

# BIOPHYSICALLY SPECIAL, UNIQUE MARINE AREAS OF THE SOLOMON ISLANDS





Marine and Coastal Biodiversity Management in Pacific Island Countries

# BIOPHYSICALLY SPECIAL, UNIQUE MARINE AREAS OF THE **SOLOMON ISLANDS**

2018





Marine and Coastal Biodiversity Management in Pacific Island Countries







On behalf of: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

of the Federal Republic of Germany



## EFFECTIVE MANAGEMENT



Marine and coastal ecosystems of the Pacific Ocean provide benefits for all people in and beyond the region. To better understand and improve the effective management of these values on the ground, Pacific Island Countries are increasingly building institutional and personal capacities for Blue Planning.

But there is no need to reinvent the wheel, when learning from experiences of centuries of traditional management in Pacific Island Countries. Coupled with scientific approaches these experiences can strengthen effective management of the region's rich natural capital, if lessons learnt are shared.

The MACBIO project collaborates with national and regional stakeholders towards documenting effective approaches to sustainable marine resource management and conservation. The project encourages and supports stakeholders to share tried and tested concepts and instruments more widely throughout partner countries and the Oceania region.

The report outlines the process undertaken to define and describe the special, unique marine areas of Solomon Islands. These special, unique marine areas provide an important input to decisions about, for example, permits, licences, EIAs and where to place different types of marine protected areas, Locally Managed Marine Area and taboo sites in Solomon Islands.

For a copy of all reports and communication material please visit **www.macbio-pacific.info**.



MARINE ECOSYSTEM SERVICE VALUATION MARINE SPATIAL PLANNING EFFECTIVE MANAGEMENT



# BIOPHYSICALLY SPECIAL, UNIQUE MARINE AREAS OF THE **SOLOMON ISLANDS**

#### AUTHORS

Ceccarelli DM<sup>1</sup>, Wini-Simeon L<sup>2</sup>, Sullivan J<sup>3</sup>, Wendt H<sup>4</sup>, Vave-Karamui A<sup>5</sup>, Masu R<sup>6</sup>, Nicolay-Grosse Hokamp A<sup>7</sup>, Davey K<sup>4</sup>, Fernandes L<sup>4</sup>

#### 2018

#### SUGGESTED CITATION

Ceccarelli DM, Wini-Simeon L, Sullivan J, Wendt H, Vave-Karamui A, Masu R, Nicolay-Grosse Hokamp A, Fernandes L (2018) Biophysically special, unique marine areas of the Solomon Islands. MACBIO (GIZ, IUCN, SPREP), Suva.



#### AUTHOR AFFILIATIONS

- 1 ARC Centre of Excellence for Coral Reef Studies, James Cook University and Marine Ecology Consultant
- 2 United Nations (previously Environment and Conservation Division, Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM), Solomon Islands)
- 3 Geoscience Australia (previously IUCN-ORO)

- 4 International Union for the Conservation of Nature Oceania Regional Office (IUCN-ORO)
- 5 Department of Environment (MECDM), Solomon Islands
- 6 Ministry of Fisheries and Marine Resources, Solomon Islands
- 7 Deutsche Gesellschaft für Internationale Zusammenarbeit

### ACKNOWLEDGEMENTS

This work, and Solomon Islands' work on Integrated Ocean Governance more generally, has been guided by the Ocean12 and the Ocean12 Technical Working Group of the Solomon Islands Government especially the Chairs: the Ministry of Fisheries and Marine Resources, Ministry of Environment, Climate Change, Disaster Management and Meteorology and the Prime Minister's Office. We would like, particularly, to thank the many scientific experts in Solomon Islands who provided their time at the national workshop and beyond, to identify and describe special, unique marine areas for the country.

The MACBIO project is funded by the International Climate Initiative (IKI) of the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU). It is being implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Government of the Solomon Islands in close collaboration with the Secretariat of the Pacific Regional Environment Programme (SPREP) and with technical support from the International Union for Conservation of Nature (IUCN) Oceania Regional Office (ORO).

#### © MACBIO 2018

All MACBIO Project partners including the Secretariat of the Pacific Regional Environment Programme (SPREP), the International Union for Conservation of Nature (IUCN) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) are the inherent copyright owners of this publication. Reproduction of this publication for educational or other non-commercial uses is authorized without prior written permission from the copyright holder(s) provided the source is fully acknowledged. Reproduction of the copyright holder(s). The designation of geographical entities in this publication, and the presentation of the material do not imply the expression of any opinion whatsoever on the part of SPREP, IUCN, GIZ or the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. This document has been produced with funds provided by the International Climate Initiative (IKI). BMU supports this initiative on the basis of a decision adopted by the German Bundestag. The views expressed herein should not be taken, in any way, to reflect the official opinion of the Federal Government of Germany.



## CONTENTS

|     | nowledgements   | iv  |
|-----|---|-----|
| Acr | onyms   | vi  |
| Exe | cutive Summary  | 1   |
| 1.  | Introduction  | 3   |
| 2.  | Methods   | 5   |
| 2.1 | Data gathering  | 5   |
| 2.2 | Workshop and additional consultations                         | 5   |
| 2.3 | Rating of Solomon Islands' special and/or unique marine areas | 6   |
| 2.4 | Overall prioritisation  | 8   |
| 2.5 | Layout of site information in report                          | 8   |
| 3.  | Results   | 9   |
| 3.1 | Offshore biophysically special and/or unique marine areas     | 9   |
|     | 3.1.1 Offshore - Central Region                               | 10  |
|     | 3.1.2 Offshore - Eastern Region                               | 25  |
|     | 3.1.3 Offshore - Western Region                               | 29  |
| 3.2 | Inshore biophysically special and/or unique marine areas      | 36  |
|     | 3.2.1 Inshore sites - Rennell and Bellona Province            | 36  |
|     | 3.2.2 Inshore Sites - Guadalcanal Province                    | 40  |
|     | 3.2.3 Inshore sites - Western Province                        | 50  |
|     | 3.2.4 Inshore Sites - Temotu Province                         | 65  |
|     | 3.2.5 Inshore sites - Makira and Ulawa Province               | 70  |
|     | 3.2.6 Inshore Sites - Choiseul Province                       | 73  |
|     | 3.2.7 Inshore Sites - Isabel Province                         | 82  |
|     | 3.2.8 Inshore Sites - Central Islands Province                | 100 |
|     | 3.2.9 Inshore Sites - Malaita Province                        | 104 |
| 4.  | Discussion  | 117 |
| 5.  | References  | 121 |
| 6.  | Appendices  | 131 |

## ACRONYMS

| ACMCA  | Arnavon Community Marine Conservation Area                                     |
|--------|--|
| CBD    | Convention on Biological Diversity   |
| CITES  | Convention on International Trade in Endangered Species                        |
| CMS    | Convention on Migratory Species  |
| DSL    | Deep scattering layer  |
| EBSA   | Ecologically or Biologically Significant Marine Areas                          |
| EEZ    | Exclusive Economic Zone  |
| FFA    | Fisheries Forum Agency   |
| GIZ    | Deutsche Gesellschaft für Internationale Zusammenarbeit                        |
| IOG    | Integrated Ocean Governance  |
| IUCN   | International Union for the Conservation of Nature                             |
| LMMA   | Locally Managed Marine Area  |
| MACBIO | Marine and Coastal Biodiversity Management in Pacific Island countries project |
| MPA    | Marine Protected Area  |
| MSP    | Marine Spatial Planning  |
| SPC    | Secretariat of the Pacific Community   |
| SPREP  | Secretariat of the Pacific Regional Environment Programme                      |
| SUMA   | Special and / or unique marine area  |
| TWG    | Technical Working Group  |
| UNESCO | United Nations Educational, Scientific and Cultural Organization               |

WCPFC Western and Central Pacific Fisheries Commission

## EXECUTIVE SUMMARY

In April 2016, the Cabinet of the Solomon Islands Government endorsed the establishment of the Ocean12 National Steering Committee (comprising the twelve Ministries relevant to ocean management and use) with the mandate to progress Integrated Ocean Governance for the Solomon Islands. The Ocean12 set up a technical working group tasked with implementing the priority aspects of Integrated Ocean Governance including marine spatial planning and the development of an ocean policy. One of their tasks was to identify Solomon Islands' special and/or unique marine areas (SUMAs) as part of this process.

This report brings together data, literature and the outputs of a special workshop synthesising information about the areas identified. The areas were described, justified and scored according to four criteria: geographic explicitness, justification, information sources and legal obligations associated with each site. Each site was described in as much detail as the available information sources allowed, and given a score out of 12. Sites were divided into large-scale mainly offshore sites and finer-scale mainly inshore sites; the former were divided into regions and the latter were divided into Provinces.

There was a large range of scores for the 12 offshore sites, from 5.5 to 11.5; most sites received intermediate scores. The lowest-scoring sites (Ulawa Deep, Cape Johnson Trough pelagic waters) suffered from a lack of information and clear boundaries, and it was therefore also difficult to determine obligations to protect attributes or components of these sites. The highest-scoring sites (Ontong Java, Kavachi) can be considered truly unique, both in a national and global context. A clear site boundary and good background information are important for spatial planning.

Among the 53 finer-scale, inshore sites, the two highest-scoring sites (11.5 and 12) were Marovo Lagoon and the Arnavon Community Marine Conservation Area. This was the result of a combination of factors: they were geographically clearly defined, there was high-quality information directly relevant to the site, and the attributes of the sites were clearly special. Low-scoring sites, such as Hiliharo Island, Waihau and West Malaita near Auki (4), were those that had been selected for a single specific organism or attribute, or those for which very little information was available. For these sites, information about habitats and species had to be inferred from similar areas or habitats, and therefore there was less certainty about the nature of their special and/or unique attributes.

Some of the sites were given a special and/or unique status because of their remoteness. Furthermore, many sites have three highly valuable ecosystems in close proximity (coral reefs, mangroves and seagrass beds), which, due to the number of organisms that use all three habitats at different times in their life cycle, confers an even higher value to each individual habitat. Other sites include steep depth gradients that bring oceanic attributes close to productive coastal environments. This points to the importance of considering multiple adjacent habitats for inclusion in interconnected protected areas. Given the status of coral reefs worldwide, and the position of the Solomon Islands within the global epicentre of coral reef biodiversity, coral reefs identified in this report may well be special and/or unique at a global level.

Both high and low scores are useful for management; high-scoring sites can be prioritised with confidence, while lowerscoring sites can be targeted with more research or protected. Future scoring systems may take into account levels of human use or impact, as this affects the intrinsic ecological value of a habitat, assemblage, population or ecosystem. The identification and scoring of SUMAs can guide the next steps in marine spatial planning, but also inform other management measures (e.g. permit or licencing decisions) or environmental impact assessments (EIAs) that may be relevant to these locations.



## 1. INTRODUCTION

The ocean and its resources are of great value to the Solomon Islands. They provide the basis for people's livelihoods and food security, and contribute significantly towards the economy of Solomon Islands. However, the shift from subsistence to cash reliance for livelihoods has often led to unsustainable uses and poor management of the marine ecosystems and resources. The Solomon Islands government recognizes that 98 percent of the country is ocean and is committing to ensure the sustainable management and protection of the ocean for now and the future of Solomon Islands.

In June 2015, representatives from the Solomon Islands government gathered at the Inaugural Ocean Summit in Honiara to discuss the values, and development, sustainable use and conservation priorities for the Ocean that Solomon Islands has in place. Discussions from the Ocean Summit concluded that

- Our ocean is extremely valuable to us, the people of Solomon Islands
- It is used by a number of industries and many individuals
- Some of the benefits we derive from our seas are under threat, and
- We need to do more in terms of integrated resource management of our ocean.

An important outcome of the Inaugural Ocean Summit was the articulation of a vision for:

#### 'A healthy, secure, clean and productive ocean, which benefits the people of the Solomon Islands and beyond'.

The vision encapsulates all sectoral, jurisdictional and geographic responsibilities, and embodies the government's desire to safeguard the benefits that people in Solomon Islands derive from the ocean and its ecosystems, today and in the future. In April 2016, Cabinet endorsed the establishment of the Ocean12 National Steering Committee with the mandate to formulate and progress an integrated Ocean management framework for Solomon Islands (Cabinet decsions 10[2016]4 dated 12/4/16).

Representatives from twelve Ministries of the Solomon Islands government reconvened on 7th August 2016, at the inaugural Ocean12 Meeting in Honiara and discussed the implementation of the next phase for ensuring the sustainability of Solomon Islands' Ocean. At this meeting, the Ocean12 decided to pursue Integrated Ocean Governance (IOG) for the Solomon Islands and discussed the objectives of IOG as being to help ensure:

- Ecologically sustainable development and use
- Food security
- Climate change resilience and adaptation
- Environmental protection and rehabilitation
- Protection from natural disasters
- National security and
- Conservation of biodiversity.

The Ocean12 also established a Technical Working Group to pursue same. The Ocean12 TWG, at a meeting on 8–9 May 2017, decided that the main aspects of IOG were:

- 1. Legal
- 2. Integrated ocean policy/strategy/plan
- 3. Institutional
- 4. Jurisdictional
- 5. Decision-making
- 6. Knowledge
- 7. Compliance

- 8. Capacity (both skills and numbers of people)
- 9. Marine spatial planning
- 10. Financial
- 11. Consultation/participation

It was recognised that the Government of the Solomon Islands cannot do everything at once, so priority aspects for implementation of IOG were identified by the Ocean12 TWG as:

- Marine Spatial Planning (MSP)
- Ocean Policy
- A legal framework for both of the above
- Capacity development to support IOG, and
- Sustainable financing, also to support IOG.

This report supports the development of a national MSP. The roadmap for implementing an MSP by 2020 (as per the Solomon Islands Voluntary Commitment (#OceanAction19754) at the United Nations Ocean Conference in June 2017) was set out by the Ocean12 TWG as:

| ACTIVITY  | TIMEFRAME  |
|---|--|
| Cabinet approval  | April 2016   |
| Determine specific ocean planning vision/objectives       | Aug 2016   |
| Review legislation specific to Solomon's ocean            | Aug 2016   |
| Draft consultation strategy                               | April 2017   |
| Develop zoning typology                                   | July/Aug 2017  |
| Map ecologically special and/or unique marine areas       | July/Aug 2017  |
| Map draft, preliminary bioregions                         | Dec 2017   |
| Develop zone placement guidelines                         | Dec 2017   |
| Prepare for and conduct initial nation-wide consultations | Prepare: Jan – Apr 2017<br>Conduct: Apr 2017– Oct 2018 |
| Revise priority areas/bioregions/guidelines               | Oct 2018 – Mar 2019                                    |
| Prepare draft map (MSP) of candidate areas for zoning     | Mar – Apr 2019   |
| Consultations on draft MSP                                | Apr 2019 – Oct 2020                                    |
| Revise and finalise MSP                                   | Oct – Dec 2020   |

This report documents one, main, building block to the foundations (as listed above) needed to implement a marine spatial plan for the Solomon Islands: that is, it describes special and/or unique marine areas (SUMAs) within the Solomon Islands. This layer of data (about the SUMAs) will be one of approximately 140 datasets that will inform government decision-making about what types of ocean zoning/what level of protection should be afforded to which parts of the marine environment of the Solomon Islands. Other datasets describe all available environmental, biological, use and risk information as it pertains to the Solomon Islands.

The SUMAs described in this report can be used by government staff, not just in marine spatial planning, but when considering permitting and licencing decisions and conditions, in environmental impact assessments, policy development and governance processes, in coastal and ocean development planning and in assessing risks associated with various intended uses in specific locations.

This report describes the workshop and methods used to identify, describe and rate SUMAs in the Solomon Islands, then presents the results. The actual SUMAs are named, coded, justified, mapped, verified and scored in the results section.

## 2. METHODS

A technical workshop was held to identify SUMAs in the Solomon Islands. For the purposes of this work, "Special" is defined as "better, greater, or otherwise different from what is usual; exceptionally good or pleasant" and "Unique" is defined as "being the only one of its kind; unlike anything else" (Oxford English Dictionary, 2018). The workshop explicitly focussed only upon the marine environment. The Solomon Islands have many important and special terrestrial sites, however these were not the purpose of this workshop and the data and expertise required to identify special and/or unique terrestrial areas were not available in this marine workshop.

### 2.1 DATA GATHERING

The Government of the Solomon Islands, together with the MACBIO project team, between 2014-2017 spent two and a half years collating, assessing, preparing and mapping open source and freely available data on, amongst other things, the special and/or unique marine features of the Solomon Islands. The data available for use at the workshop, both in electronic and hardcopy format, are listed in Appendix 4. In total, there were 60 datasets available for use in the workshop, of which 46 were related to biodiversity and 14 were related to human use of marine areas. All were available electronically and as hardcopy maps. All the data have been stored with associated metadata using the ANZMEt Lite (www.anzlic.gov.au/resources/metadata) standard and have been delivered to all interested parties, including Government Departments, in the Solomon Islands. These data and maps can also be accessed via the MACBIO website (http://macbio-pacific.info/).

## 2.2 WORKSHOP AND ADDITIONAL CONSULTATIONS

Workshop participants were chosen based upon their marine expertise and traditional knowledge, and are listed in Appendix 2. These participants (and other contributors) have marine expertise to do with one or more of the following: inshore and offshore fish and other species, marine habitats and environments, high biodiversity areas, marine mammal areas, hydrology, findings from deep sea mineral explorations, oceanography, port works, fisheries and other marine research.

The workshop agenda is presented in Appendix 1. Participants were told to identify marine areas for the Solomon Islands that were biologically and/or physically special and/or unique. In addition to the data described above, participants were provided with worksheets to complete for each site identified (Appendix 3) as well as maps of the Solomon Islands at roughly three scales: ocean-wide maps, dividing all of Solomon Island's marine jurisdiction into three vertical strips; province-based maps, highlighting the land and adjacent waters of each province; plus other hardcopy maps which "zoomed in" on each island group (roughly at scales from 1: 300 000 to 1: 11 000 scale) ( for full list of response maps see Appendix 3). These were for participants to mark the geographic boundaries of the sites they had identified.

The workshop required participants to provide, per site they identified:

- A site name;
- A geographic description of the site's location and boundaries;
- A justification. This may include information as to whether areas support, or are likely to support, rare, vulnerable or unusual habitats or species, threatened species, important life stages of key species, endemic species, physically or biologically outstanding attributes (e.g. unique geomorphology, high species diversity or high productivity);
- Sources. These could be peer reviewed scientific papers, peer reviewed reports, other reports, data or personal communications from participants or other expert sources;
- Legal or other obligations to protect the site or species within the site;
- Follow-up tasks required to finalise description of the site.

The participants were divided into groups to make decisions about what they considered biophysically special and/ or unique sites for the Solomon Islands. Each group had available: the electronic data on a GIS with a screen and GIS technician to access and map any data they wished to view, a facilitator, hard copy maps, worksheets and response maps upon which to draw their chosen sites. Each group also nominated a rapporteur. At the end of the workshop, each group presented their findings to a plenary session.

Preliminary workshop findings were also discussed with the Solomon Islands Government Ocean12 Technical Working Group Chairs. They requested that the final report access any additional research, data and information to both inform the descriptions of the sites identified in the workshop, and to consider any additional sites that the workshop had not identified, especially in offshore areas. This involved following up on potential sources of information, including experts who were not able to attend the workshop. Information was collected through online libraries that linked to peer-reviewed journals and other online "grey" (or unpublished) literature. Species-specific obligations were supplemented by compiling a list of species occurring in Solomon Islands waters that are listed in national and international conservation legislation (Appendix 5).

All spatial data and information collected during the workshop were digitized and a map of each identified site was created. A geographic boundary for each site was created in GIS from the minimum bounding geometry enclosing each site. The diagonal coordinates (latitudes/longitudes) generated from this process were used to identify the geographic boundaries for the SUMAs of the Solomon Islands.

### **2.3** RATING OF SOLOMON ISLANDS' SPECIAL AND/ OR UNIQUE MARINE AREAS

The Solomon Islands have a vast range of marine biophysical features, some are well known and understood, some are special, some are unique and some may require special consideration when planning forward for the optimal use and management of the Solomon Islands' ocean. There is not equal justification for, or information about, the special and/or unique sites identified during the workshop and in this report. Data from the workshop and other sources were used to systematically assess each site against the following criteria:

Geographic explicitness – how well-defined and well-justified the boundaries of the site are. This is a relative
assessment. For most of the sites the exact boundaries were not well known and so the maps provided are indicative
only. As with all the sites in this report, more information may mean that many of the site boundaries can be better
defined.

NOTE: All sites identified exclude land above the high-water mark. For example, if a site demarcates a ring around a fringing reef of an island (e.g. Tikopia), then the SUMA indicated in this report is understood to include only the entire marine environment within that ring up to high water mark but does not include the island itself.

- Justification how well, and in how much detail, can we justify that the SUMA is, in fact, special and/or unique? Is there available information about the site itself, or do we need to infer it from information about similar areas or habitats? This score refers to whether there is clear, abundant and convincing information to indicate whether the area is likely to support rare, vulnerable or unusual habitats or species, threatened species, endemic species, important life stages of key species, or physically or biologically outstanding attributes e.g. unique geomorphology, high species diversity or high productivity. If the information provided is only generic to the type of site being described, and not specific to the site/s located in the Solomon Islands, then the score under the criterion "Justification" will be diminished by ½ to a whole of a point. A ½ point will be subtracted from the score it might otherwise have received if the site is one where, globally, there's not much information and so the chances of having site-specific information is greater (e.g. coral reefs). The entire Solomon Islands EEZ, except for the Temotu Province, falls within the Bismarck Solomon Seas Ecoregion. Within this Ecoregion, some areas stand out globally, regionally or subregionally (Wilson et al., 2005); the Ecoregion is only listed as part of the justification when a SUMA overlaps with one of these outstanding areas.
- Information source(s) this refers to information sources used to identify and justify the site, and whether they are websites, reports, legal documents or peer-reviewed scientific articles. This determines how reliable and verifiable the information source(s) are. Information is more likely to be correct if it can be cross-referenced and triangulated via multiple information sources. All the sites will have at least one, locally specific, expert source, namely, one of the

workshop participants; some have more expert sources. For some sites, only generic sources will be available about the species or habitats in the SUMA; in these cases, the generic sources will be counted as per the table below. For example, for the offshore, deeper water sites it is well understood that data, globally, are sparse and thus, for these sites, generic sources may be considered to count as sources in this criterion. However, for globally well-studied habitats, such as coral reefs or mangroves, there will be thousands of generic sources; if we count these, each coral reef or mangrove SUMA will automatically receive the highest score. Therefore, for SUMAs containing globally well-studied species or habitats, only locally specific sources contribute to this criterion.

National or international obligations – are the areas associated with species or habitats for which the country has international obligations (e.g. under Conventions) or national obligations (e.g. under law). The Delimitation Waters Act 1977 applies throughout all marine environments in the Solomon Islands EEZ; is provides for the conservation of marine habitats within the EEZ. Similarly, coastal habitats are managed through a long-standing traditional system of reef-lagoon tenure. These obligations are therefore not used in the scoring system. Coral reefs automatically host a large number of organisms (e.g. even the corals themselves), so the "obligations" score for coral reef SUMAs is "1", with additional scores added for specific organisms for which the SUMA was listed.

Each proposed SUMA was scored as relatively low (1), medium (2) or high (3) against each of the four criteria. SUMAs scoring highly against all criteria ranked more highly overall. This meant that these sites had better and more reliable descriptions and were also likely to be relevant to the country's existing environmental protection obligations. If scoring highly against just some of the criteria, they were nominated as medium-level SUMAs.

The scoring system used is described in the table below. Three points are allocated as the top "score" for each of the four criteria (justification, geographic explicitness, source – including both type and number of sources – and national and international obligations that pertain to the site). The highest score possible is 12; the lowest is four.

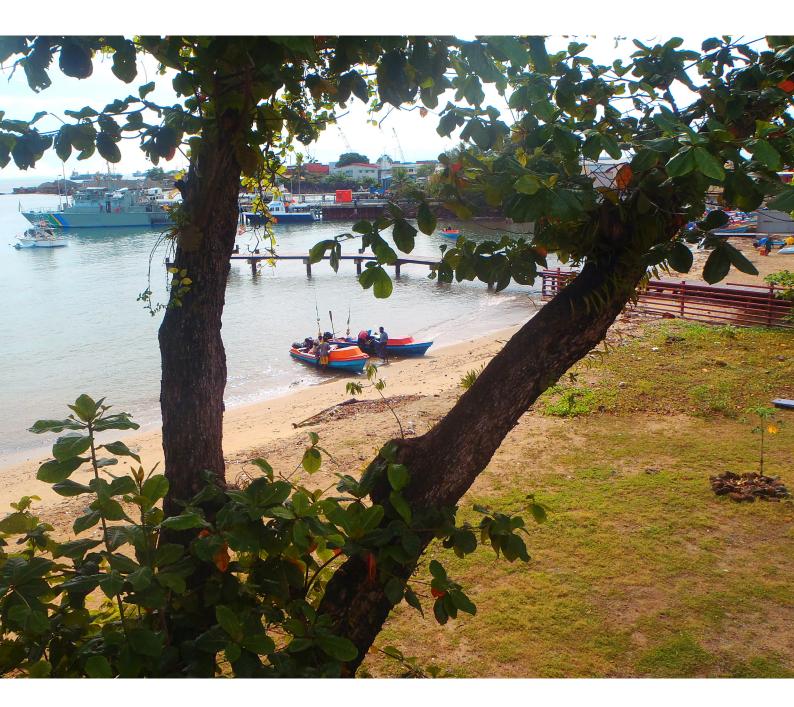
| Geograph    | ic Explicitness   |
|-------------|---|
| 1           | Boundaries are quite loosely defined  |
| 2           | Boundaries broadly match topographic or hydrodynamic features   |
| 3           | Boundaries exactly match the biophysical features identified as important   |
| Justificati | on  |
| 1           | One or two reasons (e.g. presence of organisms) justifying the site, with generic information sources   |
| 1 ½         | One or two reasons (e.g. presence of organisms) justifying the site, with site-specific information sources   |
| 2           | Three or four reasons justifying the site, with generic information sources   |
| 2 1⁄2       | Three or four reasons justifying the site, with site-specific information sources / five or more reasons justifying the site, with generic information sources  |
| 3           | Five or more reasons justifying the site, with site-specific information sources  |
| SOURCE      |   |
| Source Ty   | ре  |
| 1⁄2         | Expert advice from workshop participants  |
| 1           | No peer reviewed papers are available but there are good reports available  |
| 1 ½         | At least one peer reviewed scientific paper or report discusses this site (for inshore sites) – or, for offshore sites, good peer-reviewed generic sources describing the main feature(s) of the site |
| Source N    | umber   |
| 1⁄2         | One source  |
| 1           | Two to three sources  |
| 1 1⁄2       | Four or more sources  |
| Internatio  | nal/ National Obligations   |
| 1           | One species / habitat with obligations  |
| 2           | Two or three species/habitats   |
| 3           | More than three species/habitat with obligations  |

## 2.4 OVERALL PRIORITISATION

The ratings of the criteria were added up to give an overall score out of 12. A higher score means a site has a higher rating.

## 2.5 LAYOUT OF SITE INFORMATION IN REPORT

For each SUMA identified in the workshop, we provide, in this report, the following information: a site name, and if it is a lesser known type of habitat we provide a broad definition of the habitat; a map; a summary table with the name and score of the site; the diagonal coordinates (latitudes/longitudes) – see the last paragraph of Section 5.2 for details; a geographic boundary description; a descriptive justification for the inclusion of the site; relevant references; the number and type of sources used and the international and national obligations pertaining to the site and its key attributes.



## **3.** RESULTS

The results are grouped into offshore and inshore sites. We present the offshore SUMAs first.

This section provides information on all the SUMAs for the Solomon Islands identified during the expert workshop on 26 July 2017 and during follow-up research with in-country experts.

### **3.1** OFFSHORE BIOPHYSICALLY SPECIAL AND/OR UNIQUE MARINE AREAS

All the offshore SUMAs within the Solomon Islands provisional EEZ are depicted in the figure below.

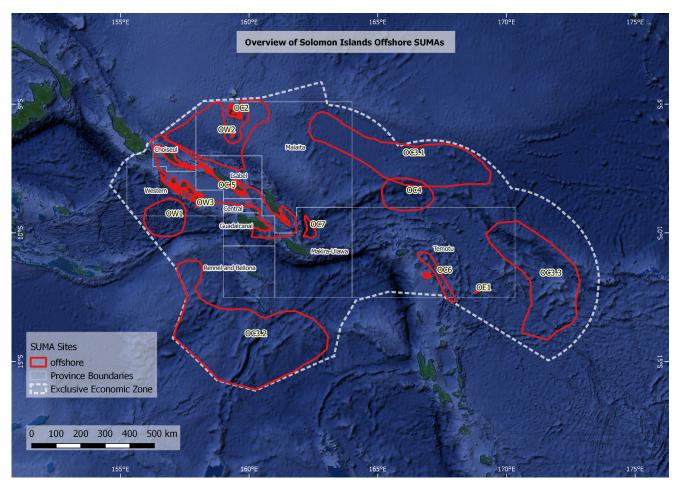
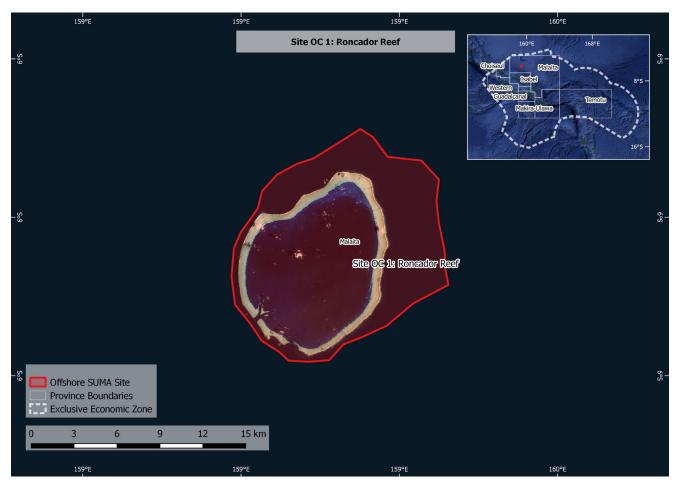


FIGURE 1. Overview of Solomon Islands offshore SUMA sites.

#### 3.1.1 Offshore - Central Region



#### 3.1.1.1 SITE OC 1: RONCADOR REEF

FIGURE 2. SITE OC 1: Roncador Reef

| Geographic Cluster             | Site Name     | Site Code | Overall Score |
|--------------------------------|---------------|-----------|---------------|
| Offshore SUMA – Central region | Roncador Reef | OC1       | 9             |

#### Geographic boundaries

159.2939°E 6.1442°S, 159.4310°E 6.2912°S

#### Geographic description (score = 3)

Roncador Reef is a small submerged atoll, approximately 25 km in diameter, located between Santa Isabel Island and Ontong Java Atoll. It has no emergent islands and is uninhabited; coral reefs surround a deep lagoon, with an entrance to the open ocean on the southwestern side.

#### Justification (score = 2)

Roncador Reef is known as a highly productive reef by the fishers that target *bêche-de-mer* and trochus (pers. comm., workshop experts). There are no biophysical data or information available for Roncador Reef itself; in a gap analysis, Andrefouet and Hamel (2014) state: "The outer atolls and reefs (Ontong Java, Roncador and Indispensable) were ... poorly studied but they also have moderate reef richness." Modelling of benthic species richness (www.aquamaps.org)

indicates the area encompassing Roncador Reef is among those with the highest benthic species richness (550–950 species) (VLIZ, 2014a). This area is also included within one of the sub-regionally important sites (the Solomon Deep) of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005). Geologically, it forms a geographic group with Ontong Java Atoll and Nukumaru Atoll (Papua New Guinea) and, given that the Solomon Islands is composed primarily of volcanic "high islands" with fringing reefs, Roncador Reef is geomorphologically rare for the country (Asian Development Bank, 2014; Ellison, 2009), and is expected to host coral reef communities distinct from those fringing the main islands (Turak, 2006). Furthermore, "Ontong Java and associated reefs" – presumably including Roncador Reef – are considered as their own unique ecoregion within the broader Coral Triangle (Green and Mous, 2007).

The Coral Triangle is a roughly triangular area of the tropical marine waters of Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste that contain at least 500 species of reef-building corals in each ecoregion (Green and Mous, 2007). The Coral Triangle hosts 67% of the world's coral species, 37% of its coral reef fishes, six out of the world's seven marine turtle species, and aquatic mammals such as blue whales, sperm whales, dolphins and dugongs; it is considered the global centre of marine biodiversity (Hughes et al., 2002; WWF South Pacific Program, 2003). The development of this unparalleled diversity was made possible by the geological and evolutionary history of the region, the mixing of species from the Indian and Pacific Oceans, and the vast variety of different habitat types found in close proximity to one another (Hoeksema, 2007).

The Solomon Islands is considered among the "megadiverse" coral reef regions, especially for corals and coral reef fishes, with almost 500 coral species and 1,371 recorded fish species (Allen, 2008; Allen and Werner, 2002; Ellison, 2009); coral reefs in the Solomon Islands cover 6,743 km<sup>2</sup> (Spalding et al., 2001; UNEP-WCMC, 2015). Despite this, the current knowledge about Solomon Islands reefs comes from a handful of studies conducted over the last 10 years (Asian Development Bank, 2014), most notably the Solomon Islands Marine Assessment conducted in 2004 (Green et al., 2006a).

Coral reefs of the Solomon Islands, including Roncador Reef, are more closely related to those of the wider Pacific than those of the central Coral Triangle area (Kool et al., 2011), and they share approximately 25 endemic fish species with reefs of eastern Papua New Guinea (Allen, 2008). Even coral reef algae such as *Sargassum* spp. are considered highly diverse in the Solomon Islands (Mattio et al., 2009), and some areas still host healthy populations of valuable sea cucumbers such as *Holothuria scabra* (Mercier et al., 2000). Sea cucumber populations have been threatened by overexploitation in the Solomon Islands (Schwarz et al., 2012); populations of high-value sea cucumbers can be considered indicators of reefs with relatively light exploitation. Connectivity studies suggest that Solomon Islands reefs may be source reefs for the western Coral Triangle (Kool et al., 2011), making these reefs very important from a conservation point of view, especially those with healthy populations of otherwise depleted species.

Country-wide coral cover has been reported to range between 29% and 47% (Hughes, 2006), which is relatively high compared with other regions (for example, Great Barrier Reef – wide coral cover was ~18% in 2017 – http://www. aims.gov.au/reef-monitoring/gbr-condition-summary-2016–2017). Coral communities are structured depending on their surrounding environment, such as turbidity, reef geomorphology, and disturbance history (Turak, 2006). Coral reef fish communities in the Solomon Islands tend to be dominated by gobies, damselfishes and wrasses (Allen, 2006). Outer reef habitats have the highest fish density and diversity, and the lowest numbers were recorded on silty inshore reefs (Allen, 2006); Roncador Reef could therefore be expected to have a highly diverse reef fish assemblage. The inventory of commercially important macroinvertebrates in the Solomon Islands, which are likely to be found on Roncador Reef, included 23 species of sea cucumbers, 10 species of bivalves (giant clams and oysters), 4 species of gastropods (*Trochus* and trochus-like species and the triton shell) and 5 species of lobsters) (Kile, 2000; Ramohia, 2006). Overfishing is a pervasive problem for nearshore reefs (Allen, 2006); isolated reefs such as Roncador Reef may have more intact fish and invertebrate communities, hence its selection by experts as a highly productive reef.

Coral reefs are valued globally because of their high biodiversity, conservation and economic value. Human activities are degrading reefs worldwide; in the western Solomon Islands, terrestrial runoff and overfishing have taken their toll on many nearshore reefs (Aswani et al., 2007). Even biologically rich areas such as Marovo and Roviana Lagoons have been subject to unsustainable levels of logging, which has affected the reefs through sedimentation (Albert et al., 2008; Halpern et al., 2013; Olsen and Turnbull, 1993). Solomon Island reefs in good condition, therefore, become more valuable; this includes remote and uninhabited reefs such as Roncador Reef. These more isolated, unimpacted coral reefs may be more resilient (able to return to their previous state after suffering damage) than those already under various degrees of other human pressure (McLean et al., 2016).

Resilient coral reefs are becoming more important and valuable, as their ability to recover from natural and climate change induced disturbance events confers to them a role of refuges and sources of larvae that assist the recovery of more damaged reefs (Holbrook et al., 2016). Typically, coral reef resilience is expected to be higher on reefs further from

human activities (McLean et al., 2016), with intact trophic structure, especially populations of predators and herbivores (Brewer et al., 2012; Holbrook et al., 2016; McLean et al., 2016), higher coral cover (Hughes, 2006), higher diversity (Ferrigno et al., 2016), greater structural complexity, deeper habitats acting as refuges, higher densities of juvenile corals and low nutrient loads (Graham et al., 2015). In the Solomon Islands and elsewhere (e.g. Papua New Guinea), high coral cover and greater distances from markets is directly correlated with higher biomass of many families of reef fishes (Brewer et al., 2009; Cinner et al., 2009). Remote and isolated coral reefs also have a greater likelihood of hosting unique assemblages, genetically distinct populations, or even endemic species (Hobbs et al., 2013; Hughes et al., 2002).

#### Type and number of sources (score = 2)

The only information available to justify the special and/or unique nature of the site was provided by experts at the workshop (MFMR, Patrol Boat officials) and inferred from generic sources about coral reefs in the Solomon Islands, an ecoregional report and a benthic species richness map produced by www.aquamaps.org. A recent (2014) peer-reviewed article mentions Roncador Reef and states that it has been poorly studied; 29 peer-reviewed papers and three technical reports were used to present information about Solomon Islands coral reefs in general, and the Australian Institute of Marine Science website provided a comparison with the Great Barrier Reef.

#### Obligations (score = 2)

Coral reefs host a number of organisms (corals, some fishes, turtles, sharks, macroinvertebrates) listed on the International Union for the Conservation of Nature Red List of Threatened Species (IUCN, 2016) (IUCN Red List) and under CITES. The Fisheries (Amendment) Regulations 1993 provide for the declaration of areas in which the collection of coral (dead or alive, or coral sand) is prohibited, and prohibits the use of machines for coral gravel or sand extraction. The Fisheries Act 1998 prohibits use of explosives or poison for fishing and the export of live corals without a licence. The Fisheries Management Act 2015 includes provisions for the protection of fish and invertebrate stocks, including those specific to coral reefs; the Environment Act 1998 and the Wildlife Protection and Management Act 1998 also include coral reefs and any associated species listed under the Acts.



#### 3.1.1.2 SITE OC 2: ONTONG JAVA



FIGURE 3. SITE OC 2: Ontong Java

| TABLE 2. JILL OC 2. Ontoing Java, Overall score (based upon intornation, below | TABLE 2. SITE OC 2: Ontong | Java. Overall sco | re (based upon in | formation, below) |
|--|----------------------------|-------------------|-------------------|-------------------|
|--|----------------------------|-------------------|-------------------|-------------------|

| Geographic Cluster             | Site Name   | Site Code | Overall Rating |
|--------------------------------|-------------|-----------|----------------|
| Offshore SUMA – Central region | Ontong Java | OC2       | 11.5           |

#### Geographic boundaries

159.1682°E 4.9949°S, 159.7370°E 5.5586°S

#### Geographic description (score = 3)

Ontong Java is boot-shaped atoll lying near the northern boundary of the Solomon Islands' EEZ, 250 km north of Santa Isabel Island. The atoll covers 1,400 km<sup>2</sup> in total, with 12 km<sup>2</sup> of land spread out over 122 small islands surrounding a deep lagoon. The islands are mostly low-lying coral cays with a maximum elevation of 13 m above sea level. Approximately 2,000 people live on the atoll, primarily in two villages. Geographically, it belongs to a scattered group of three atolls, including nearby Nukumanu Atoll (in PNG's EEZ) and the wholly submerged Roncador Reef located 75 kilometres to the south (see Site OC 1: Roncador Reef).

#### Justification (score = 2.5)

Ontong Java atoll is the largest atoll in the Solomon Islands and among the 25 largest atolls in the world.

Ontong Java atoll has been poorly studied, but is expected to have at least moderate reef richness (Andréfouët and Hamel, 2014). Green et al. (2006a), whose survey of the Solomon Islands coral reefs did not include Ontong Java, stated that it has special ecological features. The Ontong Java and Tasman Island group is considered unique even across the entire Coral Triangle, and classified as its own ecoregion (Green and Mous, 2007). In fact, it is listed as one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005). A key

feature of Ontong Java presented at the workshop was the presence of grouper spawning aggregations; the importance of this is increased by the general lack of groupers throughout inhabited areas surveyed in 2004 (Green et al., 2006b). Groupers that commonly form spawning aggregations at this site include *Plectropomus areolatus*, *P. leopardus*, *P. oligocanthus*, *Epinephelus polyphekadion*, *E. fuscoguttatus* and *Variola louti* (Donnelly, 2009).

Reef fishes breed by spawning, or releasing gametes into the water for external fertilization; most species form aggregations to maximize the likelihood of success (Russell et al., 2014). Individuals often travel long distances to a particular site to spawn in high densities. This critical event occurs in conjunction with certain phases of the moon or tidal cycles, to further maximize the likelihood of fertilization (Domeier and Colin, 1997). Spawning aggregations are especially vulnerable to fishing, as the high density is an artificial and temporary phenomenon that aggregates individuals from a wide area, and targeting them rapidly depletes fish populations from a broad catchment (Abesamis et al., 2014). The Solomon Islands is among the top ten countries in the world for known spawning aggregations, and a high proportion of these aggregations appears stable (Russell et al., 2014). Thus, known breeding grounds such as Ontong Java are of special importance (Wilson et al., 2005). Spawning aggregations of reef fishes occur periodically; in Ontong Java they spawn between June and September (Donnelly, 2009).

The importance and value of coral reefs in the Solomon Islands, and the rarity of atolls as opposed to fringing reefs (Wilson et al., 2005), has been described in Site OC 1: Roncador Reef, and is also relevant here. Additionally, modelling of benthic species richness (www.aquamaps.org) indicates the area encompassing Ontong Java is among those with the highest benthic species richness (550–950 species) (VLIZ, 2014a). Ontong Java's coral reef is dominated by shallow reef complexes and variable forereef (Kool et al., 2010). The geomorphology of Ontong Java's islands has been significantly affected by storms and cyclones (Bayliss-Smith, 1988) and the atoll is classified as a "high disturbance" reef (Green and Mous, 2007). Nevertheless, there are some long-term colonies of nesting seabirds; at least 15 species of seabirds have been recorded on the atoll (Bayliss-Smith and Christensen, 2008). Fisher communities report considerable catches of sea bream (*Sparus* spp.), trevally (Carangidae), emperors (*Lethrinus* spp.) and barracuda (*Agrioposphyraena barracuda*). Tridacnid clams, cuttlefish and octopus are common inhabitants of the coral reefs in shallow water (MECDM, 2011). Four species of turtle have been recorded in the lagoon: green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), leatherback (*Dermochelys coriacea*) and loggerhead (*Caretta caretta*) (Crean, 1977).

Fishing for *bêche-de-mer* was historically one of the main sources of income for the Ontong Java village communities. There are two main villages where the population of around 2,000 people is concentrated, with 1,386 on the island of Luaniua in the eastern end and 689 on Pelau in the northeast (MECDM, 2011). *Bêche-de-mer* harvesting was banned in 2005, however, various forms of traditional fishing still take place at this site, especially around the populated islands (Bayliss-Smith et al., 2010; Crean, 1977).

#### Type and number of sources (score = 3)

Aside from the general coral reef literature reviewed for Site OC 1: Roncador Reef, which also apply here, and information shared by expert workshop participants, there were three peer-reviewed articles and three reports about features of Ontong Java atoll, three peer-reviewed articles with more general information about special features of the site, a website indicating benthic species richness, one general report about spawning aggregations, and one technical report that could be used to infer characteristics of the site.

#### Obligations (score = 3)

Coral reefs host a number of organisms (corals, some fishes, sharks, macroinvertebrates) listed on the IUCN Red List and under CITES; the atoll further hosts at least 15 species of seabird and 4 species of turtles that are listed on the IUCN Red List and under CITES (green turtles are Endangered, hawksbill turtles are Critically Endangered, leatherback and loggerhead turtles are Vulnerable). The species of groupers that aggregate at this site to spawn are also listed on the IUCN Red List and under CITES (*Plectropomus areolatus* is Vulnerable, *P. leopardus*, *P. oligocanthus*, *Epinephelus polyphekadion* and *E. fuscoguttatus* are Near Threatened, *Variola louti* is Least Concern). The Fisheries Management Act 2015 includes provisions for the protection of fish and invertberate stocks, including those specific to coral reefs; the Environment Act 1998 and the Wildlife Protection and Management Act 1998 include coral reefs and any associated species listed under these Acts.

#### 3.1.1.3 SITE OC 3: TUNA HOTSPOTS

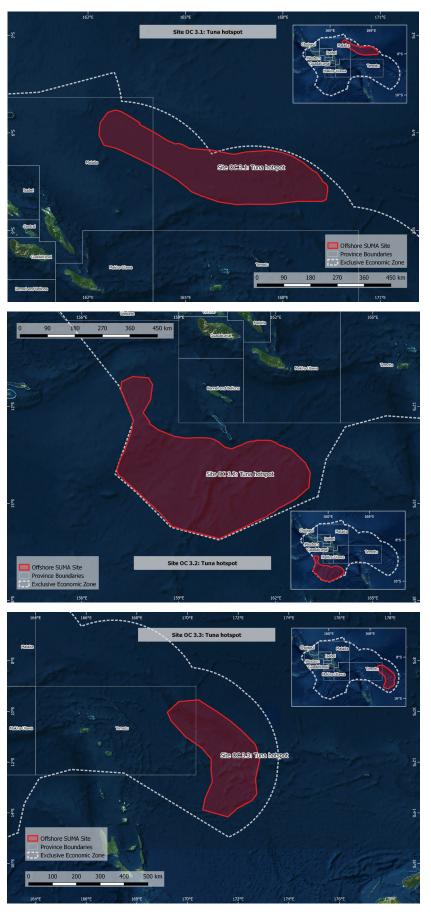


FIGURE 4. SITE OC 3: Tuna hotspots

#### TABLE 3. SITE OC 3: Tuna hotspots. Overall score (based upon information, below)

| Geographic Cluster             | Site Name     | Site Code | Overall Score |
|--------------------------------|---------------|-----------|---------------|
| Offshore SUMA – Central region | Tuna hotspots | OC3       | 8             |

#### Geographic boundaries

**3.1:** 162.3376°E 5.2979°S, 169.3782°E 8.2068°S

3.2: 157.0840°E 11.0721°S, 163.0665°E 16.0900°S

3.3: 169.1226°E 9.8096°S, 173.4719°E 13.4768°S

#### Geographic description (score = 1):

This site includes three areas of open ocean, one in the northeastern part of the Solomon Islands EEZ, one in the southwest and one to the east. The northern area is oblong in shape, oriented in a northwest to southeast direction, roughly 850 km long and 200 km wide. The southern site measures approximately 700 by 400 km. The area, at the eastern edge of the Solomon Islands EEZ, is approximately 500 km long and 200 km wide, covering an area that includes the Vitiaz Trench and a number of seamounts.

#### Justification (score = 2):

The open ocean surrounding the main island group of the Solomon Islands is known as a pelagic "hotspot" attracting large aggregations of tuna; skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*) and bigeye tuna (*T. obesus*) gather to the north of the islands, and albacore tuna (*T. alalunga*) are abundant in southern and eastern EEZ waters (pers. comm., workshop experts). Most of the information about this site comes from fisheries data, including tagging studies, peer-reviewed articles and reports. These four species of tuna comprise 90% of the total catch by industrial fisheries of the Pacific Ocean (FAO, 2017), and therefore they have attracted abundant research (Leroy et al., 2015). The four species are either approaching, have reached or have surpassed their maximum sustainable yield (Harley et al., 2015; Langley et al., 2009; Movick and Tukuitonga, 2016), prompting concerns – and increasing evidence – that the reduction of these apex predators would lead to changes in ecosystem structure and species distribution (Myers and Worm, 2003; Pauly et al., 1998; Polovina et al., 2009; Polovina and Woodworth-Jefcoats, 2013; Worm et al., 2006; Worm and Tittensor, 2011). The greatest concern is for bigeye tuna, followed by yellowfin tuna; albacore and skipjack tuna are "Least Concern" (see also Obligations section below).

The high catch rates of tuna in these three areas confirm their status as a hotspot for these tuna species (Harley et al., 2015; Langley et al., 2009; McKechnie et al., 2016; Nicol et al., 2013; Williams et al., 2017). These catch rates have persisted for at least two decades (Williams et al., 2017). The highest catch is for skipjack tuna; this has been increasing steadily since the 1960s, as this tends to be the most productive species (Williams et al., 2017). This SUMA was found to have one of the longer "dwell times" for skipjack tuna in the western Pacific (Gauldie and Sharp, 1996).

Offshore Solomon Islands waters are also known to be a yellowfin tuna nursery (Wells et al., 2012). A recent modelling study by Lan et al. (2017) found that higher catch rates of yellowfin tuna, and possibly other tuna species, correlate with areas with a higher sea surface temperature, a sea surface height anomaly of approximately 10 – 20 cm, and a chlorophyll-a concentration of around 0.05–0.25 mg/m<sup>3</sup>. This suggests that the northern tuna hotspot is likely to possess this range of attributes, and, as a high productivity area (see also Site OC 4: Cape Johnson Trough pelagic waters), likely aggregate other species as well, such as billfish, sharks, marine mammals, turtles and seabirds (Bouchet et al., 2017; Davoren, 2013; Dunn et al., 2011; Harley et al., 2012; Hyrenbach et al., 2000; Moors-Murphy, 2014). Additionally, the AquaMaps project (www.aquamaps.org) identified the southern area as having high pelagic species richness (100–110 species) (VLIZ, 2014b). This area is included within one of the sub-regionally important sites (the Solomon Deep) of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005). There is an indication that the importance of this area for tuna aggregation varies according to the El Niño / Southern Oscillation (ENSO) Index, and that it tends to be more productive during La Niña years (Williams et al., 2017).

Tuna tagging programmes have included the Solomon Islands EEZ in general, and one or multiple of the tuna hotspot sites in particular (Harley et al., 2012, 2015; Leroy et al., 2015). These and other studies suggest that populations or sub-populations of tuna species can be resident within certain areas, with only a few individuals travelling long distances (Houssard et al., 2017; Schaefer et al., 2015; Sibert and Hampton, 2002, 2003; Wells et al., 2012). The Pacific Ocean

population of yellowfin tuna is thought to be panmictic (Appleyard et al., 2001), indicating high genetic connectivity throughout the region, making individual hotspots, such as this SUMA, important on a Pacific-wide scale.

Aside from the significance of this area for pelagic productivity, this SUMA also includes a section of the Cape Johnson Trough and the Vitiaz Trench (Coleman, 1970). Deep-sea trenches are long, narrow, steep-sided depressions in the ocean bottom in which occur the maximum oceanic depths, approximately 7,300 to over 11,000 m. They typically form in locations where one tectonic plate subducts under another (IHO, 2008). The interaction between water masses and sediments in these highly geologically active environments can create mud volcanoes or seeps that are often associated with chemosynthetic communities, which thrive where cold fluids seep out of the forearc. Cold seep communities have been discovered in inner trench slopes down to depths of 7,000 m in the western Pacific (Van Dover et al., 2012). Submarine depressions such as canyons and trenches are major conduits of terrestrial and marine sediments into the food-deprived deep sea (Harris and Whiteway, 2011). Unique benthic communities form inside the slopes of trenches, with different functional groups dominating at different depths and affected by internal tides, food availability and substratum characteristics (Liao et al., 2017). Canyon heads or the ends of trenches usually have the highest benthic standing stocks among the major habitats on the continental margins, due to an accumulation of organic matter (Wei et al., 2012) and the northern area of this SUMA includes both. These factors create a number of different trophic environments, and a food web study concluded that submarine canyons, which share many features with larger and deeper trenches, may represent important havens of trophic diversity (Demopoulos et al., 2017; Fernandez-Arcaya et al., 2017)

The complex undersea topography is also likely to be, at least partially, driving the high productivity in the pelagic waters above it, as found by numerous studies of long, narrow, steep-sided depressions in the ocean floor (Bouchet et al., 2017; Fernandez-Arcaya et al., 2017; Moors-Murphy, 2014).

Seamounts also occur throughout the SUMA. Generic information about seamounts (see Site OW 1: Southern New Georgia seamounts) is also applicable here. Modelling of benthic species richness (<u>www.aquamaps.org</u>) indicates that the southern edge of the northern part of the SUMA, where seamounts appear to be more concentrated, is among those with relatively high benthic species richness (375–550 species) (VLIZ, 2014a).

#### Type and number of sources (score =3):

There are many peer-reviewed papers and technical reports that describe tuna catch rates and show the site to provide high abundance of tuna; 18 peer-reviewed articles and five reports were used for the justification. There was also one report with general information about tuna biology that was enabled logical inferences about the special nature of the area. One peer-reviewed article describes the geology of the region; a website has modelled the benthic and pelagic species richness of the Solomon Islands EEZ, and shows the position of the Cape Johnson Trough and Vitiaz Trench. Additionally, eight general references were found regarding the unique features of trenches and canyons.

#### Obligations (score = 2):

The Fisheries Management Act 2015 outlines obligations for the protection and sustainable use of fish stocks. The IUCN Red list includes the four species of tuna that aggregate at the site, skipjack tuna are listed as Least Concern, yellowfin and albacore tuna are Near Threatened and bigeye tuna are Vulnerable. There are obligations to protect and sustainably manage many fish species, including some associated with seamounts, within the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998 and Protected Areas Act 2010 and subordinate regulations, including terms and conditions associated with licenses. Marine mammals, some sharks and some large predatory fishes such as tunas found around seamounts are on the IUCN Red List and listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

#### 3.1.1.4 SITE OC 4: CAPE JOHNSON TROUGH PELAGIC WATERS

Upwelling is a process where deep, colder water rises to the warmer surface of the ocean. As winds push water masses across the ocean's surface, deeper water rises to replace the moving surface water. The colder, deeper water is typically rich in nutrients, which "fertilize" surface waters, resulting in an area of high biological productivity (NOAA, 2016).

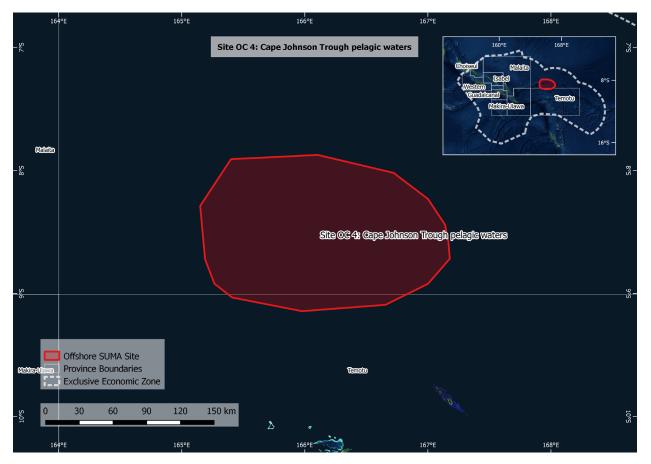


FIGURE 5. SITE OC 4: Cape Johnson Trough pelagic waters

TABLE 4. SITE OC 4: Cape Johnson Trough pelagic waters. Overall score (based upon information, below)

| Geographic Cluster             | Site Name                          | Site Code | Overall Rating |
|--------------------------------|------------------------------------|-----------|----------------|
| Offshore SUMA – Central region | Cape Johnson Trough pelagic waters | OC4       | 6.5            |

#### Geographic boundaries

165.139°E 7.861°S, 167.179°E 9.154°S

#### Geographic description (score = 2):

This site is an area of open ocean that includes the Cape Johnson Trough and the waters above it, roughly 260 km north of Santa Cruz Island. The upwelling area measuring around 130 by 150 km, is located directly south of the northern tuna hotspot (see Site OC 3: Tuna hotspot).

#### Justification (score = 1.5)

Workshop participants identified this site as being a nutrient rich area with a high chlorophyll concentration. The site is located directly above the Cape Johnson Trough. This Trough is part of a trench system that also includes the West Melanesian Trench, North Solomon Trough and Vitiaz Trench. Within this site, at the junction of the North Solomon Trough and Cape Johnson Trough, is the Ulawa Deep, which reaches 6,000 m in depth (Coulson, 2012). This area is included within one of the sub-regionally important sites (the Solomon Deep) of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

Topographic forcing of oceanographic processes can create upwelling, which enhances both pelagic and benthic productivity (De Leo et al., 2010; Dunn et al., 2011). Studies that map chlorophyll-a concentrations show that Solomon Islands waters have elevated chlorophyll content compared with surrounding Pacific Ocean tropical water, which is generally more oligotrophic or nutrient-poor (e.g. Thomas et al., 2012; Yoder et al., 2010). The Cape Johnson Trough is likely to cause the upwelling which, in turn, produces the high productivity necessary to attract large numbers of pelagic species, including not just tuna but other predators, marine mammals and turtles (Bailey et al., 2012).

#### Type and number of sources (score = 2):

There was no information or literature directly about the presence of upwelling at the site, but papers and reports about Site OC 3: Tuna hotspot are also relevant here, and there was general information (1 report and 1 peer-reviewed paper) about species that aggregate around areas of high chlorophyll concentrations. There was one peer-reviewed book chapter that included the Cape Johnson Trough in passing, an ecoregional report, and a small amount of general online information. Many peer-reviewed papers include maps of regional or Pacific-wide chlorophyll concentrations (two are cited as examples), but none pinpoint this location as especially high in chlorophyll. This may be because the scale of the maps is generally too large; no maps were found that present chlorophyll concentrations at a fine enough scale within the Solomon Islands to describe this site particularly.

#### Obligations (score = 1):

The Fisheries Management Act 2015 includes provisions for the protection of fish and invertebrate stocks, including pelagic species which may be abundant at this site. The Environment Act 1998 and the Wildlife Protection and Management Act 1998 include obligations to protect ecosystems in general, and given the high productivity expected of this site, there may be protected species listed under CITES and the IUCN Red List.

#### 3.1.1.5 SITE OC 5: LEATHERBACK TURTLE

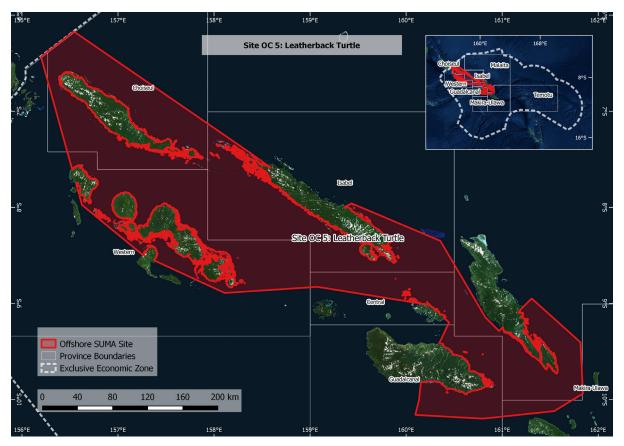


FIGURE 6. SITE OC 5: Leatherback turtle

#### TABLE 5. SITE OC 5: Leatherback turtle. Overall score (based upon information, below)

| Geographic Cluster             | Site Name          | Site Code | Overall Rating |
|--------------------------------|--------------------|-----------|----------------|
| Offshore SUMA – Central region | Leatherback turtle | OC5       | 7.5            |

#### Geographic boundaries

NW corner 156.195°E 6.171°S, SE corner 161.843°E 10.201°S, length appr. 730 km

#### Geographic description (score = 1.5)

This site encompasses the migration tracks of leatherback turtles that frequent Solomon Islands waters, from the northwestern border of the EEZ north of Choiseul, through the centre of the main island group up to south east of the Islands of Guadalcanal and Malaita. It does not include nesting beaches and adjacent shallow waters.

#### Justification (score = 2)

Expert workshop participants identified the track along which leatherback turtles travel through Solomon Islands waters. The leatherback turtle (*Dermochelys coriacea*), distinguished by its shell composed of thin, tough, rubbery skin strengthened by thousands of tiny bony plates, can grow to almost 500 kg and 3 m in length (Sea Turtle Conservancy, 2017). It is the most widely distributed of the sea turtles, feeding on jellyfishes in the open ocean. One of the key regional nesting areas is in the Solomon Islands (Tapilatu et al., 2013; Trevor, 2009), with at least eight important nesting sites (Dutton et al., 2007), and five beaches with > 50 nests that are monitored regularly (Hurutarau et al., 2009) (Figure 7).

A tagging project targeted leatherback turtles nesting on Santa Isabel Island, in acknowledgement of identified knowledge gaps about leatherback turtles in the southwest Pacific (NOAA Fisheries, 2014). During the nesting season, some leatherbacks tend to remain largely in the vicinity of nesting beaches at Santa Isabel, Makira, Malaita, Tetepare and Rendova Islands (Trevor, 2009); at other times they travel across the Pacific or south to the Tasman Front (Benson et al., 2011).

Two regional leatherback populations occur in the Pacific – in the eastern and western Pacific – with multiple nesting locations for both populations occurring in the Solomon Islands (Bailey et al., 2012). Turtles that nest in the southwest Pacific travel to multiple tropical and temperate feeding locations, providing a high degree of connectivity between the Solomon Islands and the wider Pacific Ocean (Benson et al., 2011). Tagging data show turtle tracks through the Solomon Islands group, from Indonesia, Australia and even moving to and from California (Bailey et al., 2012). Bycatch data also shows a high degree of interaction between fisheries and leatherback turtles in the area around the Solomon Islands (Roe et al., 2014).

High-use areas of passage for western Pacific leatherbacks vary, with no distinct 'migratory corridors', but important areas of passage between tropical nesting areas and temperate and tropical foraging areas include the Halmahera, Bismarck, Solomon, and Coral Seas (Benson et al., 2011). Therefore, the waters between the Solomon Islands are the clear link between the primary nesting sites in the Solomon Islands and the nearshore and offshore foraging areas and migration routes.

There has been a continuing decline in nesting leatherback turtles in other parts of the Indo-West Pacific, such as West Papua (Mangubhai et al., 2012; Tapilatu et al., 2013). This makes each nesting site and connecting waters in the region important and worthy of protection. This area is also included within one of the sub-regionally important sites (the Solomon Deep) of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

In addition to the importance of this site for leatherback turtles, this SUMA includes numerous channels, passages and patchy reefs that are known to host spawning aggregations of reef fishes. The ecological importance of spawning aggregations for reef fish populations is described in Site OC 2: Ontong Java. Species known to use parts of this SUMA for spawning include trevallies (*Caranx melampygus*), barracudas (*Sphyraena* sp.) surgeonfishes (*Ctenochaetus striatus*), rabbitfishes (*Siganus punctatus*), snappers (*Lutjanus adetii, L. bohar, L. gibbus, L. rivulatus, Symphorichthys spilurus*), emperors (*Lethrinus erythropterus*), sweetlips (*Plectorhinchus gibbosus, P. obscurus*) and groupers (*Epinephelus fuscoguttatus, E. merra, E. ongus, E. polyphekadion, E. spilotoceps, Plectropomus areolatus, P. leopardus*) (Domeier and Colin, 1997; Hamilton, 2003; Hamilton and Kama, 2004; Johannes and Hviding, 2000).

#### Type and number of sources (score = 3)

For this SUMA we used a general website and two peer-reviewed publications about leatherback turtles, a strategic action plan, an ecoregional report and one website about a tagging program in the Solomon Islands. Five peer-reviewed papers and one report had maps that showed this site as one of the regularly frequented areas in the western Pacific. There was no information describing turtle tracks passing through this area in particular.

#### Obligations (score = 1)

Leatherback turtles are listed under CITES, and under the IUCN Red List as Vulnerable.

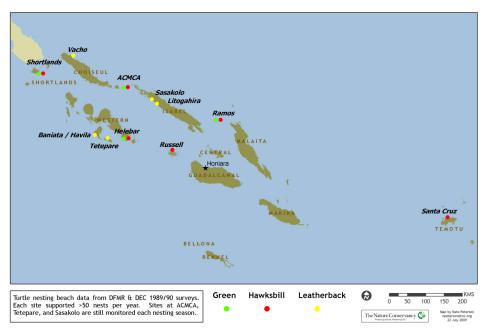


FIGURE 7. Locations of important turtle nesting beaches for green, hawksbill and leatherback turtles in the Solomon Islands. From Huruhatau et al. (2009).

#### 3.1.1.6 SITE OC 6: HYDROTHERMAL VENTS

Hydrothermal vents are the result of seawater percolating down through fissures in the ocean crust in the vicinity of spreading centers or subduction zones (places on Earth where two tectonic plates move away or towards one another) (NOAA, 2016). The cold seawater is heated by hot magma and re-emerges to form the vents (NOAA, 2016).

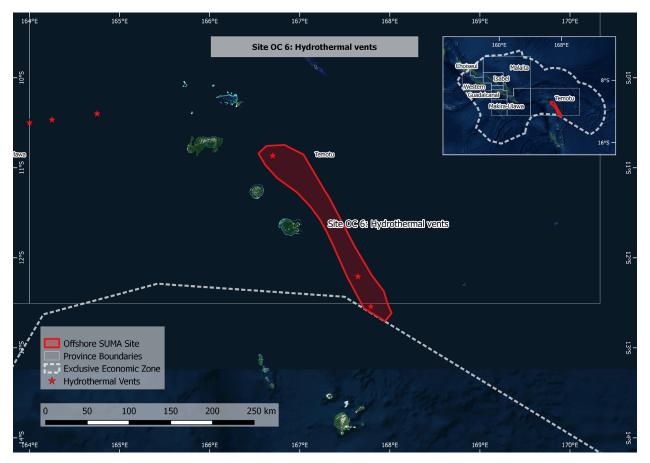


FIGURE 8. SITE OC 6: Hydrothermal vents

| TABLE 6. SITE OC 6: Hydrothermal vents. Overall score (based upon informat |
|--|
|--|

| Geographic Cluster             | Site Name          | Site Code | Overall Rating |
|--------------------------------|--------------------|-----------|----------------|
| Offshore SUMA – Central region | Hydrothermal vents | OC6       | 7.5            |

#### Geographic boundaries

166.5411°E 10.7459°S, 168.0195°E 12.70522°S

#### Geographic description (score = 1.5)

This SUMA lies to the southeast of Santa Cruz Island, surrounding the Stanton Seamount (https://vents-data.interridge. org/ventfield/stanton-seamount). The seafloor in this area is part of the structurally complex northern Vanuatu (previously New Hebrides) Arc, which continues south into the Vanuatu EEZ.

#### Justification (score =2.5)

This SUMA has been included in research cruises that investigated hydrothermal vents and hydrothermal ore forming processes, and the Stanton and Starfish Seamounts were considered geologically especially interesting (McConachy, 2002; McConachy et al., 2002). Habitats in this area are considered highly suitable for cold-water corals (Yesson et al., 2012). The vent fields discovered in this area are associated with localized hydrothermal plumes rich in methane and carbon dioxide, with low concentrations of ferruginous or other hydrothermal particulate matter (McConachy, 2002). Hydrothermal vents in the Solomon Islands are thought to form stepping stones for the dispersal of vent populations

throughout the southwest Pacific (Mitarai et al., 2016); given the patchy and ephemeral nature of hydrothermal vents, laval dispersal is the only form of connectivity available to ecological communities associated with them (Gollner et al., 2017).

Seawater in hydrothermal vents may reach temperatures of over 370° C (NOAA, 2016). Hydrothermal vents have unique ecosystems which derive energy from volcanic gases rather than sunlight (<u>https://www.cbd.int/doc/meetings/</u>mar/ebsaws-2014-01/other/ebsaws-2014-01-azores-brochure-en.pdf Accessed 5 October 2017). These areas are very productive, although small in spatial extent and relatively ephemeral – perhaps lasting some decades (Vrijenhoek, 1997). The size of the vent communities is small due to reliance upon the reach of the energy release from the volcanic activity (Vrijenhoek, 1997). Their ephemeral nature is inherent due to the reliance upon that volcanic activity, which moves as the tectonic plates of the earth move (Vrijenhoek, 1997). Whilst exact locations of extant hydrothermal vents may move, they will always be located at spreading centres or subduction zones – where magma meets the sea. Biomass is high and most of the animals are unique to the vent environments, and endemic to the specific area, but they are confined to small areas around the vents (Gollner et al., 2017; Little and Vrijenhoek, 2003; Vrijenhoek, 1997). Different hydrothermal vents have also been shown to host different meio- and macrofaunal communities depending upon the specific environmental parameters (e.g. temperature, metal concentrations, concentrations of reduced chemicals, oxygen concentration, as well as level of variation in all of these parameters space and time) (Gollner et al., 2015). Also, whilst macrofaunal species occur primarily at vents and are generally restricted to this habitat, meiofaunal species are distributed more widely and evenly across proximate and distant seafloor habitats and are less restricted to vent habitats (Gollner et al., 2015).

New work shows ecological linkages between dead hydrothermal vents and the adjacent environment – indicating potentially essential connectivity between these and also other deep-sea habitats (Klose et al., 2015). Hydrothermal vents have recently also been found to act as a recycling and decomposition systems for dissolved organic carbon (DOC), an important constituent of the global carbon pool (Hawkes et al., 2015). If the vents are disturbed, this carbon could be released and entire ecosystems can be destroyed very quickly. Experiments carried out in both the Peru basin and the Clarion Clipperton Zone show that even though mobile species may return after disturbance, sessile species do not recover (Bluhm, 2001; Gollner et al., 2017; ISA, 1999; Kaneko et al., 1997; Thiel et al., 2001).

A video from a Pacific hydrothermal vent (albeit the eastern Pacific) is available here:

#### https://ocean.si.edu/ocean-videos/hydrothermal-vent-creatures

Photos of hydrothermal vent animals are available here: http://deepseaphotography.com/downloads/category/ hydrothermal\_vent\_animals

#### Type and number of sources (score = 2.5)

The sources for hydrothermal vents found and used here include two reports that are specific to the Solomon Islands, but from a geologic, rather than biological, point of view. Mapping of cold-water coral habitat included this SUMA. A further, peer-reviewed, article mentions Solomon Islands hydrothermal vents as a stepping stone to disturbance, but the primary focus was the Japanese region. The other source information is not specific to the Solomon Islands, but applies to all hydrothermal vents and includes four peer reviewed papers, a NOAA website and one of the experts from the workshop.

#### Obligations (score = 1)

There is no specific legal framework to protect hydrothermal vents, but the Solomon Islands is a signatory to the United Nations Convention on the Law of the Sea (UNCLOS), which has regulatory frameworks relating to deep sea resource exploitation (see also http://eu-midas.net/sites/default/files/downloads/Briefs/MIDAS\_brief\_legal.pdf).

#### 3.1.1.7 SITE OC 7: ULAWA DEEP

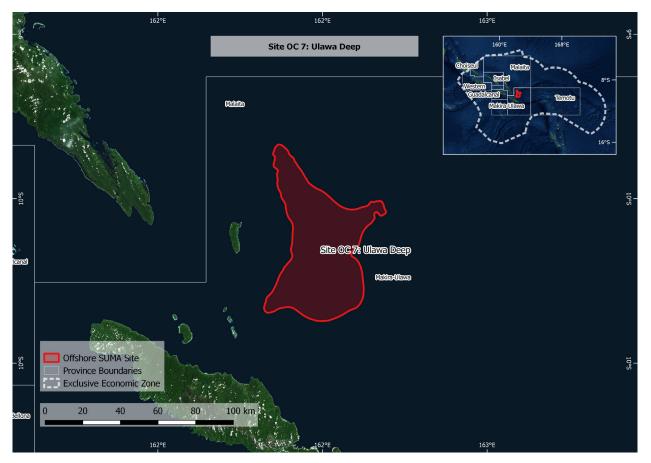


FIGURE 9. SITE OC 7: Ulawa Deep

| TABLE 7. SITE OC 7: Ulawa Deep. C | Overall score (based | upon information, below) |
|-----------------------------------|----------------------|--------------------------|
|-----------------------------------|----------------------|--------------------------|

| Geographic Cluster             | Site Name  | Site Code | Overall Rating |
|--------------------------------|------------|-----------|----------------|
| Offshore SUMA – Central region | Ulawa Deep | OC7       | 5.5            |

#### Geographic boundaries

162.1153°E 9.3363°S, 162.7090°E 10.1954°S,

#### Geographic description (score = 2)

At the eastern end of the main Solomon Island chain, the trench system (composed of the West Melanesian Trench, the North Solomon Trough, the Cape Johnson Trough and Vitiaz Trench) forms a sharp angle and reaches a depth of up to 6,000 m. The SUMA is the abyssal area at depths between 4,000 and 6,000 m and the waters above.

#### Justification (score = 1)

The abyssal zone is a unique environment found in the deepest oceans on earth; the only deeper habitats are hadal zones, found in the deepest trenches (see also Site OC 3: Tuna hotspots). There is no specific information to the Ulawa Deep or the abyssal zone in the Solomon Islands, apart from its mention in geological references (Coulson, 2012). The abyssal zone – both benthic and pelagic – is governed by a complete lack of light, low nutrients and relatively constant temperatures between 2° to 3° C (Menzies et al., 1973). The abyssal zone is believed to be a major reservoir of biodiversity, with life forms uniquely adapted to extreme environmental conditions (Gage, 2004; Linse et al., 2003; Nozawa et al., 2006). Abyssal plains have significant influence upon ocean carbon cycling, dissolution of calcium carbonate, and atmospheric  $CO_2$  concentrations (Smith et al., 2008). The structure of abyssal ecosystems is strongly influenced by the availability of marine snow, or particulate organic matter sinking from shallower depths (Smith et al., 2008).

#### Type and number of sources (score = 1.5)

Only one reference was found that specifically mentions the Ulawa Deep. Each abyssal habitat hosts unique and ephemeral communities; therefore there are few publications that describe abyssal biodiversity and ecosystem values in general. Six peer-reviewed references were used to highlight these attributes.

#### Obligations (score = 1)

There is no specific legal framework to protect abyssal habitats, but the Solomon Islands is a signatory to the United Nations Convention on the Law of the Sea (UNCLOS), which has regulatory frameworks relating to deep sea resource exploitation (see also http://eu-midas.net/sites/default/files/downloads/Briefs/MIDAS\_brief\_legal.pdf).

#### 3.1.2 Offshore - Eastern Region

#### 3.1.2.1 SITE OE 1: TIKOPIA

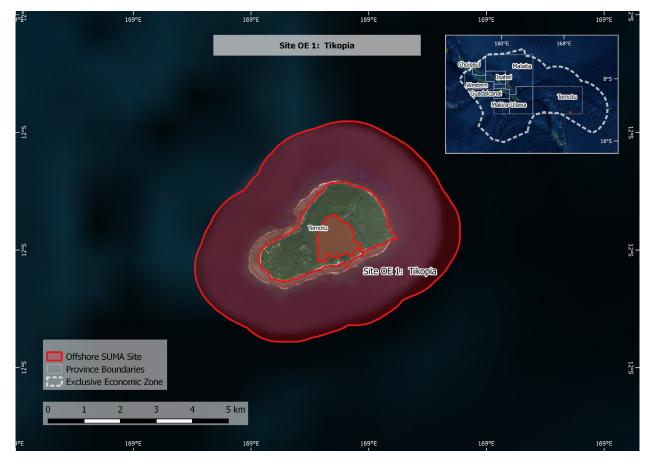


FIGURE 10. SITE OE 1: Tikopia

| TABLE 8. SITE OE 1: | Tikopia (based u | pon information, below) |
|---------------------|------------------|-------------------------|
|---------------------|------------------|-------------------------|

| Geographic Cluster             | Site Name | Site Code | Overall Rating |
|--------------------------------|-----------|-----------|----------------|
| Offshore SUMA – Eastern region | Tikopia   | OE1       | 6.5            |

#### Geographic boundaries

168.7957°E 12.2671°S, 168.8632°E 12.3234°S

#### Geographic description (score = 3)

Tikopia Island is an oceanic island of 5 km<sup>2</sup>, approximately 360 km southeast of Santa Cruz Island. The island is the remnant of an extinct volcano, reaching a maximum elevation of 380 m. The population of Tikopia is approximately 1,200, distributed among more than 20 villages mostly along the coast. The SUMA is the surrounding fringing coral reef and the large and nearly fully-enclosed lagoon.

#### Justification (score = 1)

Much of the information about Tikopia Island concerns cultural, geologic and historic aspects, because of its position as a Polynesian outlier within the Melanesian region (Kirch, 2007). This site is noteworthy for its isolation, and as the easternmost island and reef complex in the country. Due to the isolation, there is an expectation of the presence of endemics. Modelling of benthic species richness (www.aquamaps.org) indicates that the area encompassing Tikopia has high benthic species richness (330–380 species) (VLIZ, 2014a). Workshop participants nominated it for its high abundance of *bêche-de-mer*, and its importance to the commercial fishery for these species (Holland, 1994). Polynesian islands have been known to support different assemblages compared with Melanesian Islands (Kirch, 2007). There has been a reduction in marine fauna over the years (Kirch, 2007), due to the exploitation of fish on the relatively small area of fringing reef by local communities. The largest village is Matautu on the west coast; historically, the island has supported a high-density population of a thousand or so for hundreds of years, with population increase prevented by strict social controls (Firth, 1930).

#### Type and number of sources (score = 1.5)

There were only two sources, excluding the workshop experts, that had a small amount of information on Tikopia; the AquaMaps model has mapped benthic species richness for this area, and a further source mentioned the status of this SUMA as important for its *bêche-de-mer* stocks.

#### Obligations (score = 1)

Coral reefs host a number of organisms, including sea cucumbers, listed on the IUCN Red List and under CITES. The Fisheries Act 1998 includes provisions for the management of macroinvertebrate stocks.



#### 3.1.2.2 SITE OE 2: VANIKORO

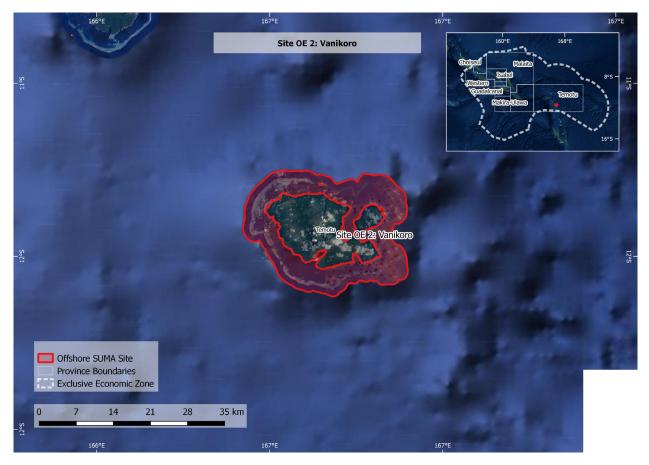


FIGURE 11. SITE OE 2: Vanikoro

| <b>TABLE 9.</b> SITE OF 2: Vanikoro. Overali score (pased upon information, pe | ikoro. Overall score (based upon information, k | below | v) |
|--|---|-------|----|
|--|---|-------|----|

| Geographic Cluster             | Site Name | Site Code | Overall Rating |
|--------------------------------|-----------|-----------|----------------|
| Offshore SUMA – Eastern region | Vanikoro  | OE2       | 7              |

#### Geographic boundaries

166.7539°E 11.5508°S, 167.0394°E 11.7693°S

#### Geographic description (score = 2.5)

Vanikoro Island is located 118 km to the southeast of the Santa Cruz group, in the Temotu Province. Santa Cruz is a group of 3 islands with a combined area of some 20 km<sup>2</sup> surrounded by a single belt of barrier coral reef which has a total area of 173 km<sup>2</sup>. The two major islands are inhabited. The SUMA includes the shallow marine habitats surrounding Vanikoro Island.

#### Justification (score = 2)

Workshop participants identified this group of islands as hosting a significant population of dugongs. Dugongs (*Dugong dugon*) are keystone herbivores of tropical and subtropical coastal ecosystems, and crucial to the dispersal of seagrasses (Tol et al., 2017). They are at high risk of local extinction in several parts of their range, due to human impacts such as direct exploitation, habitat loss, pollution and boat strike (Marsh and Sobtzick, 2015). Dugong numbers have been estimated for 20 countries using aerial surveys, yet in the Western Pacific region, information on dugong abundance is largely anecdotal (Cleguer et al., 2017).

The only information on the dugong population in the Solomon Islands is based on sets of interviews with local coastal communities conducted in 2009 and 2010, including sightings and levels of direct take (http://www.dugongconservation. org/where-we-work/solomon-islands/). In the 2009 survey of people from six provinces, a total of 742 dugongs had been sighted in the preceding 10 years (SPREP, 2010). The highest number of dugong sightings occurred in north-east Choiseul, Honiara Bay, northern Malaita, Marovo Lagoon and the Samasodu coast of Isabel Province. Malaita Province yielded the highest number of dugong sightings, and over half the seagrass recorded in the Solomon Islands. The presence of seagrass beds in Vanikoro was noted during surveys off Buma Village (Hooper, 2015). A GEF-funded project aims to facilitate better understanding about dugongs in various locations, including Vanikoro (GEF-UNEP-CMS, 2016). The coral reefs in Vanikoro have a high diversity of fish and high density of pelagic predators that are absent in many other areas of the Solomon Islands (Bruckner, 2014), indicating a healthy environment and limited human impacts, which is likely to enhance the potential for dugong populations to persist. Modelling of benthic species richness (www. aquamaps.org) indicates the area encompassing Vanikoro is among those with the highest benthic species richness (550–950 species) (VLIZ, 2014a); the deep slopes of Vanikoro have habitat considered highly suitable for cold-water corals (Yesson et al., 2012).

In general, dugongs are still hunted for food in the Solomon Islands, and there is limited awareness about their importance and conservation status.

#### Type and number of sources (score = 1.5)

Sources used for this SUMA include three general references and a website about the importance and conservation status of dugongs, one report and two maps about the state of coral reef communities, benthic species richness and cold-water coral habitat suitability on Vanikoro, and one website and one report about dugongs in the Solomon Islands. The website mentioned an SICCP and Oceanwatch joint project to conduct surveys on sightings and occurrence of dugongs at Vanikoro, corroborated by a progress report, which has yet to begin.

#### Obligations (score = 1)

There are current dugong conservation initiatives conducted under Community-Based Resource Management (CBRM) efforts, national efforts led by the Ministry of Environment, and the Solomon Islands Coral Triangle Initiative. National Plan of Action (NPoA) encourages a people-centred integrated resource management approach to improve food security, sustainable use, adaptive capacity (in the face of climate change and other pressures), and the conservation of threatened species and habitats (MECM/MFMR, 2010). Dugongs are protected under both national and international legislation. The Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998 and Protected Areas Act 2010 all have provisions for the protection of dugongs, and they are listed under CITES and classified as vulnerable in the IUCN Red List.

# 3.1.3 Offshore - Western Region

# 3.1.3.1 SITE OW 1: SOUTHERN NEW GEORGIA SEAMOUNTS

Seamounts are "a discrete (or group of) large isolated elevation(s), greater than 1,000m in relief above the sea floor, characteristically of conical form" (IHO, 2008). Hills on the seabed at abyssal depths having peaks that rise >300 to <1,000 m above the seafloor were mapped as abyssal hills (Harris et al., 2014); they are abundant between the mid-ocean ridges and the comparatively flat abyssal plains.

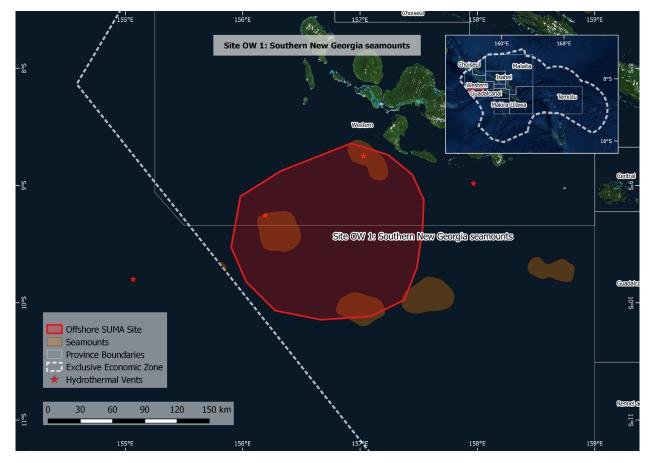


FIGURE 12. SITE OW 1: Southern New Georgia seamounts

TABLE 10. SITE OW 1: Southern New Georgia seamounts. Overall score (based upon information, below)

| Geographic Cluster             | Site Name                      | Site Code | Overall Rating |
|--------------------------------|--------------------------------|-----------|----------------|
| Offshore SUMA – Western region | Southern New Georgia seamounts | OW1       | 7.5            |

### Geographic boundaries

155.9017°E 8.6407°S, 157.5434°E 10.1447°S

### Geographic description (score =1)

This SUMA is located south of the island of New Georgia, with a diameter of approximately 100 km. It encompasses an area of open ocean known for a number of seamounts, including the Coleman Seamount.

### Justification (score = 2.5)

Workshop participants have identified this area as having high primary productivity and being a tuna hotspot, which is probably facilitated by the presence of seamounts and undersea volcanoes (Exon and Johnson, 1986). The special and/ or unique nature of this area is therefore likely to be a combination of the properties of seamounts and their interaction

with pelagic systems, which promotes high productivity. Modelling of pelagic species richness (www.aquamaps. org) indicates that this SUMA is among the areas with high pelagic species richness (100–110 species), and that the underlying geomorphology is highly suitable for cold-water corals (VLIZ, 2014b; Yesson et al., 2012). This area is included within one of the sub-regionally important sites (the Solomon Deep) of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

Evidence of the high tuna densities comes primarily from fisheries information, and although the two areas do not overlap, information about albacore tuna in Site OC 3: Tuna hotspot also applies here.

Information about seamounts in this area is focused on the Coleman Seamount, an active undersea volcano rising 2.8 km above the surrounding sea floor that was originally discovered in 1985/86 (http://volcano.si.edu/volcano. cfm?vn=255053), and the Kana Keoki Seamount, which reaches an elevation of 2.4 km above the sea floor (Mann et al., 1998). These seamounts' pinnacles are currently at depths of 717 m and 700 m, respectively. This area has been widely studied from a geological perspective; an early survey identified it as having a highly complex seafloor (Tiffin et al., 1985). It is one of four places where an active or recently active spreading ridge is being subducted beneath an island arc, and is tectonically highly active (Mann et al., 1998). The Solomon Islands has 157 underwater features as classified by Allain et al. (2008); it is unknown how many of these are present within this SUMA.

Seamounts usually have steep slopes which can cause the upward movement of nutrients from the deep ocean (upwellings) and create "hotspots" of biodiversity and productivity (Dunstan et al., 2011; Morato et al., 2010). They often attract deep-water and pelagic species such as tuna, deep-water snapper, sharks, whales and dolphins (Baker and Beaudoin, 2013; Morato and Clark, 2007; Stone et al., 2004). Longline and pole-and-line fishing vessels often target seamounts specifically, as aggregations of tuna are attracted to the high productivity typical of waters above them (Passfield and Gilman, 2010). Telemetry studies have shown a high levels of individual fidelity to specific sites, such as seamounts, by highly migratory marine species (e.g. humpback whales), and basin-wide movements can be directed towards these locations (Garrigue et al., 2010; Luschi, 2013).

Cetaceans are frequently encountered in the Solomon Islands, and it is likely that up to 30 species – one-third of the world's known cetacean species – inhabit the area (Table 11). They are often found in open ocean environments such as oceanic islands, oceanic fronts and upwellings, seamounts, guyots, canyons, deep-sea trenches and the water column itself. These diverse habitats occur in close proximity to one another because of the Solomon Islands' narrow continental shelf, abundant oceanic islands and extreme depth gradients. The unique combination of coastal-oceanic habitat diversity and the proximity of deep oceanic waters to shore, creates ideal habitats for many cetacean species (Hyrenbach et al., 2000; Kahn, 2001; Malakoff, 2004).



| Species                    | Common Name                  | Confirmed | IUCN           |
|----------------------------|------------------------------|-----------|----------------|
| Balaenoptera musculus      | Blue whale                   | Yes       | Endangered     |
| Globicephala macrorhynchus | Short-finned pilot whale     | Yes       | Data Deficient |
| Grampus griseus            | Risso's dolphin              | Yes       | Least Concern  |
| Lagenodelphis hosei        | Fraser's dolphin             | Yes       | Least Concern  |
| Orcinus orca               | Orca                         | Yes       | Data Deficient |
| Peponocephala electra      | Melon-headed whale           | Yes       | Least Concern  |
| Pseudorca crassidens       | False killer whale           | Yes       | Data Deficient |
| Stenella attenuata         | Pantropical spotted dolphin  | Yes       | Least Concern  |
| Stenella coeruleoalba      | Striped dolphin              | Yes       | Least Concern  |
| Stenella longirostris      | Spinner dolphin              | Yes       | Data Deficient |
| Steno bredanensis          | Rough-toothed dolphin        | Yes       | Least Concern  |
| Tursiops sp.               | Bottlenose dolphin           | Yes       | Least Concern  |
| Physeter macrocephalus     | Sperm whale                  | Yes       | Vulnerable     |
| Balaenoptera brydei        | Bryde's whale complex        | No        | Data Deficient |
| Balaenoptera edeni         | Bryde's whale complex        | No        | Data Deficient |
| Delphinus spp.             | Common dolphin               | No        | Least Concern  |
| Megaptera novaeangliae     | Humpback whale               | No        | Least Concern  |
| Mesoplodon densirostris    | Blainville's beaked whale    | No        | Data Deficient |
| Orcaella brevirostris      | Irrawaddy dolphin            | No        | Vulnerable     |
| Ziphius cavirostris        | Cuvier's beaked whale        | No        | Least Concern  |
| Balaenoptera physalus      | Fin whale                    | No        | Endangered     |
| Feresa attenuata           | Pygmy killer whale           | No        | Data Deficient |
| Kogia spp.                 | Pygmy and dwarf sperm whales | No        | Data Deficient |
| Balaenoptera borealis      | Sei whale                    | No        | Endangered     |

### TABLE 11. Cetaceans listed for the Solomon Islands (Kahn, 2006; Miller, 2006).

Many southwest Pacific seamounts have peaks or slopes within the depth range of the deep scattering layer (DSL). The DSL is a mix of zooplankton (such as shrimps, euphausiids, and copepods), mesopelagic fish (such as lanternfish) and small squid that migrate vertically upwards at night and down during the day. Where the DSL makes contact with the seamount summit and upper flanks, there is a zone of interaction between pelagic and benthic ecosystems. Other seamounts extend into the photic zone, where light penetration allows growth or aggregation of light-dependent organisms (Baker and Beaudoin, 2013). Three of the seamounts in this SUMA have summits that reach into the bathypelagic zone (1,000–4,000 m), and one has a summit in the mesopelagic zone (200–1,000 m).

Many seamounts exhibit a positive biological cascade effect, where the elevated levels of primary productivity and higher concentrations of zooplankton support high abundance of benthic fauna and consequently large populations at higher trophic levels (Stone et al., 2004). Benthic taxa living on seamounts can include biogenic habitat-forming corals and sponges, anemones, crabs, sea stars, sea urchins, brittle stars, sea cucumbers and feather stars (Baker and Beaudoin, 2013; Clark et al., 2011a; CSIRO, 2008; Rogers, 2004). Modelling of benthic species richness (www.aquamaps.org) indicates that this SUMA is among the areas with the highest benthic species richness (550–950 species) (VLIZ, 2014a).

The deep-water seamount communities often have a high level of endemism, and are likely to have different fauna on the leeward and windward sides (Dunstan et al., 2011; Marchese, 2014; Stone et al., 2004). Species may be restricted to a chain of seamounts, to a few adjacent seamounts or even to a single seamount (Stone et al., 2004). Rates of endemism vary, from a low of 5–9% up to 52% (Stone et al., 2004). Richer de Forges et al. (2000) found that adjacent seamounts in New Caledonia shared only 21% of species; and seamounts approximately 1,000km apart shared only 4% of species.

However, it is not necessary for seamounts and seamount-like features (e.g. ridges) to be isolated or large to support high levels of endemism. Work by Koslow et al. (2001) and Rowden et al. (2002) (both in Stone et al. (2004)) showed that even relatively small underwater hills (100 to 400m above the seafloor) had rates of endemism of 15 to 35%. Among non-endemic species, research has shown genetic connectivity in animals (e.g. tuna and other fish) between seamounts, and between seamounts and nearby non-seamount areas (Stone et al., 2004). This indicates that some populations of animals found on seamounts are unlikely to be self-sustaining, and may rely on long-range larval dispersal and adult movement (Ayre and Hughes, 2004).

How biodiversity, including endemism, varies on seamounts, ridges and hills with parameters such as depth, surface productivity, temperature, substrate composition, organic flux to the seafloor, currents, oxygen level, latitude and other factors is unknown and unpredictable (Baker and Beaudoin, 2013; Stone et al., 2004). Species new to science continue to be discovered each time seamounts are sampled and, due to the longevity of many of those species, they may provide valuable information regarding the workings of the ocean and the source of some parts of life on Earth (CSIRO, 2008; Stone et al., 2004). Harris et al. (2014) has classified the seamounts of the world based upon at least some of the physical parameters likely to determine the nature and diversity of species inhabiting them (e.g. depth of seamount base and summit, slope, size, height above seabed, shape of summit, etc). Globally, 11 types of seamounts occur (Harris et al., 2014) and this SUMA contains two types, both in Group 3 (one seamount in the category of "intermediate size, large, tall and deep; and three seamounts in the category of "intermediate size, largest basal area and deepest peak depth"). This area also covers a section on the San Cristobal Trench (Chadwick et al., 2009), which further contributes to the unique and special features of this site (See Site OC 3: Tuna hotspot).

See a video on seamounts here: https://www.youtube.com/watch?v=0NUaxdxt2sE

See pictures from seamounts here: http://ngm.nationalgeographic.com/2012/09/seamounts/interactive-gallery

### Type and number of sources (score = 2)

General sources (16) were used for the importance of seamounts in general, one map showed benthic and pelagic species richness and cold-water coral suitability in the area, and knowledge about tunas and high productivity areas was shared with Site OC 3: Tuna hotspot. One website and two peer-reviewed papers referred to the Coleman Seamount, but from a geological point of view. There are many references about the Woodlark Basin and the geological / tectonic particularities of the site, including about the undersea volcanoes, but no direct biological information. Two peer-reviewed papers and three reports were used to highlight the importance of Solomon Islands waters, and seamounts in particular, to cetaceans.

### Obligations (score = 2)

There are obligations to protect and sustainably manage many fish species, including some associated with seamounts, within the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998 and Protected Areas Act 2010 and subordinate regulations, including terms and conditions associated with licenses. Marine mammals, some sharks and some large predatory fishes such as tunas found around seamounts are on the IUCN Red List (IUCN, 2016) and listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

# 3.1.3.2 SITE OW 2: NORTHERN WATERS

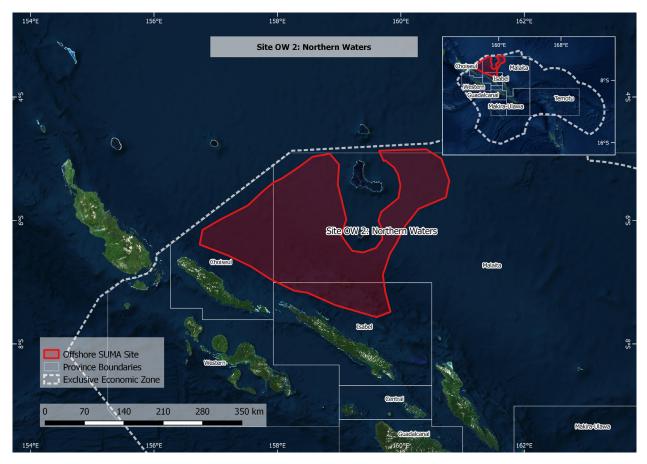


FIGURE 13. SITE OW 2: Northern waters

### TABLE 12. SITE OW 2: Northern waters. Overall score (based upon information, below)

| Geographic Cluster             | Site Name       | Site Code | Overall Rating |
|--------------------------------|-----------------|-----------|----------------|
| Offshore SUMA – Western region | Northern waters | OW2       | 6              |

### Geographic boundaries

156.7404°E 4.8501°S, 160.7851°E 7.5661°S

### Geographic description (score = 1)

This SUMA, in northern offshore waters of the western region, is defined as an area roughly 500 by 300 km to the north of Choiseul and Santa Isabel Islands. It encompasses Roncador Reef (Site OC 1: Roncador Reef), the North Solomon Trough and a part of the Ontong Java plateau (Coulson, 2012).

### Justification (score = 2)

A number of features define this SUMA, including Roncador Reef (Site OC 1: Roncador Reef), high numbers of tuna (therefore this SUMA has a similar justification to Site OC 3: Tuna hotspot – the northern area) and high benthic species richness (VLIZ, 2014a). The deep slopes of the main islands bordering these waters, Choiseul and Santa Isabel, are predicted to be highly suitable for cold-water corals (Yesson et al., 2012). It also falls within one of the subregionally outstanding sites in the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005; WWF, 2004).

### Type and number of sources (score = 2)

The sources for this site overlap with the general reports, websites, maps and publications used for Site OC 3: Tuna

hotspot, Roncador Reef (Site OC 1: Roncador Reef) and Site OC 5: Leatherback turtle. Additionally, the Bismarck Solomon Sea Ecoregion report includes this area.

### Obligations (score = 1)

The Fisheries Management Act 2015 outlines obligations for the protection and sustainable use of fish stocks. The IUCN Red list includes the four species of tuna that aggregate at the site; skipjack tuna are listed as Least Concern and yellowfin tuna are Near Threatened.

## 3.1.3.3 SITE OW 3: KAVACHI

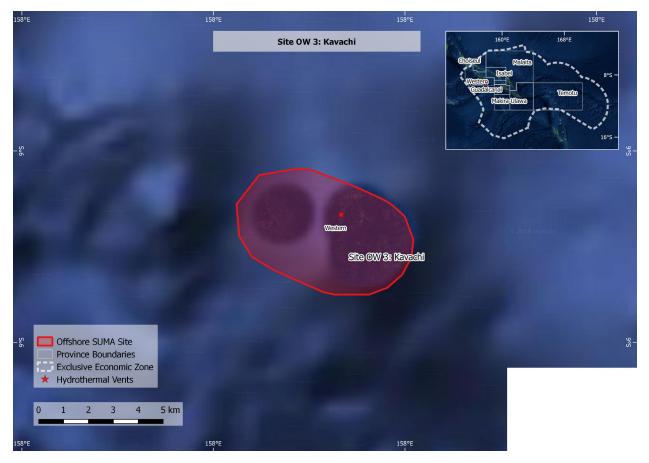


FIGURE 14. SITE OW 3: Kavachi

| TABLE 13. SITE OW 3: Kavachi. Overall score (based upon information | , below) |
|---|----------|
|---|----------|

| Geographic Cluster             | Site Name | Site Code | Overall Rating |
|--------------------------------|-----------|-----------|----------------|
| Offshore SUMA – Western region | Kavachi   | OW3       | 10.5           |

### Geographic boundaries

157.9284°E 8.9664°S, 157.9930°E 9.0122°S

### Geographic description (score = 3)

Kavachi undersea volcano is located south of Vangunu Island, and is one of the most active submarine volcanoes in the south-west Pacific Ocean. A product of the region's abundant tectonic activity, it is ~30 km northeast of the Woodlark Spreading Centre subduction zone. It rises up to 20 metres below the sea surface from 1,100 m depth and has a basal diameter of 8 km.

### Justification (score = 2.5)

Kavachi volcano is surveyed regularly to record eruptive activity (Global Volcanism Program, 2017) from a geological point of view (Baker et al., 2002); the volcano has become emergent and then been eroded back into the sea at least eight times since its first recorded eruption in 1939. Less information is available about its ecological and biological attributes. Modelling of benthic and pelagic species richness (www.aquamaps.org) indicates the area around Kavachi volcano is among those with the highest benthic species richness (550–950 species) and high pelagic species richness (100–110 species) (VLIZ, 2014a, 2014b). This area is included within one of the sub-regionally important sites (the Solomon Deep) of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005). The deep slopes of the volcano are expected to be highly suitable for cold-water corals (Yesson et al., 2012). The only other active submarine volcanoes that have received scientific attention are Northwest Rota-1 (Chadwick et al., 2010), West Mata (Embley et al., 2014), El Hierro (Santana-Casiano et al., 2013), Kick'em Jenny (Wishner et al., 2005), and Axial Seamount (Xu and Lavelle, 2017). Where biological information is available, it suggests unique ecosystems with communities forced to adapt to frequent catastrophic disturbances in the form of volcanic eruptions.

Active submarine volcanoes often host fauna typical of seamounts and hydrothermal vents, and species diversity is often related to the area of habitat available, the frequency of disruption by volcanic activity and the assemblage at any given time depends on the timing of the last eruption (Wishner et al., 2005). Usually these communities are composed of colonies of shrimps, limpets, and crabs; new species are routinely found (Chadwick et al., 2010). Knowledge about ecological communities on active undersea volcanoes is in its infancy; a biological survey of Kick'em Jenny found a surprising benthic association of a number of shrimp species previously considered mesopelagic (Wishner et al., 2005). Vertically migrating pelagic organisms may 'bump into' seamounts and undersea volcanoes during their daytime descent, providing food for the seamount community; vertically migrating fishes and zooplankton resident on the seamount may rise at night to feed on plankton (Genin, 2004). Like seamounts, undersea volcanoes can significantly affect hydrodynamics, entraining pelagic organisms or directing current flow in specific directions (Xu and Lavelle, 2017).

The summit of Kavachi was most recently described by as being oblong with a pockmarked crater of approximately 75 by 120 m, a rim rising to an average of 24 m depth, and almost uniform flanks with 18° slopes that descend to depths greater than 1,000 m; a secondary summit rises to 260 m depth 1.3 km south-west of the main summit (Phillips et al., 2016). It therefore would be expected to function as habitat similar to a steep seamount with a summit in the photic zone. In 2015, an expedition to film the inside of Kavachi crater recorded chemosynthetic bacteria, reef fish, larvaceans, a sixgill stingray (*Hexatrygon bickelli*) and two species of sharks – silky sharks (*Carcharhinus falciformis*) and scalloped hammerheads (*Sphyrna lewini*) (Phillips et al., 2016). A video of the 2015 expedition is available here: (https://www.youtube.com/watch?v=0e3t18rrjOA).

### Type and number of sources (score = 2)

There are at least three websites describing the characteristics of Kavachi volcano, but they mostly draw on the results of a single expedition, which is also described in a peer-reviewed article. Apart from the dozens of articles, reports and websites describing the tectonics, geology and eruption characteristics of submarine volcanoes, only four had information of a more biological nature. The AquaMaps project mapped benthic species richness in this area.

### Obligations (score = 3)

There are obligations to protect and sustainably manage pelagic and demersal fish species, including some associated with seamounts, within the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998 and Protected Areas Act 2010 and subordinate regulations, including terms and conditions associated with licenses. Marine mammals, some sharks and large predatory fishes such as tunas found around seamounts are on the IUCN Red List (IUCN, 2016) and listed under CITES. The scalloped hammerhead is listed as Endangered, the silky shark as Near Threatened and the sixgill stingray as Least Concern on the IUCN Red List.

# **3.2** INSHORE BIOPHYSICALLY SPECIAL AND/OR UNIQUE MARINE AREAS

All the inshore SUMAs within the Solomon Islands provisional EEZ are depicted in the figure below.

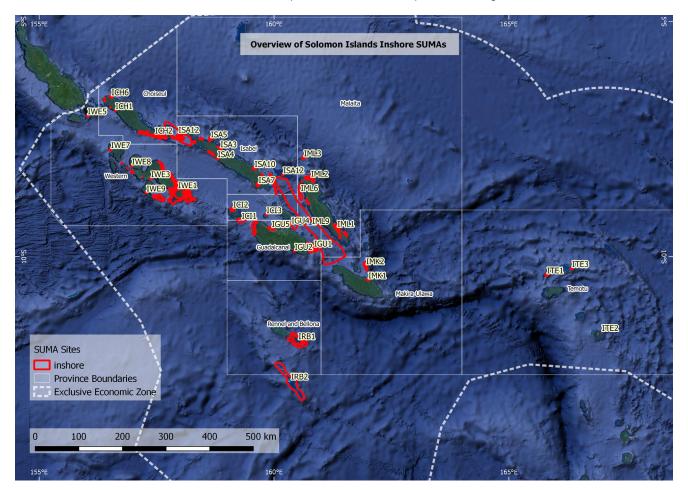


FIGURE 15. Overview of Solomon Islands inshore SUMA sites.

# 3.2.1 Inshore sites - Rennell and Bellona Province

All the inshore SUMAs within Rennell and Bellona Province are depicted in the figure below.

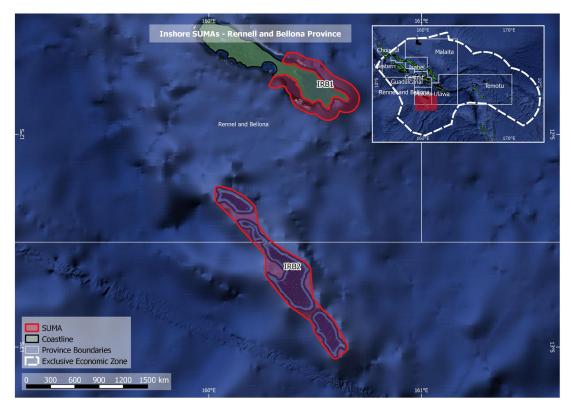


FIGURE 16. Overview of the inshore SUMA sites within Rennell and Bellona Province.

# 3.2.1.1 SITE IRB 1: EAST RENNELL

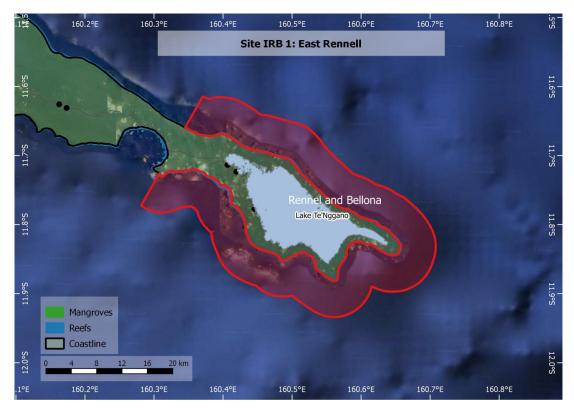


FIGURE 17. SITE IRB 1: East Rennell

### TABLE 14. SITE IRB 1: East Rennell. Overall score (based upon information, below)

| Geographic Cluster                           | Site Name    | Site Code | Overall Rating |
|--|--------------|-----------|----------------|
| Inshore sites - Rennell and Bellona Province | East Rennell | IRB1      | 10             |

### Geographic boundaries

160.2814°E 11.6142°S, 160.7082°E 11.9338°S

### Geographic description (score = 3)

Rennell Island is the larger of two inhabited islands that make up the Rennell and Bellona Province in the southern Solomon Islands. Rennell Island has a land area of 660 km<sup>2</sup>; it is the second largest raised coral atoll in the world, with the largest brackish lake in the insular Pacific (Lake Tegano). Rennell Island has a population of about 1,840 people of Polynesian descent. East Rennell makes up the southern third of Rennell Island. The SUMA covers the East Rennell World Heritage Site, including approximately 37,000 ha of the island and a marine area extending three nautical miles from the coast.

### Justification (score = 2)

This SUMA has been recognised as a World Heritage Site. The flora in East Rennell includes 10 endemic species, and it is the largest raised coral atoll in the world, with the largest lake in the Pacific (15,500 ha). Lake Tegano was the former atoll lagoon, which has been enclosed over time. The lake is brackish, surrounded by mangroves, contains numerous limestone islands and hosts 300 species of diatoms and algae and some endemic species, including an endemic banded sea snake – also known as a sea krait (*Laticauda crockeri*) – that occurs nowhere else (Smith, 2011). There is believed to be an underground channel connecting the eastern end of the lake with the sea, allowing the migration of elvers into the lake and adult eels to the sea (Leary, 1991). The lake hosts many species of waterbirds and seabirds (Leary, 1991). Coconut crab (Birgus latro) and two other species of land hermit crabs (Coenobita sp.) occur on the island. The shallow coral reefs surrounding the island host giant clams, trochus, lobsters, sea cucumbers and fish that people rely on for subsistence (Dingwall, 2012; Wein, 2007). East Rennell is considered a stepping stone in the migration and evolution of species in the western Pacific, and is an important site for island biogeography (Kuijper, 2003), and is listed as one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

There is little knowledge about the coral reefs surrounding East Rennell (See Site OC 1: Roncador Reef for general information on the value of coral reefs in the Solomon Islands), but it is considered one of the finest examples of a raised coral atoll in the world (Leary, 1991). Ecological surveys of the East Rennell coral reefs were recommended in the World Heritage Area Management Plan (Wein, 2007), but it is unclear whether these surveys have occurred.

There is international recognition of the threats affecting the special and/or unique values of East Rennell, including logging, overharvesting of resources, runoff and introduced pests (Dingwall, 2012). The logging and associated runoff are likely to be impacting upon the surrounding fringing reef (Hamilton et al., 2017). Even introduced tilapia (Tilapia mozambica), once plentiful in the lake, are in decline (Smith, 2011).

### Type and number of sources (score = 2)

There are four sources that outline the World Heritage values of East Rennell, and one that highlights its ecoregional significance, but most of them have focused on terrestrial values and or threats. One report gave some detailed information about Lake Tegano. Marine sources, apart from expert knowledge at the workshop, were limited; it is assumed that the references used for Site OC 1: Roncador Reef are also suitable for this site, as they were very general.

### Obligations (score = 3)

The East Rennell World Heritage Site was inscribed on UNESCO's World Heritage List on December 5, 1998. All land, islands and marine habitats within the property are under customary ownership, which is acknowledged in the Constitution of the Solomon Islands and the 1995 Customs Recognition Act. Coral reef organisms and species living in the lake, including those harvested for subsistence (e.g. giant clams, sea cucumbers, fishes) and threatened species, are also protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998, and listed under CITES and in the IUCN Red List. The endemic sea krait is listed as Vulnerable.

# 3.2.1.2 SITE IRB 2: INDISPENSABLE REEFS

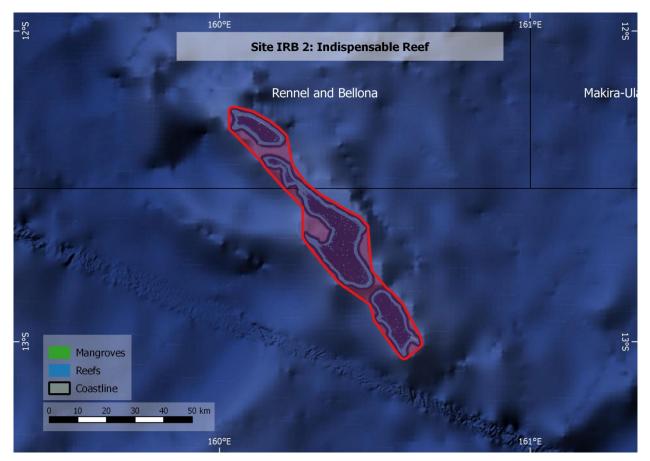


FIGURE 18. SITE IRB 2: Indispensable Reefs

| Geographic Cluster                           | Site Name           | Site Code | Overall Rating |
|--|---------------------|-----------|----------------|
| Inshore sites - Rennell and Bellona Province | Indispensable Reefs | IRB2      | 9.5            |

### Geographic boundaries

160.0305°E 12.2445°S, 160.6520°E 13.0554°S

### Geographic description (score = 3)

The Indispensable Reefs are a chain of three large coral atolls in the Coral Sea spread over a length of 114 km, approximately 50 km south of Rennell Island, separated from it by the Rennell Trough. The atolls enclose deep lagoons. North Reef is 18 by 7 km, and its rim has two narrow openings in the north and northwest, with no islets. The reef has a total area of 100 km<sup>2</sup>, including the lagoon and reef flat. Middle Reef has a total area of 300 km<sup>2</sup>. A small islet (Little Nottingham Islet) is located near the center of the reef. South Reef is 21 by 8 km, with a total area of 100 km<sup>2</sup>.

### Justification (score = 1.5)

The Indispensible Reefs are possibly the least known reefs in the Coral Sea. Expert workshop participants identified it for its highly productive fish populations and high value sea cucumbers, and as a part of turtle migratory routes. As a series of remote coral reef atolls, they are likely to share similar values with Site OC 1: Roncador Reef, but with a combination of Coral Sea and Coral Triangle assemblages. Unfortunately, the information available for this site is mostly concerned with illegal fishing of coral reef invertebrates by Korean fishing vessels (Sulu et al., 2004). These isolated reefs, together with Rennell and Bellona Islands, are important stepping stones in the movement of species between the Great Barrier Reef and the Western Pacific.

A review about the Coral Sea indicated that larval dispersal pathways from eastern PNG southeast along the Solomon Islands, Vanuatu and New Caledonia island chains and from PNG southward to the GBR across the Torres Strait are likely for some species (e.g. some corals or fish), given the proximity of available habitats (Ceccarelli and et al, 2013). Larval transport of shallow benthic invertebrates (e.g. sponges and clams) may have occurred westward from the Pacific, with reefs forming stepping stones across the Coral Sea (Benzie, 1998; Treml et al., 2008) using jets of the South Equatorial Current (Kessler and Cravatte, 2013).

On the other hand, isolated reefs such as the Indispensable Reefs are more likely to be largely reliant on self-seeding (Ayre and Hughes, 2004), promoting speciation and endemism; species with limited larval dispersal capabilities have developed genetically distinct populations at short spatial scales (Planes et al., 2001). For example, separation is indicated in the marine flora of the Chesterfield and Bellona Plateau, the Loyalty Islands versus the New Caledonian coastal reefs and lagoons, with less than 25% of species in common (Ceccarelli and et al, 2013).

It is likely that the Indispensible Reefs host assemblages governed by a combination of extended larval duration, relatively high larval survival, and self-seeding, and they are potentially dominated by genetically isolated species.

### Type and number of sources (score = 2)

Only workshop experts and one technical report had a small amount of information about the Indispensable Reefs. Additional references used to infer the value of this site were general reports and articles about coral reefs in the Solomon Islands, the Coral Triangle and the Coral Sea.

### Obligations (score = 3)

Some coral reef fishes and macroinvertebrates are listed on the IUCN Red List and under CITES; the specific species for which this SUMA was identified are unknown. The Fisheries Management Act 2015 includes provisions for the protection of fish and invertebrate stocks; the Environment Act 1998 and the Wildlife Protection and Management Act 1998 also include coral reefs and any associated species listed under the Acts. Turtles are listed under CITES and on the IUCN Red List (green turtles are Endangered, hawksbill turtles are Critically Endangered, leatherback and loggerhead turtles are Vulnerable).

# 3.2.2 Inshore Sites - Guadalcanal Province

All the inshore SUMAs within Guadalcanal Province are depicted in the figure below.

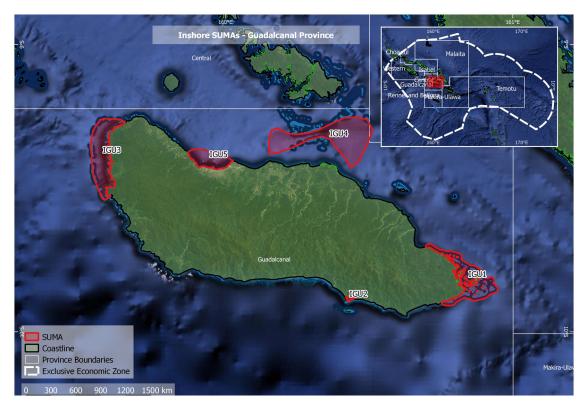


FIGURE 19. Overview of the inshore SUMA sites within Guadalcanal Province.

# 3.2.2.1 SITE IGU 1: MARAU SOUND

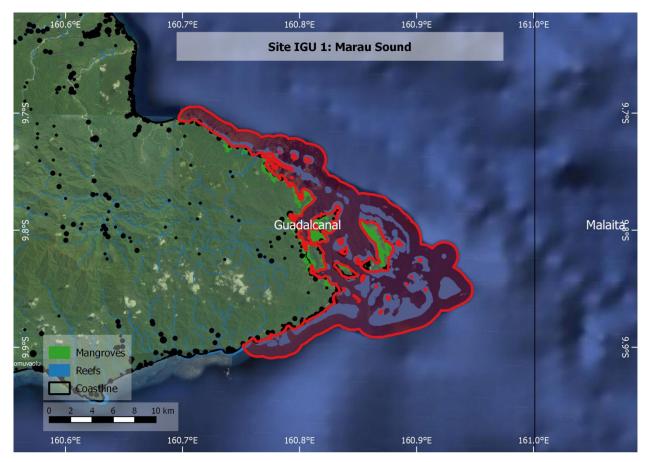


FIGURE 20. SITE IGU 1: Marau Sound

| TABLE 16. SITE IGU 1: Marau Sound. Overall score (based upon information, below | TABLE 16. | . SITE IGU 1 | : Marau Sound. | Overall score | (based upon | information, | below) |
|---|-----------|--------------|----------------|---------------|-------------|--------------|--------|
|---|-----------|--------------|----------------|---------------|-------------|--------------|--------|

| Geographic Cluster Site Name         |             | Site Code | Overall Rating |
|--------------------------------------|-------------|-----------|----------------|
| Inshore sites – Guadalcanal Province | Marau Sound | IGU1      | 11             |

### Geographic boundaries

160.9476°E 9.9092°S, 160.6966°E 9.6945°S

### Geographic description (score = 2.5)

Marau Sound is located at the eastern end of Guadalcanal Island, and includes a narrow stretch of water forming an inlet, which essentially functions as a lagoon, with numerous small islands surrounded by fringing reefs. The islands close to the mainland are surrounded by thick mangrove forests with intermittent patches of narrow reef flats (<20 m wide). Islands facing the open ocean have wider reef flats, reaching 0.5 km in some areas.

### Justification (score = 3)

Marau Sound is included within one of the sub-regionally important sites of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005). Experts present at the workshop identified the site as a habitat for endangered species (turtles, dugongs and topa – bumphead parrotfish). It is considered a major habitat for corals, mangroves and seagrass; in recognition of this it was declared a marine protected area (MPA) and locally managed marine area (LMMA). The Sound is part of the Guadalcanal watershed and a key biodiversity area, especially for seabirds. Ecological surveys of the Sound were conducted in 2004 and 2009 (Green et al., 2006a; Pinca et al., 2009).

Apart from leatherback turtles (see Site OC 5: Leatherback turtle) and dugongs (see Site OE 2: Vanikoro), the Solomon Islands are home to green, loggerhead, hawksbill and Olive Ridley turtles (Albert et al., 2010; Vaughan, 1981).

Guadalcanal Island has two of only three known loggerhead turtle nesting beaches in this region of the Pacific (Trevor, 2009). A turtle monitoring project was proposed for Marau Sound based on at least four known turtle nesting sites, three of which are *tambu* (SPC, 2016).

Thirty species of seabirds are listed for the Solomon Islands (Table 17), and all but five have been listed in surveys of Guadalcanal (http://birdsofmelanesia.net). The nesting activities of seabirds introduce nutrients into otherwise nutrient-poor and oligotrophic systems, and are an integral component of island ecosystems (Wilson et al., 2006). Seabirds are top predators in parts of the ocean where they forage, and their feeding and breeding activities create a unique connectivity between terrestrial and marine habitats (Birdlife International, 2009). Most seabirds are adapted for extensive migrations, feeding on or just below the ocean's surface, and nesting in colonies on beaches and in other coastal habitats. Seabirds that nest on Pacific Islands often lay their eggs in rudimentary nests on shrub-like vegetation, in crevices or holes dug in the sand, or directly on the ground. During the nesting season, they forage in the waters surrounding their nesting site (Thaxter et al., 2012).

| Scientific name          | Common name                | Family                                | IUCN Red List |
|--------------------------|----------------------------|---------------------------------------|---------------|
| Phaethon rubricauda      | Red-tailed Tropicbird      | Phaethontidae (Tropicbirds)           | LC            |
| Phaethon lepturus        | White-tailed Tropicbird    | Phaethontidae (Tropicbirds)           | LC            |
| Fregetta tropica         | Black-bellied Storm-petrel | Oceanitidae (Southern Storm-petrels)  | LC            |
| Ardenna pacifica         | Wedge-tailed Shearwater    | Procellariidae (Petrels, Shearwaters) | LC            |
| Ardenna tenuirostris     | Short-tailed Shearwater    | Procellariidae (Petrels, Shearwaters) | LC            |
| Calonectris leucomelas   | Streaked Shearwater        | Procellariidae (Petrels, Shearwaters) | NT            |
| Puffinus bailloni        | Tropical Shearwater        | Procellariidae (Petrels, Shearwaters) | LC            |
| Puffinus heinrothi       | Heinroth's Shearwater      | Procellariidae (Petrels, Shearwaters) | VU            |
| Pseudobulweria becki     | Beck's Petrel              | Procellariidae (Petrels, Shearwaters) | CR            |
| Fregata ariel            | Lesser Frigatebird         | Fregatidae (Frigatebirds)             | LC            |
| Fregata minor            | Great Frigatebird          | Fregatidae (Frigatebirds)             | LC            |
| Sula sula                | Red-footed Booby           | Sulidae (Gannets, Boobies)            | LC            |
| Sula leucogaster         | Brown Booby                | Sulidae (Gannets, Boobies)            | LC            |
| Sula dactylatra          | Masked Booby               | Sulidae (Gannets, Boobies)            | LC            |
| Microcarbo melanoleucos  | Little Pied Cormorant      | Phalacrocoracidae (Cormorants)        | LC            |
| Phalacrocorax carbo      | Great Cormorant            | Phalacrocoracidae (Cormorants)        | LC            |
| Anous stolidus           | Brown Noddy                | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Anous minutus            | Black Noddy                | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Gygis alba               | Common White Tern          | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Onychoprion fuscatus     | Sooty Tern                 | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Onychoprion anaethetus   | Bridled Tern               | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Onychoprion lunatus      | Grey-backed Tern           | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Sternula albifrons       | Little Tern                | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Sterna dougallii         | Roseate Tern               | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Sterna sumatrana         | Black-naped Tern           | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Sterna hirundo           | Common Tern                | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Thalasseus bergii        | Greater Crested Tern       | Laridae (Gulls, Terns, Skimmers)      | LC            |
| Stercorarius longicaudus | Long-tailed Jaeger         | Stercorariidae (Skuas)                | LC            |
| Stercorarius parasiticus | Arctic Jaeger              | Stercorariidae (Skuas)                | LC            |
| Stercorarius pomarinus   | Pomarine Jaeger            | Stercorariidae (Skuas)                | LC            |

**TABLE 17.** Seabirds listed for the Solomon Islands by BirdLife International (http://datazone.birdlife.org/ country/solomon-islands). LC: Least Concern; NT: Near Threatened; VU: Vulnerable; CR: Critically Endangered.

The topa fish, or bumphead parrotfish (*Bolbometopon muricatum*) plays a key ecological role as a habitat engineer that shapes the functional structure of coral reefs, with adults capable of removing an average of 5.7 tonnes each of carbonate material from reef surfaces per year, including up to 50% of living coral (Bell et al., 2011). In the Solomon Islands, topa fish are exploited while they aggregate (Hamilton et al., 2016), and are vulnerable to coral reef degradation from logging (Hamilton et al., 2017). Nearshore coral reefs such as those in Marau Sound potentially provide ideal habitat for juvenile topa, and there are reportedly healthy populations of adults in the Sound (pers. comm. workshop experts).

Coral reefs in the Solomon Islands are among the most diverse in the world (see Site OC 1: Roncador Reef). Marau Sound has the largest expanse of fringing reefs on Guadalcanal Island, and the highest coral cover (Hughes, 2006). There is a high rate of water exchange through the inlets, resulting in clear water conditions inside the Sound, allowing corals to flourish. A survey by Pinca et al. (2009) focused on fishes and invertebrates of commercial interest within Marau Sound. A total of 212 families, 60 genera, 184 species and 10,290 individual fish were recorded on the reefs. Reef fish communities varied according to the type of reef, from high density, low diversity assemblages in back reef areas to low density, high diversity assemblages on the outer reefs, and a dominance of herbivores, snappers, emperors and goatfish. Compared with similar areas in the Solomon Islands, the status of finfish resources in Marau is in better condition than other reef areas, with a relatively good representation of carnivores (Pinca et al., 2009). The survey also recorded 84 invertebrate species or species groups, including 16 bivalves (including giant clams and blacklip pearl oysters), 32 gastropods (including *Trochus niloticus* and *Tectus pyramis* in low densities), 16 sea cucumbers (including some high value species), seven urchins, five sea stars, one cnidarian and two lobsters. Among the giant clams, *Tridacna maxima* was the most abundant. However, commercially valuable invertebrates were found in very low abundances prior to the implementation of MPAs (Ramohia, 2004).

Seagrass beds and mangrove forests are key features of many inshore marine habitats in the Solomon Islands, and are abundant in Marau Sound. Seagrass beds in the Solomon Islands are well-developed in nearshore areas, usually on sandy substrata between the shorelines and fringing coral reefs; 10 seagrass species have been recorded across the country (Albert et al., 2010), and the dominant species encountered in the 2004 survey were *Enhalus acoroides* and *Thalassia hemprichii* (McKenzie et al., 2006). Solomon Islands' seagrass habitats can be generally categorised into four broad habitats: estuaries (incl. large shallow lagoons), coastal (incl. fringing reef), deep-water and reef (e.g., barrier or isolated); Marau Sound hosts examples of all of them (McKenzie et al., 2006). In the ecological survey of Marau Sound, fringing reefs were dominated by *Enhalus acoroides / Cymodocea rotundata* close to shore (0–10 m from shore), *Thalassia hemprichii / Cymodocea rotundata* (20–50 m from shore) and *Thalassia hemprichii / Halophila ovalis* (50+ m from shore). Some fringing reef seagrass meadows extended 50–100 m from smaller islands (e.g., Beura, Henera Islands). Sheltered bays on the southern mainland area of Marau Sound were dominated by *Enhalus acoroides, Thalassia hemprichii* and *Cymodocea rotundata* (McKenzie et al., 2006).

Seagrass beds provide food sources and key habitats for numerous marine organisms, including protected species (e.g. dugongs, green turtles) and species of commercial or subsistence value (e.g. emperors). Many species that are ecologically and commercially important, especially invertebrates, use seagrass beds as nurseries (McDevitt-Irwin et al., 2016). Seagrasses also contribute to the primary production of shallow marine habitats and stabilize sediments, hence contributing to coastal protection (Norlund et al., 2016). They are vulnerable to poor water quality, excessive sedimentation and destructive fishing (Ellison, 2009).

Marau Sound hosts the only extensive area of mangrove forests on Guadalcanal Island. Mangrove forests are highly specialized and adapted to coastal and intertidal environments (Alongi, 2008). They provide nursery grounds for fish and crustaceans, feeding and breeding grounds for birds, shoreline protection, sediment and nutrient trapping of runoff, carbon sequestration and habitat for a diverse assemblage of mangrove specialist species (J. A. Albert et al., 2012; Barbier et al., 2011). They are a key component in the maintenance of water quality for nearshore marine environments, and are ecologically linked to seagrass beds and coral reefs (Olds et al., 2013). The Solomon Islands have between 52,500 and 65,000 ha of mangroves of at least 20 species of a typical Indo-Malayan assemblage, dominated by *Rhizophora stylosa* (Ellison, 2009; Leary, 1993). Mangrove zonation in the Solomon Islands is relatively simple, with *Rhizophora apiculata* and *R. stylosa* in seaward exposed locations, followed by *Brugueira gymnorhiza* shoreward, and *Lumnitzera littorea* further inland (Ellison, 2009). The mangrove community in Marau Sound is composed of eleven species also recorded in the area include *R. mucronata, B. parviflora, C. tagal, S. ovata, Excoecaria agallocha, X. granatum, S. hydrophyllacea* and, more rarely, the marine fern *A. aureum* (Ramohia and da Wheya, 2000).

Marine areas where seagrass, mangrove and coral reef habitats exist in close proximity are especially valuable, as

many species use more than one of these habitats during their life cycle (Mumby et al., 2004). For example, emperors (Lethrinidae) settle into seagrass beds as juveniles, and move to coral reef habitats as they mature. Seascape connectivity is known to enhance the effectiveness of MPAs by protecting species' entire life cycles and the transition zones between critical habitats (Olds et al., 2016).

### Type and number of sources (score = 2.5)

Aside from expert knowledge from the workshop, four reports addressed the qualities of Marau Sound; one tourism, one on fisheries resources, one ecoregional profile and one ecological survey where some sampling had been done at the site. Several general peer-reviewed papers and reports were used to infer the special and/or unique attributes of the site, especially relating to mangroves (5), turtles (2), topa (2), seagrass (3), seabirds (1 peer-reviewed paper, 2 reports and 1 website) and seascape connectivity (1).

### Obligations (score = 3)

Marau Sound is managed as a Locally Managed Marine Area (LMMA), and part of the Solomon Islands LMMA Network (SILMMA). The various habitats and species present in Marau Sound are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998, and mangroves are also protected under the Forest Resources and Timber Act. Dugongs, turtles, topa fish, seabirds, corals, fishes and some invertebrates are listed under CITES and on the IUCN Red List.

# 3.2.2.2 SITE IGU 2: LAUVI LAGOON



### FIGURE 21. SITE IGU 2: Lauvi Lagoon

### TABLE 18. SITE IGU 2: Lauvi Lagoon. Overall score (based upon information, below)

| Geographic Cluster                   | Site Name    | Site Code | Overall Rating |
|--------------------------------------|--------------|-----------|----------------|
| Inshore sites – Guadalcanal Province | Lauvi Lagoon | IGU2      | 9.5            |

### Geographic boundaries

160.4194°E 9.8762°S, 160.4479°E 9.8961°S

### Geographic description (score = 3)

Lauvi Lagoon is an enclosed lagoon on the exposed southeastern coast of Guadalcanal Island. It measures approximately 200 ha, considered the second largest lake in the Solomon Islands (after Lake Tegano; see Site IRB 1: East Rennell) and is a freshwater lagoon with extensive swamp vegetation.

### Justification (score = 1.5)

Lauvi Lagoon is the Solomon Islands' second largest lake, and hosts the country's largest population of estuarine, or saltwater, crocodiles (*Crocodylus porosus*). The lagoon is roughly triangular, and is separated from the sea on two of its sides by bush-covered gravel dunes. Its landward side backs on to steep ridges covered in tropical rainforest. The lagoon is between 2.5 and 4 metres deep and is fed by a number of streams and several springs which run off the base of the basalt rocks of Guadalcanal's eastern highlands. The ecology of the lagoon combines a unique mixture of freshwater and marine species rare elsewhere in the Solomon Islands (Leary, 1991). Lauvi Lagoon is included within one of the sub-regionally important sites of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

Common aquatic plants include sedges, ferns and species of Vallisneria, Nitelkt, Fontinalis, Ceratopteris and Ceratophyllum. A rare type of freshwater swamp dominated by Pandanus sp. occurs at the edges of the lagoon and on submerged islands in the lagoon (Pacific Horizons Consultancy Group, 2008). The vegetation along the beach side of the lagoon is dominated by Barringtonia asiatica, with Hibiscus tiliaceus, Morinda citnfolia, Calophyllum inophyllum, Ochrusia oppositifolia, Macaranga spp., Terminalia catappa and strangling figs. The exposed beach side of the forest features a zone of the shrub Scaevola taccada, Ipomoea pes-caprae and Casuarina equisetifolia (Leary, 1991).

Leatherback Turtles (Dermochelys coriacea) nest on a black sand beach near the lagoon (see Site OC 5: Leatherback turtle). Marine and estuarine fish species include *Amphitherapon caudavittatus, Apogon hyalosoma, Chanos chanos, Caranx spp., Lutjanus argentimaculatus* and *Anguilla marmorata*. The lagoon also supports a variety of water and seabirds including little pied cormorants (*Phalacrocorax melanoleucos*), little herons (*Butorides striatus*), Pacific reef herons (*Egretta sacra*), black bitterns (*Dupetor flavicollis*), Pacific black ducks (Anas *superciliosa*) and ospreys (*Pandion haliaetus*). One Australian little grebe (*Tachybaptus novaehollandiae*) was observed during a survey in early 1990 (Leary, 1991).

Crocodile populations were decimated by uncontrolled hunting during the 1980s, but are recovering since a ban on guns in 2003 (Webb et al., 2010). Lauvi Lagoon is important habitat for the saltwater crocodile, and now supports the largest single population of this species in the Solomon Islands; it was estimated to host ~20% of the population in 2008 (Pacific Horizons Consultancy Group, 2008).

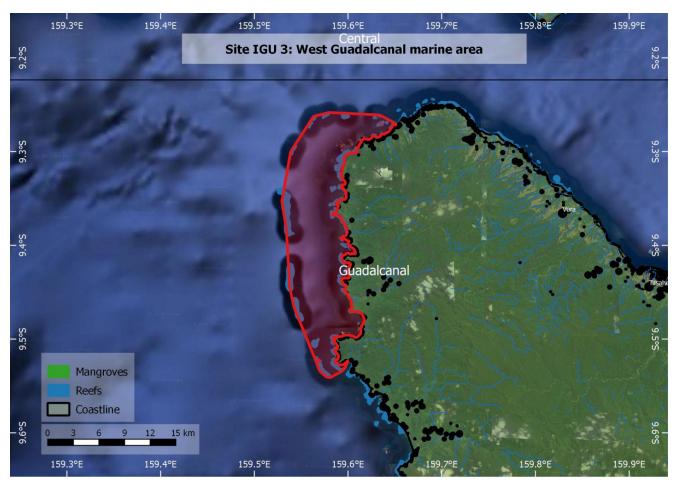
The saltwater crocodile is considered the largest of the living crocodilians, with reported lengths of up to 6–7 m, and is one of the most widely distributed of all crocodilians (Webb et al., 2010). It is a versatile apex predator likely to remove prey from a variety of trophic levels and food webs (Hanson et al., 2015). This makes them an important keystone predator and an indicator species for ecosystem health both in estuarine waters and the adjacent marine environment that they inhabit (Evans et al., 2016).

### Type and number of sources (score = 2)

Four reports highlight the importance of Lauvi Lagoon for the Solomon Islands population of saltwater crocodiles. A further report discusses the status of crocodiles in the Solomon Islands in general, and two generic peer-reviewed articles were used as background about the ecological importance of crocodiles.

### Obligations (score = 3)

Lauvi Lagoon has been recommended for various forms of protection (e.g. as a Ramsar site), and the Solomon Islands National Environment Management Strategy identified the lagoon as a priority for the development of a "nature site" (Leary, 1991). Obligations to protect habitats and species specific to wetlands exist under the Environment Act 1998, Wildlife Management and Protection Act 1998 and Fisheries Act 1998. The crocodile is listed under CITES, and considered Least Concern on the IUCN Red List, with a note that the classification needs updating. Leatherback turtles are listed as Vulnerable, and all the birds recorded for the lagoon are also listed (all are Least Concern). Other aquatic species (e.g. *Lutjanus argentimaculatus, Anguilla marmorata*) are also listed, suggesting there may be more protected species in the lagoon that have yet to be listed.



# 3.2.2.3 SITE IGU 3: WEST GUADALCANAL MARINE AREA

FIGURE 22. SITE IGU 3: West Guadalcanal marine area

### **TABLE 19.** SITE IGU 3: West Guadalcanal marine area. Overall score (based upon information, below)

| Geographic Cluster                   | Site Name                    | Site Code | Overall Rating |
|--------------------------------------|------------------------------|-----------|----------------|
| Inshore sites – Guadalcanal Province | West Guadalcanal marine area | IGU 3     | 10.5           |

### Geographic boundaries

159.52952°E 9.2582°S, 159.6512°E 9.5409°S

### Geographic description (score = 1.5)

The northwestern coastline of Guadalcanal is approximately 30 km long in a roughly north, northeast to south, southwest orientation, out to 3nm, with a series of shallow reefs forming a barrier on the outer edge of the shallow shelf. The SUMA includes the marine habitats from the coast to the outer edge of the reefs.

### Justification (score = 3)

Expert workshop participants identified this site as being special and unique for a number of reasons, including coral reefs (see generic information on coral reefs at Site OC 1: Roncador Reef), seagrass beds (generic information on seagrass at Site IGU 1: Marau Sound), turtles (see also Site IGU 1: Marau Sound), dugongs (see also Site IGU 1: Marau Sound) and cetaceans.

The 2004 Marine Assessment presented data collected at the northern end of the SUMA (Green et al., 2006a). Coral reef communities tended to vary between the northernmost part of the site and areas further south (Hughes, 2006). Northern reefs were typical of higher wave exposure in the shallows, with high cover of live hard coral (Acropora,

faviids, pocilloporids and Millepora), crustose coralline algae and low-lying turf; in deeper areas there was good reef development with high water visibility, high coral species richness and a variety of soft corals (Hughes, 2006). A short distance to the south were different benthic communities shaped by a lower exposure regime and more delicate table Acropora corals, as well as other coral growth forms and a variety of soft corals, macroalgae, Halimeda and crustose red algae (Hughes, 2006). Deeper areas along this whole stretch of coast were characterised by steep slopes covered in agaricid corals, gorgonian fans, alcyonaceas and sponges; the close proximity of different reef types creates a high overall biodiversity (Hughes, 2006). A fish species previously unknown from the Pacific, the African lionfish (Pterois mombasae) was recorded in this area; this is listed as a range extension in the Marine Assessment (Allen, 2006). Unfortunately, the northern part of the site was subject to a crown-of-thorns (COTS) outbreak at the time of the surveys (Hughes, 2006).

The seagrass beds lie between the fringing reefs and the shoreline. The sand-mud flats are generally dominated by Thalassia hemprichii shoreward and Enhalus acoroides seaward. Halophila decipiens, the rarest species in the Solomon Islands, was recorded only in Tambea, in northwestern Guadalcanal; this could be because this species occurs slightly deeper than most others (McKenzie et al., 2006).

The cetacean survey of the marine assessment recorded oceanic dolphins and a sperm whale offshore of western Guadalcanal (Kahn, 2006). A more recent survey that included the northern half of this site recorded a dugong (*Dugong dugon*), a baleen whale (Balaenoptera sp.) and spinner dolphins (*Stenella longirostris*) (Oremus et al., 2014). Further observations across the northwest coast of Guadalcanal deduced that around 100 resident Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) reside there, including within this SUMA (Oremus et al., 2014).

Overall, species sighted across the Solomon Islands are presented in Site OW 1: Southern New Georgia seamounts (Table 11). Given the known sightings of a number of these cetaceans in this site, it's possible it hosts more species that have not, as yet, been recorded there.

Spinner dolphins, pantropical spotted dolphins and Indo-Pacific bottlenose dolphins are subject to capture by drivehunting, especially in certain villages in Malaita (Kahn, 2006; Oremus et al., 2014); this makes areas where these dolphins can rest safely, such as this SUMA, more important in the Solomon Islands. These three species have a high level of genetic diversity in the Solomon Islands compared to other populations in the Pacific Ocean, and Indo-Pacific bottlenose dolphins, spinner dolphins are highly differentiated from neighbour populations such as New Caledonia (Oremus et al., 2014, 2015). There is also very high site fidelity within the Solomon Islands, and populations of dolphins that frequent different islands or island groups are demographically separate (Oremus et al., 2014). This means that any site used by these species may be important both genetically and in terms of population survival.

### Type and number of sources (score = 3)

The Solomon Islands Marine Assessment surveyed coral reefs, seagrass and cetaceans in the northern part of this site, and one marine mammal survey also included the northern part of the area. One survey report, one knowledge review and one peer-reviewed paper included cetaceans from the Solomon Islands. Two additional peer-reviewed papers were consulted to highlight the special habitat characteristics in the Solomon Islands for cetaceans.

### Obligations (score = 3)

Coral reefs and seagrass beds, and the species within them, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998, and mangroves are also protected under the Forest Resources and Timber Act. Dugongs, turtles, corals, some fishes and some invertebrates are listed under CITES and on the IUCN Red List. Several whale species that are known or suspected to occur in the Solomon Seas, including in this site, are listed on the IUCN Red List as Vulnerable or Endangered (Table 11).

In 2009, a Memorandum of Understanding was developed and a collaborative project was initiated between the South Pacific Whale Research Consortium, the Solomon Islands Ministry of Fisheries and Marine Resources and the Solomon Islands Ministry of Environment, Climate Change, Disaster Management and Meteorology to facilitate management decisions relating to the live capture of dolphins from wild populations anywhere in the Solomon Islands, including from this area.

# 3.2.2.4 SITE IGU 4: SEALARK CHANNEL



FIGURE 23. SITE IGU 4: Sealark Channel

### TABLE 20. SITE IGU 4: Sealark Channel. Overall score (based upon information, below)

| Geographic Cluster                   | Site Name       | Site Code | Overall Rating |
|--------------------------------------|-----------------|-----------|----------------|
| Inshore sites – Guadalcanal Province | Sealark Channel | IGU4      | 7.5            |

### Geographic boundaries

160.1518°E 9.2530°S, 160.5128°E 9.4289°S

### Geographic description (score = 2.5)

This SUMA encompasses a stretch of water between Florida Islands and Taivu Point, Northeast of Guadalcanal Island. The entire distance between the Florida Islands and Guadacanal is 32 km, and is divided into Ngello Channel (close to Florida Island), Lengo Channel (close to Guadalcanal) and Sealark Channel (in the middle). This central channel is bounded by Nughu Island to the north and Tanapari Island, Sealark Reef and Hutchinson Shoal to the south. There are fringing coral reefs around the islands and shoals at the edges of Sealark Channel.

### Justification (score = 1.5)

The position of the islands and reefs around the Sealark Channel suggests a potential stepping-stone role in the local dispersal of coral reef organisms around the islands (see more on Solomon Islands coral reefs in Site OC 1: Roncador Reef). Nughu Island and some of the coral reef areas around the Sealark Channel were surveyed during the 2004 Marine Assessment; the reef communities in this area showed signs of overfishing and of past destructive fishing practices (Green et al., 2006b; Hughes, 2006).

The Marine Assessment recorded consistent sightings of cetaceans in the channel, including both oceanic and coastal dolphins (e.g. spinner dolphins) and whales; the survey by Oremus et al. (2014) reported sightings of Bryde's whales, shortfinned pilot whales, false killer whales, spotted dolphins and spinner dolphins in the vicinity of the channel (see also

Site OW 1: Southern New Georgia seamounts and Site IGU 3: West Guadalcanal marine area). This suggests that the channel may be a movement corridor for a wide variety of cetacean species (Kahn, 2006).

### Type and number of sources (score = 1.5)

Very little information comes directly from the channel and the reefs around it; two cetacean survey reports include sightings from directly within the area. Experts at the workshop highlighted the reefs as being an important feature of the site, but apart from a small amount of information from the Marine Assessment, only general Solomon Islands coral reef information applies here.

### Obligations (score = 2)

Coral reefs and a number of the species within them are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998. All cetacean species are listed under CITES and on the IUCN Red List (Table 11).

# 159.9°E 160.0°E Site IGU 5: Lunga coast

# 3.2.2.5 SITE IGU 5: LUNGGA COAST

FIGURE 24. SITE IGU 5: Lungga coast

| TABLE 21. SITE IGU 5: Lungga coast. | . Overall score (based | d upon information, below) |
|-------------------------------------|------------------------|----------------------------|
|-------------------------------------|------------------------|----------------------------|

| Geographic Cluster                   | Site Name    | Site Code | Overall Rating |
|--------------------------------------|--------------|-----------|----------------|
| Inshore sites – Guadalcanal Province | Lungga coast | IGU5      | 6.5            |

### Geographic boundaries

159.8690°E 9.3637°S, 160.0278°E 9.4348°S

### Geographic description (score = 1.5)

This SUMA comprises a marine area off the coast of Honiara, where the shelf is narrow and drops abruptly into deep oceanic water.

### Justification (score = 1.5)

Experts present at the workshop selected this site for its abundance of snapper and for the presence of elevations above the seafloor that were referred to as seamounts. Such elevations may be hills, knolls, pinnacles and, although not technically seamounts, are believed to perform a similar ecological role (Clark et al., 2011b). This ecological functioning appears to be true, although the features may only be 100 m or less from the seabed (Clark et al., 2011b). High catch rates of snapper suggest a productive ecosystem with a relatively healthy fish community. However, a study that investigated fish populations in relation to the proximity of fished areas to markets found that this part of the Solomon Islands has relatively depleted fish communities (Brewer et al., 2009).

A global study of seamounts shows bathyal seamounts and other elevations throughout the seabed of the central Solomon Islands, suggesting there could be such elevations just off the Lungga coast (Clark et al., 2011a). Nothing is known of the seamounts, hills, knolls, pinnacles or other elevations in this area, but information about seamounts and other elevations in general, including those in the Solomon Islands (see Site OW 1: Southern New Georgia seamounts), also applies here.

### Type and number of sources (score = 1.5)

Only expert sources were available to confirm the presence of snappers and seabed elevations at the site; generic sources and references from other sites can be used to infer the presence of seamounts.

### Obligations (score = 2)

There are obligations to protect and sustainably manage many fish species, including snappers and species associated with seamounts, within the Environment Act 1998, Wildlife Management and Protection Act 1998 and Fisheries Act 1998 and subordinate regulations, including terms and conditions associated with licenses. Marine mammals, some sharks and some large predatory fishes such as some tunas found around seamounts are on the IUCN Red List (IUCN, 2016) and listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

# 3.2.3 Inshore sites - Western Province

All the inshore SUMAs within Western Province are depicted in the figure below.

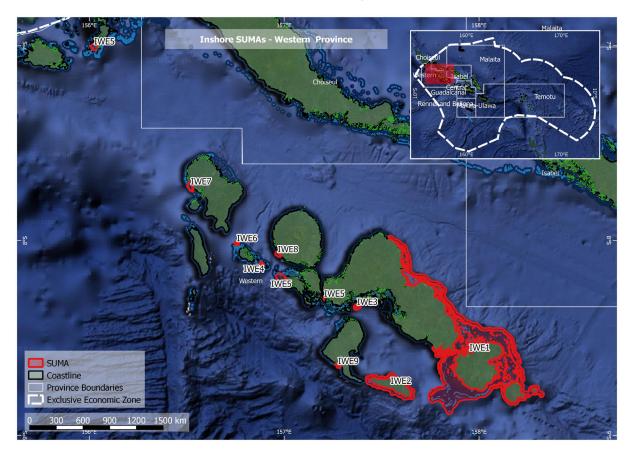


FIGURE 25. Overview of the inshore SUMA sites within Western Province.

# 3.2.3.1 SITE IWE 1: MAROVO LAGOON

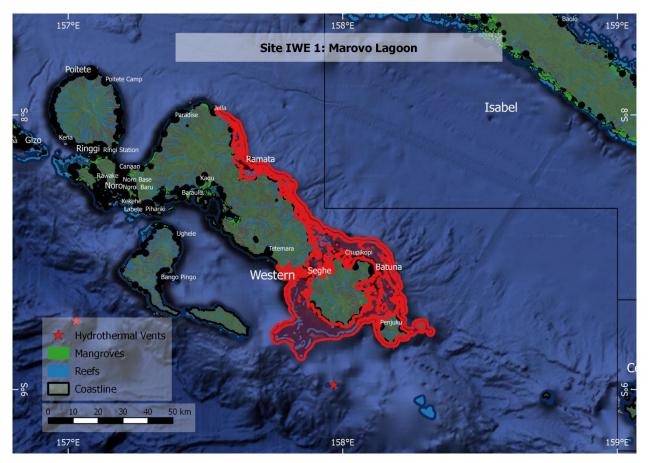


FIGURE 26. SITE IWE 1: Marovo Lagoon

### TABLE 22. SITE IWE 1: Marovo Lagoon. Overall score (based upon information, below)

| Geographic Cluster               | Site Name     | Site Code | Overall Rating |
|----------------------------------|---------------|-----------|----------------|
| Inshore sites – Western Province | Marovo Lagoon | IWE1      | 11.5           |

### Geographic boundaries

158.3335°E 8.8921°S, 157.5335°E 7.9748°S

### Geographic description (score = 3)

Marovo Lagoon is the largest saltwater lagoon in the world. It is located in the New Georgia Islands and encompasses 700 km<sup>2</sup>; it is protected by a double barrier reef system that extends over 100 km. Barrier islands have formed from elevated reefs that rise up to 15 m above sea level in the north and up to 25 m in the south. The lagoon contains over 300 islands including sand cays, mangrove islets, raised reefs and small volcanic cones, and is bordered along its southern edge by extensive mangrove and freshwater swamp forests.

### Justification (score = 2.5)

There is a high diversity of coral reef, seagrass and mangrove habitats in close proximity throughout Marovo Lagoon, including shallow fringing reefs, lagoonal patch reefs and a unique double barrier reef system, where the outer, and deeper, barrier reef slopes steeply into deep water (Albert et al., 2010; Kere, 2009). For more general information about the special attributes of these habitats, see Site OC 1: Roncador Reef and Site IGU 1: Marau Sound. Overall, Marovo Lagoon hosts 130 km<sup>2</sup> of coral reef (Albert et al., 2010). Marovo Lagoon is one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005). The high diversity of shallow habitats in Marovo Lagoon makes it a highly productive environment, but the high-value species of invertebrates and reef

fishes (including topa) have been heavily depleted (Bruckner, 2014; Buckius et al., 2010; Kere, 2009; Pinca et al., 2009).

A number of species and populations of special significance are found in the lagoon. In the 2004 Marine Assessment, it was one of the 12 sites with the highest reef fish diversity ever recorded (Allen, 2006). Dugongs have been reported from the northern part of the lagoon (Leary, 1993; Pinca et al., 2009), topa fish (*Bolbometopon muricatum*) were recorded on outer reefs (Pinca et al., 2009), and the site hosts various species of waterbirds, including green heron (*Butorides striatus*), Pacific reef heron (*Egretta sacra*), Pacific black duck (*Anas superciliosa*), Sanford's sea eagle (*Haliaeetus sanford*), osprey (*Pandion haliaetus*), Pacific golden plover (*Pluvialis fulva*), whimbrel (*Numenius phaeopus*), common sandpiper (*Actitis hypoleucos*), beach stone curlew (*Esacus magnirostris*), common tern (*Sterna hirundo*) and black-naped tern (*S. sumatrana*) (Leary, 1993). Islets in Roviana and Marovo Lagoons host the last remaining population in the world, of around 250 birds, of the Sandford's sea eagle (MECCDMM, 2014). Together with Tetepare, Marovo Lagoon is one of the few remaining safe havens, globally, for nesting leatherback and hawksbill turtles (Albert et al., 2010; Sulu et al., 2012). The passages in Marovo Lagoon are spawning aggregation sites (*Siganus punctatus*), snappers (*Lutjanus adetii*, *L. bohar, L. rivulatus, Symphorichthys spilurus*), sweetlips (*Plectorhinchus gibbosus, P. obscurus*) and groupers (*Plectropomus areolatus, Epinephelus fuscoguttatus* and *E. polyphekadion*) (Donnelly, 2009; Johannes, 1989; Johannes and Hviding, 2000).

High sedimentation from logging activities and nutrient enrichment close to human settlements are highlighted as problems for Marovo Lagoon's coral reefs, seagrasses and mangroves, especially those in the more inshore areas (Albert et al., 2010; Kere, 2009; McKenzie et al., 2006). Inshore reefs tend to be naturally dominated by species resistant to high turbidity levels, such as massive corals, while more structurally complex branching *Acropora* species are mostly found on the outer barrier (Kere, 2009). The low water quality inshore is coupled with a lower biomass of herbivores, leading to higher algal biomass that can have detrimental effects on corals (Albert et al., 2008). This makes the barrier reefs more valuable as potential refugia and sources of larvae.

Workshop participants also identified this as an area through which whales travel, and where vents contribute occasional bouts of warmer water, but no additional information was found about these attributes.

### Type and number of sources (score = 3)

For this site, it was possible to draw completely on literature about the site itself, as it is either mentioned, or the subject of research, in ten technical reports and three peer-reviewed articles. The UNESCO World Heritage Areas website lists it, together with Tetepare (see below), as a potential site.

### Obligations (score = 3)

In Marovo Lagoon, there is more information about the long-standing traditional system of reef-lagoon tenure and management than in other areas, and more recently there are small MPAs throughout the area. The various habitats and species present in Marovo Lagoon are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998, and mangroves are also protected under the Forest Resources and Timber Act. Dugongs, turtles, some seabirds, corals, some fishes and some invertebrates are listed under CITES and on the IUCN Red List.

# 3.2.3.2 SITE IWE 2: TETEPARE

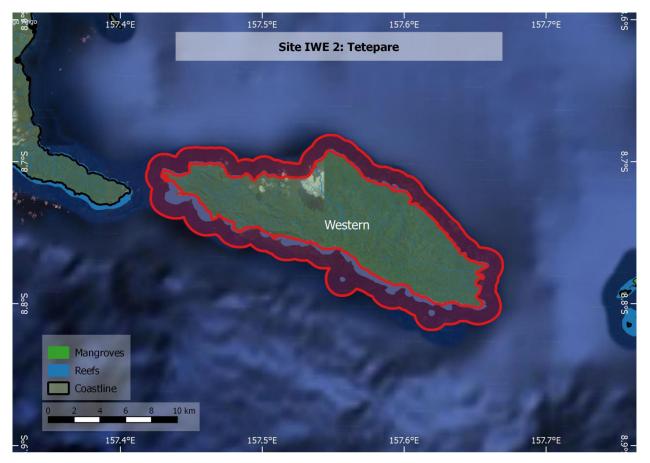


FIGURE 27. SITE IWE 2: Tetepare

### TABLE 23. SITE IWE 2: Tetepare. Overall score (based upon information, below)

| Geographic Cluster               | Site Name | Site Code | Overall Rating |
|----------------------------------|-----------|-----------|----------------|
| Inshore sites – Western Province | Tetepare  | IWE2      | 11             |

### Geographic boundaries

157.4182°E 8.6812°S, 157.6694°E 8.8184°S

### Geographic description (score = 3)

Tetepare Island is the largest uninhabited island in the South Pacific, of reef limestone and volcanic origin, covering approximately 118 km<sup>2</sup>. The island is steeply sloped on the southern windward side with its highest point at 357 m, and has a more gentle sloping topography to the leeward side.

### Justification (score = 3)

Tetepare Island has long been recognized for its conservation significance and archaeological value (e.g. Kool et al., 2010). The island's varied topography hosts one of the last pristine lowland rainforest areas in the wider Pacific region, and a rich and diverse fringing coral reef and inshore marine areas. It has very high biodiversity, both terrestrial and marine, with rare and endemic species recorded and new species discovered in recent years (UNESCO WHC, 2017). Experts present at the workshop recognised it as a nesting area for leatherback turtles, breeding ground for dugongs, high abundance of coconut crabs, healthy seagrass beds, and high marine biodiversity.

Hawksbill and green turtles feed on the seagrass beds surrounding the island (Hurutarau et al., 2009), and a significant number of leatherback turtles nest on Tetepare's volcanic black sand beaches (UNESCO WHC, 2017). Together with

Rendova Island, this is the most important turtle nesting area of the Western Province (Hurutarau et al., 2009; Sulu et al., 2004, 2012; Trevor, 2009). Small numbers of dugongs and crocodiles are also present (Read and Moseby, 2006; UNESCO WHC, 2017).

Sharks, dolphins and an extraordinary diversity of fish species are found on the island's fringing reefs. Unfortunately, the 2004 Marine Assessment did not survey Tetepare (Green et al., 2006a), but a later survey did (Kere, 2009). On the southern side of the island are long stretches of fringing reefs extending about 100 m from shore while on the northern part of the island, where shorelines are steep, reefs are relatively narrow sheltered fringing reefs (Kere, 2009). There was a higher percentage cover of *Acropora* and other hard corals in shallow water than in deeper habitats (Kere, 2009) Despite active management, fish communities were dominated by small damselfishes, with low densities of fish species commonly harvested as food (Kere, 2009). However, topa fish (bumphead parrotfish) was in high abundances with a full range of sizes, suggesting that these reefs may serve as a refuge for this species (Kere, 2009).

Ecosystem functioning of Tetepare's marine habitats is strengthened by its connectivity with Marovo Lagoon through the Hele Islands, which function as stepping stones (UNESCO WHC, 2017).

### Type and number of sources (score = 2)

Tetepare Island is listed as a potential World Heritage Site on the UNESCO website, which describes some of its special and/or unique attributes. A coral reef survey was described in a 2009 report, and the site is described in the strategic action plan for turtles in the Solomon Islands. There are also two reports that mention the turtle nesting sites on the island, and Tetepare is featured in the Ridges to Reefs report.

### Obligations (score = 3)

The Tetepare Descendants' Association was founded in 2002 to coordinate the conservation of the island ecosystem and the exploitation of its resources by the growing human population of the Western Province. The Association is a community-based landowners' organization that has developed a management plan for Tetepare Island and established the second largest community-managed protected area in the country. The various habitats and species present in the marine areas around Tetepare Island are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Dugongs, crocodiles, turtles, corals, some fishes and some invertebrates are listed under CITES and on the IUCN Red List.



# 3.2.3.3 SITE IWE 3: MUSHROOM ISLAND

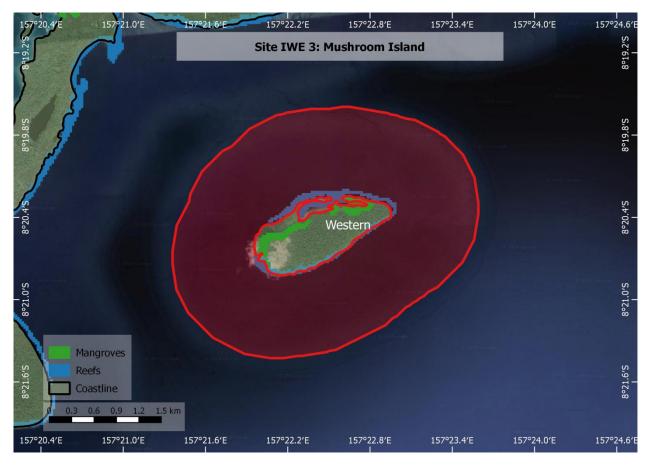


FIGURE 28. SITE IWE 3: Mushroom Island

### TABLE 24. SITE IWE 3: Mushroom Island. Overall score (based upon information, below)

| Geographic Cluster               | Site Name       | Site Code | Overall Rating |
|----------------------------------|-----------------|-----------|----------------|
| Inshore sites – Western Province | Mushroom Island | IWE3      | 6.5            |

### Geographic boundaries

157.3559°E 8.3265°S, 157.3931°E 8.3571°S

### Geographic description (score = 3)

Mushroom Island is a small island at the edge of Roviana Lagoon, surrounded by sheer drop-offs of over 500 m into the waters of Blanche Channel.

### Justification (score = 1)

Mushroom Island is a popular dive site due to the dramatic drop-off around the island, which can attract large pelagic fishes, turtles, reef sharks and migratory hammerhead sharks (http://www.diveadventures.com.au/brochures/Dive%20 Solomon%20Islands.pdf). Very little information exists about Mushroom Island aside from brochures and websites for diving, but Roviana Lagoon has been the subject of numerous studies. Roviana Lagoon is a diverse marine ecosystem that hosts mangroves, 920 ha of coral reefs, 1,495 ha of seagrass, and over than 5,000 ha of sparse seagrass and corals amongst sediment, rubble, rocks and algae (S. Albert et al., 2012). Inshore areas of the lagoon are impacted by nutrients and sediment runoff caused by logging operations in the catchment (S. Albert et al., 2012); this makes clearwater habitats such as those found around Mushroom Island more valuable. Islets around Roviana Lagoon host the last remaining population in the world, of around 250 birds, of the Sandford's sea eagle (MECCDMM, 2014).

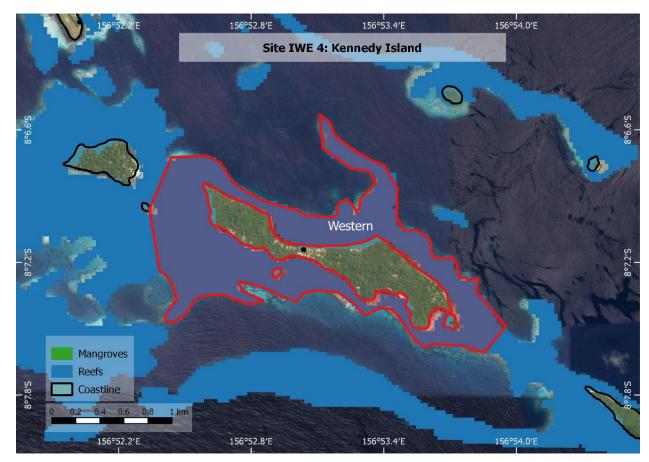
A number of grouper species form spawning aggregations in Roviana Lagoon (Hamilton and Kama, 2004); typically these aggregations occur in outer reef areas or passes (Aswani et al., 2005), making Mushroom Island a potential aggregation site.

### Type and number of sources (score = 1.5)

Despite the abundant information about Roviana Lagoon in general, only one site dedicated to diving tourism mentioned Mushroom Island. "Mushroom" also seems to be a generic term used to describe islands of a certain form. Further information about offshore islands of Roviana Lagoon was inferred from two reports and one peer-reviewed paper.

### Obligations (score = 1)

Community-based conservation efforts in Roviana Lagoon are facilitated by The Roviana and Vonavona Lagoons Resource Management Program. The various habitats and species present in the marine areas around offshore islands of Roviana Lagoon, such as Mushroom Island, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, some fishes, some invertebrates and sharks are listed under CITES and on the IUCN Red List.



# 3.2.3.4 SITE IWE 4: KENNEDY ISLAND

FIGURE 29. SITE IWE 4: Kennedy Island

TABLE 25. SITE IWE 4: Kennedy Island. Overall score (based upon information, below)

| Geographic Cluster               | Site Name      | Site Code | Overall Rating |
|----------------------------------|----------------|-----------|----------------|
| Inshore sites – Western Province | Kennedy Island | IWE4      | 8              |

### Geographic boundaries

156.8723°E 8.1088°S, 156.8992°E 8.12679°S

### Geographic description (score = 3)

Kennedy Island (the local name is Kasolo Island) is a small uninhabited island east of Gizo, the provincial capital of the Solomon Islands' Western Province. The island is a vegetated sand cay; the SUMA is the fringing reef surrounding the island.

### Justification (score = 1.5)

Kennedy Island is known as a tourism site with a significant role in World War II history and highly biodiverse reefs. For general information on the special and/or unique attributes of coral reefs in the Solomon Islands, see Site OC 1: Roncador Reef. For information about coral reefs in the vicinity of Gizo, see Site IWE 6: Njari Island. Given the very high biodiversity recorded there, and the geomorphic similarity and geographic proximity of Kennedy Island to Njari Island, high biodiversity values are also likely for Kennedy Island. The Gizo area, which presumably includes Kennedy Island, also has four known spawning aggregation sites for brownmarbled grouper (*Epinephelus fusoguttatus*), camouflage grouper (*Epinephelus polyphekadion*) and squaretail coralgrouper (*Plectropomus areolatus*) (Sulu et al., 2004). Shallow fringing reefs in this area hosted high average coral cover of 30–45%; unfortunately these reefs were damaged by an earthquake and tsunami in 2007 (Kere, 2009). This area is included within one of the sub-regionally important sites of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005). The current condition of these reefs in unknown.

### Type and number of sources (score = 1.5)

Apart from expert sources from the workshop, only three documents were found that could be used to infer special and/or unique characteristics of this site: a coral reef survey report, a general report on the state of Solomon Islands reefs and an ecoregional report. For more general knowledge about the value of coral reefs in the Solomon Islands, the references used for Site OC 1: Roncador Reef and Site IWE 6: Njari Island also apply.

### Obligations (score = 2)

The various habitats and species present on fringing coral reefs, such as those that surround Kennedy Island, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, fishes (including the groupers that may aggregate here to spawn), some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.

# 3.2.3.5 SITE IWE 5: BAIT GROUNDS (NUNUNGGARA, RARUMANA, SHORTLAND)

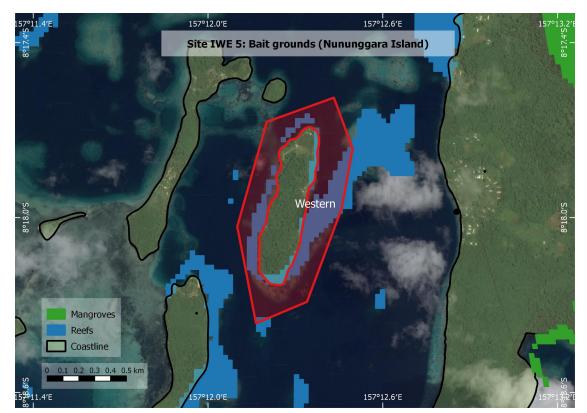
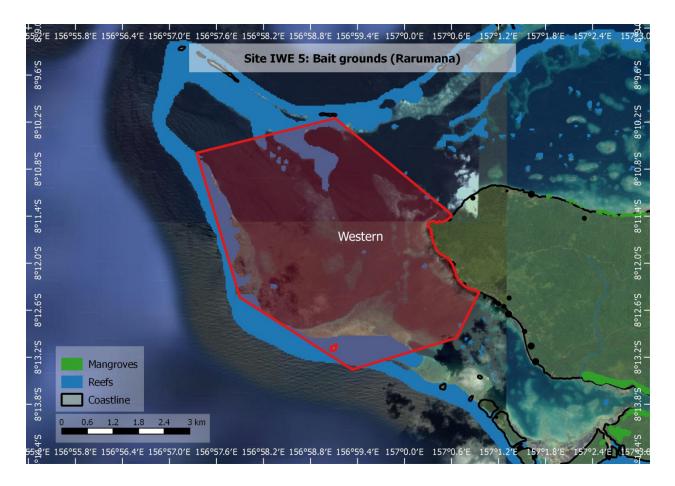


FIGURE 30a. SITE IWE 5: Bait ground (Nununggara)



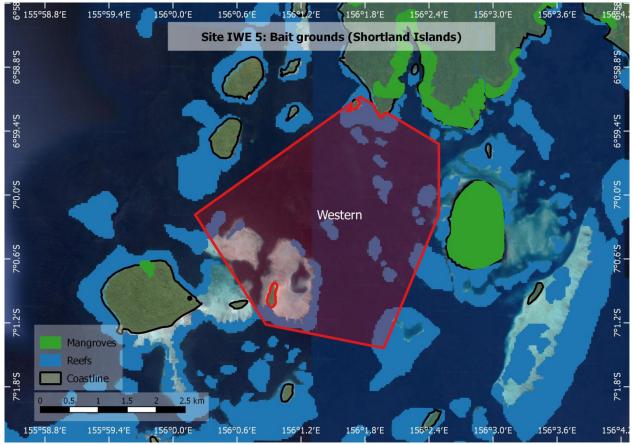


FIGURE 30b. SITE IWE 5: Bait grounds (Rarumana, Shortland)

These bait ground areas were demarcated by participants as sample areas at the workshop. Similar and often very small areas of bait grounds are much more frequent in Solomon Islands waters.

TABLE 26. SITE IWE 5: Bait grounds (Nununggara, Rarumana, Shortland) (based upon information, below)

| Geographic Cluster               | Site Name                                      | Site Code | Overall Rating |
|----------------------------------|--|-----------|----------------|
| Inshore sites – Western Province | Bait grounds (Nununggara, Rarumana, Shortland) | IWE5      | 5              |

### Geographic boundaries

| Nununggara: | 157.2016°E 8.2931°S, 157.2082°E 8.3060°S | (area approximately 1km x 0.6km)   |
|-------------|--|------------------------------------|
| Rarumana:   | 156.9557°E 8.1691°S, 157.0159°E 8.2226°S | (area approximately 4.3km x 4.2km) |
| Shortlands: | 156.0034°E 6.9846°S, 156.0415°E 7.0239°S | (area approximately 6km x 6km)     |

### Geographic description (score = 1)

These sites are specific areas of shallow inshore areas of lagoons where small fishes aggregate. They are likely to These sites are specific areas of shallow inshore areas of lagoons where small fishes aggregate. They are likely to include coral reef and soft sediment habitats.

### Justification (score = 1.5)

These sites were identified by workshop participants as having special significance for aggregations of small fishes (baitfish) and as a milkfish breeding ground. It comprises the inshore areas of some of the Solomon Islands' most extensive lagoonal systems; these aggregations and breeding grounds probably indicate that these particular inshore sites are especially productive. Bait grounds are a common but special feature of many of the Solomon Islands' lagoons

For descriptions about the special characteristics of lagoons see Marovo Lagoon, see Site IWE 1: Marovo Lagoon (see also Site IWE 2: Tetepare for more on Roviana Lagoon). There is surprisingly low connectivity between the lagoons, giving each lagoonal system's unique characteristics (S. Albert et al., 2012). Each lagoon is also likely to have a variety of productivity levels throughout its inshore habitats. Common small fish species used as baitfish in the Solomon Islands include anchovies (Engraulidae), sprats (Dussumieriidae), sardines, herrings (Clupeidae), blue and chub mackerels (Scombridae), jacks (Carangidae), cardinalfish (Apogonidae), fusiliers (Caesionidae), silversides, hardyheads (Atherinidae) and ponyfish (Leiognathidae) (FFA, 2015). Milkfish (*Chanos chanos*) are an important aquaculture species throughout the Pacific and native to the Solomon Islands (FFA, 2015; FitzGerald, 2004); their spawning grounds are valuable for maintaining wild populations, which are also a source of fish for aquaculture (see also Site OC 2: Ontong Java for a discussion on the importance of spawning aggregations). The ecology of the milkfish is one of continuous ontogenetic migration (Bagarinao, 1994); they therefore play an important role in linking the food webs of inshore and offshore marine habitats. Additionally, Vona Vona Lagoon (which includes Rarumana) is included within an ecoregionally significant and sub-regionally important site of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

### Type and number of sources (score = 1.5)

Apart from experts consulted during the workshop, there were no sources detailing the values or characteristics of the site. Two reports and one peer-reviewed paper give information about the species used as baitfish and the importance of milkfish. Two reports suggest the unique character of this SUMA.

### Obligations (score = 1)

For the species present at this site, there are provisions in the Fisheries Act 1998 for their sustainable management. Additionally the demarcation of Bait grounds is one important feature in management plans on local level that supporting pole and line fishing.

# 3.2.3.6 SITE IWE 6: NJARI ISLAND

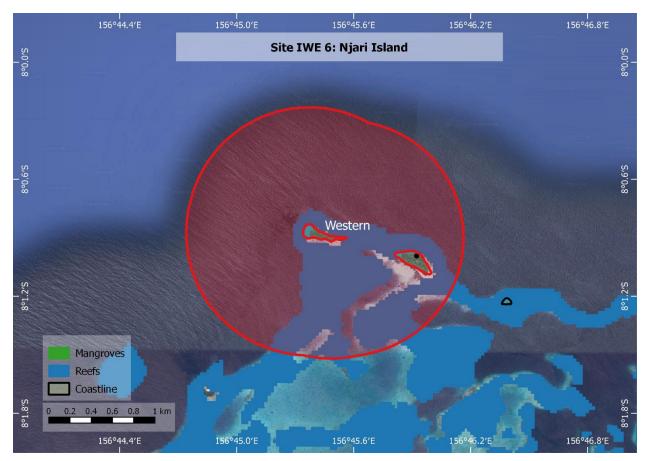


FIGURE 31. SITE IWE 6: Njari Island

### TABLE 27. SITE IWE 6: Njari Island (based upon information, below)

| Geographic Cluster               | Site Name    | Site Code | Overall Rating |
|----------------------------------|--------------|-----------|----------------|
| Inshore sites – Western Province | Njari Island | IWE6      | 10             |

### Geographic boundaries

156.7456°E 8.0038°S, 156.7694°E 8.0253°S

### Geographic description (score = 3)

Njari Island is located to the northwest of Ghizo Island, at the outer edge of a fringing and platform reef system that links it to Ghizo Island. The island is vegetated, with a small sand spit at the eastern end. The SUMA is the fringing reef surrounding the island.

### Justification (score = 3)

This site was noted for its especially high biodiversity; in the 2004 Marine Assessment, Njari Island yielded the fourth highest fish species count ever recorded for a single dive anywhere, surpassed only by three sites in the Raja Ampat Islands (Allen, 2006). The survey recorded 279 fish species on this dive, only six species less than the highest diversity recorded in the world. This gives the site global coral reef biodiversity significance. Coral diversity was also high at Njari Island (Veron and Turak, 2006).

This very high coral reef diversity is facilitated by strong currents and good flushing of the steep outer reef dropoff, which occurs close to a sheltered inshore reef interspersed with sandy areas of clean-sand on the southern and eastern side of the island. There are small patches of seagrass in the sandy habitats (McKenzie et al., 2006). The island is uninhabited and shore-based human impacts are minimal. Njari Island also hosts medium to high abundance and diversity of

commercially important marine invertebrates (Ramohia, 2006). Njari Island is also though to host grouper spawning aggregations (see Site IWE 4: Kennedy Island). Njari Island is included within one of the sub-regionally important sites of the Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

The 2007 earthquake and tsunami caused serious damage to Njari Island's coral reefs (Kere, 2009), and their current state is unknown.

### Type and number of sources (score = 2)

Njari Island was surveyed during the 2004 Marine Assessment and features prominently throughout the report. The Bismarck Solomon Seas Ecoregion report also mentions Njari Island.

### Obligations (score = 2)

The various habitats and species present on coral reefs, such as those that surround Njari Island, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, some fishes (including the groupers that may aggregate here to spawn), some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.

# 7.7°S 156.5°E 156.5°E 156.6°E 156.5°E 7.70 te IWE 7: Leona Reef (Vella Lavella ) 7.7°S 7.7°S Mangroves Reefs Coastline 1.2 1.8 2.4 3 km 156.5°E 156.5°E 156.6°F

# 3.2.3.7 SITE IWE 7: LEONA REEF, VELLA LAVELLA

FIGURE 32. SITE IWE 7: Leona Reef, Vella Lavella

| Geographic Cluster               | Site Name                 | Site Code | Overall Rating |
|----------------------------------|---------------------------|-----------|----------------|
| Inshore sites – Western Province | Leona Reef, Vella Lavella | IWE7      | 6              |

### Geographic boundaries

156.5012°E 7.6981°S, 156.5373°E 7.7503°S

### Geographic description (score = 2.5)

Leona Reef is a stretch of fringing reef around the western coast of Vella Lavella, an island 42 km long and 19 km wide. The island is mountainous, with its main peak 808 m high. It is the most northwestern of the New Georgia Islands, north of Gizo and Ranongga. Bougainville Strait is to its north with the Treasury Islands to the northwest. The SUMA includes the Locally Managed Marine Area, an area 5 by 3 km, which includes two stretches of fringing reefs and three patch reefs approximately 2.5 km offshore (SILMMA, 2017a).

### Justification (score = 1)

Experts present at the workshop identified this area as a productive reef protected within the Solomon Islands LMMA network, where the local community is active in monitoring and managing fish communities (Schwarz et al., 2012). Leona Reef was included in the 2004 Marine Assessment, and was found to host diverse coral communities with high coral cover (Hughes, 2006). General characteristics of Solomon Islands coral reefs can be found in Site OC 1: Roncador Reef and also apply here.

### Type and number of sources (score = 1.5)

Expert knowledge from the workshop and a brief overview of benthic communities in the 2004 Marine Assessment report were available for Leona Reef. A report on improving resilience was also found. General special and/or unique characteristics of Solomon Islands reefs also apply here.

### Obligations (score = 1)

Vella Lavella is part of the Solomon Islands Locally Managed Marine Areas network. The various habitats and species present on coral reefs are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.

# 3.2.3.8 SITE IWE 8: SANTUPAELE

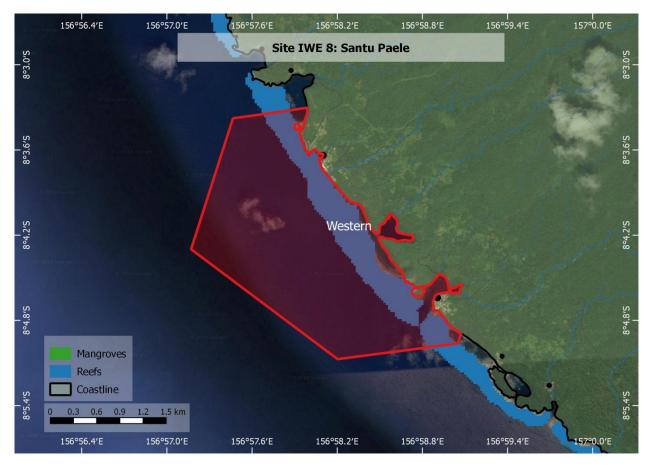


FIGURE 33. SITE IWE 8: Santupaele

| TABLE 29. SITE IWE 8: Santupaele | (based upon information, below) |
|----------------------------------|---------------------------------|
|----------------------------------|---------------------------------|

| Geographic Cluster               | Site Name  | Site Code | Overall Rating |
|----------------------------------|------------|-----------|----------------|
| Inshore sites – Western Province | Santupaele | IWE8      | 5.5            |

### Geographic boundaries

156.9846°E 8.0845°S, 156.9528°E 8.0550°S

### Geographic description (score = 2)

Santuapaele is the name of a community on the west coast of Kolombangara Island. The SUMA is the small embayment just off the beach from the village, containing a narrow fringing reef.

### Justification (score = 1.5)

Experts present at the workshop identified this area as part of the Solomon Islands LMMA network. Reefs around Kolombangara Island, and adjacent to Santupaele in particular, have received little scientific attention. A study on groupers on the reef off Vavanga found associations between grouper numbers, lunar phase and depth, but did not indicate whether spawning aggregations are likely to occur around Kolombangara Island (Sabetian, 2003). Mangrove estuaries on the southern side of Kolombangara were surveyed to describe the fish community; in each estuary there were 20–44 species, with a typical Indo-Pacific fish community assemblage (Blaber and Milton, 1990).

Fringing coral reef communities close to the Kolombangara coast have been affected by sedimentation caused by logging, leading to reduced benthic communities (Morrisey et al., 2003).

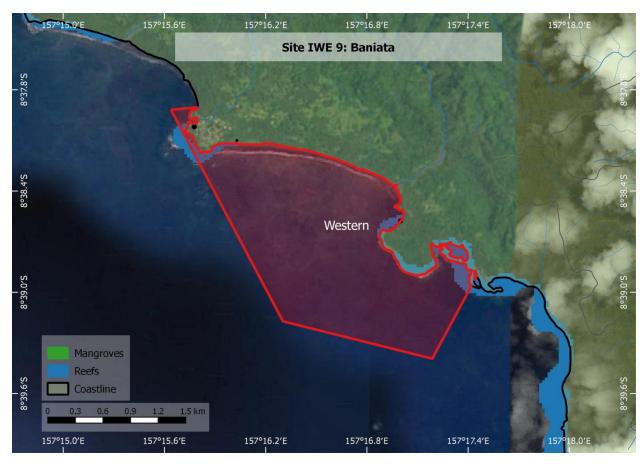
General characteristics of Solomon Islands coral reefs can be found in Site OC 1: Roncador Reef; those characteristics also apply here.

### Type and number of sources (score = 1)

Apart from expert sources at the workshop and an outline of the LMMA management plan (SILMMA, 2017b), there were no references available to describe the special and/or unique features of Santupaele. Three peer-reviewed papers described studies conducted on Kolombangara Island, but none of these was particularly descriptive about the marine values of the fringing reefs around the island.

### Obligations (score = 1)

Santupaele is part of the Solomon Islands Locally Managed Marine Areas network. The various habitats and species present on coral reefs are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.



# 3.2.3.9 SITE IWE 9: BANIATA

FIGURE 34. SITE IWE 9: Baniata

| TABLE 30. | SITE IWE 9: F | Baniata O  | verall score  | (based i | inon inform | ation, below) |
|-----------|---------------|------------|---------------|----------|-------------|---------------|
| IADLE 30. |               | Juniata. O | verun score i | (Duscu t |             |               |

| Geographic Cluster               | Site Name | Site Code | Overall Rating |
|----------------------------------|-----------|-----------|----------------|
| Inshore sites – Western Province | Baniata   | IWE9      | 9              |

### Geographic boundaries

157.2606°E 8.6317°S, 157.2908°E 8.6565°S

### Geographic description (score = 3)

Baniata is on Rendova Island, in the New Georgia group of islands. The island covers approximately 40,000 ha, and Baniata is its largest village. The SUMA is the turtle nesting beach off the village.

### Justification (score = 2)

The black-sand beaches of Baniata are important nesting grounds for the vulnerable leatherback turtle (Hurutarau et al., 2009); it is the longest nesting beach in the Solomon Islands (Mast et al., 2006). The leatherback nesting population in the Solomon Islands is part of the stock nesting throughout the western Pacific (Pita et al., 2007). A monitoring program for nesting leatherback turtle, involving the village community, has been underway for a number of years; Baniata was also subject to a genetic study that established that Western Pacific leatherback turtles are subpopulations of a larger single genetic stock (Dutton et al., 2007), and a tagging study that found leatherbacks nesting at Baniata tended to remain in the vicinity during the entire nesting season (Benson et al., 2011). From September 2002 until May 2004, a total of 122 leatherback nests were recorded on Baniata's beaches (Gjertsen and Stevenson, 2005). Information about leatherback turtles in the Solomon Islands is also presented in Site OC 5: Leatherback turtle.

Whilst this SUMA was identified for its importance for leatherback turtles, it also includes fringing coral reef and associated communities which are important for turtle foraging but also for the biodiversity they contain – although no specific information about these reef areas is known.

## Type and number of sources (score = 3)

Three reports detail the value of Baniata for nesting leatherback turtles, and describe the monitoring program that also ensures the conservation of the nesting beach. The strategic action plan for turtles includes the site among the most important turtle nesting sites in the Solomon Islands. Two peer-reviewed papers on genetics and migration sampled turtles from Baniata.

## Obligations (score = 1)

Community-based conservation organisation, the Tetepare Descendants' Association, runs a leatherback conservation program in the villages of Baniata, Havilla and Retavo on this coastline. Leatherback turtles are also listed under CITES, and under the IUCN Red List as Vulnerable.

# 3.2.4 Inshore Sites - Temotu Province

All the inshore SUMAs within Temotu Province are depicted in the figure below.



FIGURE 35. Overview of the inshore SUMA sites within Temotu Province.

# 3.2.4.1 SITE ITE 1: TINAKULA

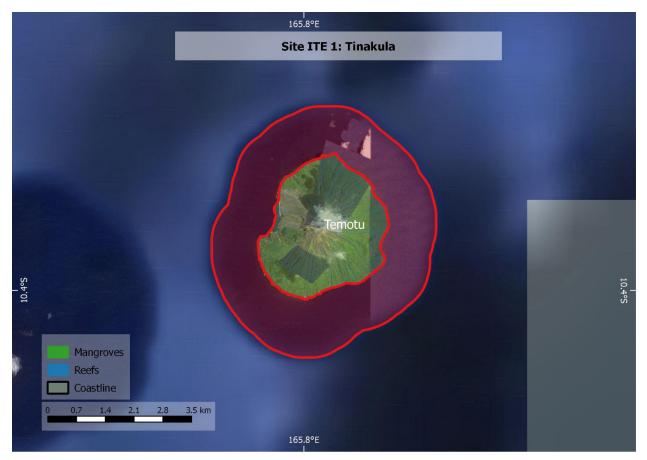


FIGURE 36. SITE ITE 1: Tinakula

| Geographic Cluster              | Site Name | Site Code | Overall Rating |
|---------------------------------|-----------|-----------|----------------|
| Inshore sites – Temotu Province | Tinakula  | ITE1      | 8.5            |

### Geographic boundaries

165.7795°E 10.3590°S, 165.8293°E 10.4149°S

### Geographic description (score = 3)

Tinakula volcano is located 35km north of Santa Cruz Island in the Solomon Islands. It forms a steep island 3.5 km wide, which is the upper 25% of a very active stratovolcano that rises more than 3 km from the sea floor. The SUMA is the fringing reef surrounding the island.

### Justification (score = 2)

Experts present at the workshop named Tinakula for its fish abundance. As an isolated island rising steeply from the deep ocean, it likely creates turbulence and upwelling that enhance productivity, and benthic communities along its sides are also likely to attract pelagic species (see Site OW 1: Southern New Georgia seamounts). Tinakula's marine habitats are likely to possess similar qualities to other areas where coral reefs have formed on the sides of active volcanoes (Houk and Starmer, 2010; Pinault et al., 2014; Vroom and Zgliczynski, 2011); a survey was conducted there, but results have yet to become available (Bruckner, 2014).

Tinakula's active summit crater is often in strombolian activity, ejecting glowing bombs that roll down a steep slope of loose ash and scoria that extend into the sea on the southwestern side of the island. Coral reefs growing in the vicinity of active volcances experience frequent catastrophic disturbances. The lava flows and heavy ash deposition that often

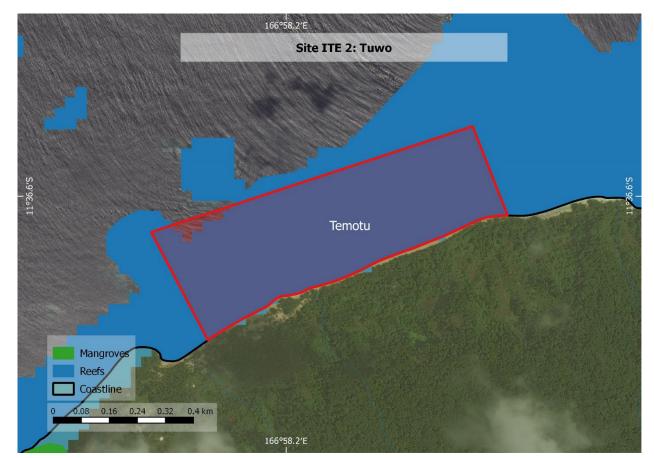
follow volcanic eruptions can cause mass mortality of reef biota (Vroom and Zgliczynski, 2011), and the recovery of post-burial reef ecosystems depends partly upon the capacity of the ash deposit to be colonised by waterborne bacterial communities and may be influenced by the physiochemical properties of the ash itself (Witt et al., 2017). The few studies available show that coral reef recovery is possible after volcanic eruptions (Vroom and Zgliczynski, 2011), and geological research has found that complete reassembly can occur after this type of damage (Reuter and Piller, 2011). However, connectivity to larval sources, either from undamaged parts of the island or from other islands, is crucial (Starger et al., 2010). Volcanogenic substrata (ash, glass) have been found to host a more diverse, and significantly different, bacterial community compared with biogenic (carbonate and calcite sand) and terrigenic (quartz) substrates (Witt et al., 2017). Also, the extremely harsh environment created directly after an eruption is thought to encourage endemism, at least in coral reef fishes (Pinault et al., 2014). Ultimately, reefs around and active volcano such as Tinakula are likely to present a range of states from early to late succession, depending on the timing and location of eruption impacts (Houk and Starmer, 2010). The abundance and composition of the fish community is also likely to be structured according to the age of the lava flow and distance to the most recent lava flow, as well as other environmental variables (Pinault et al., 2014).

## Type and number of sources (score = 2.5)

No direct information was found about Tinakula; the only survey report found was a field report, with no actual results. However, six peer-reviewed papers described research on coral reefs around active volcanoes, and there is information to support marine life around seamounts (Site OW 1: Southern New Georgia seamounts) from which some inferences about Tinakula can be made.

## Obligations (score = 1)

The various habitats and species present on coral reefs, and pelagic species that use coral reef habitats, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.



# 3.2.4.2 SITE ITE 2: TUWO

### FIGURE 37. SITE ITE 2: Tuwo

### TABLE 32. SITE ITE 2: Tuwo. Overall score (based upon information, below)

| Geographic Cluster              | Site Name | Site Code | Overall Rating |
|---------------------------------|-----------|-----------|----------------|
| Inshore sites – Temotu Province | Tuwo      | ITE2      | 7              |

### Geographic boundaries

166.9664°E 11.6081°S, 166.9757°E 11.6137°S

### Geographic description (score = 3)

Tuwo is a community on Fenualoa, the second largest island in the Reef Islands, measuring 8 km by 600 m. At low tide, Fenualoa is connected to the neighbouring island of Nifiloli to the north. The west side of the island is mainly sandy beaches facing a vast lagoon and the Great Reef. The east side is composed of steep rocky cliffs with the deep Forest Passage separating Fenualoa from the largest island of the group (Lomlom). The island is densely populated with four main villages, all on the western side of the island. The SUMA is the coral reef complex surrounding the island.

### Justification (score = 1)

Tuwo is identified as a conservation area (http://www.oceanswatch.org/), and has gained some publicity due to water shortages and climate change impacts (e.g. Connell, 2015). There is very little information about the marine environment around Tuwo, or the Reef Islands in general. A fish biodiversity survey found very high fish diversity (725 species) in 1998 in Temotu Province, but it is unclear whether the Reef Islands were included (McGrouther, 1999). This area is expected to represent the special and/or unique values typical of remote, oceanic coral reefs (see Site OC 1: Roncador Reef) and reefs that have a diverse variety of habitats in close proximity (see Site IWE 6: Njari Island).

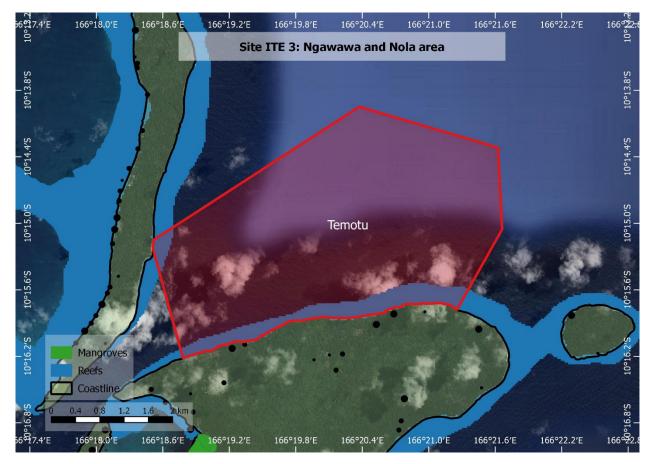
### Type and number of sources (score = 2)

The sources available for Site OC 1: Roncador Reef and Site IWE 6: Njari Island may also apply here. Additionally, two websites highlight the measures takes against climate change impacts, and one peer-reviewed reference presents the vulnerability of these islands. An older report presents the results of a fish biodiversity survey.

### Obligations (score = 1)

The various habitats and species present on coral reefs, and pelagic species that use coral reef habitats, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.





# 3.2.4.3 SITE ITE 3: NGAWAWA AND NOLA AREA

FIGURE 38. SITE ITE 3: Ngawawa and Nola area

| Geographic Cluster              | Site Name             | Site Code | Overall Rating |
|---------------------------------|-----------------------|-----------|----------------|
| Inshore sites – Temotu Province | Ngawawa and Nola area | ITE3      | 8.5            |

### Geographic boundaries

166.3610°E 10.2702°S, 166.3084°E 10.2324°S,

### Geographic description (score = 3)

Ngawawa and Nola villages are generally referred to as the Green Lagoon Community, home to around 300 people. The community is located on Ngalo Island, the main island of the Reef Islands atoll. The island is uplifted on one side, forming a cliff on the side facing the open sea, and a lagoon on the inside. The SUMA is the coral reef complex surrounding the island; Ngawawa and Nola communities are on the small island to the left of the SUMA

### Justification (score = 1.5)

Ngawawa and Nola villages have been identified as a conservation area, and have been flagged as a potential climate change adaptation project area due to repeated disturbances (Ramohia, 2012; Walenenea et al., 2013). The "Green Lagoon Conservation Area" aims to protect the green and hawksbill turtle nesting beaches of Nykolo and Nymembula (Ramohia, 2012). There is very little information about the marine environment around the villages, or the Reef Islands in general, except for a list of natural disasters that have repeatedly impacted the reefs. A fish biodiversity survey found

very high fish diversity (725 species) in 1998 in Temotu Province, but it is unclear whether the Reef Islands were included (McGrouther, 1999). This area is expected to represent the special and/or unique values typical of remote, oceanic coral reefs (see Site OC 1: Roncador Reef) and reefs that have a diverse variety of habitats in close proximity (see Site IWE 6: Njari Island).

### Type and number of sources (score = 2)

The sources available for Site OC 1: Roncador Reef and Site IWE 6: Njari Island may also apply here. Additionally, two reports highlight the measures to be taken against climate change impacts. An older report presents the results of a fish biodiversity survey.

## Obligations (score = 2)

The various habitats and a number of species present on coral reefs, and some pelagic species that use coral reef habitats, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998 and the Fisheries Act 1998. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List Green turtles are listed as Endangered and hawksbill turtles as Critically Endangered.

# 3.2.5 Inshore sites - Makira and Ulawa Province

All the inshore SUMAs within Makira and Ulawa Province are depicted in the figure below.

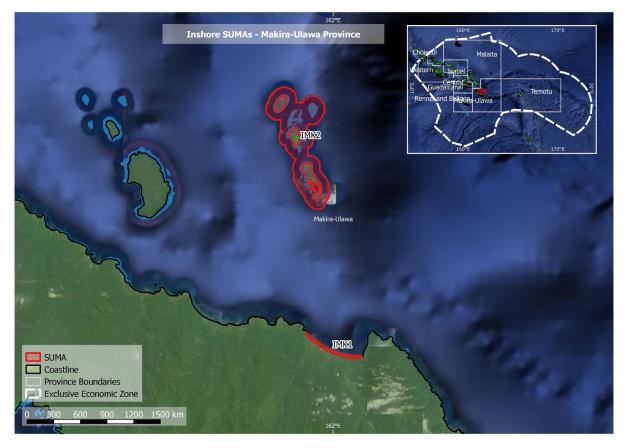


FIGURE 39. Overview of the inshore SUMA sites within Makira and Ulawa Province.

# 3.2.5.1 SITE IMK 1: WAINONI

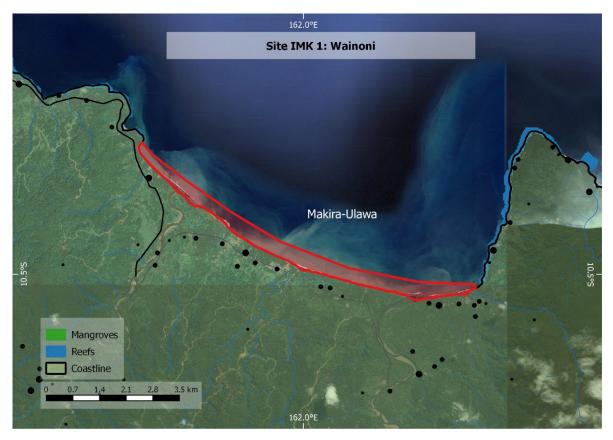


FIGURE 40. SITE IMK 1: Wainoni

### TABLE 34. SITE IMK 1: Wainoni. Overall score (based upon information, below)

| Geographic Cluster                        | Site Name | Site Code | Overall Rating |
|---|-----------|-----------|----------------|
| Inshore sites - Makira and Ulawa Province | Wainoni   | IMK1      | 5.5            |

### Geographic boundaries

161.9604°E 10.4682°S, 162.0413°E 10.5062°S

### Geographic description (score = 1.5)

Wainoni Bay faces north, on the northeastern side of San Cristobal Island. It is approximately 10 km long, and two creeks drain into the bay. The SUMA includes the entire beach and marine habitats within the bay.

### Justification (score = 1.5)

Workshop participants identified this area as an Olive Ridley turtle nesting site. Olive Ridley turtles were first recorded in the Solomon Islands in 1977, and are not considered common here (James, 1977; Pacific Horizons Consultancy Group, 2008; Trevor, 2009), although they are generally common throughout the world's oceans (Mast et al., 2006). No information was available on Wainoni Bay and its associated marine habitats; only one report alluded to an Olive Ridley hatchling found off Makira (San Cristobal) Island (McKeown, 1977).

### Type and number of sources (score = 1.5)

Information about Wainoni was only available through workshop experts. We drew on one general report on turtles, three reports about Olive Ridley turtles in the Solomon Islands, and one report that alluded to their presence at the site.

## Obligations (score = 1)

Olive Ridley turtles are listed under CITES, the Convention on Migratory Species (CMS) and on the IUCN Red List as Vulnerable.

# 3.2.5.2 SITE IMK 2: THREE SISTERS ISLANDS

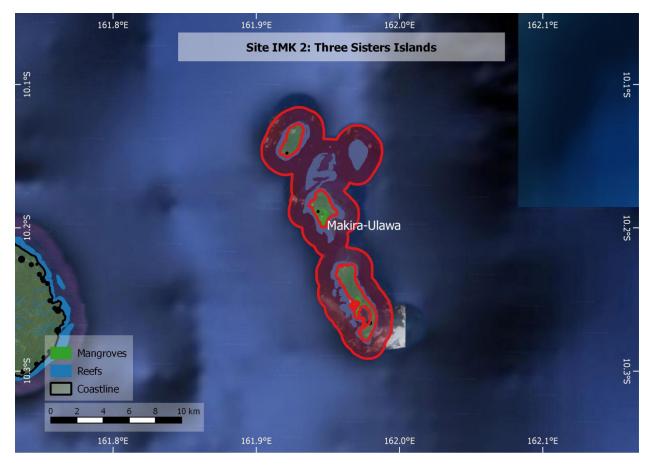


FIGURE 41. SITE IMK 2: Three Sisters Islands

### TABLE 35. SITE IMK 2: Three Sisters Islands. Overall score (based upon information, below)

| Geographic Cluster                        | Site Name             | Site Code | Overall Rating |
|---|-----------------------|-----------|----------------|
| Inshore sites - Makira and Ulawa Province | Three Sisters Islands | IMK2      | 10.5           |

### Geographic boundaries

161.9949°E 10.2912°S, 161.9037°E 10.1158°S

### Geographic description (score = 3)

The Three Sisters (Olu Malau) Islands are located north of Makira (San Cristobal) Island, and form a small chain arranged roughly in a north-south direction. The islands are named, from north to south, Ali'ite Island (2.91 km<sup>2</sup>), Malaulalo Island (3.34 km<sup>2</sup>) and Malaupaina Island (6.37 km<sup>2</sup>). The islands are surrounded by complex fringing reef habitats and separated by deep water, all of which comprise this SUMA.

### Justification (score = 2.5)

The Three Sisters Islands' marine environment was chosen for its rich marine habitats and the islands' position along movement pathways for whales that frequent Solomon Islands waters. The Three Sisters Islands were considered by the 2004 Marine Assessment to provide a prime example of a biodiverse offshore island marine system with minimal terrestrial and human influence. Some of the best underwater visibility conditions and highest biodiversity were encountered off Malaupaina Island, which also has an extensive shallow lagoon that is almost entirely land-locked (Green et al., 2006a). Reef fish communities were among the top three most diverse of all sites surveyed in the Solomon Islands (Allen, 2006), and also had high biomass and abundance of food and aquarium fishes (Green et al., 2006b) and commercially important invertebrates (Ramohia, 2006). For further information about reef communities in the Solomon Islands, see Site OC 1: Roncador Reef and Site IGU 1: Marau Sound.

Shallow reef and lagoonal habitats around the Three Sisters Islands support seagrass communities. On Malaulalo Island there is an extensive meadow consisting of *T. hemprichii*, *C. rotundata* and *H. ovalis* growing on coarse sand/shell, and macroalgae (*Halimeda*, turf, *Lyngbya*) are also abundant (McKenzie et al., 2006). On Malaupaina Island, *T. hemprichii*, *H. ovalis* and *C. rotundata* meadows dominated the bays along the western leeward shores (McKenzie et al., 2006). Inside the lagoon fringed by mangroves (Ramohia and da Wheya, 2000) is a 20–30m seagrass meadow dominated by *E. acoroides*, *H. uninervis*, *C. rotundata* and *H. ovalis* (McKenzie et al., 2006). For further information on seagrass and mangrove habitats, and the value of their proximity to coral reefs, see Site IGU 1: Marau Sound.

The islands have also been known to support one of the three largest populations of estuarine crocodile (*Crocodylus porosus*) surviving in the Solomon Islands. For further information about crocodiles in the Solomon Islands, see Site IGU 2: Lauvi Lagoon.

There was no specific information about whales around the islands beyond expert advice. For information about whales in the Solomon Islands, see Site OW 1: Southern New Georgia seamounts.

# Type and number of sources (score = 2)

The Marine Assessment provided the main source of information about the Three Sisters Islands marine communities, but no documented information was found about whales. Two reports mentioned the Three Sisters Islands as habitat for crocodiles and mangroves.

# Obligations (score = 3)

Coral reefs and seagrass beds, and the species within them, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998, and mangroves are also protected under the Forest Resources and Timber Act. Crocodiles, corals, some fishes and some invertebrates are listed under CITES and on the IUCN Red List. Several whale species that are known or suspected to occur in the Solomon Seas are IUCN Red Listed as Vulnerable (humpback, sperm, 'Pacific' blue whales) or Endangered (i.e. fin, 'Antarctic' blue whales, sei whales).

# 3.2.6 Inshore Sites - Choiseul Province

All the inshore SUMAs within Choiseul Province are depicted in the figure below.

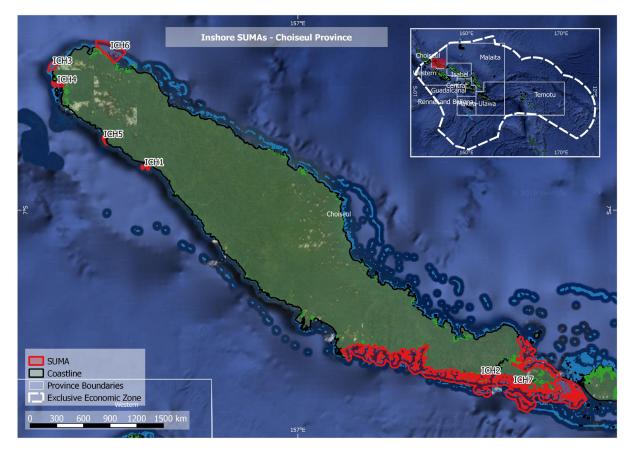


FIGURE 42. Overview of the inshore SUMA sites within Choiseul Province.

# 3.2.6.1 SITE ICH 1: ZINOA

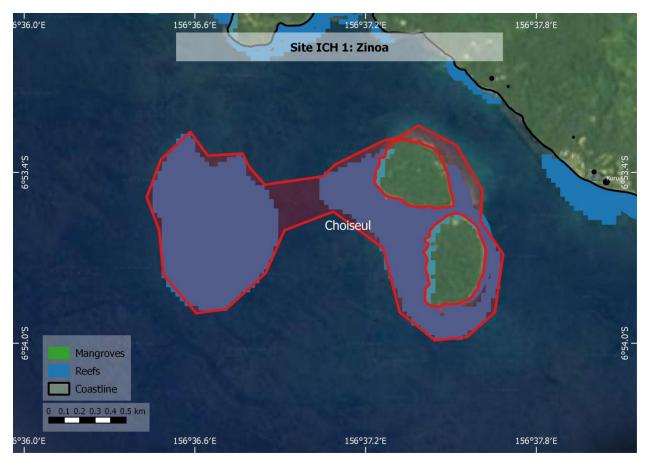


FIGURE 43. SITE ICH 1: Zinoa

### TABLE 36. SITE ICH 1: Zinoa. Overall score (based upon information, below)

| Geographic Cluster                | Site Name | Site Code | Overall Rating |
|-----------------------------------|-----------|-----------|----------------|
| Inshore sites – Choiseul Province | Zinoa     | ICH1      | 7              |

### Geographic boundaries

156.6280°E 6.8998°S, 156.6071°E 6.8872°S

### Geographic description (score = 3)

Zinoa Island is located on the south-west side of Choiseul in the Solomon Islands. The SUMA includes the Zinoa Marine Conservation Area, which covers 150 ha and consists of two islands and associated reefs that occur approximately one kilometre offshore from Voza village on the Choiseul mainland.

### Justification (score = 2)

Choiseul Province hosts very high marine biodiversity (Green et al., 2006a), which is representative of the Coral Triangle (see Site OC 1: Roncador Reef). The Zinoa Islands are surrounded by marine habitats typical of the turbid inshore reefs of this area of the Solomon Islands (Hamilton et al., 2007). Massive and encrusting coral species dominate the benthos and cover of branching *Acropora* corals is low (Hamilton et al., 2007). Several nocturnal aggregation sites for bumphead parrotfish (*Bolbometopon muricatum*) are known from around Zinoa (Hamilton et al., 2007).

This area regularly receives strong sea conditions as a result of prevailing trade-winds and cyclone seasons, with strong wave conditions that play an important role in structuring the benthic communities of coral reefs situated along the coastline. Zinoa was significantly affected by the April 2007 tsunami, which caused reduced density and biomass of reef food fish (especially snappers (Lutjanidae), surgeonfishes (Acanthuridae) and to some extent emperors (Lethrinidae));

macroinvertebrates (which had increased in response to protection) and hard corals (Hamilton et al., 2007). Other organisms, such as drummers (Kyphosidae), goatfishes (Mullidae), rabbitfishes (Siganidae), bumphead parrotfish and soft corals were more resistant to the disturbance (Hamilton et al., 2007).

The reef system at Zinoa is regularly subjected to changes in turbidity, wave action and possibly salinity, making it robust and capable of tolerating extreme events, and has a good capacity to recover from damage (Hamilton et al., 2007). Resilient coral reefs are highly valuable, as they can enhance the persistence of organisms that rely on and support the recovery of damaged areas around them (McLean et al., 2016).

## Type and number of sources (score = 1)

One report described surveys conducted specifically around Ziona in the wake of a tsunami, providing a clear description of the coral reef ecosystem in the MCA. The 2004 Marine Assessment surveyed sites around the main island of Choiseul, but not around Ziona.

# Obligations (score = 1)

Coral reefs and the species that use them are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. No-take protection exists for reefs around Zinoa. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.

# 3.2.6.2 SITE ICH 2: ROB ROY PASSAGE

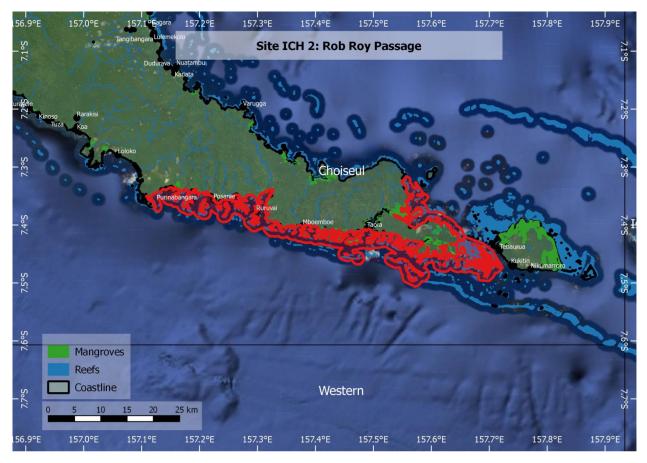


FIGURE 44. SITE ICH 2: Rob Roy Passage

### TABLE 37. SITE ICH 2: Rob Roy Passage (based upon information, below)

| Geographic Cluster                | Site Name       | Site Code | Overall Rating |
|-----------------------------------|-----------------|-----------|----------------|
| Inshore sites – Choiseul Province | Rob Roy Passage | ICH2      | 9.5            |

# Geographic boundaries

157.1078°E 7.31595°S, 157.7233°E 7.5062°S

## Geographic description (score = 2)

Rob Roy Island, a low-lying island almost covered with coconut plantations, lies very close to the southeastern end of Choiseul, and is separated from it by a narrow sea passage fringed with mangrove forest. The island itself is almost completely encircled with mangrove forest. There is a particularly extensive mangrove forest near the entrance of Rob Roy Passage into Pisuka Bay. The SUMA is the passage between Rob Roy Island and Choiseul Island.

### Justification (score = 2)

Nagosele passage, between Rob Roy Island and Choiseul Island, is rich in seagrasses and mangroves (McKenzie et al., 2006; see also Site IGU1: Marau Sound). These wetlands have developed on the drowned coastline of southeastern Choiseul and Rob Roy Island, with many rivers and sheltered lagoons, large areas of swamp forest and extensive mangrove forests, especially on either side of Rob Roy passage between Choiseul and Rob Roy Island (Pacific Horizons Consultancy Group, 2008). The mangrove forest is dominated by *Rhizophora* spp., but with *Bruguiera* sp. locally common. The seaward side of the mangrove forest is dominated by *Rhizophora apiculata*, and the landward side hosts *R. stylosa, Lumnitzera littorea* and *Xylocarpus granatum* (Leary, 1991).

This area hosts a high abundance of crocodiles, which are otherwise rare on Choiseul (Crocodile Working Group, 1990), and dugong are also reported to be present (Leary, 1991). See Site IGU 2: Lauvi Lagoon and Site OE 2: Vanikoro for information about crocodiles and dugongs, respectively. Rob Roy Passage lies within one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

### Type and number of sources (score = 2.5)

Rob Roy Island and channel are mentioned in the 2004 Marine Assessment, in two "State of the Environment" reports, and in the Bismarck Solomon Seas Ecoregion report. The significance of mangroves, crocodiles and dugongs at this site can be inferred through sources for sites mentioned above.

## Obligations (score = 3)

The Environment Act 1998, Wildlife Management, Protection Act 1998, Fisheries Act 1998 and Forests Act 1999 have provisions for the protection and management of habitats and species specific to wetlands. The crocodile is listed under CITES, and considered Least Concern on the IUCN Red List, with a note that the classification needs updating. Dugongs are protected under both national and international legislation. The Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998 and Protected Areas Act 2010 all have provisions for the protection of dugongs, and they are listed under CITES and classified as vulnerable in the IUCN Red List.

# 3.2.6.3 SITE ICH 3: RABAKELA



FIGURE 45. SITE ICH 3: Rabakela

| TABLE 38. SITE ICH 3: Rabakela. Overall score. (based upon i | information, | below) |
|--|--------------|--------|
|--|--------------|--------|

| Geographic Cluster                | Site Name | Site Code | Overall Rating |
|-----------------------------------|-----------|-----------|----------------|
| Inshore sites – Choiseul Province | Rabakela  | ICH3      | 7              |

### Geographic boundaries

156.4029°E 6.6520°S, 156.3736°E 6.6263°S

### Geographic description (score = 3)

Rabakela is a marine protected area (MPA), measuring 0.22 km<sup>2</sup>, at the northern end of Choiseul Island. It includes a stretch of fringing coral reef; the SUMA includes this MPA.

### Justification (score = 2)

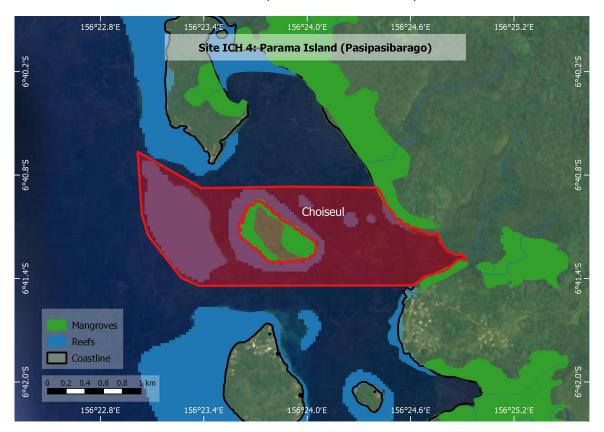
Rabakela is an existing LMMA at the northern end of Choiseul Island, including a no-take zone as part of a protected area network that extends around the entire island (Lipsett-Moore et al., 2010). It includes a fringing coral reef (see Site OC 1: Roncador Reef and Site IGU 1: Marau Sound for special attributes of coral reefs in general and in the Solomon Islands). During the 2004 Marine Assessment, Choiseul was found to have particularly high fish biodiversity (Allen, 2006) and food fish biomass (Green et al., 2006b), and sites in northeastern Choiseul had high coral cover (Hughes, 2006). This part of Choiseul was the only site north of 8°S where the seagrass species Cymodocea serrulata was recorded (McKenzie et al., 2006). No-take protection of reef habitats further south (see Site ICH 1: Zinoa) has resulted in positive effects on populations of exploited fishes and invertebrates (Hamilton et al., 2007).

## Type and number of sources (score = 1)

Reefs in the vicinity of Rabakela are mentioned in the 2004 Marine Assessment. The significance of coral reefs at this site can be inferred through sources for sites mentioned above.

### Obligations (score = 1)

Coral reefs and numerous species that use them are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.



# 3.2.6.4 SITE ICH 4: PARAMA ISLAND (PASIPASIBAREGO)

FIGURE 46. SITE ICH 4: Parama Island (Pasipasibarego)

TABLE 39. SITE ICH 4: Parama Island (Pasipasibarego). Overall score. (based upon information, below)

| Geographic Cluster                | Site Name                      | Site Code | Overall Rating |
|-----------------------------------|--------------------------------|-----------|----------------|
| Inshore sites – Choiseul Province | Parama Island (Pasipasibarego) | ICH5      | 5.5            |

### Geographic boundaries

156.3835°E 6.6778°S, 156.4153°E 6.6907°S

### Geographic description (score = 2.5)

This SUMA is the mouth of an estuary close to the western tip of Choiseul Island, inshore from Parama Island. It includes the marine habitats within the embayment approximately 500 m out from the estuary itself.

### Justification (score = 1)

Parama Island and Pasipasibarego are LMMAs off Choiseul Island (Lipsett-Moore et al., 2010). Experts present at the workshop identified the area from west of Parama Island up to the river mouth on the main island to the east as important for saltwater crocodile populations (see Site IGU 2: Lauvi Lagoon).

## Type and number of sources (score = 1)

Only expert sources from the workshop confirmed this as an important area for crocodiles. A Ridges to Reefs report named it as a protected area. No further information was found.

### Obligations (score = 1)

The saltwater crocodile is listed under CITES, and considered Least Concern on the IUCN Red List, with a note that the classification needs updating.

# 3.2.6.5 SITE ICH 5: MOLI

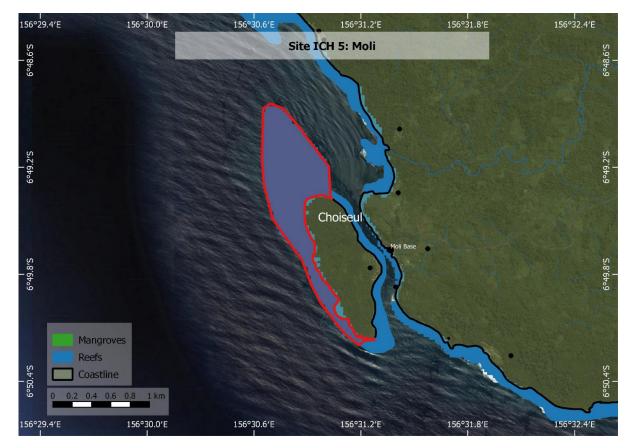


FIGURE 47. SITE ICH 5: Moli

TABLE 40. SITE ICH 5: Moli. Overall score. (based upon information, below)

| Geographic Cluster                | Site Name | Site Code | Overall Rating |
|-----------------------------------|-----------|-----------|----------------|
| Inshore sites – Choiseul Province | Moli      | ICH5      | 6.5            |

### Geographic boundaries

156.51075°E 6.8140°S, 156.5212°E 6.8366°S

### Geographic description (score = 2.5)

Moli Island, off the western side of Choiseul Island, has a locally managed marine area (LMMA). The SUMA includes the LMMA, which includes a stretch of fringing coral reef.

### Justification (score = 1.5)

Expert sources from the workshop and a Ridges to Reefs report confirmed this as an LMMA (Lipsett-Moore et al., 2010). Fringing reefs in this area are likely to have similar attributes to Site ICH 1: Zinoa.

## Type and number of sources (score = 1.5)

Expert sources from the workshop and a Ridges to Reefs report confirmed this as an LMMA. Sources used to describe Site ICH 1: Zinoa are also likely to apply here.

### Obligations (score = 1)

Coral reefs and the species that use them are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Corals, some fishes, some invertebrates and reef sharks are listed under CITES and on the IUCN Red List.

# 3.2.6.6 SITE ICH 6: CHIVOKO

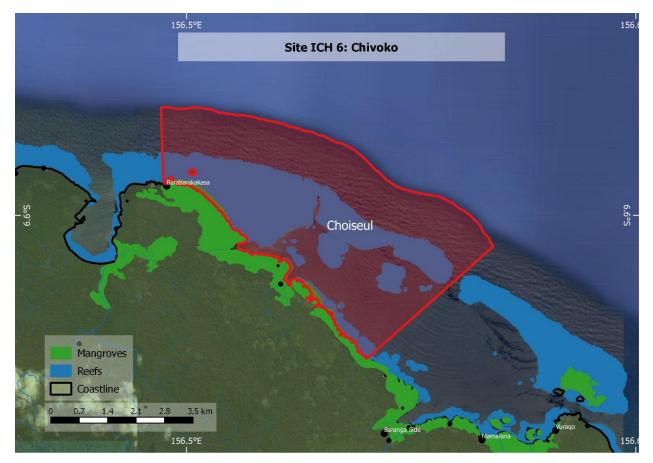


FIGURE 48. SITE ICH 6: Chivoko

| TABLE 41. SITE ICH 6: Chivoko (bas | ed upon inforn | nation, below) |
|------------------------------------|----------------|----------------|
|------------------------------------|----------------|----------------|

| Geographic Cluster                | Site Name | Site Code | Overall Rating |
|-----------------------------------|-----------|-----------|----------------|
| Inshore sites – Choiseul Province | Chivoko   | ICH6      | 7.5            |

### Geographic boundaries

156.4943°E 6.5759°S, 156.5682°E 6.6318°S

### Geographic description (score = 3)

Chivoko is a coastal village in northern Choiseul surrounded by dense mangroves and tidal mudflats, with an LMMA that includes a lagoon ringed with mangroves and bordered at the northern end by a stretch of coral reef. The SUMA includes the marine environments within the LMMA.

### Justification (score = 1.5)

Chivoko LMMA (Lipsett-Moore et al., 2010) contains a rich and diverse marine area (Nguyen and Kereseka, 2008). Workshop participants identified this site specifically as a spawning aggregation for the surgeonfish *Ctenochaetus striatus* and the groupers *Epinephelus merra* and *E. spilotoceps* (Hamilton, 2003), small, versatile ambush predators that tend to be abundant on tropical reefs (see also Site OC 2: Ontong Java for general information on the importance of spawning aggregations). This species is one of the many reef fishes that aggregate according to the lunar cycle to spawn (Soyano et al., 2003), making them vulnerable to overexploitation but also responsive to conservation within no-take areas (Dell et al., 2015). Chivoko is known by local fishers to be a large aggregation site for a number of grouper species and, even though it is targeted by fishers, it has been stable for many years (Hamilton, 2003).

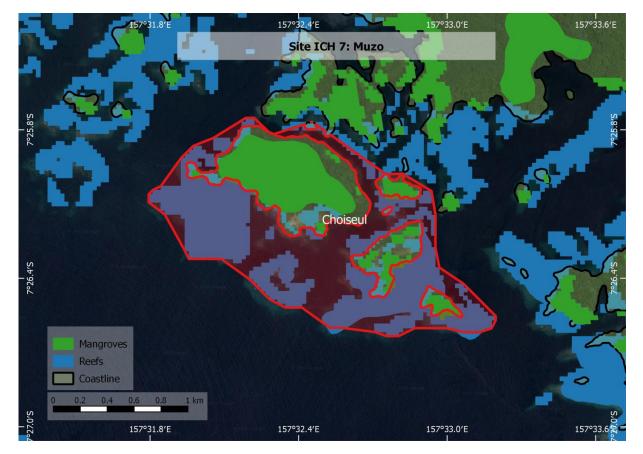
### Type and number of sources (score = 2)

This site was described with the aid of workshop participants, two general peer-reviewed articles about honeycomb groupers, two reports that identify Chivoko as an LMMA and two reports that specifically refers to spawning aggregations at this site.

### Obligations (score = 1)

There are provisions for the protection and management of honeycomb groupers under the Fisheries Act 1998. They are listed on the IUCN Red List as Least Concern.

# 3.2.6.7 SITE ICH 7: MUZO



#### FIGURE 49. SITE ICH 7: Muzo

### TABLE 42. SITE ICH 7: Muzo (based upon information, below)

| Geographic Cluster                | Site Name | Site Code | Overall Rating |
|-----------------------------------|-----------|-----------|----------------|
| Inshore sites – Choiseul Province | Muzo      | ICH7      | 7.5            |

## Geographic boundaries

157.5299°E 7.4291°S, 157.5532°E 7.4438°S

## Geographic description (score = 3)

Muzo Island is located towards the southern end of Choiseul Island. It is slightly further offshore than most other islands in this area, and fringed by coral reef. It is sheltered from strong wave action by a barrier reef directly to the south. The SUMA comprises the coral reef surrounding the island.

## Justification (score = 1)

Workshop participants pinpointed this site for its diverse reef system and as a turtle nesting area. It is already protected as an LMMA (Lipsett-Moore et al., 2010), and is likely to have attributes similar to Site ICH 1: Zinoa. Only one Environmental Impact Assessment (EIA) report identified Muzo Island as a turtle nesting site, but there was no information of turtle species or numbers (SMM Solomon Ltd., 2012a). General information about nesting turtles in the Solomon Islands is detailed in Site OC 5: Leatherback turtle and Site IGU 1: Marau Sound.

### Type and number of sources (score = 1.5)

Two reports identified Muzo as an LMMA and as a turtle nesting site, but no details were given. General information reviewed for Site ICH 1: Zinoa (coral reefs), Site OC 5: Leatherback turtle (leatherback turtles) and Site IGU 1: Marau Sound (other turtle species) may also apply here.

## Obligations (score = 2)

Coral reefs and the species that use them are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Corals, some fishes, some invertebrates, some reef sharks and turtles are listed under CITES and on the IUCN Red List.

# 3.2.7 Inshore Sites - Isabel Province

All the inshore SUMAs within Isabel Province are depicted in the figure below.

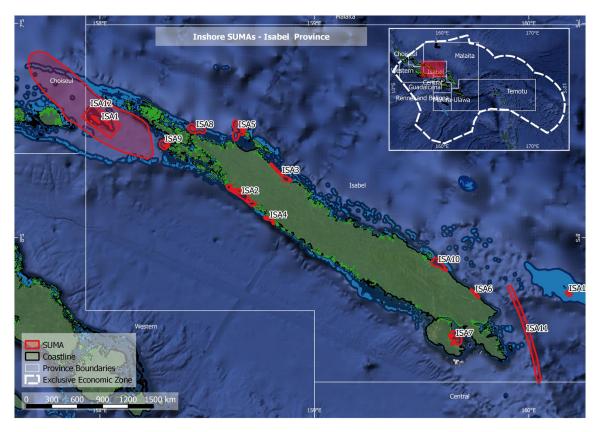


FIGURE 50. Overview of the inshore SUMA sites within Isabel Province.

# 3.2.7.1 SITE ISA 1: ARNAVON MARINE PARK

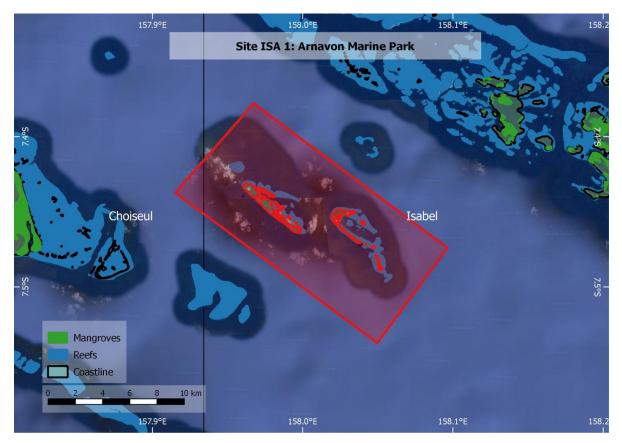


FIGURE 51. SITE ISA 1: Arnavon Marine Park

### TABLE 43. SITE ISA 1: Arnavon Marine Park. Overall score (based upon information, below)

| Geographic Cluster              | Site Name           | Site Code | Overall Rating |
|---------------------------------|---------------------|-----------|----------------|
| Inshore sites - Isabel Province | Arnavon Marine Park | ISA1      | 12             |

### Geographic boundaries

157.9152°E 7.3778°S, 158.0964°E 7.5373°S

### Geographic description (score = 3)

The Arnarvon Islands are a group of islands in Isabel Province, near Wagina Island in Choiseul Province. The Arnavon Islands consist of Sikopo, Kerehikapa and Maleivona Islands (major islands) and Tuma and Leko (minor islands). The SUMA is the Arnarvon Marine Park, which encompasses 157 km<sup>2</sup> between Santa Isabel and Choiseul islands in the Manning Strait.

### Justification (score = 3)

The Arnavon Islands are the Solomon Island's prime example of a marine protected area and represent one of the Pacific's most important biodiversity hotspots. The Arnavons Community Marine Conservation Area (ACMCA) was established in 1995 with help from The Nature Conservancy and is administered by a group of previously inimical communities with a shared conservation vision (Sulu et al., 2012). The primary goal is the protection of hawksbill turtles in one of the world's most important hawksbill turtle nesting sites (Hurutarau et al., 2009; The Nature Conservancy, 2017).

Since the ACMCA's foundation, the Arnavon Islands marine ecosystem has experienced a remarkable recovery, including a doubling of the number of hawksbill turtle nests (Hamilton et al., 2015) and an increase in other species, such as giant clams and trochus (The Nature Conservancy, 2017). Most of the 20 nesting hawksbill turtle females that have been fitted

with satellite trackers in the last two years at ACMCA travelled almost directly to the relative safety of the Great Barrier Reef in Queensland, Australia (Foale et al., 2017). There is also a link between immature turtles foraging in Solomon Islands waters to nesting beaches in Micronesia (Mortimer, 2002). This confirms the regional, if not global, importance of the turtle rookery, where the hawksbill turtles belong to a unique genetic stock (Mortimer, 2002), but also enhances the protection of the whole population both during nesting in the Solomon Islands and foraging in Australia.

Green turtles also nest in the ACMCA (Hurutarau et al., 2009; McKeown, 1977); in the 1980s, it was estimated that 27–36% of the entire combined green and hawksbill turtle population in the Solomon Islands nested in the ACMCA (Vaughan, 1981).

The ACMCA has also been highly effective for the recovery of populations of exploited invertebrates and fishes which have been explicitly protected. *Trochus* and white teatfish, for instance, increased rapidly after protection was established (Lincoln Smith et al., 2000, 2002; Ramohia, 2006). There is a highly diverse fish community (Allen, 2006) with unusually large populations of schooling herbivores and a high biomass of snappers (e.g. *Macolor niger, Lutjanus gibbus, Lutjanus bohar*), breams (e.g. *Monotaxis grandoculis*), groupers (*Plectropomus* and *Variola* spp, both very rare elsewhere), herbivorous surgeonfishes (e.g. *Naso hexacanthus*), parrotfishes (Bruckner, 2014; Green et al., 2006), and milkfish in the lagoons (Pickering, 2013). Bumphead parrotfish and Maori wrasse were also more common than on other reefs (Kere, 2009). A recent survey recorded the largest stands of foliaceous corals seen in the Solomon Islands at intermediate and deeper depths (15–30 m), and some very large staghorn coral thickets in shallow water and extensive coral outcrops of *Porites lobata* (Bruckner, 2014). Despite the fact that subsistence fishing for other species is still allowed, coral reef benthic communities are unique, diverse and typical of healthy and productive coral reefs in a range of exposure regimes (Hughes, 2006; Kere, 2009). The Arnavon Islands lie within one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

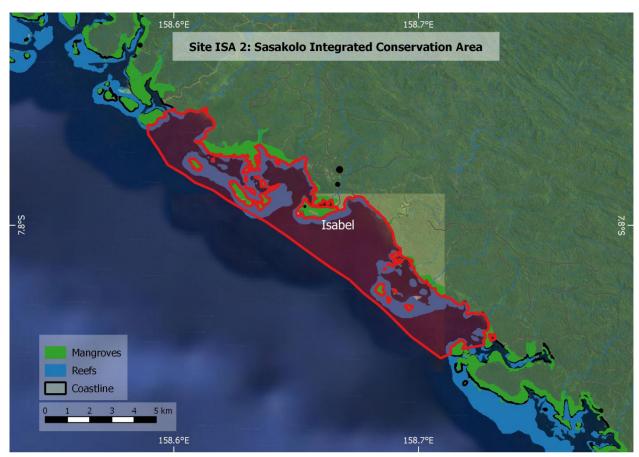
### Type and number of sources (score = 3)

A wealth of information exists for the Arnavon Islands, especially the ACMCA, and all agree on the positive results of conservation. To highlight the special and/or unique marine attributes of the Arnavon Islands, we drew on one website, eleven reports, a strategic action plan for turtles and three peer-reviewed articles, all specifically about the site.

### Obligations (score = 3)

Coral reefs and the species that use them are protected by the National Protected Areas Act 2010; the ACMCA is the first protected area to be established under this Act. Other relevant legislation includes the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Corals, some fishes, some invertebrates, some reef sharks and turtles are listed under CITES and on the IUCN Red List. Green turtles are listed as Endangered, and hawksbill turtles are Critically Endangered.





# 3.2.7.2 SITE ISA 2: SASAKOLO INTEGRATED CONSERVATION AREA

FIGURE 52. SITE ISA 2: Sasakolo Integrated Conservation Area

 TABLE 44. SITE ISA 2: Sasakolo Integrated Conservation Area. Overall score (based upon information, below)

| Geographic Cluster              | Site Name                             | Site Code | Overall Rating |
|---------------------------------|---------------------------------------|-----------|----------------|
| Inshore sites – Isabel Province | Sasakolo Integrated Conservation Area | ISA2      | 6.5            |

### Geographic boundaries

158.5892°E 7.7515°S, 158.7314°E 7.8542°S

### Geographic description (score = 2)

This SUMA is the Sasakolo Integrated Conservation Area, which comprises Sasakolo beach and adjacent waters located in the southwest of Isabel Island.

## Justification (score = 1.5)

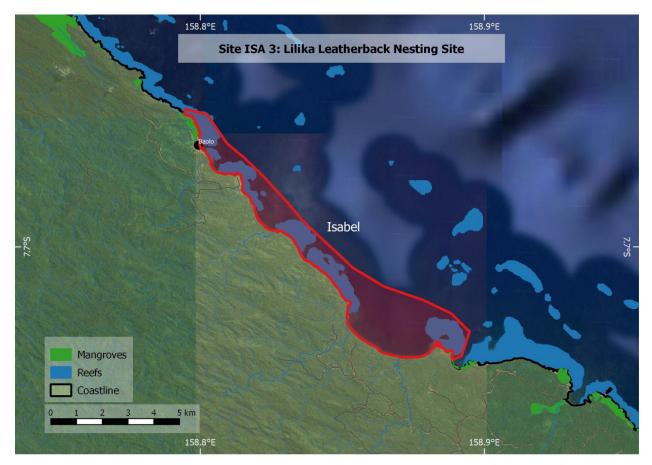
Isabel Province has 33 leatherback turtle nesting beaches that together cover over 70 km (Peterson et al., 2012). Among these, Sasakolo is one of the largest leatherback turtle nesting beaches in the Solomon Islands (Hurutarau et al., 2009); it is used as one of the "index beaches" for turtle monitoring activities (Pita et al., 2007). With the help of TNC, this has been turned into a LMMA (Peterson et al., 2012). For further information about leatherback turtles in the Solomon Islands, see Site OC 5: Leatherback turtle. Sasakolo beach lies within one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

## Type and number of sources (score = 2)

A Ridge to Reef report, the Bismarck Solomon Seas Ecoregion report, the strategic action plan for turtles and a turtle monitoring report confirmed Sasakolo beach as a critical nesting beach for leatherback turtles.

### Obligations (score = 1)

Leatherback turtles are listed under CITES, and on the IUCN Red List as Vulnerable. The Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998 have provisions for protecting turtles and protected areas. Sasakolo is protected by the community as a LMMA.



# 3.2.7.3 SITE ISA 3: LILIKA LEATHERBACK NESTING SITE

FIGURE 53. SITE ISA 3: Lilika Leatherback Nesting Site

TABLE 45. SITE ISA 3: Lilika Leatherback Nesting Site. Overall score (based upon information, below)

| Geographic Cluster              | Site Name                       | Site Code | Overall Rating |
|---------------------------------|---------------------------------|-----------|----------------|
| Inshore sites – Isabel Province | Lilika Leatherback Nesting Site | ISA3      | 5.5            |

### Geographic boundaries

158.7943°E 7.6514°S, 158.8948°E 7.7398°S

### Geographic description (score = 2)

Lilika is a beach on the northeastern side of Isabel Island. This SUMA includes the beach and adjacent waters.

### Justification (score = 1)

Isabel Province has 33 unique turtle nesting beaches that together cover over 70 km (Peterson et al., 2012). Lilika, one of the most important of these beaches, is a protected area with an estimated 150 nests, but no monitoring is thought to occur there (Mast et al., 2006). For further information about leatherback turtles in the Solomon Islands, see Site OC 5: Leatherback turtle.

## Type and number of sources (score = 1.5)

A "State of the World's Turtles" report names Lilika beach as a critical nesting beach for leatherback turtles.

### Obligations (score = 1)

Leatherback turtles are listed under CITES, and on the IUCN Red List as Vulnerable. The Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998 have provisions for protecting turtles and protected areas.

# 3.2.7.4 SITE ISA 4: LITOGHAHIRA

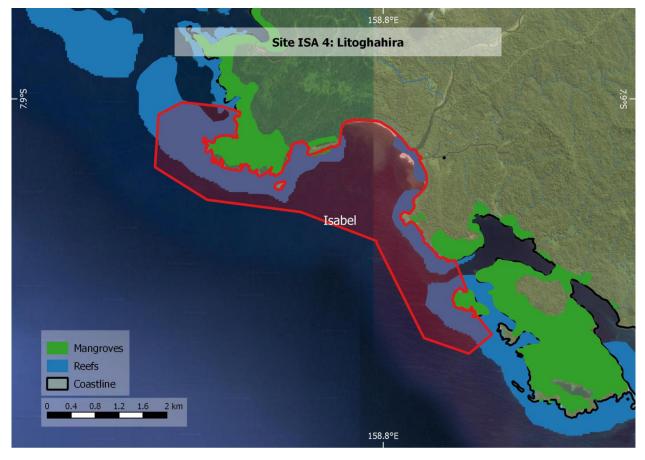


FIGURE 54. SITE ISA 4: Litoghahira

TABLE 46. SITE ISA 4: Litoghahira. Overall score (based upon information, below)

| Geographic Cluster              | Site Name    | Site Code | Overall Rating |
|---------------------------------|--------------|-----------|----------------|
| Inshore sites – Isabel Province | Litogharhira | ISA4      | 6              |

### Geographic boundaries

158.7653°E 7.9005°S, 158.8164°E 7.9386°S

## Geographic description (score = 2)

Litoghahira is a beach located in the southwest of Isabel Island. This SUMA includes the beach and adjacent waters.

### Justification (score = 1.5)

Isabel Province has 33 unique turtle nesting beaches that together cover over 70 km (Peterson et al., 2012). Among them, Litoghahira is one of the largest leatherback turtle nesting beaches in the Solomon Islands (Hurutarau et al., 2009); it is used as one of the "index beaches" for turtle monitoring activities (Pita et al., 2007). With the help of TNC, this has

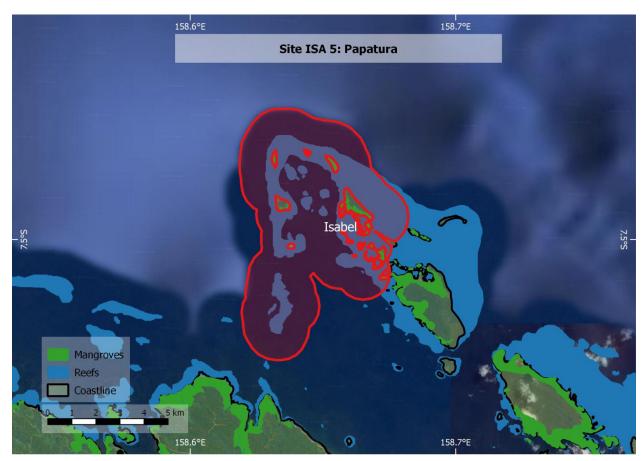
been turned into a conservation area (Peterson et al., 2012). For further information about leatherback turtles in the Solomon Islands, see Site OC 5: Leatherback turtle. Litogharhira lies within one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

### Type and number of sources (score = 1.5)

A Ridge to Reef report, the Bismarck Solomon Seas Ecoregion report, the strategic action plan for turtles and a turtle monitoring report confirmed Litogharhira beach as a critical nesting beach for leatherback turtles.

## Obligations (score = 1)

Leatherback turtles are listed under CITES, and on the IUCN Red List as Vulnerable. The Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998 have provisions for protecting turtles and protected areas.



# 3.2.7.5 SITE ISA 5: PAPATURA

FIGURE 55. SITE ISA 5: Papatura

|  | TABLE 47 | . SITE ISA 5: Pa | patura. Overall | score (based | upon informatio | on, below) |
|--|----------|------------------|-----------------|--------------|-----------------|------------|
|--|----------|------------------|-----------------|--------------|-----------------|------------|

| Geographic Cluster              | Site Name | Site Code | Overall Rating |
|---------------------------------|-----------|-----------|----------------|
| Inshore sites – Isabel Province | Papatura  | ISA5      | 5              |

### Geographic boundaries

158.6186°E 7.4507°S, 158.6821°E 7.5453°S

## Geographic description (score = 2)

Papatura Island lies off the northeastern side of Isabel Island. It is vegetated and surrounded by fringing reefs. This SUMA includes the beach and adjacent waters.

### Justification (score = 1)

Workshop participants have identified this site, which is an LMMA, as a fish aggregation site. For more information on the significance of fish aggregation sites, see Site OC 2: Ontong Java. It is uncertain which species frequent this aggregation site, but surveys conducted nearby focused on groupers (Johannes and Kile, 2001).

### Type and number of sources (score = 1)

Information for this site was assembled from expert sources at the workshop and one peer-reviewed article on areas in the vicinity of Papatura. There was no information specific to the site itself.

### Obligations (score = 1)

There are provisions for the protection and management of groupers under the Fisheries Act 1998, and most grouper species are on the IUCN Red List.

# 3.2.7.6 SITE ISA 6: HAEVO KHULANO

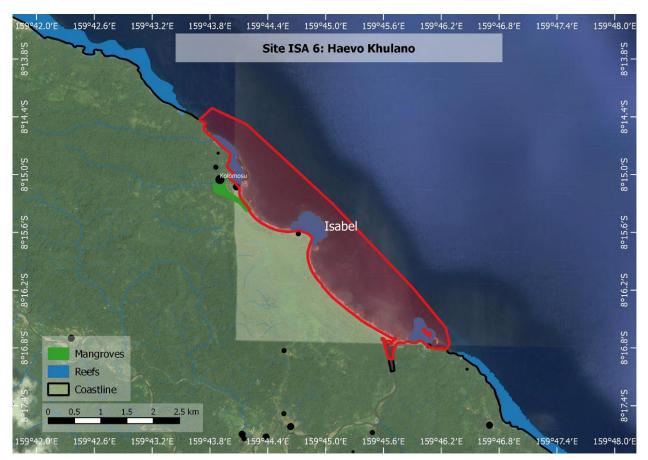


FIGURE 56. SITE ISA 6: Haevo Khulano

| TABLE 48. SITE ISA 6: Haevo | Khulano. | Overall s | core (based | upon information. | below) |
|-----------------------------|----------|-----------|-------------|-------------------|--------|
|                             |          | 0.0.00    |             |                   |        |

| Geographic Cluster              | Site Name     | Site Code | Overall Rating |
|---------------------------------|---------------|-----------|----------------|
| Inshore sites - Isabel Province | Haevo Khulano | ISA6      | 5              |

## Geographic boundaries

159.7281°E 8.2385°S, 159.7714°E 8.2819°S

## Geographic description (score = 2)

Haevo Khulano is a beach on the southeastern side of Isabel Island. This SUMA includes the beach and adjacent waters.

### Justification (score = 1)

Isabel Province has 33 unique turtle nesting beaches that together cover over 70 km; Haevo Kuhlano is one of these beaches and is protected as a LMMA designed to protect nesting leatherback turtles (Peterson et al., 2012). For further information about leatherback turtles in the Solomon Islands, see Site OC 5: Leatherback turtle. This conservation area is one of the sites where a satellite-tagged leatherback turtle was tracked on its journey across the Pacific to California and back again, suggesting the regional significance of this nesting site (http://www.cticff.org/news/stories-coral-triangle-day-2014).

### Type and number of sources (score = 1)

A report and a website identify this site as a leatherback turtle nesting beach.

### Obligations (score = 1)

Leatherback turtles are listed under CITES, and on the IUCN Red List as Vulnerable. The Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998 have provisions for protecting turtles and protected areas. The nesting site is protected by the community as a LMMA.

# 3.2.7.7 SITE ISA 7: SAN JORGE LAGOON

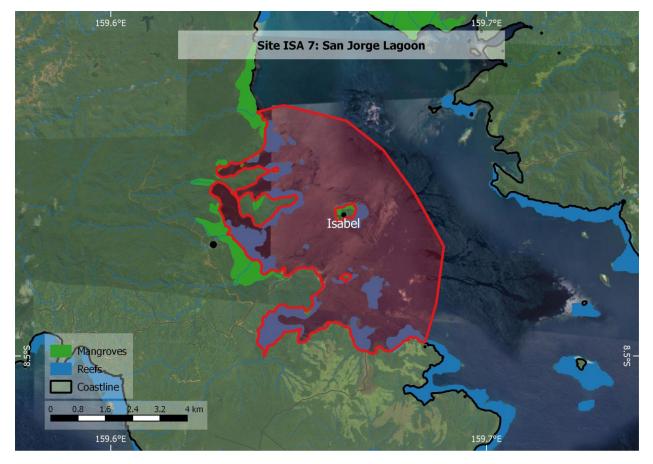


FIGURE 57. SITE ISA 7: San Jorge Lagoon

### TABLE 49. SITE ISA 7: San Jorge Lagoon. Overall score (based upon information, below)

| Geographic Cluster              | Site Name        | Site Code | Overall Rating |
|---------------------------------|------------------|-----------|----------------|
| Inshore sites – Isabel Province | San Jorge Lagoon | ISA7      | 8.5            |

## Geographic boundaries

159.626°E 8.4332°S, 159.6886°E 8.5001°S

### Geographic description (score = 3)

San Jorge Island (184 km<sup>2</sup>) lies at the southern end of Santa Isabel Island and borders Thousand Ships Bay. The lagoon occupies the eastern side of San Jorge Island, separated from Santa Isabel Island by Baravale Passage and Ortega Channel. The SUMA includes parts of the marine habitats of San Jorge Lagoon.

### Justification (score = 2)

San Jorge Lagoon is separated from Baravale Passage by thick stands of intact *Rhizophora* forest, and turbid inshore reefs form a border with Thousand Ships Bay (SMM Solomon Ltd., 2012b). Seagrasses (mainly *Enhalus acoroides*) have developed on the landward sides of fringing reefs. The wetland, characterised as herbaceous *Casuarina* swamp, allows significant mixing of freshwater with the marine waters, especially in the top few centimetres (Leary, 1991).

These areas are heavily fished for trevally and baitfish. On the seaward edge and reef crest, *Sargassum* spp. is abundant; large stands of *Sargassum* can provide critical recruitment habitat to fishes of commercial and conservation importance (Wilson et al., 2017). The species composition of the seagrass meadows change between inshore and offshore habitats (McKenzie et al., 2006). Estuarine crocodiles are said to occur here (Leary, 1991). For more information about the significance of seagrass beds and mangrove forests, see Site IGU 1: Marau Sound; for more information about crocodiles, see Site IGU 2: Lauvi Lagoon.

### Type and number of sources (score = 1.5)

There was a small amount of information in an Environmental Impact Statement that enabled the lagoon to be located, and showed a habitat map. The 2004 Marine Assessment and an older State of the Environment Report described the mangrove and seagrass communities.

### Obligations (score = 2)

Mangroves and seagrass beds are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998, and mangroves are also protected under the Forest Resources and Timber Act. The crocodile is listed under CITES, and considered Least Concern on the IUCN Red List, with a note that the classification needs updating.



# 3.2.7.8 SITE ISA 8: HETAHETA ISLAND



FIGURE 58. SITE ISA 8: Hetaheta Island

### TABLE 50. SITE ISA 8: Hetaheta Island. Overall score (based upon information, below)

| Geographic Cluster              | Site Name       | Site Code | Overall Rating |
|---------------------------------|-----------------|-----------|----------------|
| Inshore sites – Isabel Province | Hetaheta Island | ISA8      | 5              |

# Geographic boundaries

158.4931°E 7.5129°S, 158.4092°E 7.4703°S

## Geographic description (score = 2)

Hetaheta Island lies off the northeastern end of Isabel Island, at the entrance of Kia Village. The SUMA includes the shallow marine environments surrounding the island.

### Justification (score = 1)

Experts at the workshop identified this as a milkfish breeding and harvesting site, suggesting the presence of highly productive marine habitats. For further information about the significance of milkfish, see Site IWE 5: Bait grounds (Nununggara, Rarumana, Shortland).

### Type and number of sources (score = 1)

Apart from expert knowledge from the workshop, the general sources used for Site IWE 5: Bait grounds (Nununggara, Rarumana, Shortland) also apply here. There were no additional sources for this site in particular.

### Obligations (score = 1)

There are provisions in the Fisheries Act 1998 for the sustainable management of milkfish.

# 3.2.7.9 SITE ISA 9: HILIHARO ISLAND

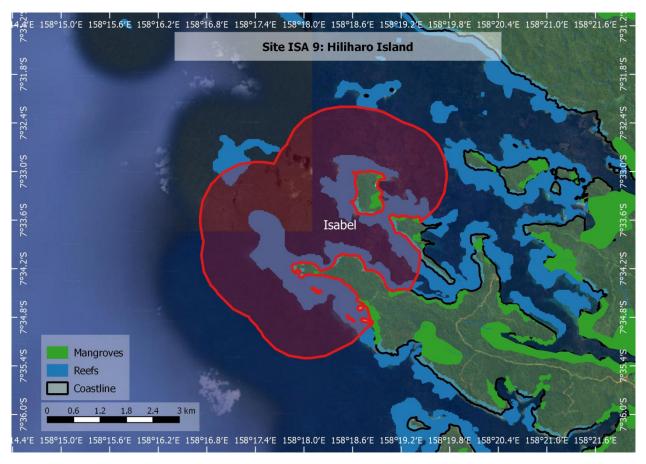


FIGURE 59. SITE ISA 9: Hiliharo Island

### TABLE 51. SITE ISA 9: Hiliharo Island. Overall score (based upon information, below)

| Geographic Cluster              | Site Name       | Site Code | Overall Rating |
|---------------------------------|-----------------|-----------|----------------|
| Inshore sites – Isabel Province | Hiliharo Island | ISA9      | 4              |

### Geographic boundaries

158.2786°E 7.5366°S, 158.3293°E 7.5884°S

### Geographic description (score = 1)

Hilihaero Island lies west of Kia (Isabel Island), in the Babahaero area. The SUMA includes the shallow marine environments surrounding the island.

### Justification (score = 1)

Experts at the workshop identified this as a milkfish breeding and harvesting site, suggesting the presence of highly productive marine habitats. For further information about the significance of milkfish, see Site IWE 5: Bait grounds (Nununggara, Rarumana, Shortland).

### Type and number of sources (score = 1)

Apart from expert knowledge from the workshop, the general sources used for Site IWE 5: Bait grounds (Nununggara, Rarumana, Shortland) also apply here. There were no additional sources for this site in particular.

### Obligations (score = 1)

There are provisions in the Fisheries Act 1998 for the sustainable management of milkfish.

# 3.2.7.10 SITE ISA 10: BUALA LAGOON

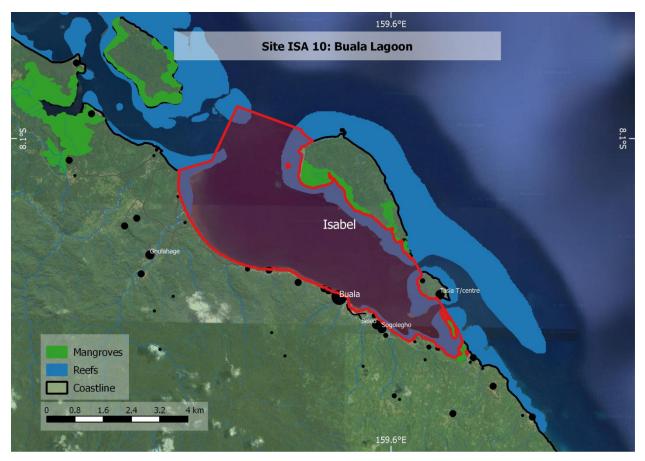


FIGURE 60. SITE ISA 10: Buala Lagoon

| TABLE 52. SITE ISA 10: Buala | Lagoon | Overall score | (based i | inon information | helow) |
|------------------------------|--------|---------------|----------|------------------|--------|
| TADLE JZ. SITE ISA TO, Duala | Lagoon |               | (Daseu L |                  |        |

| Geographic Cluster              | Site Name    | Site Code | Overall Rating |
|---------------------------------|--------------|-----------|----------------|
| Inshore sites – Isabel Province | Buala Lagoon | ISA10     | 8              |

### Geographic boundaries

159.5451°E 8.0916°S, 159.6198°E 8.1563°S

### Geographic description (score = 1.5)

Buala Lagoon / Buala Bay / Maringe Lagoon lies on the eastern side of Isabel Island. It is bordered on the seaward side by a chain of islands and a barrier reef; the SUMA includes these reefs along with the shallow habitats they encircle.

### Justification (score = 2.5)

Buala Lagoon is open to the ocean on its eastern side, bounded only by a chain of islands and a stretch of barrier reef; two of these islands (Fera and Tasia) are conservation areas. Fishers tend to target deep reefs north of Buala, as the lagoon itself is depleted (Peterson et al., 2012). The exposed reefs near Buala have relatively high coral cover (Hughes, 2006) and high abundance of sea cucumbers (Ramohia, 2006).

In the lagoon, seagrass meadows (predominately *Enhalus acoroides* and *Thalassia hemprichii*, with some *Halodule uninervis* and *Halophila ovalis*) cover much of the fringing reef flats. Along the western shores, the fringing reef is narrow, dominated by large beds of *Sargassum*, and drops to deep water (~25 m) within 100 m from the shore. To the north of the lagoon, seagrasses are absent due to strong wave action, unstable soft sediment and high turbidity. On the leeward sides of Fera and Vegane Islands, seagrasses cover the nearshore shallow subtidal areas adjacent to

patches of *Rhizophora stylosa* (McKenzie et al., 2006). The proximity of exposed and sheltered reefs, seagrass beds and mangroves creates a dynamic, interconnected ecosystem which promotes high diversity and productivity (see also Site IGU 1: Marau Sound).

## Type and number of sources (score = 1)

The 2004 Marine Assessment included reef, seagrass and mangrove sites at Buala and Maringe Lagoon. A Ridges to Reefs report mentioned the fishery in Buala Lagoon.

## Obligations (score = 3)

Buala / Maringe Lagoon is managed as a Locally Managed Marine Area (LMMA), but further information about this was unavailable. The various habitats and species present in the area are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, Fisheries Act 1998, and mangroves are also protected under the Forest Resources and Timber Act. A number of coral reefs, seagrass and mangrove species likely to be present are listed under CITES and on the IUCN Red List.

# 3.2.7.11 SITE ISA 11: WHALE MIGRATORY ROUTE

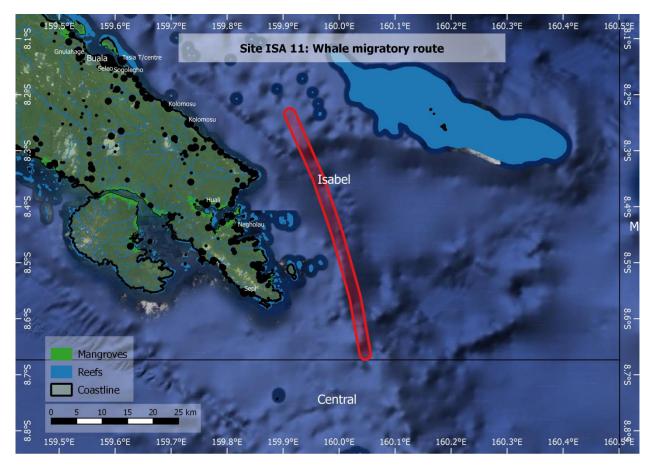


FIGURE 61. SITE ISA 11: Whale migratory route

| TABLE 53. SITE ISA 11: Whale migratory route. Overall score (based upon information, below | ow) |
|--|-----|
|  |     |

| Geographic Cluster              | Site Name             | Site Code | Overall Rating |
|---------------------------------|-----------------------|-----------|----------------|
| Inshore sites – Isabel Province | Whale migratory route | ISA11     | 4              |

### Geographic boundaries

159.90195°E 8.2242°S, 160.0566°E 8.6729°S

## Geographic description (score = 1):

The northern part of the Indispensable Strait passes between Isabel Island and the shallow reefs and shoals associated with Ramos Island. The SUMA is a stretch of water approximately 2 km wide along this part of the Indispensable Strait.

### Justification (score = 1):

The Indispensable Strait, including the waters of this SUMA, are thought to be used seasonally by large baleen whales, such as blue whales, as they migrate through the Solomon Islands' waters (Kahn, 2006). Frequent whale sightings have been reported from the waters to the west of Malaita Island, in the southern portion of the SUMA (D. Boso, WorldFish Centre, pers. comm.). Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) also frequent these waters, albeit closer to the shores of Isabel and Malaita Islands (Oremus et al., 2013).

Large baleen whales are usually found in open ocean environments such as oceanic islands, oceanic fronts and upwellings, seamounts, guyots, canyons, deep-sea trenches and the water column itself. These diverse habitats occur in close proximity to one another because of the Solomon Islands' narrow continental shelf, abundant oceanic islands and extreme depth gradients, even among the islands of the main island chain. The unique combination of coastal-oceanic habitat diversity and the proximity of deep oceanic waters to shore creates ideal habitats for many cetacean species (Hyrenbach et al., 2000; Kahn, 2001; Malakoff, 2004). General knowledge about cetaceans in Solomon Islands' waters is reviewed in Site OW 1: Southern New Georgia seamounts.

## Type and number of sources (score = 1):

Two reports and one personal account offered information about whales and dolphins that may use this SUMA. Three peer-reviewed papers assisted in the justification of the area as favourable habitat for the whales. Sources used for Site OW 1: Southern New Georgia seamounts are also relevant here.

## Obligations (score = 1):

Cetaceans are protected by the Environment Act 1998 and the Wildlife Management and Protection Act 1998. Several whale species that are known or suspected to occur in the Solomon Seas, including potentially in this SUMA, are listed on the IUCN Red List as Vulnerable or Endangered (Table 11).

In 2009, a Memorandum of Understanding was developed and a collaborative project was initiated between the South Pacific Whale Research Consortium, the Solomon Islands Ministry of Fisheries and Marine Resources and the Solomon Islands Ministry of Environment, Climate Change, Disaster Management and Meteorology to facilitate management decisions relating to the live capture of dolphins from wild populations anywhere in the Solomon Islands, including from this area.

# 3.2.7.12 SITE ISA 12: ARNAVON PASSAGE

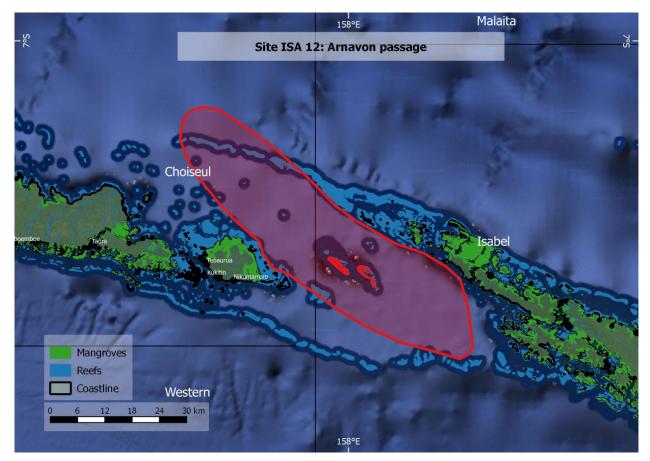


FIGURE 62. SITE ISA 12: Arnavon passage

### TABLE 54. SITE ISA 12: Arnavon passage. Overall score (based upon information, below)

| Geographic Cluster              | Site Name       | Site Code | Overall Rating |
|---------------------------------|-----------------|-----------|----------------|
| Inshore sites – Isabel Province | Arnavon Passage | ISA12     | 9              |

### Geographic boundaries

157.6648°E 7.1314°S, 158.2475°E 7.6325°S

### Geographic description (score = 2)

The Arnavon Passage, also known as Manning Strait, is the stretch of water between south- east Choiseul and northwest of Santa Isabel Islands, linking the Pacific Ocean to New Georgia Sound. The Strait has deep channels and strong currents; the SUMA includes the passage and surrounding reefs.

### Justification (score = 2.5)

The channel between Choiseul and Santa Isabel Islands is one of the major marine corridors for the movement of marine species in the Solomon Islands, providing connectivity between the Pacific Ocean and the inner islands of the Solomon Islands, and between the Pacific Ocean and the Coral Sea (Kahn, 2006). Such passages are suspected to be multi-species migratory corridors for large pelagic animals (Kahn, 2006). There are large coral reef areas bordering

the passage, indicating that this corridor may also provide connectivity for the larval dispersal of coral reefs species, with these reefs acting as stepping stones for species with low dispersal capability (Peterson et al., 2012). Evidence of the use of the passage comes from a stranded false killer whale (*Pseudorca crassidens*) found in the ACMCA (Kahn, 2006), sightings of Bryde's whales on the Pacific Ocean side of the passage (Shimada and Miyashita, 2001), the tracks of hawksbill turtles migrating between the Solomon Islands and the Great Barrier Reef (Miller et al., 1998) and of leatherback turtles between Santa Isabel Island, the Tasman Sea and west coast USA (Bailey et al., 2012; Benson et al., 2011). Further information about cetaceans in the Solomon Islands is found in Site IGU 3: West Guadalcanal marine area and Site OW 1: Southern New Georgia seamounts. The Arnavon Passage lies within one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

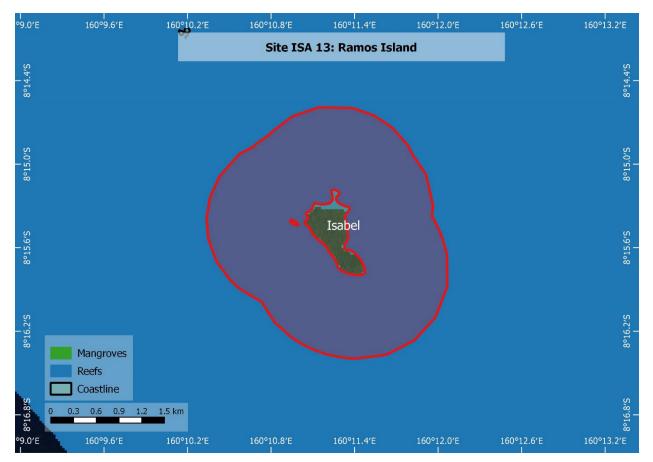
## Type and number of sources (score = 2.5)

The 2004 Marine Assessment identifies the passage as an important migration corridor, and the Bismarck Solomon Seas Ecoregion report identifies it as ecoregionally significant. A Ridge to Reef report mentioned the extensive coral reef areas found along the sides of the passage, and sightings and tracks of turtles and whales were compiled from one report and two peer-reviewed papers.

## Obligations (score = 2)

Several whale species that are known or suspected to occur in the Solomon Seas are listed on the IUCN Red List as Vulnerable (humpback, sperm, and 'Pacific' blue whales) or Endangered (i.e. fin, 'Antarctic' blue whales, and sei whales).

In 2009, a Memorandum of Understanding was developed and a collaborative project was initiated between the South Pacific Whale Research Consortium, the Solomon Islands Ministry of Fisheries and Marine Resources and the Solomon Islands Ministry of Environment, Climate Change, Disaster Management and Meteorology to facilitate management decisions relating to the live capture of dolphins from wild populations in the Solomon Islands.



# 3.2.7.13 SITE ISA 13: RAMOS ISLAND

FIGURE 63. SITE ISA 13: Ramos Island

### TABLE 55. SITE ISA 13: Ramos Island. Overall score (based upon information, below)

| Geographic Cluster              | Site Name    | Site Code | Overall Rating |
|---------------------------------|--------------|-----------|----------------|
| Inshore sites – Isabel Province | Ramos Island | ISA13     | 9.5            |

### Geographic boundaries

160.1722°E 8.2431°S, 160.2011°E 8.2732°S

### Geographic description (score = 3)

Ramos Island is a small island located seaward of the passage between Isabel and Malaita Islands. It is isolated from the larger islands by deep water and surrounded by fringing coral reefs.

### Justification (score = 1.5)

Ramos Island is an important nesting site for hawksbill and green turtles (Hurutarau et al., 2009; Sulu et al., 2012), with 50–100 nests (Aylesworth, 2009). Virtually no other information exists about the island and surrounds, as it is widely believed that the spirits of the dead rest on the island and access is very restricted. This has helped to conserve marine resources around the island (Sulu et al., 2004). Given its isolated location (over 40 km from the nearest land or reef) and the fact that is falls within deep waters, the marine ecosystem is likely to have attributes of other isolated and protected islands or island groups in the Solomon Islands, but given its small size, it is unlikely to host high biodiversity (see Site OC 1: Roncador Reef, Site OW 1: Southern New Georgia seamounts).

Ramos Island was also selected as an important site for birds; a bird checklist for the island lists 19 species of birds (http://birdsofmelanesia.net/solomons8.html/ramos.pdf), five of which can be considered seabirds (the eastern reef egret, *Egretta sacra*; brahminy kite, *Haliastur indus* 

*flavirostris*; eastern osprey, *Pandion cristatus melvillensis*; beach thick-knee, *Esacus magnirostris* and ruddy turnstone, *Arenaria interpres*). More information about seabirds in the Solomon Islands and their ecological significance is given in Site IGU 1: Marau Sound.

### Type and number of sources (score = 2)

One report alludes to the possibility of turtles nesting on Ramos Island, which is confirmed in the strategic action plan for turtles and a Masters thesis. A second report clarifies the reason for the general lack of information about the island. An online checklist was used to highlight the presence of seabirds on Ramos Island.

### Obligations (score = 3)

Coral reefs and the species that use them are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Corals, some fishes, some invertebrates, reef sharks and turtles are listed under CITES and on the IUCN Red List. Hawksbill and green turtles are listed under CITES, and on the IUCN Red List. Hawksbill and green turtles are listed under CITES, and on the IUCN Red List. Hawksbill and green turtles are listed under CITES, and on the IUCN Red List as Critically Endangered and Endangered, respectively. Four of the seabird species known from the island are also listed on the IUCN Red List, as Least Concern (eastern reef egret, brahminy kite and ruddy turnstone) and Near Threatened (beach thick-knee).

# 3.2.8 Inshore Sites - Central Islands Province

All the inshore SUMAs within Central Islands Province are depicted in the figure below.

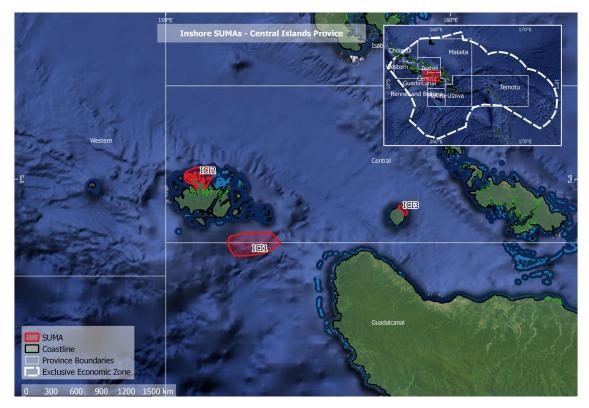


FIGURE 64. Overview of the inshore SUMA sites within Central Islands Province.

# 3.2.8.1 SITE ICI 1: AREA BETWEEN GUADALCANAL AND RUSSELL ISLANDS



FIGURE 65. SITE ICI 1: Area between Guadalcanal and Russell Islands

## TABLE 56. SITE ICI 1: Area between Guadalcanal and Russell Islands. Overall score (based on information below)

| Geographic Cluster                       | Site Name                                    | Site Code | Overall Rating |
|--|--|-----------|----------------|
| Inshore sites – Central Islands Province | Area between Guadalcanal and Russell Islands | ICI1      | 5              |

#### Geographic boundaries

159.2175°E 9.1853°S, 159.4010°E 9.2686°S

# Geographic description (score = 2)

This SUMA is the stretch of deep water between Guadalcanal Island and the Russell Islands to the northwest.

# Justification (score = 1)

Experts present at the workshop identified this site as being important for whales. The 2004 Marine Assessment report mentioned sperm whale and orca sightings in the deep waters surrounding the Russell Islands, and stated that all the deep passages between major islands were ideal habitat and migratory corridors for cetaceans (Kahn, 2006). No further information was available for whales in this area, but general information about cetaceans in the Solomon Islands is reviewed for Site OW 1: Southern New Georgia seamounts, Site IGU 3: West Guadalcanal marine area and Site ISA 12: Arnavon passage.

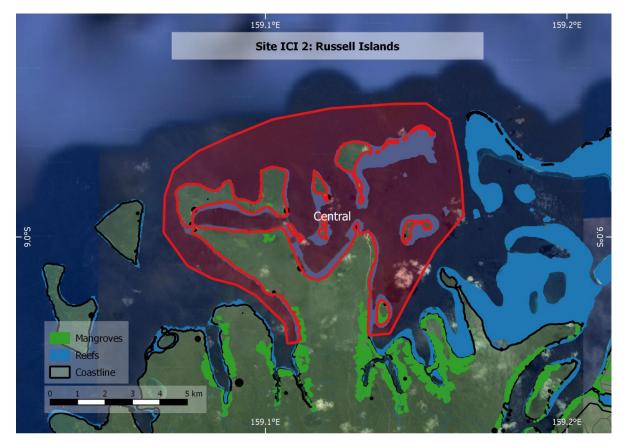
# Type and number of sources (score = 1)

There was no information specifically about whales in this area other than expert sources at the workshop and a secondhand statement in the Marine Assessment report.

# Obligations (score = 1)

Several whale species that are known or suspected to occur in the Solomon Seas are listed on the IUCN Red List as Vulnerable (humpback, sperm, and 'Pacific' blue whales) or Endangered (i.e. fin, 'Antarctic' blue whales, and sei whales).

# 3.2.8.2 SITE ICI 2: RUSSELL ISLANDS



# FIGURE 66. SITE ICI 2: Russell Islands

TABLE 57. SITE ICI 2: Russell Islands. Overall score (based upon information, below)

| Geographic Cluster                       | Site Name       | Site Code | Overall Rating |
|--|-----------------|-----------|----------------|
| Inshore sites – Central Islands Province | Russell Islands | ICI2      | 11             |

#### Geographic boundaries

159.0662°E 8.9557°S, 159.1657°E 9.0352°S

# Geographic description (score = 3)

The Russell Islands are two small islands (Pavuvu and Mbanika), as well as several islets, of volcanic origin, between Guadalcanal and New Georgia Islands. They are recently extinct volcanoes located approximately 48 km northwest of Guadalcanal. The SUMA is north of West Russell, Pavuvu Island.

### Justification (score = 2.5)

The Russell Islands and the SUMA in particular, were nominated as a green and hawksbill turtle nesting site, a protected area (LMMA) and a hotspot for crocodiles and sharks. By virtue of being somewhat separate from the larger islands and flushed with strong currents, the Russell Islands share a number of positive attributes with the Arnavon Islands, including some protection (see Site ISA 1: Arnavon Marine Park). Reefs around the Russell Islands are complex and interspersed with sandy and seagrass areas (Kool et al., 2010). Biodiversity is high and reefs are considered to be in good condition (Green et al., 2006a), with high live coral cover (Hughes, 2006) and healthy populations of food fishes (Green et al., 2006b). Fish diversity is among the highest of all sites that were surveyed in the 2004 Marine Assessment, and some rare species were encountered there (Allen, 2006). Northeast of the Russell Islands is a line of submerged reefs otherwise rarely seen in the Solomon Islands (Sulu et al., 2004). The Russell Islands are listed as one of the ecoregionally important areas within the highly biodiverse Bismarck Solomon Seas Ecoregion (Wilson et al., 2005).

There are mangrove forests on the northern coast of the larger island (Leary, 1991), and seagrasses cover soft sediment substrata within the fringing reefs, providing foraging grounds for green turtles (McKenzie et al., 2006). The area is thought to be important to cetaceans (Wilson et al., 2005).

There are at least 11 nesting beaches for hawksbill and green turtles around the Russell Islands (Ramohia, 1992), and it is considered especially important for hawksbill turtles (Hurutarau et al., 2009; Sulu et al., 2012).

There was no specific information about the significance of the Russell Islands for crocodiles (see Site IGU 2: Lauvi Lagoon) and sharks, but high abundance of sharks was suggested in Wilson et al. (2005), and SCUBA diving websites provided some additional evidence (e.g. https://www.liveaboard.com/diving/solomon-islands/russel-islands).

# Type and number of sources (score = 2.5)

Many of the sources used for the Arnavon Islands are relevant for the Russell Islands, and the 2004 Marine Assessment surveyed several sites around the Russell Islands. The Bismarck Solomon Seas Ecoregion report lists its general ecological attributes. Three reports suggest the importance of the site for nesting turtles, and the strategic action plan for turtles confirms this.

# Obligations (score = 3)

Coral reefs and the species that use them are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Sharks and turtles are listed under CITES and on the IUCN Red List.

# **3.2.8.3 SITE ICI 3:** SAVO

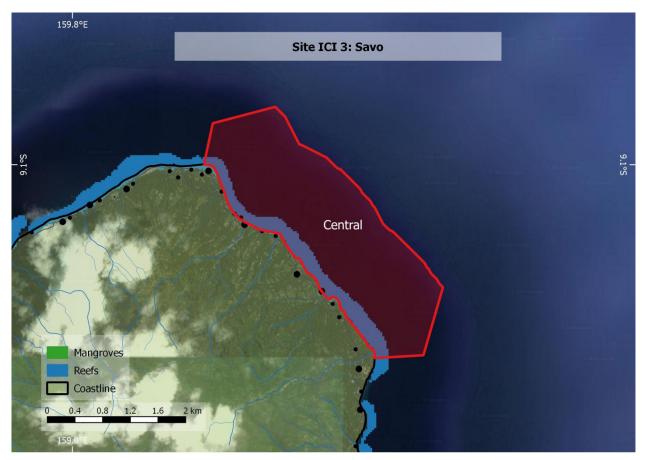


FIGURE 67. SITE ICI 3: Savo

### TABLE 58. SITE ICI 3: Savo. Overall score (based upon information, below)

| Geographic Cluster                       | Site Name | Site Code | Overall Rating |
|--|-----------|-----------|----------------|
| Inshore sites - Central Islands Province | Savo      | ICI3      | 8              |

# Geographic boundaries

159.8172°E 9.0923°S, 159.8487°E 9.12540°S

# Geographic description (score = 3)

Savo Island is a cone shaped island in Iron Bottom Sound, off the northern end of Guadalcanal Island. It is dominated by a dormant volcano, and its 31 km<sup>2</sup> shores are surrounded by fringing reefs and small patchy seagrass meadows in deeper water. The SUMA encompasses the shallow marine habitats surrounding the island.

# Justification (score = 2)

Expert sources present at the workshop identified Savo Island as a dolphin breeding site. Dolphins are important apex predators that regulate the structure and function of marine communities, both in the pelagic realm and as regular visitors in demersal assemblages (Heithaus et al., 2008; Myers et al., 2007). They occur in high abundances in the Solomon Islands archipelago, where highly productive coastal habitats occur in close proximity to deep water (Kahn, 2006). The most common dolphin species encountered in Solomon Island surveys include *Stenella longirostris, Tursiops aduncus* and *Stenella attenuata* (Oremus et al., 2011).

The coastal habitats around Savo Islands are diverse and productive (Allen, 2006), including both coral reefs and mangroves (Hughes, 2006), and the island has a reputation for abundant sharks (Hughes, 2006). It is also highly exposed to open ocean conditions, due to its isolation and small size (Hughes, 2006). Dolphin sightings have been

reported from Savo Island (Oremus et al., 2011), and villagers claim that the island has been an important resting site for spinner dolphins for a long time (Kahn, 2006). During the 2004 survey, ~50 spinner dolphins were recorded in the place indicated by the villagers (Kahn, 2006). Additionally, Savo was one of the few places where the same spinner dolphins were re-sighted on more than one occasion (Oremus et al., 2014).

# Type and number of sources (score = 2)

Two general peer-reviewed sources support the importance of dolphins as apex predators. The 2004 Marine Assessment included Savo Island and confirmed its importance to spinner dolphins as a resting area. Two reports about a dolphin project in the Solomon Islands also included Savo Island.

# Obligations (score = 1)

Because dolphins are captured in the Solomon Islands, there are provisions for their protection in the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. They are also listed under CITES and on the IUCN Red List. The Solomon Islands have signed the Memorandum of Understanding (MoU) for the Conservation of Cetaceans and their Habitats in the Pacific Islands Region under the Convention for the Conservation of Migratory Species in 2007.

# 3.2.9 Inshore Sites - Malaita Province

All the inshore SUMAs within Malaita Province are depicted in the figure below.

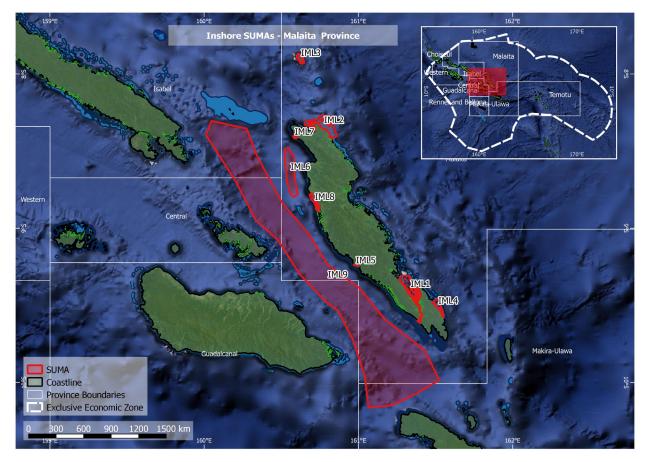


FIGURE 68. Overview of the inshore SUMA sites within Malaita Province.

# 3.2.9.1 SITE IML 1: MARAMASIKE PASSAGE

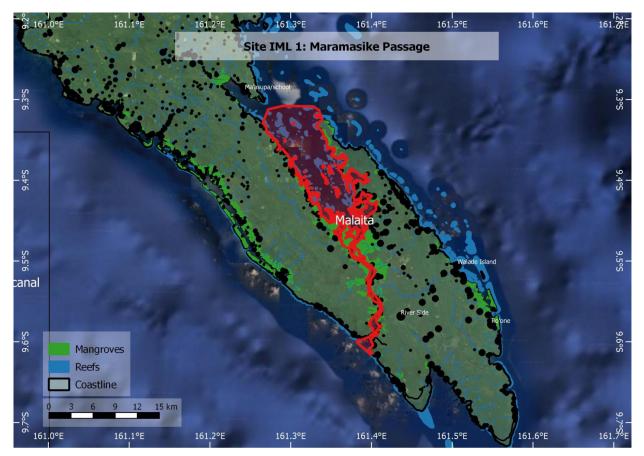


FIGURE 69. SITE IML 1: Maramasike Passage

| TABLE 59. SITE IML | 1: Maramasike | Passage. O | verall score | (based u | pon information | , below) |
|--------------------|---------------|------------|--------------|----------|-----------------|----------|
|                    |               |            |              |          |                 |          |

| Geographic Cluster               | Site Name          | Site Code | Overall Rating |
|----------------------------------|--------------------|-----------|----------------|
| Inshore sites – Malaita Province | Maramasike Passage | IML1      | 9              |

# Geographic boundaries

161.2654°E 9.3077°S, 161.4132°E 9.6158°S

# Geographic description (score = 3)

The Maramasike Passage SUMA is a narrow passage 20 km long, created by volcanic activity, which separates the two main islands of Malaita Province, the larger Malaita and the smaller South Malaita Island, also known as Maramasike. The northern mouth is much wider than the southern mouth, and is several miles wide with scattered barrier islands and mangrove patches in the passage which leads to Raroi Su'u Lagoon, a sheltered bay.

# Justification (score = 2)

The Maramasike Passage supports one of the largest intact mangrove ecosystems in the Solomon Islands, with relatively minor levels of logging, and the long and stable fishery in the passage is testament to its productivity and sustainable use (Albert and Schwarz, 2013; IUCN, 2013). The mangroves here have high biomass, high structural complexity and habitat diversity with variations in dominant species composition, stem density, canopy layers and height (MacKenzie et al., 2013).

The mangrove forest in this area is composed of a "downstream" mangrove assemblage influenced by marine waters (dominated by *Rhizophora* spp.), and an "upstream" community that has a greater freshwater influence, with species such as *Acanthus ilicifolius* and *Aegiceras* spp (IUCN, 2013; Leary, 1991). The downstream community, fringing the shoreline of the passage, is extremely important, as the interaction and tidal exchange between the marine and

mangrove habitats creates a great level of material exchange, aquatic habitat value, nursery habitat, shoreline protection and water quality improvement (Kieckbusch et al., 2004; Nagelkerken et al., 2008; Rivera-Monroy et al., 1995). The fringe mangrove forest along the passage is stable along 68% of the surveyed shoreline, with clear signs of growth along 24% of the shoreline. The passage is also likely to provide shelter from storms and cyclones, providing a critical refuge for mangrove forest ecosystems (MacKenzie et al., 2013). See also Site IGU 1: Marau Sound for further information about mangroves in the Solomon Islands.

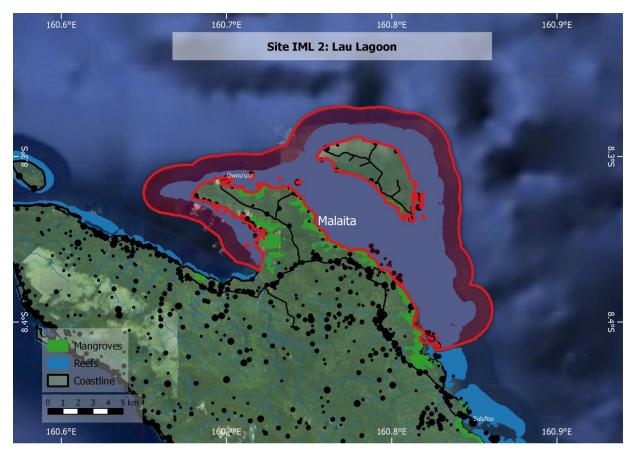
# Type and number of sources (score = 3)

Three reports describe the mangroves in Maramasike Passage and their special and/or unique attributes in detail. A further three peer-reviewed articles were used to highlight the importance of these mangroves, in particular. The passage is also mentioned in three State of the Environment reports and, briefly, in the 2004 Marine Assessment.

# Obligations (score = 1)

Although there are several national and provincial legislative frameworks and strategic plans that support the management of marine resources in general, specific legislation pertaining to mangroves is lacking. Mangrove management initiatives will be able to be registered under the National Fisheries Bill (revision of the 1998 Fisheries Act) as community managed fisheries areas, the Protected Areas Act (2010) or Provincial Ordinances that have that capability. Species that frequent mangroves are also protected under Environment Act 1998, Wildlife Management and Protection Act 1998, and the Forest Resources and Timber Act.

# 3.2.9.2 SITE IML 2: LAU LAGOON



# FIGURE 70. SITE IML 2: Lau Lagoon

TABLE 60. SITE IML 2: Lau Lagoon. Overall score (based upon information, below)

| Geographic Cluster               | Site Name  | Site Code | Overall Rating |
|----------------------------------|------------|-----------|----------------|
| Inshore sites – Malaita Province | Lau Lagoon | IML2      | 10.5           |

160.6498°E 8.2697°S, 160.8608°E 8.4167°S

# Geographic description (score = 2)

The Lau Lagoon is located off the northeast coast of Malaita Island. The large shallow (~1.5m deep) lagoon is approximately 1 km wide and stretches 3–5 km along the coast between Maana'oba Island and Malaita, on the north-eastern coast; the SUMA includes all the marine habitats within the lagoon.

### Justification (score = 3)

Lau Lagoon shelters the largest seagrass meadows in the Solomon Islands, and is considered by some to be one of the most special areas in the Solomon Islands for its proximity of different marine habitats and the intersection between cultural and ecological significance (Green et al., 2006a). These meadows were associated with a high biodiversity of fauna including relatively large numbers of dugongs (Sulu et al., 2004), fishes, sea cucumbers and other invertebrates, algae and patches of coral reefs. These highly productive seagrass meadows also support important fisheries (Boso and Schwarz, 2010) and provide extensive spawning areas for rabbitfishes (Sulu et al., 2012) and nursery areas for juvenile fishes of conservation (e.g. parrotfishes) and commercial / subsistence (e.g. emperors) significance (Green et al., 2006a).

The landward edge is dominated by E. acoroides in mud sediments, followed by communities of

*E. acoroides, Thalassia hemprichii, Cymodocea rotundata, Halophila ovalis* interspersed with patch reefs in the midsection of the lagoon. Seagrass stretched north from the seaward edge of Maana'oba Island across the top of the island into a large embayment and southward through numerous sea-based communities inhabiting dwellings built on modified coral reefs. The region is believed to be significant dugong and green turtle feeding grounds (McKenzie et al., 2006). The Lau Lagoon is considered one of the key habitats for dugongs in the Indo-Pacific (Marsh et al., 2012), and is one of the key project areas for mapping of seagrass habitats and for dugong conservation (http://www.dugongconservation.org/ where-we-work/solomon-islands/).

Coral reefs and mangroves are also abundant in Lau Lagoon (Kool et al., 2010; McKenzie et al., 2006), facilitating linkages between these three critical habitats (see also Site IGU 1: Marau Sound). Malaita Island generally has overall lower coral cover, higher macroalgal cover, and lower densities and biomass of food fishes and macroinvertebrates than other sites observed in the Solomon Islands (Green et al., 2006); Hughes, 2006; Ramohia, 2006).

Sulufou and Foia Islands were identified by experts at the workshop for frequent dolphin sightings and sperm whale sightings. No information was available about sperm whales in the vicinity of Lau Lagoon (but see Site OW 1: Southern New Georgia seamounts for general information about cetaceans in the Solomon Islands). Like Fanalei, this was a traditional dolphin hunting area, with the same species caught (Oremus et al., 2014), and is likely to share similar special attributes that attract pods of dolphins (see Site IML 4: Fanalei / Walande). It is unknown whether dolphins are still hunted here, or which species are regularly observed.

Lau Lagoon is considered heavily exploited; the very high population density and rate of increase has put pressure on the marine habitats and species in the lagoon (Schwarz et al., 2012).

# Type and number of sources (score = 2.5)

The 2004 Marine Assessment sampled the seagrass meadows of Lau Lagoon, and its attributes were also mentioned in a Ridge to Reefs report, two "livelihoods" reports and two "State of Coral Reefs" reports. A website details current projects that aim to map and conserve seagrass meadows and dugongs, and a book lists the Lau Lagoon as a habitat of regional significance for dugongs.

# Obligations (score = 3)

Coral reefs, seagrass beds and the species that use them, including dugongs and dolphins, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Corals, some fishes, some invertebrates, reef sharks, turtles, dugongs and cetaceans are listed under CITES and on the IUCN Red List.

# 3.2.9.3 SITE IML 3: NDAI

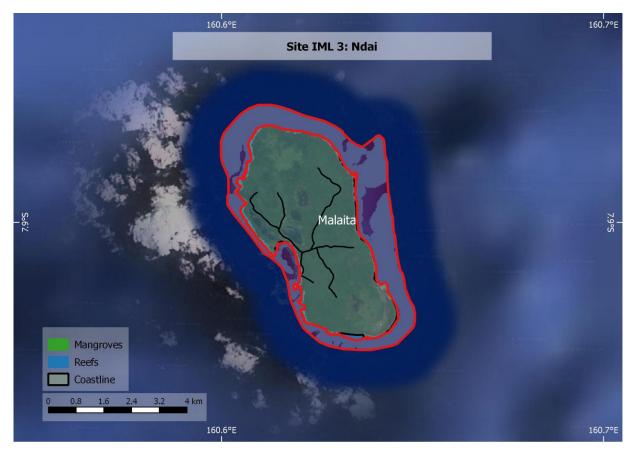


FIGURE 71. SITE IML 3: Ndai

#### TABLE 61. SITE IML 3: Ndai. Overall score (based upon information, below)

| Geographic Cluster               | Site Name | Site Code | Overall Rating |
|----------------------------------|-----------|-----------|----------------|
| Inshore sites – Malaita Province | Ndai      | IML3      | 8              |

#### Geographic boundaries

160.5998°E 7.8692°S, 160.6506°E 7.9334°S

# Geographic description (score = 3)

Ndai, or Dai, Island is a small (three by seven km), isolated island 43 km off the northern end of Malaita Island. The island is an elevated coral reef, with a maximum height above sea level of 18 m. A mangrove wetland system extends approximately 1.5 km from the southeastern end of the island; the SUMA includes the mangroves and coral reefs.

# Justification (score = 1)

Expert sources present at the workshop identified Ndai Island for its values as an isolated reef (see Site OC 1: Roncador Reef), a semi-enclosed lagoonal wetland system, and a valuable nursery area for a number of marine species (R. Sulu, pers.comm.). Local knowledge indicates that milkfish fry occur in the marine habitats around the island (Sulu et al., 2016). The isolation from large human populations, combined with the proximity of wetlands and coral reefs, is likely to result in a healthy and highly productive environment (see Site IGU 1: Marau Sound).

# Type and number of sources (score = 2)

Sources used for other sites of importance to isolated coral reefs, wetland systems, nursery grounds and milkfish breeding and farming are also applicable here. Additionally, one book / report highlights the importance of Ndai Island to milkfish breeding and aquaculture.

# Obligations (score = 2)

Coral reefs, seagrass beds and the species that use them, including dugongs and dolphins, are protected by the Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998. Corals, some fishes, some invertebrates, reef sharks, turtles, dugongs and cetaceans are listed under CITES and on the IUCN Red List. There are provisions in the Fisheries Act 1998 for the sustainable management of milkfish.

# 161.6°E 161.6°E 161.6°E 161.6°E 161.6°E 161.6°E 161.6°E 161.6°E

# 3.2.9.4 SITE IML 4: FANALEI / WALANDE

FIGURE 72. SITE IML 4: Fanalei / Walande

TABLE 62. SITE IML 4: Fanalei / Walande. Overall score (based upon information, below)

| Geographic Cluster               | Site Name         | Site Code | Overall Rating |
|----------------------------------|-------------------|-----------|----------------|
| Inshore sites – Malaita Province | Fanalei / Walande | IML4      | 8              |

# Geographic boundaries

161.4799°E 9.4611°S, 161.5545°E 9.5771°S

# Geographic description (score = 3)

Fanalei and Walande are two villages on the eastern side of Maramasike Island. A coral reef lagoon is situated off the coast of the two villages and comprises the SUMA.

# Justification (score = 2)

Fanalei and Walande are known for their custom of dolphin drive hunting (Pacific Horizons Consultancy Group, 2008), whereby dolphins are driven in schools towards the beach and killed for their meat and teeth (Oremus et al., 2014; Takekawa, 2000). Hunting in recent years has resulted in the killing of over a thousand dolphins per year, including pan-tropical spotted dolphins, spinner dolphins, striped dolphins and bottlenose dolphins (Oremus et al., 2014). Melon-headed whales and Fraser's dolphins were once also targeted, but are now rare in these waters (Kahn, 2006).

Dolphin hunting has probably developed because of the high density of dolphins in these waters; certain attributes of this site (a combination of tides and currents) therefore probably create favourable conditions for dolphins to gather in schools of between 30 and 700 individuals to feed and rest (Takekawa, 2000). Furthermore, various reports from local people suggest that a number of species tend to become stranded along this coastline, including the species mentioned above, Risso's dolphins and false killer whales (Takekawa, 2000). Blue whales are also likely to occur off the coast (Kahn, 2006).

# Type and number of sources (score = 2)

Numerous websites debate and criticise, and therefore also document, the dolphin hunts of Fanalei and Walande. Information sources used here include four reports that combine ecological and cultural information about this site.

# Obligations (score = 1)

In 2010, the villages of Fanalei, Walende, and Bitamae signed a MoU with the non-governmental organization Earth Island Institute, to stop hunting dolphins for financial reward. However, in early 2013 the agreement broke down and hunting resumed. The Solomon Islands have signed the Memorandum of Understanding (MoU) for the Conservation of Cetaceans and their Habitats in the Pacific Islands Region under the Convention for the Conservation of Migratory Species in 2007.

# 3.2.9.5 SITE IML 5: WAIHAU



FIGURE 73. SITE IML 5: Waihau

| TABLE 63. SITE IML 5: Waihau | . Overall score (based ι | upon information, below) |
|------------------------------|--------------------------|--------------------------|
|------------------------------|--------------------------|--------------------------|

| Geographic Cluster               | Site Name | Site Code | Overall Rating |
|----------------------------------|-----------|-----------|----------------|
| Inshore sites – Malaita Province | Waihau    | IML5      | 4              |

160.9680°E 9.2339°S, 161.0040°E 9.2479°S

# Geographic description (score = 1)

This SUMA is the leatherback nesting beach (Waisurione Beach) near Uhu Village, west Are'Are Lagoon on Malaita Island.

# Justification (score = 1)

Waihau is referred to as a conservation initiative to monitor and protect leatherback turtles nesting on Waisurione Beach. A relatively small number of nests are recorded (Marine Research Foundation, 2015), but this may be the main nesting site on Malaita Island. Apart from expert sources present at the workshop, no other information was found on this site. For additional information about leatherback turtles in the Solomon Islands, see Site OC 5: Leatherback turtle.

# Type and number of sources (score = 1)

Only expert sources at the workshop and one monitoring report made reference to this site.

# Obligations (score = 1)

Leatherback turtles are listed under CITES, and on the IUCN Red List as Vulnerable.

# 3.2.9.6 SITE IML 6: WEST MALAITA NEAR AUKI

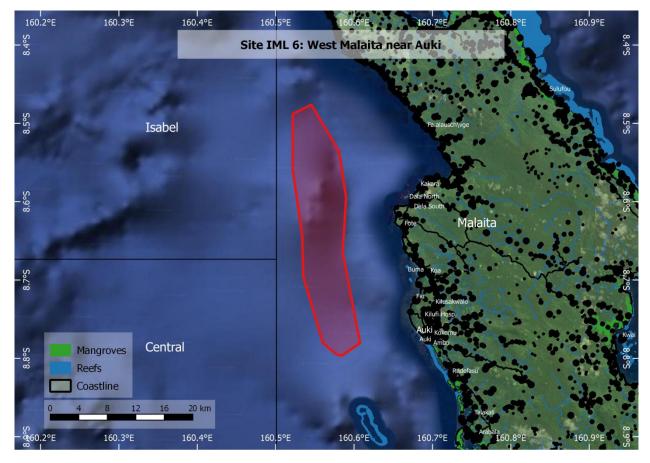


FIGURE 74. SITE IML 6: West Malaita near Auki

### TABLE 64. SITE IML 6: West Malaita near Auki. Overall score (based upon information, below)

| Geographic Cluster               | Site Name              | Site Code | Overall Rating |
|----------------------------------|------------------------|-----------|----------------|
| Inshore sites – Malaita Province | West Malaita near Auki | IML6      | 4              |

160.5219°E 8.4761°S, 160.6077 8.7966°S

# Geographic description (score = 1)

Auki is the provincial capital of Malaita Province, situated on the northern end of Langa Langa Lagoon on the north-west coast of Malaita Island. This SUMA is located offshore from this part of the Malaita coast.

# Justification (score = 1)

Expert sources present at the workshop identified this site as an important area for whale sightings (WorldFish photo archives). Oremus et al. (2014) reported a number of dolphin sightings and one *Balaenoptera* sp. during their survey in this area. See Site OW 1: Southern New Georgia seamounts and Site IGU 3: West Guadalcanal marine area for further information about whales and dolphins in the Solomon Islands.

### Type and number of sources (score = 1)

Expert sources at the workshop and one report that listed one whale sighting were the only sources found for this site.

### Obligations (score = 1)

Several whale species that are known or suspected to occur in the Solomon Seas are listed on the IUCN Red List as Vulnerable (humpback, sperm, and 'Pacific' blue whales) or Endangered (i.e. fin, 'Antarctic' blue whales, and sei whales).

# 

# 3.2.9.7 SITE IML 7: BITA'AMA

#### FIGURE 75. SITE IML 7: Bita'ama

#### TABLE 65. SITE IML 7: Bita'ama. Overall score (based upon information, below)

| Geographic Cluster               | Site Name | Site Code | Overall Rating |
|----------------------------------|-----------|-----------|----------------|
| Inshore sites – Malaita Province | Bita'ama  | IML7      | 5              |

160.5772°E 8.3969°S, 160.6016°E 8.4183°S

# Geographic description (score = 2)

Bita'ama is a village on the northwestern coast of Malaita. It is located along a stretch of coastline that forms a semienclosed lagoon, open to the north. Fringing reefs separate the coast from deeper water. The lagoon, associated reefs and adjacent deeper waters form the SUMA.

# Justification (score = 1)

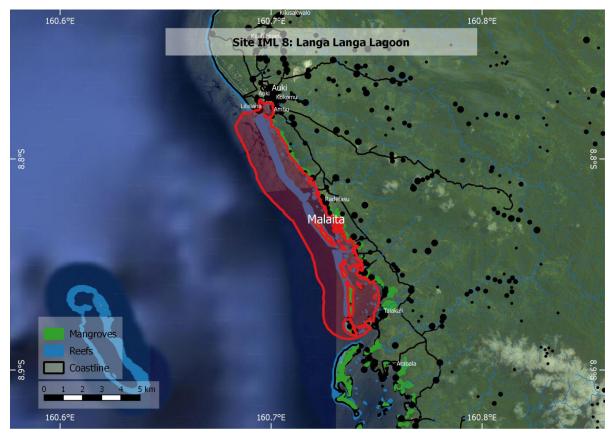
Bita'ama was identified by experts at the workshop for its frequent dolphin sightings. Like Fanalei, this was a traditional dolphin hunting village, with the same species caught (Oremus et al., 2014), and is likely to share similar special attributes that attract pods of dolphins (see Site IML 4: Fanalei / Walande). However, dolphin hunting here ceased at least a decade ago (Kahn, 2006). Whales are also reportedly sighted off the coast, including blue whales (Kahn, 2006).

# Type and number of sources (score = 1)

Information sources used here include two reports that combine ecological and cultural information about this site.

# Obligations (score = 1)

In 2010, the villages of Fanalei, Walende, and Bita'ama signed a MoU with the non-governmental organization Earth Island Institute, to stop hunting dolphins for financial reward. This MoU continues to be upheld in Bita'ama. The Solomon Islands have signed the Memorandum of Understanding (MoU) for the Conservation of Cetaceans and their Habitats in the Pacific Islands Region under the Convention for the Conservation of Migratory Species in 2007. The Environment Act 1998, Wildlife Management and Protection Act 1998, and the Fisheries Act 1998 are relevant for the protection of whales, and all cetaceans are listed under CITES and on the IUCN Red List.



# 3.2.9.8 SITE IML 8: LANGA LANGA LAGOON

FIGURE 76. SITE IML 8: Langa Langa Lagoon

TABLE 66. SITE IML 8: Langa Langa Lagoon. Overall score (based upon information, below)

| Geographic Cluster               | Site Name          | Site Code | Overall Rating |
|----------------------------------|--------------------|-----------|----------------|
| Inshore sites – Malaita Province | Langa Langa Lagoon | IML8      | 8              |

### Geographic boundaries

160.6831°E 8.7717°S, 160.7513°E 8.8853°S,

## Geographic description (score = 3)

Langa Langa Lagoon, or Akwalaafu, is a natural lagoon on the western coast of Malaita, just south of the provincial capital Auki. The SUMA encompasses the whole lagoon, which is 21 km long and just less than 1 km wide.

# Justification (score = 2)

Expert sources at the workshop listed this site as being significant for seasonal shark sightings. In fact, there is a tradition of shark worship and "shark calling" among the people of the lagoon (Stanley, 2004), indicating that this is likely to be an important shark habitat. The "lagoon people" or "salt water people" live on small artificial islands built on sand bars.

High densities of sharks are considered a sign of a healthy marine ecosystem. Top predators are typically the first to disappear from marine ecosystems under any degree of fishing pressure, as they are preferentially targeted by most fisheries and/or killed by fishermen when caught as by-catch (Friedlander and DeMartini, 2002; Graham et al., 2010; Hisano et al., 2011; Sandin et al., 2008). Their high commercial value combined with their K-selected life-history (slow growth, late maturity, low fecundity) reduces productivity of apex predators and inhibits recovery of exploited populations under continued fishing pressure (Collette et al., 2011; Pauly et al., 1998; Stevens et al., 2000). In some habitats, anthropogenic impacts have reduced the abundance of apex predators by 90 % or more (Myers and Worm, 2003). The removal of apex predators may result in trophic cascades, with changes occurring throughout the food web, sometimes down to primary producers (Estes et al., 2011). Therefore, areas where sharks are still abundant can be considered special, as having retained their trophic balance.

Ten species of sharks are thought to occur in the Solomon Islands, but very little is known about them (Albert et al., 2010). Sharks are generally rare throughout nearshore areas of the Solomon Islands, which is one of many signs of overfishing. In fact, Malaita was the only Province surveyed during the 2004 Marine Assessment where no sharks were seen, including Langa Langa; Langa Langa Lagoon is considered heavily exploited (Green et al., 2006b). However, there appears to be a shark feeding station (https://www.youtube.com/watch?v=wbuZJco-o9k).

# Type and number of sources (score = 2)

Some information about sharks in the Solomon Islands was available through a general marine environment report, and sharks were included in the 2004 Marine Assessment but not seen in Malaita Province. A travel guide contained information about the traditional shark worship in Langa Langa Lagoon, and a YouTube video showed a shark calling / feeding station. There is ample general information about the importance of sharks in marine ecosystems, nine peer-reviewed articles were used to discuss this.

# Obligations (score = 1)

Sharks are protected under the Fisheries Act 1998, the Environment Act 1998 and the Wildlife Management and Protection Act 1998. Many species are also on the IUCN Red List.

# 3.2.9.9 SITE IML 9: INDISPENSABLE STRAIT

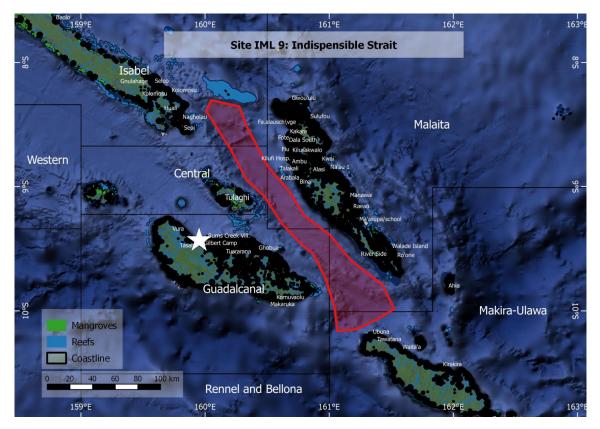


FIGURE 77. SITE IML 9: Indispensable Strait

TABLE 67. SITE IML 9: Indispensable Strait. Overall score (based upon information, below)

| Geographic Cluster               | Site Name            | Site Code | Overall Rating |
|----------------------------------|----------------------|-----------|----------------|
| Inshore sites – Malaita Province | Indispensable Strait | IML9      | 5              |

# Geographic boundaries

160.0125°E 8.3036°S, 161.5249°E 10.1636°S

# Geographic description (score = 2)

This SUMA includes the Indispensable Strait, which runs approximately 200 km northwest-southeast from Santa Isabel to Makira (San Cristóbal), between the Florida Islands and Guadalcanal to the southwest, and Malaita to the northeast.

# Justification (score = 1)

The Indispensable Strait is one of the major marine corridors for the movement of marine species in the Solomon Islands, providing connectivity between the Pacific Ocean and the inner islands of the Solomon Islands, and between the Pacific Ocean and the Coral Sea (see also Site ISA 12: Arnavon passage). Such passages are suspected to be multispecies migratory corridors for large pelagic animals (Kahn, 2006). For cetaceans in the Solomon Islands see Site OW 1: Southern New Georgia seamounts. There is no specific evidence from Indispensable Strait itself.

# Type and number of sources (score = 1)

This area was named as an important corridor for the movement of marine species in the 2004 Marine Assessment. References used for Site ISA 12 are also applicable here.

# Obligations (score = 1)

Several whale species that are known or suspected to occur in the Solomon Seas are listed on the IUCN Red List as Vulnerable (humpback, sperm, 'Pacific' blue whales) or Endangered (i.e. fin, 'Antarctic' blue whales, sei whales).



# 4. DISCUSSION

Workshop participants identified 65 special, unique marine areas (SUMAs), of which twelve were offshore and 53 were inshore sites. Sites identified by the expert workshop as SUMAs were given scores between 4 and 12 (Table 68). This scoring system is systematic, albeit subjective, and is designed to use as a guide for planning purposes. The map provided per special, unique marine areas was prepared using all available information but remains indicative only. Local experts are likely to be able to refine the boundaries more exactly and this should occur before their use in management or decision-making.

The final score for each site reflects the amount and type of knowledge available for that site, as well as the attributes of the site; lower-scoring sites may benefit from ground-truthing before definitive decisions are made about their protection or management. Because the highest scoring sites have a more robust information base, these areas can be prioritised with greater confidence during conservation or management planning across all sectors. However, the scoring system is based upon information available at the time of writing and, as more information is gathered or as time goes on, the "real" score of any site may change.

The Solomon Islands host a large number of SUMAs, and to some degree this is by virtue of its location within the Coral Triangle, the centre of the world's marine biodiversity. There is therefore a potential bias against giving high scores to coral reef sites that were not nominated for a specific attribute. Furthermore, it was recognised that many inshore coral reefs in the Solomon Islands have been impacted by overfishing and sedimentation.

None of the large-scale offshore sites was given the maximum score of 12 (see list of scores in Table 68). Because of their large-scale and often offshore nature, the geographic boundaries of these sites were not exactly defined, and very little supporting information exists for many of them. A clear site boundary and good background information are important for spatial planning, especially in the case of marine areas where the features to be protected are usually hidden under the surface or determined by the movements of animals. There was a large range of scores for the offshore sites, from 5.5 to 11.5; most sites received intermediate scores. The lowest-scoring sites (Ulawa Deep, Cape Johnson Trough pelagic waters) suffered from a lack of information and clear boundaries, and it was therefore also difficult to determine obligations to protect attributes or components of these sites. The highest-scoring sites (Ontong Java, Kavachi) can be considered truly unique, both in a national and global context.

Among the finer-scale mainly inshore sites, the two highest-scoring sites (11.5 and 12) were Marovo Lagoon and the Arnavon Community Marine Conservation Area (see list of scores in Table 68). This was the result of a combination of factors: they were geographically clearly defined, there was high-quality information directly relevant to the site, and the attributes of the sites were clearly special. These high-scoring sites have already been recognised for their special attributes through various forms of protection; for example, the Arnavon Community Marine Conservation Area is the first part of the Solomon Islands to be nationally and formally declared a Marine Protected Area.

Low-scoring sites, such as Hiliharo Island, Waihau and West Malaita near Auki (4), were those that had been selected for a single specific organism or attribute, or those for which very little information was available. This indicates that both high and low scores are useful for management; while high-scoring sites can be prioritised with confidence, lower-scoring sites can be highlighted for needing more research or requiring protection for the purposes of ecosystem recovery, or even restoration efforts.

Some of the sites were given a special and/or unique status because of their remoteness. This was partly because geographic isolation often leads to unique assemblages, genetic distinctness and the presence of endemics, and/or because the remoteness itself has left their ecosystems relatively intact. For instance, the Solomon Islands has abundant coral reefs, but a large number are heavily exploited, polluted and degraded, especially by sedimentation from logging. Others are relatively pristine because of their distance from human settlements. It is the reefs further offshore that are considered more special and/or unique because the lack of exploitation and pollution makes them more diverse and resilient, with more abundant flora and fauna and intact food webs. Spatial planning can take this into account directly, but also in the context of connectivity, where intact coral reefs could act as sources of larvae to replenish degraded reefs; hydrodynamic modelling could help establish such linkages to further guide planning and management.

Given the status of coral reefs worldwide, and the position of the Solomon Islands within the global epicentre of coral reef biodiversity, coral reefs identified in this report may well be special and/or unique at a global level. Furthermore, many

sites have three highly valuable ecosystems in close proximity (coral reefs, mangroves and seagrass beds), which, due to the number of organisms that use all three habitats at different times in their life cycle, confers an even higher value to each individual habitat. Other sites include steep depth gradients that bring oceanic attributes close to productive coastal environments. This points to the importance of considering multiple adjacent habitats for inclusion in cohesive protected areas.

Vital information for management, such as stock structure, population estimates and dynamics, local species diversity, distribution and ecology, are virtually non-existent for much of the ocean of the Solomon Islands. Future scoring of SUMAs should take this information into account when it became available. Future scoring systems could, more explicitly, take into account levels of human use or impact, as this affects the intrinsic ecological value of a habitat, assemblage, population or ecosystem. This intrinsic ecological value is embedded within the ability of the system to function in a balanced and sustainable manner. It includes elements of assemblage structure and diversity, nutrient cycling, trophic linkages and the abundance of keystone species. Sometimes a single species can indicate that these processes are likely to be intact. However, in the absence of existing information, only ground-truthing can confirm the special and/or unique nature of a site.

The identification and scoring of SUMAs can guide the next steps in marine spatial planning, but also provide information for other management measures, for example, in permitting or licencing or in Environmental Impact Assessments for which the SUMAs are relevant. Sites with higher scores can be seen as priority sites at a national level, while those with lower scores should be flagged for further research.

| Position | Region/<br>Province | Site<br>Code | Site Name                                      | Geographic description | Justification | Sources | Obligations | Total |
|----------|---------------------|--------------|--|------------------------|---------------|---------|-------------|-------|
| Offshore | Central             | OC7          | Ulawa Deep                                     | 2                      | 1             | 1.5     | 1           | 5.5   |
| Offshore | Western             | OW2          | Northern waters                                | 1                      | 2             | 2       | 1           | 6     |
| Offshore | Central             | OC4          | Cape Johnson Trough pelagic waters             | 2                      | 1.5           | 2       | 1           | 6.5   |
| Offshore | Eastern             | OE1          | Tikopia  | 3                      | 1             | 1.5     | 1           | 6.5   |
| Offshore | Eastern             | OE2          | Vanikoro                                       | 2.5                    | 2             | 1.5     | 1           | 7     |
| Offshore | Central             | OC5          | Leatherback turtle                             | 1.5                    | 2             | 3       | 1           | 7.5   |
| Offshore | Central             | OC6          | Hydrothermal vents                             | 1.5                    | 2.5           | 2.5     | 1           | 7.5   |
| Offshore | Western             | OW1          | Southern New Georgia seamounts                 | 1                      | 2.5           | 2       | 2           | 7.5   |
| Offshore | Central             | OC3          | Tuna hotspots                                  | 1                      | 2             | 3       | 2           | 8     |
| Offshore | Central             | OC1          | Roncador Reef                                  | 3                      | 2             | 2       | 2           | 9     |
| Offshore | Western             | OW3          | Kavachi  | 3                      | 2.5           | 2       | 3           | 10.5  |
| Offshore | Central             | OC2          | Ontong Java                                    | 3                      | 2.5           | 3       | 3           | 11.5  |
| Inshore  | Isabel              | ISA11        | Whale migratory route                          | 1                      | 1             | 1       | 1           | 4     |
| Inshore  | Isabel              | ISA9         | Hiliharo Island                                | 1                      | 1             | 1       | 1           | 4     |
| Inshore  | Malaita             | IML5         | Waihau   | 1                      | 1             | 1       | 1           | 4     |
| Inshore  | Malaita             | IML6         | West Malaita near Auki                         | 1                      | 1             | 1       | 1           | 4     |
| Inshore  | Western             | IWE5         | Bait grounds (Nununggara, Rarumana, Shortland) | 1                      | 1.5           | 1.5     | 1           | 5     |
| Inshore  | Isabel              | ISA5         | Papatura                                       | 2                      | 1             | 1       | 1           | 5     |
| Inshore  | Isabel              | ISA6         | Haevo Khulano                                  | 2                      | 1             | 1       | 1           | 5     |
| Inshore  | Isabel              | ISA8         | Hetaheta Island                                | 2                      | 1             | 1       | 1           | 5     |
| Inshore  | Central<br>Islands  | ICI1         | Area between Guadalcanal and Russell Islands   | 2                      | 1             | 1       | 1           | 5     |
| Inshore  | Malaita             | IML7         | Bita'ama                                       | 2                      | 1             | 1       | 1           | 5     |
| Inshore  | Malaita             | IML9         | Indispensable Strait                           | 1                      | 1             | 1       | 2           | 5     |
| Inshore  | Western             | IWE8         | Santupaele                                     | 2                      | 1.5           | 1       | 1           | 5.5   |
| Inshore  | Makira              | IMK1         | Wainoni  | 1.5                    | 1.5           | 1.5     | 1           | 5.5   |

**TABLE 68.** Summary of special, unique marine areas in order of decreasing score. Offshore and inshore sites are rated separately.

| Position | Region/<br>Province    | Site<br>Code | Site Name                             | Geographic description | Justification | Sources | Obligations | Total |
|----------|------------------------|--------------|---------------------------------------|------------------------|---------------|---------|-------------|-------|
| Inshore  | Choiseul               | ICH4         | Parama Island (Pasipasibarego)        | 2.5                    | 1             | 1       | 1           | 5.5   |
| Inshore  | Isabel                 | ISA3         | Lilika Leatherback nesting site       | 2                      | 1             | 1.5     | 1           | 5.5   |
| Inshore  | Western                | IWE7         | Leona Reef, Vella Lavella             | 2.5                    | 1             | 1.5     | 1           | 6     |
| Inshore  | Isabel                 | ISA4         | Litoghahira                           | 2                      | 1.5           | 1.5     | 1           | 6     |
| Inshore  | Malaita                | IML3         | Ndai                                  | 3                      | 1             | 2       | 2           | 8     |
| Inshore  | Guadalcanal            | IGU5         | Lungga coast                          | 1.5                    | 1.5           | 1.5     | 2           | 6.5   |
| Inshore  | Western                | IWE3         | Mushroom Island                       | 3                      | 1             | 1.5     | 1           | 6.5   |
| Inshore  | Choiseul               | ICH5         | Moli                                  | 2.5                    | 1.5           | 1.5     | 1           | 6.5   |
| Inshore  | Isabel                 | ISA2         | Sasakolo Integrated Conservation Area | 2                      | 1.5           | 2       | 1           | 6.5   |
| Inshore  | Temotu                 | ITE2         | Tuwo                                  | 3                      | 1             | 2       | 1           | 7     |
| Inshore  | Choiseul               | ICH1         | Zinoa                                 | 3                      | 2             | 1       | 1           | 7     |
| Inshore  | Choiseul               | ICH3         | Rabakela                              | 3                      | 2             | 1       | 1           | 7     |
| Inshore  | Guadalcanal            | IGU4         | Sealark Channel                       | 2.5                    | 1.5           | 1.5     | 2           | 7.5   |
| Inshore  | Choiseul               | ICH6         | Chivoko                               | 3                      | 1.5           | 2       | 1           | 7.5   |
| Inshore  | Choiseul               | ICH7         | Muzo                                  | 3                      | 1             | 1.5     | 2           | 7.5   |
| Inshore  | Western                | IWE4         | Kennedy Island                        | 3                      | 1.5           | 1.5     | 2           | 8     |
| Inshore  | Isabel                 | ISA10        | Buala Lagoon                          | 1.5                    | 2.5           | 1       | 3           | 8     |
| Inshore  | Central<br>Islands     | ICI3         | Savo                                  | 3                      | 2             | 2       | 1           | 8     |
| Inshore  | Malaita                | IML4         | Fanalei / Walande                     | 3                      | 2             | 2       | 1           | 8     |
| Inshore  | Malaita                | IML8         | Langa Lagoon                          | 3                      | 2             | 2       | 1           | 8     |
| Inshore  | Temotu                 | ITE1         | Tinakula                              | 3                      | 2             | 2.5     | 1           | 8.5   |
| Inshore  | Temotu                 | ITE3         | Ngawawa and Nola area                 | 3                      | 1.5           | 2       | 2           | 8.5   |
| Inshore  | Isabel                 | ISA7         | San Jorge Lagoon                      | 3                      | 2             | 1.5     | 2           | 8.5   |
| Inshore  | Western                | IWE9         | Baniata                               | 3                      | 2             | 3       | 1           | 9     |
| Inshore  | Isabel                 | ISA12        | Arnavon Passage                       | 2                      | 2.5           | 2.5     | 2           | 9     |
| Inshore  | Malaita                | IML1         | Maramasike Passage                    | 3                      | 2             | 3       | 1           | 9     |
| Inshore  | Rennell and<br>Bellona | IRB2         | Indispensable Reefs                   | 3                      | 1.5           | 2       | 3           | 9.5   |
| Inshore  | Guadalcanal            | IGU2         | Lauvi Lagoon                          | 3                      | 1.5           | 2       | 3           | 9.5   |
| Inshore  | Choiseul               | ICH2         | Rob Roy Passage                       | 2                      | 2             | 2.5     | 3           | 9.5   |
| Inshore  | Isabel                 | ISA13        | Ramos Island                          | 3                      | 1.5           | 2       | 3           | 9.5   |
| Inshore  | Rennell and<br>Bellona | IRB1         | East Rennell                          | 3                      | 2             | 2       | 3           | 10    |
| Inshore  | Western                | IWE6         | Njari Island                          | 3                      | 3             | 2       | 2           | 10    |
| Inshore  | Guadalcanal            | IGU3         | West Guadalcanal marine area          | 1.5                    | 3             | 3       | 3           | 10.5  |
| Inshore  | Makira                 | IMK2         | Three Sisters Islands                 | 3                      | 2.5           | 2       | 3           | 10.5  |
| Inshore  | Malaita                | IML2         | Lau Lagoon                            | 2                      | 3             | 2.5     | 3           | 10.5  |
| Inshore  | Guadalcanal            | IGU1         | Marau Sound                           | 2.5                    | 3             | 2.5     | 3           | 11    |
| Inshore  | Western                | IWE2         | Tetepare                              | 3                      | 3             | 2       | 3           | 11    |
| Inshore  | Central<br>Islands     | ICI2         | Russell Islands                       | 3                      | 2.5           | 2.5     | 3           | 11    |
| Inshore  | Western                | IWE1         | Marovo Lagoon                         | 3                      | 2.5           | 3       | 3           | 11.5  |
| Inshore  | Isabel                 | ISA1         | Arnavon Marine Park                   | 3                      | 3             | 3       | 3           | 12    |



# 5. REFERENCES

- Abesamis, R.A., Green, A.L., Russ, G.R., Jadloc, C.R.L., 2014. The intrinsic vulnerability to fishing of coral reef fishes and their differential recovery in fishery closures. Rev. Fish Biol. Fish. 24, 1033–1063.
- Albert, J.A., Schwarz, A.J., 2013. Mangrove management in Solomon Islands: Case studies from Malaita Province. CGIAR Research Program on Aquatic Agricultural Systems, Penang, Malaysia.
- Albert, J.A., Warren-Rhodes, K., Schwarz, A.J., Duke, N.D., 2012. Mangrove ecosystem services & payments for blue carbon in Solomon Islands. The WorldFish Centre, Solomon Islands.
- Albert, S., Grinham, A., Bythell, J., Olds, A.D., Schwarz, A., Abernethy, K., Aranani, K., Sirikolo, M., Watoto, C., Duke, N., McKenzie, J., Roelfsema, C., Liggins, L., Brokovich, E., Pantos, O., Oeta, J., Gibbes, B., 2012. Building social and ecological resilience to climate change in Roviana, Solomon Islands. The University of Queensland, Brisbane.
- Albert, S., Tibbetts, I., Udy, james, 2010. Solomon Islands marine Ilfe: information on biology and management of marine resources. University of Queensland, Brisbane.
- Albert, S., Udy, J., Tibbets, I.R., 2008. Responses of algal communities to gradients in herbivore biomass and water quality in Marovo Lagoon, Solomon Islands. Coral Reefs 27, 73–82.
- Allain, V., Kerandel, J.-A., Andréfouët, S., Magron, F., Clark, M., Kirby, D.S., Muller-Karger, F.E., 2008. Enhanced seamount location database for the western and central Pacific Ocean: Screening and cross-checking of 20 existing datasets. Deep Sea Res. Part Oceanogr. Res. Pap. 55, 1035–1047. https:// doi.org/10.1016/j.dsr.2008.04.004
- Allen, G.R., 2008. Conservation hotspots of biodiversity and endemism for Indo-Pacific coral reef fishes. Aquat. Conserv. Mar. Freshw. Ecosyst. 18, 541–556.
- Allen, G.R., 2006. Coral reef fish diversity, in: In: Green, A., P. Lokani, W. Atu, P. Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004. TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane.
- Allen, G.R., Werner, T.B., 2002. Coral reef fish assessment in the 'coral triangle' of southeastern Asia. Environ. Biol. Fishes 65, 209–214.
- Alongi, D.M., 2008. Mangrove forests: resilience, protection from tsunamis, and responses to global climate change. Estuar. Coast. Shelf Sci. 76, 1–13.
- Andréfouët, S., Hamel, M.A., 2014. Tropical islands quick data gap analysis guided by coral reef geomorphological maps. Mar. Pollut. Bull. 81, 191–199.
- Appleyard, S.A., Grewe, P.M., Innes, B.H., Ward, R.D., 2001. Population structure of yellowfin tuna Thunnus albacares) in the western Pacific Ocean, inferred from microsatellite loci. Mar. Biol. 139, 383–393.

AquaMaps, 2014. Vanuatu benthic marine species richness. Vanuatu Coastlines. [WWW Document]. URL http://aquamaps. org/

- Asian Development Bank, 2014. State of the Coral Triangle: Solomon Islands. Asian Development Bank. http://hdl.handle. net/11540/775.
- Aswani, S., Albert, S., Sabetian, A., Furusawa, T., 2007. Customary management as precautionary and adaptive principles for protecting coral reefs in Oceania. Coral Reefs 26, 1009–1021.
- Aswani, S., Lauer, M., Hamilton, R.J., Weiant, P., Tooler, N.B., 2005. The Roviana and Vonavona Lagoons Marine Resource Management Program. Final Report (Phases 1 and 2) 2000–2004. University of California Santa Barbara.
- Aylesworth, L., 2009. Pacific Island fisheries and interactions with marine mammals, seabirds and sea turtles. Masters project submitted in partial fulfillment of the requirements for the Master of Environmental management degree in the Nicholas School of the Environment of Duke University.
- Ayre, D.J., Hughes, T.P., 2004. Climate change, genotypic diversity and gene flow in reef-building corals. Ecol. Lett. 7, 272–278.
- Bagarinao, T., 1994. Systematics, distribution, genetics and life history of milkfish, Chanos chanos. Environ. Biol. Fishes 39, 23–41.
- Bailey, H., Benson, S.R., Shillinger, G.L., Bograd, S.J., Dutton,
  P.H., Eckert, S.A., Morreale, S.J., Paladino, F.V., Eguchi, T.,
  Foley, D.G., Block, B.A., Piedra, R., Hitipeuw, C., Tapilatu,
  R.F., Spotila, J.R., 2012. Identification of distinct movement
  patterns in Pacific leatherback turtle populations influenced by
  ocean conditions. Ecol. Appl. 22, 735–747.
- Baker, E., Beaudoin, Y., 2013. Deep Sea Minerals: Cobalt-rich Ferromanganese Crusts, a physical, biological, environmental, and technical review. Vol. 1C. Secretariat of the Pacific Community.
- Baker, E.T., Massoth, G.J., de Ronde, J.E., Lupton, J.E., McInnes, B.I., 2002. Observations and sampling of an ongoing subsurface eruption of Kavachi volcano, Solomon Islands, May 2000. Geology 30, 975–978.
- Barbier, E.B., Hacker, S.D., Kennedy, C., Koch, E.W., Stier, A.C., Silliman, B.R., 2011. The value of estuarine and coastal ecosystem services. Ecol. Monogr. 81, 169–193.
- Bayliss-Smith, T., 1988. The role of hurricanes in the development of reef islands, Ontong Java Atoll, Solomon Islands. Geogr. J. 154, 377–391.
- Bayliss-Smith, T., Gough, K.V., Christensen, A.E., Kristensen, S.P., 2010. Managing Ontong Java: Social institutions for production and governance of atoll resources in Solomon Islands. Singap. J. Trop. Geogr. 31, 51–69.
- Bayliss-Smith, T.P., Christensen, A.E., 2008. Birds and people on Ontong Java atoll, 1906–2008: continuity and change. Atoll Res. Bull. 562, 1–36.

Bell, J.D., Adams, T.J.H., Johnson, J.E., Hobday, A.J., Sen Gupta,
A., 2011. Pacific communities, fisheries, aquaculture and
climate change: An introduction, in: Bell, J.D., Johnson, J.E.,
Hobday, A.J. (Eds.), Vulnerability of Tropical Pacific Fisheries
and Aquaculture to Climate Change. Secretariat of the Pacific
Community, Noumea, New Caledonia.

Benson, S.R., Eguchi, T., Foley, D., Forney, K.A., Bailey, H., Hitipeuw, C., Samber, B., Tapilatu, R.F., Rei, V., Ramohia, P.C., Pita, J., Dutton, P.H., 2011. Large-scale movements and high use areas of western Pacific leatherback turtles, Dermochelys coriacea. Ecosphere 2, art84.

Benzie, J.A.H., 1998. Genetic structure of marine organisms and SE Asian biogeography, in: In: Hall, R., Holloway, D. (Eds.),
Biogeography and Geological Evolution of SE Asia. Backhuys Publishers, The Netherlands, pp. 197–209.

Birdlife International, 2009. Designing networks of marine protected areas: exploring the linkages between Important Bird Areas and ecologically or biologically significant marine areas. Birdlife International, Cambridge.

Blaber, S.J.M., Milton, D.A., 1990. Species composition, community structure and zoogeography of fishes of mangrove estuaries in the Solomon Islands. Mar. Biol. 105, 259–267.

Bluhm, H., 2001. Re-establishment of an abyssal megabenthic community after experimental physical disturbance of the sea floor. Deep Sea Res. Part Oceanogr. Res. Pap. 48, 3841– 3868.

Boso, D.N., Schwarz, A.M., 2010. Livelihoods and Resilience Analysis in Two Community Clusters: the Funa'afou and Foueda Artificial Island communities, Lau Iagoon, Malaita Province, Solomon Islands (May 2009). WorldFish Centre, Solomon Islands.

Bouchet, P.J., Meeuwig, J.J., Huang, Z., Letessier, T.B., Nichol, S.L., Caley, M.J., Watson, R., 2017. Continental-scale hotspots of pelagic fish abundance inferred from commercial catch records. Glob. Ecol. Biogeogr. 26, 1098–1111.

Brewer, T.D., Cinner, J.E., Green, A., Pandolfi, J.M., 2009. Thresholds and multiple scale interaction of environment, resource use, and market proximity on reef fishery resources in the Solomon Islands. Biol. Conserv. 142, 1797–1807.

Brewer, T.D., Cinner, J.E., Green, A., Pressey, R.L., 2012. Effects of human population density and proximity to markets on coral reef fishes vulnerable to extinction by fishing. Conserv. Biol. 27, 443–452.

Bruckner, A.W., 2014. Global Reef Expedition: Solomon Islands. Field Report. Khaled bin Sultan Living Oceans Foundation, Landover.

Buckius, C., Albert, S., Tibbets, I.R., Udy, J., 2010. Effect of diel activity patterns and harvesting pressure on the diversity and biomass of sea cucumbers in Marovo Lagoon, Solomon Islands. Environ. Manage. 45, 963–973.

Ceccarelli, D.M., et al, 2013. The Coral Sea: physcial environment, ecosystem status and biodiversity assets, in: Advances in Marine Biology. Elsevier.

Chadwick, J., Perfit, M., McInnes, B.I., Kamenov, G., Plank, T., Jonasson, I., Chadwick, C., 2009. Arc lavas on both sides of a trench: Slab window effects at the Solomon Islands triple junction, SW Pacific. Earth Planet. Sci. Lett. 279, 293–302. Chadwick, W.W., Embley, R.W., Baker, E.T., Resing, J.A., Lupton, J.E., Cashman, K.V., Dziak, R.P., Tunnicliffe, V., Butterfield, D.A., Tamura, Y., 2010. Northwest Rota-1 Seamount. Oceanography 23, 182–183.

Cinner, J.E., McClanahan, T.R., Graham, N.A.J., Pratchett, M.S., Wilson, S.K., Raina, J.-B., 2009. Gear-based fisheries management as a potential adaptive response to climate change and coral mortality. J. Appl. Ecol. 46, 724–732. https:// doi.org/10.1111/j.1365–2664.2009.01648.x

Clark, M.R., Watling, L., Rowden, A.A., Guinotte, J.M., Smith, C.R., 2011a. A global seamount classification to aid the scientific design of marine protected area networks. Ocean Coast. Manag. 54, 19–36. https://doi.org/10.1016/j. ocecoaman.2010.10.006

Clark, M.R., Watling, L., Rowden, A.A., Guinotte, J.M., Smith, C.R., 2011b. A global seamount classification to aid the scientific design of marine protected area networks. Ocean Coast. Manag. 54, 19–36. https://doi.org/10.1016/j. ocecoaman.2010.10.006

 Cleguer, C., Garrigue, C., Fuentes, M.M.P.B., Everingham, Y., Hagihara, R., Hamann, M., Payri, F.C.E., Marsh, H., 2017.
 Drivers of change in the relative abundance of dugongs in New Caledonia. Wildl. Res. 44, 365–276.

Coleman, P.J., 1970. Geology of the Solomon and New Hebrides Islands, as part of the Melanesian re-entrant, Southwest Pacific. Pac. Sci. 24, 289–314.

Collette, B.B., Carpenter, K.E., Polidoro, B.A., Juan-Jorda,
M.J., Boustany, A., Die, D.J., Elfes, C., Fox, W., Graves, J.,
Harrison, L.R., McManus, R., Minte-Vera, C.V., Nelson, R.,
Restrepo, V., Schratwieser, J., Sun, C.-L., Amorim, A., Brick
Peres, M., Canales, C., Cardenas, G., Chang, S.-K., Chiang,
W.-C., De Oliveira Leite, N.J., Harwell, H., Lessa, R., Fredou,
F.L., Oxenford, H.A., Serra, R., Shao, K.-T., Sumaila, R.,
Wang, S.-P., Watson, R., Yanez, E., 2011. High value and long
life—double jeopardy for tunas and billfishes. Science 333, 291–292.

Connell, J., 2015. Vulnerable islands: climate change, tectonic change, and changing livelihoods in the western Pacific. Contemp. Pac. 27, 1–36.

Coulson, F.I., 2012. Chapter 13 – Solomon Islands, in: In: Nairn, A. E. M. and Stehli, F. G. (Eds) The Ocean Basins and Margins: Volume 7A The Pacific Ocean. Plenum Press, New York.

Crean, K., 1977. Some aspects of the *bêche-de-mer* industry in Ontong Java, Solomon Islands. SPC Fish. Newsl. 15, 36–48.

Crocodile Working Group, 1990. Crocodiles. Proceedings of the 10th working meeting. IUCN, Gland, Switzerland.

CSIRO, 2008. http://www.cmar.csiro.au/publications/facts/anfc/ anfc.html#reports from an expedition Accessed 11 Jan 2017.

Davoren, G.C., 2013. Distribution of marine predator hotspots explained by persistent areas of prey. Mar. Biol. 160, 3043– 3058.

De Leo, F.C., Smith, C.R., Rowden, A.A., Bowden, D.A., Clark, M.R., 2010. Submarine canyons: hotspots of benthic biomass and productivity in the deep sea. Proc. R. Soc. B Biol. Sci. 277, 2783–2792. Dell, C., Montoya, J.P., Hay, M.E., 2015. Effect of marine protected areas (MPAs) on consumer diet: MPA fish feed higher in the food chain. Mar. Ecol. Prog. Ser. 540, 227–234.

Demopoulos, A.W.J., McClain-Counts, J., Ross, S.W., Brooke, S., Mienis, F., 2017. Food-web dynamics and isotopic niches in deep-sea communities residing in a submarine canyon and on the adjacent open slopes. Mar. Ecol. Prog. Ser. 578, 19–33.

Dingwall, P.R., 2012. Report on the reactive monitoring mission to East Rennell, Solomon Islands. UNESCO, Geneva.

Domeier, M.L., Colin, P.L., 1997. Tropical reef fish spawning aggregations: defined and reviewed. Bull. Mar. Sci. 60, 698–726.

Donnelly, R., 2009. Managing for sustainability : the live reef foodfish trade in Solomon Islands (MSc Thesis). Southern Cross University, Lismore, NSW, Australia.

Dunn, D.C. (ed), Ardron, J., Ban, N.C., Bax, N.J., Bernal, P.,
Bograd, S.J., Corrigan, C., Dunstan, P., Game, E.T., Gjerde,
K., Grantham, H.S., Halpin, P.N., Harrison, A.L., Hazen, E.L.,
Lagabrielle, E., Lascelles, B., Maxwell, S.M., McKenna, S.A.,
Nicol, S., Norse, E.A., Palacios, D.M., Reeve, L., Shillinger,
G.L., Simard, F., Sink, K., Smith, F., Spadone, A., Würtz, M.,
2011. Ecologically or Biologically Significant Areas in the
Pelagic Realm: Examples & Guidelines – Workshop Report.
IUCN, Gland, Switzerland.

Dunstan, P., Clark, M., Guinotte, J., O'Hara, T., Niklitschek, Rowden, A., Schlacher, T., Tsuchida, S., Watling, L., Williams, A., 2011. Identifying Ecologically and Biologically Significant Areas on Seamounts. IUCN, Gland, Switzerland.

Dutton, P.H., Hitipeuw, C., Zein, M., Benson, S.R., Petro, G., Pita, J., Rei, V., Ambio, L., Bakarbessy, J., 2007. Status and genetic structure of nesting populations of leatherback turtles (Dermochelys coriacea) in the western Pacific. Chelonian Conserv. Biol. 6, 47–53.

Ellison, J.C., 2009. Wetlands of the Pacific Island region. Wetl. Ecol. Manag. 17, 169–206.

Embley, R.W., Merle, S.G., Baker, E.T., Rubin, K.H., Lupton, J.E., Resing, J.A., Dziak, R.P., Lilley, M.D., Chadwick, W.W., Shank, T., Greene, R., Walker, S.L., Haxel, J., Olson, E., Baumberger, T., 2014. Eruptive modes and hiatus of volcanism at West Mata seamount, NE Lau basin: 1996–2012. Geochem. Geophys. Geosystems 15, 4093–4115.

Estes, J.A., Terborgh, J., Brashares, J.S., Power, M.E., Berger, J., Bond, W.J., Carpenter, S.R., Essington, T.E., Holt, R.D., Jackson, J.B.C., Marquis, R.J., Oksanen, L., Oksanen, T., Paine, R.T., Pikitch, E.K., Ripple, W.J., Sandin, S.A., Scheffer, M., Schoener, T.W., Shurin, J.B., Sinclair, A.R.E., Soule, M.E., Virtanen, R., Wardle, D.A., 2011. Trophic downgrading of planet earth. Science 333, 301–306.

Evans, L.J., Jones, H., Pang, K., Saimin, S., Goossens, B., 2016. Spatial ecology of estuarine crocodile (*Crocodylus porosus*) nesting in a fragmented landscape. Sensors 16, 1527; doi:10.3390/s16091527.

Exon, N.F., Johnson, R.W., 1986. The elusive Cook volcano and other submarine forearc volcanoes in the Solomon Islands. BMR J. Aust. Geol. Geophys. 10, 77–83.

FAO, 2017. Global tuna catches by stock. Fisheries and Aquaculture Department, Food and Agriculture Organization of the United Nations (FAO), Rome, Italy. Fernandez-Arcaya, U., Ramirez-Llodra, E., Aguzzi, J., Allcock, A.L., Davies, J.S., Dissanyake, A., Harris, P.T., Howell, K., Huvenne, V.A.I., Macmillan-Lawler, M., Martín, J., Menot, L., Nizinski, M., Puig, P., Rowden, A.A., Sanchez, F., Van den Beld, I.M.J., 2017. Ecological role of submarine canyons and need for canyon conservation: A review. Front. Mar. Sci. 4, doi: 10.3389/fmars.2017.00005.

Ferrigno, F., Bianchi, C.N., Lasagna, R., Morri, C., Russo, G.F., Sandulli, R., 2016. Corals in high diversity reefs resist human impact. Ecol. Indic. 70, 106–113.

FFA, 2015. Common baitfish species used in Solomon Islands skipjack pole-and-line fishery. Secretariat of the Pacific Community (SPC) and Pacific Islands Forum Fisheries Agency (FFA).

Firth, R., 1930. Reports on research in Tikopia. Oceania 1, 105–117.

FitzGerald, W., 2004. Milkfish aquaculture in the Pacific: potential for the tuna longline fishery bait market. SPC, Noumea, New Caledonia.

Foale, S., Wini, L., Fernandes, L., 2017. The Arnavon Community Marine Conservation Area: a review of successes, challenges and lessons learned. A report to the MACBIO project. GIZ, IUCN, SPREP, Suva, Fiji.

Friedlander, A.M., DeMartini, E.E., 2002. Contrasts in density, size, and biomass of reef fishes between the northwestern and the main Hawaiian Islands: the effects of fishing down apex predators. Mar. Ecol. Prog. Ser. 230, 253–264.

Gage, J.D., 2004. Diversity in deep-sea benthic macrofauna: the importance of local ecology, the larger scale, history and the Antarctic. Deep-Sea Res. II 51, 1689–1708.

Garrigue, C., Zerbini, A.N., Geyer, Y., Heide-Jørgensen, M.-P., Hanaoka, W., Clapham, P., 2010. Movements of satellitemonitored humpback whales from New Caledonia. J. Mammal. 91, 109–115.

Gauldie, R.W., Sharp, G.D., 1996. Skipjack velocity, dwell time and migration. Fish. Oceanogr. 5, 100–113.

GEF-UNEP-CMS, 2016. The Dugong and Seagrass Conservation Project [WWW Document]. URL http://www.dugongconservation. org/where-we-work/vanuatu/ (accessed 3.5.18).

Genin, A., 2004. Bio-physical coupling in the formation of zooplankton and fish aggregations over abrupt topographies.J. Mar. Syst. 50, 3–20.

Gjertsen, H., Stevenson, T.C., 2005. Direct incentive approaches for leatherback turtle conservation. NOAA and Conservation International.

Global Volcanism Program, 2017. Report on Kavachi (Solomon Islands). In: Venzke, E (ed.), Bulletin of the Global Volcanism Network 42:3. Smithsonian Institution, Washington D.C.

Gollner, S., Govenar, B., Fisher, C.R., Bright, M., 2015. Size matters at deep-sea hydrothermal vents: different diversity and habitat fidelity patterns of meio- and macrofauna. Mar. Ecol. Prog. Ser. 520, 57–66.

Gollner, S., Kaiser, S., Menzel, L., Jones, D.O.B., Brown, A., Mestre, N.C., van Oevelen, D., Menot, L., Colaço, A., Canals, M., Cuvelier, D., Durden, J.M., Gebruk, A., Egho, G.A., Haeckel, M., Marcon, Y., Mevenkamp, L., Morato, T., Pham, C.K., Purser, A., Sanchez-Vidal, A., Vanreusel, A., Vink, A., Arbizu, P.M., 2017. Resilience of benthic deep-sea fauna to mining activities. Mar. Environ. Res. 129, 76–101. Graham, N.A.J., Jennings, S., MacNeil, M.A., Mouillot, D., Wilson, S.K., 2015. Predicting climate-driven regime shifts versus rebound potential in coral reefs. Nature 518, 94–97.

Graham, N.A.J., Spalding, M.D., Sheppard, C.R.C., 2010. Reef shark declines in remote atolls highlight the need for multi-faceted conservation action. Aquat. Conserv. 20, 543–548.

Green, A., Lokani, P., Atu, W., Ramohia, P.C., Thomas, P.,
Almany, J., 2006a. Solomon Islands Marine Assessment:
Technical Report of Survey Conducted [from] 13 May to 17
June 2004. TNC Pacific Island Countries Report No1/06. The
Nature Conservancy, Brisbane.

Green, A., Ramohia, P.C., Ginigele, M., Leve, T., 2006b. Fisheries resources: coral reef fishes., in: In: Green, A., P. Lokani, W. Atu, P. Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004. TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane.

Green, A.L., Mous, P.J., 2007. Delineating the Coral Triangle, its ecoregions and functional seascapes. The Nature Conservancy, Brisbane.

Halpern, B.S., Selkoe, K.A., White, C., Albert, S., Aswani, S., Lauer, M., 2013. Marine protected areas and resilience to sedimentation in the Solomon Islands. Coral Reefs 32, 61–69.

Hamilton, R.J., 2003. A report on the current status of exploited reef fish aggregations in the Solomon Islands and Papua New Guinea – Choiseul, Ysabel, Bougainville and Manus Provinces. Society for the Conservation of Reef Fish Aggregations (SCRFA).

Hamilton, R.J., Almany, G.R., Brown, C.J., Pita, J., Peterson, N.A., Choat, J.H., 2017. Logging degrades nursery habitat for an iconic coral reef fish. Biol. Conserv. 210, 273–280.

Hamilton, R.J., Almany, G.R., Stevens, D., Bode, M., Pita, J., Peterson, N.A., Choat, J.H., 2016. Hyperstability masks declines in bumphead parrotfish (*Bolbometopon muricatum*) populations. Coral Reefs 35, 751–763.

Hamilton, R.J., Bird, T., Gereniu, C., Pita, J., Ramohia, P.C., Walter, R., Goerlich, C., Limpus, C., 2015. Solomon Islands largest hawksbill turtle rookery shows signs of recovery after 150 years of excessive exploitation. PLoS ONE 10, e0121435.

Hamilton, R.J., Kama, W., 2004. Spawning aggregations of coral reef fish in Roviana Lagoon, Western Province, Solomon Islands: Local knowledge field survey report. Report prepared for the Pacific Island Countries Coastal Marine Program, The Nature Conservancy. TNC Pacific Island Countries Report No. 5/04.

Hamilton, R.J., Ramohia, P.C., Hughes, A., Siota, C., Kere, N., Ginigele, M., Kereseka, J., Taniveke, F., Tanito, N., Atu, W., Tanavalu, L., 2007. Post-Tsunami Assessment of Zinoa Marine Conservation Area, South Choiseul, Solomon Islands. TNC Pacific Island Countries Report No. 4/07.

Hanson, J.O., Salisbury, S.W., Campbell, H.A., Dwyer, R.G., Jardine, T.D., Franklin, C.E., 2015. Feeding across the food web: The interaction between diet, movement and body size in estuarine crocodiles (*Crocodylus porosus*). Austral Ecol. 40, 275–286.

Harley, S.J., Williams, P., Hampton, J., 2012. A compendium of fisheries indicators forbigeye, skipjack, yellowfin, and south Pacific albacore tunas and south Pacific swordfish. Western and Central Pacific Fisheries Commission, Document Number WCPFC-SC8–2012/SA-WP-02, Busan, Republic of Korea. Harley, S.J., Williams, P., Nicol, S., Hampton, J., 2015. The western and central Pacific tuna fishery: 2013 overview and status of stocks. Secretariat of the Pacific Community, Noumea, New Caledonia.

Harris, P.T., Macmillan-Lawler, M., Rupp, J., Baker, E.K., 2014. Geomorphology of the Oceans. Mar. Geol. 352, 4–24. https:// doi.org/10.1016/j.margeo.2014.01.011

Harris, P.T., Whiteway, T., 2011. Global distribution of large submarine canyons: geomorphic differences between active and passive continental margins. Mar. Geol. 285, 69–86.

Hawkes, J.A., Rossel, P.E., Stubbins, A., Koschinsky, A., Chavagnac, V., Hansen, C.T., Bach, W., Dittmar, T., 2015.
Efficient removal of recalcitrant deep-ocean dissolved organic matter during hydrothermal circulation. Nat. Geosci. 8, 856–860.

Heithaus, M.R., Frid, A., Wirsing, A.J., Worm, B., 2008. Predicting ecological consequences of marine top predator declines. Trends Ecol. Evol. 23, 202–210.

Hisano, M., Connolly, S.R., Robbins, W.D., 2011. Population growth rates of reef sharks with and without fishing on the Great Barrier Reef: robust estimation with multiple models. PLoS ONE 6, e25028. doi:10.1371/journal.pone.0025028.

Hobbs, J.-P.A., van Herwerden, L., Jerry, D.R., Jones, G.P., Munday, P.L., 2013. High genetic diversity in geographically remote populations of endemic and widespread coral reef angelfishes (genus: Centropyge). Diversity 5, 39–50.

Hoeksema, B.W., 2007. Delineation of the Indo-Malayan Centre of Maximum Marine Biodiversity: the Coral Triangle, in: Chapter 5 In: Renema, W. (Ed). Biogeography, Time and Place: Distributions, Barriers and Islands. Springer, New York, pp. 117–178.

Holbrook, S.J., Schmitt, R.J., Adam, T.C., Brooks, A.J., 2016. Coral reef resilience, tipping points and the strength of herbivory. Sci. Rep. 6:35817 | DOI: 10.1038/srep35817.

Holland, A., 1994. The beche-de-mer industry in the Solomon Islands: recent trends and suggestions for management. SPC Beche--Mer Inf. Bull. 6, 2–9.

Hooper, E., 2015. Marine report: Buma, Vanikoro. OceansWatch, New Zealand.

Houk, P., Starmer, J., 2010. Constraints on the diversity and distribution of coral-reef assemblages in the volcanic Northern Mariana Islands. Coral Reefs 29, 59–70.

Houssard, P., Lorrain, A., Tremblay-Boyer, L., Allain, V., Graham,
B.S., Menkes, C.E., Pethybridge, H., Couturier, L.I.E., Point,
D., Leroy, B., Receveur, A., Hunt, B.P.V., Vourey, E., Bonnet,
S., Rodier, M., Raimbault, P., Feunteun, E., Kuhnert, P.,
Munaron, J.-M., Lebreton, B., Otaker, T., Letourneur, Y., 2017.
Trophic position increases with thermocline depth in yellowfin and bigeye tuna across the Western and Central Pacific Ocean. Prog. Oceanogr. 154, 49–63.

Hughes, A., 2006. Benthic communities, in: In: Green, A., P. Lokani, W. Atu, P. Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004. TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane.

Hughes, T.P., Bellwood, D.R., Connolly, S.R., 2002. Biodiversity hotspots, centres of endemicity, and the conservation of coral reefs. Ecol. Lett. 5, 775–784.

Hurutarau, J., Vave-Karamui, A., Masu, R., Siota, C., Ramohia, P.C., Pita, J., Manioli, J., Kere, N., Boso, D.N., Aihunu, J.P., Tafea, H., Bero, A.T., 2009. Solomon Islands Turtle Strategic Action Plan 2008–2012. Environment & Conservation Division, Honiara, Solomon Islands.

Hyrenbach, K.D., Forney, K.A., Dayton, P.K., 2000. Marine protected areas and ocean basin management. Aquat. Conserv. Mar. Freshw. Ecosyst. 10, 437–458.

IHO, 2008. Standardization of Undersea Feature Names: Guidelines Proposal form Terminology.

ISA, 1999. Deep-seabed polymetallic nodule exploration: Development of environmental guidelines. International Seabed Authority, Kingston, Jamaica.

IUCN, 2016. The IUCN Red List of Threatened Species. Version 2016–3. <a href="http://www.iucnredlist.org">http://www.iucnredlist.org</a>. Downloaded on 07 December 2016. The International Union for the Conservation of Nature, Gland, Switzerland.

IUCN, 2013. Biodiversity assessment report Maramasike Passage, Malaita Province, Solomon Islands. Mangrove Ecosystems for Climate Change Adaptation & Livelihoods (MESCAL) & IUCN, Gland, Switzerland.

James, R.H., 1977. Olive Ridley turltes and leatherbacks found in the Solomons. Mar. Turt. Newsl. 2, 2–3.

Johannes, R.E., 1989. Spawning aggregations of the grouper Plectropomus areolatus (Ruppell) in the Solomon Islands, in: In: Choat, J.H., Barnes, D.J., Borowitzka, M.A., Coll, J.C., Davies, P.J., Flood, P., Hatcher, B.G., Hopley, D., Hutchings, P.A., Others (Eds.), Proceedings of the Sixth International Coral Reef Symposium. Townsville, Australia, pp. 751–755.

Johannes, R.E., Hviding, E., 2000. Traditional knowledge possessed by the fishers of Marovo Lagoon, Solomon Islands, concerning fish aggregating behaviour. SPC Tradit. Mar. Resour. Manag. Knowl. Bull. 12, 22.

Johannes, R.E., Kile, N., 2001. Protecting grouper spawning aggregations, a potential target of the live reef food fish trade in Ysabel and Wagina Islands, Solomon Islands. SPC Live Reef Fish Inf. Bull. 8, 5–9.

Kahn, B., 2006. Oceanic cetaceans and associated habitats., in: In: Green, A., P. Lokani, W. Atu, P. Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004.
TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane.

Kahn, B., 2001. Important criteria for selecting/establishing protected habitat regions for cetaceans in Papua New Guinea.
In: Transcripts of the New Guinea Marine Mammal Forum. July 16–17 2001. Port Moresby, PNG.

Kaneko, T., Maejima, Y., Teishima, A., 1997. The abundance and vertical distribution of abyssal benthic fauna in the Japan Deep-Sea I mpact Experiment. Presented at the The Seventh International Offshore and Polar Engineering Conference, Honolulu, Hawaii, USA.

Kere, N., 2009. Solomon Islands (Western Province) coral reef monitoring report for 2006–2007, in: In: Whippy-Morris, C (Ed) South-West Pacific Status of Coral Reefs Report 2007. CRISP, Noumea, New Caledonia, pp. 117–153.

Kessler, W., Cravatte, S., 2013. Mean circulation of the Coral Sea, in press, J. Geophys. Res. Kessler. J. Geophys. Res. 118, 1–26. Kieckbusch, D.K., Koch, M.S., Serafy, J.E., Anderson, W., 2004. Trophic linkages among primary producers and consumers in fringing mangroves of subtropical lagoons. Bull. Mar. Sci. 74, 271–285.

Kile, N., 2000. Solomon Islands marine resources overview. Pac. Econ. Bull. 15, 143–147.

Kirch, P.V., 2007. Three islands and an archipelago: reciprocal interactions between humans and island ecosystems in Polynesia. Earth Environ. Sci. Trans. R. Soc. Edinb. 98, 85–99.

Klose, J., Polz, M.F., Wagner, M., Schimak, M.P., Gollner, S., Bright, S., 2015. Endosymbionts escape dead hydrothermal vent tubeworms to enrich the free-living population. Proc. Natl. Acad. Sci. U. S. A. 112, 11300–11305.

Kool, J.T., Brewer, T.D., Mills, M., Pressey, R.L., 2010. Ridges to Reefs Conservation Plan for Solomon Islands. ARC Centre of Excellence for Coral Reef Studies, Townsville, Australia.

Kool, J.T., Paris, C.B., Barber, P.H., Cowen, R.K., 2011. Connectivity and the development of population genetic structure in Indo-West Pacific coral reef communities. Glob. Ecol. Biogeogr. 20, 695–706.

Kuijper, M.W.M., 2003. Marine and coastal environmental awareness building within the context of UNESCO's activities in Asia and the Pacific. Mar. Pollut. Bull. 47, 265–272.

Lan, K.-W., Shimada, T., Lee, M.-A., Su, N.-J., Chang, Y., 2017. Using remote-sensing environmental and fishery data to map potential yellowfin tuna habitats in the tropical Pacific Ocean. Remote Sens. 9, 444; doi:10.3390/rs9050444.

Langley, A., Wright, A., Hurry, G., Hampton, J., Aqorua, T., Rodwell, L., 2009. Slow steps towards management of the world's largest tuna fishery. Mar. Policy 33, 271–279.

Leary, T., 1993. Solomon Islands State of the Environment Report. SPREP, Apia, Samoa.

Leary, T., 1991. Solomon Islands. SPREP, Apia, Samoa.

Leroy, B., Nicol, S., Lewis, A., Hampton, J., Kolody, D., Caillot, S., Hoyle, S., 2015. Lessons learned from implementing three, large-scale tuna tagging programmes in the western and central Pacific Ocean. Fish. Res. 163, 23–33.

Liao, J.-X., Chen, G.-M., Chiou, M.-D., Jan, S., Wei, C.-L., 2017. Internal tides affect benthic community structure in an energetic submarine canyon off SW Taiwan. Deep Sea Res. Part Oceanogr. Res. Pap. 125, 147–160.

Lincoln Smith, M.R., Bell, J.D., Pitt, K.A., Ramohia, P.C., 2002. The Arnavon Islands Marine Conservation Area: Lessons in monitoring and management, in: Proceedings of the 9th International Coral Reef Symposium 2000.

Lincoln Smith, M.R., Pitt, K.A., Bell, J.D., Ramohia, P.C., 2000. Testing the use of Marine Protected Areas to restore and manage tropical multispecies invertebrate fisheries at the Arnavon Islands, Solomon Islands. The Great Barrier Reef Marine Park Authority and The Australian Centre for International Agricultural Research.

Linse, K., Schrödl, M., Zelaya, D., 2003. Biodiversity, biogeography and evolution of Magellanic and Antarctic Mollusca. Rep. Polar Res. 462, 19–28.

Lipsett-Moore, G., Hamilton, R.J., Peterson, N., Game, E.T., Atu,
 W., Kereseka, J., Pita, J., Ramohia, P.C., Siota, C., 2010.
 Ridges to Reefs Conservation Plan for Choiseul Province,
 Solomon Islands. NC Pacific Islands Countries Report No. 2/10.

Little, C.T.S., Vrijenhoek, R.C., 2003. Are hydrothermal vent animals living fossils? Trends Ecol. Evol. 18, 582–588.

Luschi, L., 2013. Long-distance animal migrations in the oceanic environment: orientation and navigation correlates. Int. Sch. Res. Not. – Zool. Artic. ID 631839 23 Pages 2013 Doi1011552013631839.

MacKenzie, J., Duke, N.C., Wood, A., 2013. MangroveWatch assessment of shoreline mangroves in the Solomon Islands. Centre for Tropical Water & Aquatic Ecosystem Research (TropWATER) Publication 13/52, James Cook University, Townsville, Australia.

Malakoff, D., 2004. New tools reveal treasures at ocean hot spots. Science 304, 1104–1105.

Mangubhai, S., Erdmann, M.V., Wilson, J.R., Huffard, C.L.,
Ballamu, F., Hidayat, S.I., Hitipeuw, C., Lazuardi, M.E.,
Mujahir, Pada, D., Purba, G., Rotinsulu, C., Rumetna,
L., Sumolang, K., Werna, W., 2012. Papuan Bird's Head
Seascape: Emerging threats and challenges in the global
center of marine biodiversity. Mar. Pollut. Bull. 64, 2279–2295.

Mann, P., Taylor, F.W., Lagoe, M.B., Quarles, A., Burr, G., 1998. Accelerating late Quaternary uplift of the New Georgia Island Group (Solomon island arc) in response to subduction of the recently active Woodlark spreading center and Coleman seamount. Tectonophysic 295, 259–306.

Marchese, C., 2014. Biodiversity hotspots: A shortcut for a more complicated concept. Global Ecology and Conservation. Glob. Ecol. Conserv. 3, 297–309.

Marine Research Foundation, 2015. Capacity building in the Solomon Islands to enhance leatherback sea turtle conservation. Marine Research Foundation, Malaysia.

Marsh, H., O'Shea, T.J., Reynolds III, J.E., 2012. Ecology and conservation of the Sirenia: dugongs and manatees. Cambridge University Press, Cambridge, UK.

Marsh, H., Sobtzick, S., 2015. Dugong dugon The IUCN Red List of Threatened Species 2015: e.T6909A43792211 [WWW Document]. URL http://www. iucnredlist.org/pdflink.43792211 (accessed 10.7.17).

Mast, R.B., Bailey, L.M., Hutchinson, B.J., 2006. State of the world's sea turtles. SWoT Report, Washington, D.C.

Mattio, L., Payri, F.C.E., Verlaque, M., 2009. Taxonomic revision and geographic distribution of the subgenus Sargassum (Fucales, Phaeophyceae) in the western and central Pacific Islands based on morphological and molecular analyses. J. Phycol. 45, 1213–1227.

McConachy, T., 2002. Submarine hydrothermal processes in volcanic arcs, back arcs and continental shelf settings in the SW Pacific. CSIRO, North Ryde, NSW, Australia.

McConachy, T., Binns, R.A., Arculus, R.J., 2002. Submarine hydrothermal activity and volcanic petrogenesis associated with the birth of island arcs in the Solomon Islands (SOLAVENTS – 2002). Cruise Summary, RV Franklin, FR 03/02. CSIRO, Hobart, Tasmania.

McDevitt-Irwin, J.M., Iacarella, J.C., Baum, J.K., 2016. Reassessing the nursery role of seagrass habitats from temperate to tropical regions: a meta-analysis. Mar. Ecol. Prog. Ser. 557, 133–143. McGrouther, M., 1999. Report on the 1998 marine fish survey of the Santa Cruz Group, Solomon Islands, conducted by the Australian Museum, Smithsonian Institution, Field Museum of Natural History, Milwaukee Public Museum and Solomon Islands Fisheries. Australian Museum, Sydney.

McKechnie, S., Hampton, J., Pilling, G.M., Davies, N., 2016. Stock assessment of skipjack tuna in the western and central Pacific Ocean. Western and Central Pacific Fisheries Commission, Scientific Committee Twelfth Regular Session, Bali, Indonesia.

McKenzie, L., Campbell, S., Lasi, F., 2006. Seagrasses and mangroves, in: In: Green, A., P. Lokani, W. Atu, P. Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004. TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane.

McKeown, A., 1977. Marine turtles of the Solomon Islands. Ministry on Natural Resources, Fisheries Division, Honiara, Solomon Islands.

McLean, M., Cuentos-Bueno, J., Nedlic, O., Luckymiss, M., Houk, P., 2016. Local stressors, resilience, and shifting baselines on coral reefs. PLoS ONE 11, e0166319. doi:10.1371/journal. pone.0166319.

MECCDMM, 2014. 5th National Report on the implementation of the Convention of Biological Diversity. Ministry of Environment, Climate Change, Disaster Management & Meteorology, Solomon Islands.

MECDM, 2011. Vulnerability and adaptation assessment report for low lying atolls – Ontong Java. Ministry of Environment, Climate Change, Disaster Management & Meteorology, Honiara, Solomon Islands.

MECM/MFMR, 2010. Solomon Islands Coral Triangle Initiative National Plan of Action. Solomon Islands Government, Honiara, Solomon Islands.

Menzies, R.J., George, R.Y., Rowe, G.T., 1973. Abyssal environment and ecology of the world oceans. Wiley-Interscience, New York.

Mercier, A., Battaglene, S.C., Hamel, J.-F., 2000. Periodic movement, recruitment and size-related distribution of the sea cucumber Holothuria scabra in Solomon Islands. Hydrobiologia 440, 81–100.

Miller, C., 2006. Current state of knowledge of cetacean threats, diversity and habitats in the Pacific Islands region A Report by the Whale and Dolphin Conservation Society for the First Meeting of the Signatories to the Memorandum of Understanding for the Conservation of Cetaceans and Their Habitats in the Pacific Islands Region. WDCS International.

Miller, J.D., Dobbs, K.A., Limpus, C.J., Mattocks, N., Landry, A.M., 1998. Long-distance migrations by the hawksbill turtle, Eretmochelys imbricata, from north-eastern Australia. Wildl. Res. 89–95.

Mitarai, S., Watanabe, H., Nakajimaa, Y., Shchepetkinc, A.F., McWilliams, J.C., 2016. Quantifying dispersal from hydrothermal vent fields in the western Pacific Ocean. Proc. Natl. Acad. Sci. USA 113, 2976–2981.

Moors-Murphy, H.B., 2014. Submarine canyons as important habitat for cetaceans, with special reference to the gully: A review. Deep Sea Res. Part II Top. Stud. Oceanogr. 104, 6–19. Morato, T., Clark, M.R., 2007. Seamount fishes: ecology and life histories. In T. J. Pitcher et al., eds. Seamounts: ecology, fisheries and conservation: Blackwell Fisheries and Aquatic Resources Series, 12. Oxford: Blackwell Publishing, pp. 170–188.

Morato, T., Hoyle, S.D., Allain, V., Nicol, S.J., 2010. Seamounts are hotspots of pelagic biodiversity in the open ocean. Proc. Natl. Acad. Sci. 107, 9707–9711.

Morrisey, D.J., Cole, R.G., Bell, J., Lane, I., Read, G.B., 2003. Low abundances and diversities of benthic faunas of shallow, coastal sediments in the Solomon Islands and their implications for assessing environmental impacts of logging. Pac. Conserv. Biol. 9, 215–227.

Mortimer, J.A., 2002. Sea turtle biology & conservation in the Arnavon Marine Conservation Area (AMCA) of the Solomon Islands. The Nature Conservancy.

Movick, J.T., Tukuitonga, C., 2016. Future of Fisheries: Tuna Fishery Report Card 2016. Pacific Islands Forum Fisheries Agency (FFA) and Secretariat of the Pacific Community.

Mumby, P.J., Edwards, A.J., Arias-Gonzalez, J.E., Lindeman, K.C., Blackwell, P.G., Gall, A., Gorczynska, M.I., Harborne, A.R., Perscod, C.L., Renken, H., Wabnitz, C.C.C., Llewellyn, G., 2004. Mangroves enhance the biomass of coral reef fish communities in the Caribbean. Nature 427, 533–536.

Myers, R.A., Baum, J.K., Shepherd, T., Powers, S.P., Peterson, C.H., 2007. Cascading effects of the loss of apex predatory sharks from a coastal ocean. Science 315, 1849–1850.

Myers, R.A., Worm, B., 2003. Rapid worldwide depletion of predatory fish communities. Nature 423, 280–283.

Nagelkerken, I., Blaber, S.J.M., Bouillon, S., Green, P., Haywood, M., Kirton, L.G., Meynecke, J.O., Pawlick, J., Penrose, H.M., Sasekumar, A., Somerfield, P.J., 2008. The habitat function of mangroves for terrestrial and marine fauna: A review. Aquat. Bot. 89, 155–185.

Nguyen, D., Kereseka, J., 2008. Tarevalata 'Kastom' Conserved Area Chivoko, Lauru Island, Solomon Islands. Lauru Land Conference of Tribal Communities, Solomon Islands.

Nicol, S.J., Allain, V., Pilling, G.M., Polovina, J.J., Coll, M., Bell, J., Dalzell, P., Sharples, P., Olson, R., Griffiths, S., Dambacher, J.M., Young, J., Lewis, A., Hampton, J., Molina, J.J., Hoyle, S., Briand, K., Bax, N.J., Lehodey, P., Williams, P., 2013. An ocean observation system for monitoring the affects of climate change on the ecology and sustainability of pelagic fisheries in the Pacific Ocean. Clim. Change 119, 131–145.

NOAA, 2016. National Ocean Service http://oceanservice.noaa. gov/facts/vents.html Accessed 10/01/17.

NOAA Fisheries, 2014. Southwest Fisheries Science Centre. Solomon Islands in the field [WWW Document]. URL https:// swfsc.noaa.gov/textblock.aspx?Division=PRD&ParentMenuId= 212&id=8724 (accessed 10.3.17).

Norlund, L.M., Koch, E.W., Barbier, E.B., Creed, J.C., 2016. Seagrass ecosystem services and their variability across genera and geographical regions. PLoS ONE 11, e0163091. doi:10.1371/journal.pone.0163091.

Nozawa, F., Kitazato, H., Tsuchiya, M., Gooday, A.J., 2006. 'Live'' benthic foraminifera at an abyssal site in the equatorial Pacific nodule province: abundance, diversity and taxonomic composition.' Deep Sea Res. Part Oceanogr. Res. Pap. 1406–1422. Olds, A.D., Albert, S., Maxwell, P.S., Pitt, K.A., Connolly, R.M., 2013. Mangrove-reef connectivity promotes the effectiveness of marine reserves across the western Pacific. Glob. Ecol. Biogeogr. 22, 1040–1049.

Olds, A.D., Connolly, R.M., Pitt, K.A., Pittman, S.J., Maxwell, P.S., Huijbers, C.M., Moore, B.R., Albert, S., Rissik, D., Babcock, R.C., Schlacher, T.A., 2016. Quantifying the conservation value of seascape connectivity: a global synthesis The conservation value of seascape connectivity. Glob. Ecol. Biogeogr. 25, 3–15.

Olsen, M., Turnbull, M., 1993. Assessment of the growth rates of logged and un-logged forests in the Solomon Islands. Solomon Islands national forest resources inventory. Ministry of Forests, Environment and Conservation, Honiara Solomon Islands.

Oremus, M., Garrigue, C., Tezanos-Pinto, G., Baker, C.S., 2015. Phylogenetic identification and population differentiation of bottlenose dolphins (Tursiops spp.) in Melanesia, as revealed by mitochondrial DNA. Mar. Mammal Sci. 31, 1035–1056.

Oremus, M., Lequata, J., Hurutarau, J., Taei, S., Donoghue, M., Baker, C.S., 2014. Genetic and demographic assessment of dolphins taken in live-capture and traditional drive-hunt in the Solomon Islands. Final Report for the Small Cetacean Conservation Fund of the International Whaling Commission, London, UK.

Oremus, M., Lequata, J., Hurutarau, J., Taei, S., Donoghue, M., Baker, C.S., 2013. Population status of Indo-Pacific bottlenose dolphins, Tursiops aduncus, in the Solomon Islands and assessment of live-capture sustainability. South Pacific Whale Research Consortium and MECDM, Honiara, Solomon Islands.

Oremus, M., Lequata, J., Hurutarau, J., Taei, S., Donoghue, M., Thompson, K., Baker, C.S., 2011. Solomon Islands Dolphin Project. Progress report on data collection and analyses. South Pacific Whale Research Consortium and MECDM, Honiara, Solomon Islands.

Oxford English Dictionary, 2018. Oxford English Dictionary. Oxford University Press, Oxford, UK.

Pacific Horizons Consultancy Group, 2008. Solomon Islands State of the Environment Report. Ministry of Environment, Conservation and Meteorology, Honiara, Solomon Islands.

Passfield, K., Gilman, E., 2010. Effects of Pelagic Longline Fishing on Seamount Ecosystems Based on Interviews with Pacific Island Fishers. International Union for the Conservation of Nature, Oceania Regional Office, Suva, Fiji.

Pauly, D., Christensen, V., Dalsgaard, J., Froese, R., Torres, F.J., 1998. Fishing down marine food webs. Science 279, 860–863.

Peterson, N., Hamilton, R.J., Pita, J., Atu, W., James, R.H.,
2012. Ridges to Reefs Conservation Plan for Isabel Province,
Solomon Islands. The Nature Conservancy Indo-Pacific
Division, Solomon Islands. Report No. 1/12. 61 pp.

Phillips, B.T., Dunbabin, M., Henning, B., Howell, C., DeCiccio,
A., Flinders, A., Kelley, K.A., Scott, J.J., Albert, S., Carey, S.,
Tsadok, R., Grinham, A., 2016. Exploring the "Sharkcano":
Biogeochemical observations of the Kavachi submarine
volcano (Solomon Islands). Oceanography 29, 160–169.

Pickering, T., 2013. Survey for milkfish fry collection in the Arnavon Islands, Solomon Islands. SPC Fish. Newsl. 140, 9–10. Pinault, M., Bissery, C., Gassiole, G., Magalon, H., Quod, J.-P., Galzin, R., 2014. Fish community structure in relation to environmental variation in coastal volcanic habitats. J. Exp. Mar. Biol. Ecol. 460, 62–71.

Pinca, S., Vunisea, A., Lasi, F., Friedman, K., Kronen, M., Awira, R., Boblin, P., Tardy, E., Chapman, L., Magron, F., 2009. Solomon Islands Country Report: Profiles and Survey Work at Nggela, Marau, Rarumana and Chubikopi (June to September 2006 and December 2006), Secretariat of the Pacific Community, Coastal Fisheries Programme, Noumea, New Caledonia. Secretariat of the Pacific Community, Coastal Fisheries Programme, Noumea, New Caledonia.

Pita, J., Ramohia, P.C., Horokou, J., 2007. Leatherback turtle survey in Solomon Islands. Melanes. Geo Jan-April 2007, 20–21.

Planes, S., Doherty, P.J., Bernardi, G., 2001. Strong genetic divergence among populations of a marine fish with limited dispersal, Acanthochromis polyacanthus, within the Great Barrier Reef and the Coral Sea. Evolution 55, 2263–2273.

Polovina, J.J., Abecassis, M., Howell, E.A., Woodworth, P., 2009. Increases in the rel-ative abundance of mid-trophic level fishes concurrent with declines in apexpredators in the sub-tropical North Pacific, 1996–2006. Fish. Bull. 107, 523–531.

Polovina, J.J., Woodworth-Jefcoats, P.A., 2013. Fishery-induced changes in the sub-tropical Pacific pelagic ecosystem size structure: Observations and theory. PLoS ONE 8, e62341.

Ramohia, P.C., 2012. A Report on the Assessment of the five shortlisted potential Project Communities. An Assessment carried out in support of the EU-funded USP Climate Change project in the Solomon Islands: "Supporting the Global Climate Change Alliance (GCCA) through Capacity Building, Community Engagement and Applied Research". The Assessment carried out between 18th December, 2011 and 21st February, 2012.

Ramohia, P.C., 2006. Fisheries resources: commercially important macroinvertebrates, in: In: Green, A., P. Lokani, W. Atu, P.
Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004. TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane.

Ramohia, P.C., 2004. Baseline survey: Assessing abundance of commercially important invertebrates of the Marapa and Simeruka Marine Protected Areas, Marau Sound, Guadalcanal. Department of Fisheries and Marine Resources, Honiara, Solomon Islands.

Ramohia, P.C., 1992. The Russell Islands turtle survey, 7th-18th November 1992. A Joint Environment and Conservation Division and Fisheries Division Project, Honiara, Solomon Islands.

Ramohia, P.C., da Wheya, N., 2000. Solomon Islands mangrove report. SPREP, Apia, Samoa.

Read, J.L., Moseby, K., 2006. Vertebrates of Tetepare Island, Solomon Islands. Pac. Sci. 60, 69–79.

Reuter, M., Piller, W.E., 2011. Volcaniclastic events in coral reef and seagrass environments: evidence for disturbance and recovery (Middle Miocene, Styrian Basin, Austria). Coral Reefs 30, 889–899.

Richer de Forges, B., Koslow, J.A., Poore, G.C.B., 2000. Diversity and endemism of the benthic seamount fauna in the southwest Pacific. Nature 405, 944–947. Rivera-Monroy, V.H., Day, J.W., Twilley, R.R., Vera-Herrera, F., Coronado-Molina, C., 1995. Flux of nitrogen and sediment in a fringe mangrove forest in Terminos Lagoon, Mexico. Estuar. Coast. Shelf Sci. 40, 139–160.

Roe, J.H., Morreale, S.J., Paladino, F.V., Shillinger, G.L., Benson, S.R., Eckert, S.A., Bailey, H., Tomillo, P.S., Bograd, S.J.,
Eguchi, T., Dutton, P.H., Seminoff, J.A., Block, B.A., Spotila, J.R., 2014. Predicting bycatch hotspots for endangered leatherback turtles on longlines in the Pacific Ocean. Proc.
R. Soc. B Biol. Sci. 281, 20132559–20132559. https://doi. org/10.1098/rspb.2013.2559

Rogers, A.D., 2004. The biology, ecology and vulnerability of seamount communities. International Union for Conservation of Nature & Natural Resources, Gland, Switzerland.

Russell, M.W., Sadovy de Mitcheson, Y., Erisman, B.E., Hamilton, R.J., Luckhurst, B.E., Nemeth, R.S., 2014. Status Report – world's fish aggregations 2014. Science and Conservation of Fish Aggregations. International Coral Reef Initiative., California, USA.

Sabetian, A., 2003. The association of physical and environmental factors with abundance and distribution patterns of groupers around Kolombangara Island, Solomon Islands. Environ. Biol. Fishes 68, 93–99.

Sandin, S.A., Smith, J.E., DeMartini, E.E., Dinsdale, E.A., Donner, S.D., Friedlander, A.M., Konotchick, T., Malay, M., Maragos, J.E., Obura, D., Pantos, O., Paulay, G., Richie, M., Rohwer, F., Schroeder, R.E., Walsh, S., Jackson, J.B.C., Knowlton, N., Sala, E., 2008. Baselines and degradation of coral reefs in the northern Line Islands. PLoS ONE 3, doi:10.1371/journal. pone.0001548.

Santana-Casiano, J.M., González-Dávila, M., Fraile-Nuez, E., De Armas, D., González, A.G., Domínguez-Yanes, J.F., Escánez, J., 2013. The natural ocean acidification and fertilization event caused by the submarine eruption of El Hierro. Sci. Rep. 3, 1140.

Schaefer, K.M., Fuller, D.W., Hampton, J., Caillot, S., Leroy, B., Itano, D.G., 2015. Movements, dispersion, and mixing of bigeye tuna (*Thunnus obesus*) tagged and released in the equatorial Central Pacific Ocean, with conventional and archival tags. Fish. Res. 161, 336–355.

Schwarz, A.M., Alexander, T., Bodo, D., 2012. Improving resilience and adaptive capacity of fisheries-dependent communities in Solomon Islands. ACIAR, Canberra, Australia.

Sea Turtle Conservancy, 2017. Information about sea turtles: Leatherback sea turtle [WWW Document]. URL https:// conserveturtles.org/information-about-sea-turtles-leatherbacksea-turtle/ (accessed 10.2.17).

Shimada, H., Miyashita, T., 2001. Report of the sighting surveys for winter distribution of large cetaceans in the low latitudinal waters of the western North Pacific, 1999 - 2001. Working Document SC/53/RMP10 submitted to the Sci. Comm. Int. Whal. Comm., 23 - 27 July, London, UK.

Sibert, J., Hampton, J., 2003. Mobility of tropical tunas and the implications for fisheries management. Mar. Policy 27, 87–95.

Sibert, J., Hampton, J., 2002. Lifetime displacements of tropical tunas: How much ocean do you need to conserve "your" tuna? Pelagic Fisheries Program, University of Hawaii Secretariat of the Pacific Community, New Caledonia. SILMMA, 2017a. Leona & Paramatta Marine Resource Management. Solomon Islands Locally Managed Marine Area Network, Solomon Islands.

SILMMA, 2017b. Kolombangara Island – Santupaele Marine Resource Management Plan. Solomon Islands Locally Managed Marine Area Network, Solomon Islands.

Smith, A., 2011. East Rennell World Heritage Site: misunderstandings, inconsistencies and opportunities in the implementation of the World Heritage Convention in the Pacific Islands. Int. J. Herit. Stud. 17, 592–607.

Smith, C.R., De Leo, F.C., Bernardino, A.F., Sweetman, A.K., Martinez, A.P., 2008. Abyssal food limitation, ecosystem structure and climate change. Trends Ecol. Evol. 23, 518–528.

Smith, C.R., Drazen, J., Mincks, S.L., 2006. Deep-sea biodiversity and biogeography: perspectives from the abyss. International Seabed Authority Seamount Biodiversity Symposium.

SMM Solomon Ltd., 2012a. Chapter 4: Environmental values and management of impacts.

SMM Solomon Ltd., 2012b. Environmental Impact Statement. Santa Isabel Island. SMM Solomon Ltd., Honiara, Solomon Islands.

Soyano, K., Masumoto, T., Tanaka, H., Takushima, M., Nakamura, M., 2003. Lunar-related spawning in honeycomb grouper, Epinephelus merra. Fish Physiol. Biochem. 28, 447–448.

Spalding, M.D., Ravilious, C., Green, E.P., 2001. World atlas of coral reefs. University of California Press, Berkeley, CA.

SPC, 2016. Eco-cultural tourism in Marau Sound: Feasibility of developing community-based tourism in Marau Sound, Solomon Islands, to encourage conservation. Secretariat of the Pacific Community, Noumea, New Caledonia.

SPREP, 2010. Report of the dugong workshop for the Pacific Islands dugong range states, Brisbane, Australia, 11–12 April, 2010. UNEP/CMS, Abu Dhabi, United Arab Emirates.

Stanley, D., 2004. Moon Handbooks, South Pacific. Avalon Travel.

Starger, C.J., Barber, P.H., Ambariyanto, Baker, A.C., 2010. The recovery of coral genetic diversity in the Sunda Strait following the 1883 eruption of Krakatau. Coral Reefs 29, 547–565.

Stevens, J.D., Bonfil, R., Dulvy, N.K., Walker, P.A., 2000. The effects of fishing on sharks, rays, and chimaeras (chondrichthyans), and the implications for marine ecosystems. ICES J. Mar. Sci. 57, 476–494.

Stone, G.S., Madin, L.P., Stocks, K., Hovermale, G., Hoagland, P., Scumacher, M., Etnoyer, P., Sotka, C., Tausig, H., 2004. Chapter 2. Seamount biodiversity, exploitation and conservation, in: Defy Ocean's End. Island Press, Washington D.C.

 Sulu, R.J., Boso, D.N., Vave-Karamui, A., Mauli, S., Wini-Simeon, L., 2012. State of the Coral Reefs of Solomon Islands.
 Coral Triangle Marine Resources: their status, economies and management. Solomon Islands National Coral Triangle Initiative Coordinating Committee, Honiara.

Sulu, R.J., Hay, C., Ramohia, P.C., Lam, M., 2004. The status of Solomon Islands' coral reefs. A Report prepared for the Global Coral Reef Monitoring Network, Townsville, Australia. Sulu, R.J., Vuto, S.P., Schwarz, A.M., Chang, C.W., Alex, M., Basco, J.E., Phillips, M., Teoh, S.J., Perera, R., Pickering, T., Oengpepa, C.P., Toihere, C., Rota, H., Cleasby, N., Lilopeza, M., Lavisi, J., Sibiti, S., Tawaki, A., Warren, R., Harohau, D., Sukulu, M., Koti, B., 2016. The feasibility of milkfish (Chanos chanos) aquaculture in Solomon Islands. WorldFish, Penang, Malaysia.

Takekawa, D., 2000. Hunting method and the ecological knowledge of dolphins among the Fanalei villagers of Malaita, Solomon Islands. SPC Tradit. Mar. Resour. Manag. Knowl. Inf. Bull. 12, 3–11.

Tapilatu, R.F., Dutton, P.H., Tiwari, M., Wibbels, T., Ferdinandus, H.V., Iwanggin, W.G., Nugroho, B.H., 2013. Long-term decline of the western Pacific leatherback, Dermochelys coriacea: a globally important sea turtle population. Ecosphere 4, 25. http://dx.doi.org/10.1890/ES12–00348.1.

Thaxter, C.B., Lascelles, B., Sugar, K., Cook, A.S.C.P., Roos, S., Bolton, M., Langston, R.H.W., Burton, N.H.K., 2012. Seabird foraging ranges as a preliminary tool for identifying candidate Marine Protected Areas. Biol. Conserv. 156, 53–61.

The Nature Conservancy, 2017. Solomon Islands. Places we protect: Arnavon Islands [WWW Document]. Nat. Conserv. URL https://www.nature.org/ourinitiatives/regions/ asiaandthepacific/solomonislands/placesweprotect/arnavonislands.xml (accessed 10.26.17).

Thiel, H., Schriever, G., Ahnert, A., Bluhm, H., Borowski, C., Vopel, K., 2001. The large-scale environmental impact experiment DISCOL— reflection and foresight. Deep Sea Res. Part II Top. Stud. Oceanogr. 48, 3869–3882.

Thomas, A.C., Strub, P.T., Weatherbee, R.A., James, C., 2012. Satellite views of Pacific chlorophyll variability: Comparisons to physical variability, local versus non local influences and links to climate indices. Deep Sea Res. Part II Top. Stud. Oceanogr. dx.doi.org/10.1016/j.dsr2.2012.04.008.

Tiffin, D.L., Taylor, B., Crook, K.A.W., Sinton, J., Frankel, E., 1985. Surveys in the Solomon Islands and Papua New Guinea using SeaMARC-11. A Cruise Report of the R/V MOANA WAVE, November 29, 1985 – January 9, 1986 Under the Tripartite II Programme and Other Programmes. CCOP/SOPAC Cruise Report 117.

Tol, S.J., Jarvis, J.C., York, P.H., Grech, A.M., Congdon, B.C., Coles, R.G., 2017. Long distance biotic dispersal of tropical seagrass seeds by marine mega-herbivores. Sci. Rep. 4, 4458 I DOI:10.1038/s41598–017–04421–1.

Treml, E.A., Halpin, P.N., Urban, D.L., Pratson, L.F., 2008. Modeling population connectivity by ocean currents, a graphtheoretic approach for marine conservation. Landsc. Ecol. 23, 19–36.

Trevor, A.P., 2009. Turtle Research and Monitoring Database System (TREDS): Annual report 2009. SPREP, Apia, Samoa.

Turak, E., 2006. Coral communities and reef health, in: In: Green, A., P. Lokani, W. Atu, P. Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004. TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane. UNEP-WCMC, 2015. Review of corals from Fiji, Haiti, Solomon Islands and Tonga (coral species subject to EU decisions where identification to genus level is acceptable for trade purposes). UNEP-WCMC, Cambridge.

UNESCO WHC, 2017. Tetepare-Marovo complex [WWW Document]. URL http://whc.unesco.org/en/list/854 (accessed 10.21.17).

- Van Dover, C.L., Smith, C.R., Ardron, J., Dunn, D., Gjerde, K., Levin, L., Smith, S., The Dinard Workshop Contributors, 2012. Designating networks of chemosynthetic ecosystem reserves in the deep sea. Mar. Policy 36, 378–381.
- Vaughan, P.W., 1981. Marine turtles: a review of their status and management in the Solomon Islands. Ministry of Natural Resources, Honiara, Solomon Islands.
- Veron, J.E.N., Turak, E., 2006. Coral diversity, in: In: Green, A., P. Lokani, W. Atu, P. Ramohia, P. Thomas and J. Almany (Eds) Solomon Islands Marine Assessment: Technical Report of Survey Conducted May 13 to June 17, 2004. TNC Pacific Island Countries Report No 1/06. The Nature Conservancy, Brisbane.

VLIZ, 2014. Republic of Vanuatu dissolved oxygen concentration [WWW Document]. URL http://aquamaps.org/ (accessed 2.28.18).

Vrijenhoek, R.C., 1997. Gene flow and genetic diversity in naturally fragmented metapopulations of deep-sea hydrothermal vent animals. J. Hered. 88, 85–293.

Vroom, P.S., Zgliczynski, B.J., 2011. Effects of volcanic ash deposits on four functional groups of a coral reef. Coral Reefs 30, 1025–1032.

Walenenea, J., Atu, W., Maike, J.B., 2013. Vulnerability and adaptation assessment report for Ngawawa (Reef Islands). Pacific Centre of Environment and Sustainable Development, Solomon Islands.

Webb, G.J.W., Manolis, S.C., Brien, M.L., 2010. Saltwater Crocodile Crocodylus porosus, in: In: Manolis, S. C. and Stevenson, C. (Eds) Crocodiles. Status Survey and Conservation Action Plan. Crocodile Specialist Group, Darwin, pp. 99–113.

Wei, C.-L., Rowe, G.T., Escobar-Briones, E., Nunnally, C., Soliman, Y., Ellis, N., 2012. Standing stocks and body size of deep-sea Macrofauna: predicting the baseline of 2010 deepwater Horizon Oil Spill in the Northern Gulf of Mexico. Deep Sea Res. Part Oceanogr. Res. Pap. 69, 82–99.

Wein, L., 2007. East Rennell World Heritage Site Management Plan. East Rennell World Heritage Trust Board, Solomon Islands.

Wells, R.J.D., Rooker, J.R., Itano, D.G., 2012. Nursery origin of yellowfin tuna in the Hawaiian Islands. Mar. Ecol. Prog. Ser. 461, 187–196. Williams, P., Terawasi, P., Reid, C., 2017. Overview of tuna fisheries in the western and central Pacific Ocean, including economic conditions – 2016. Western and Central Pacific Fisheries Commission, Scientific Committee Thirteenth Regular Session, Rarotonga, Cook Islands.

Wilson, E.G., Miller, K.L., Allison, D., Magliocca, M., 2006. Why healthy oceans need sea turtles. Oceana.

Wilson, L., Losi, L., Philip, M., Pet-Soede, L., Hitipeuw, C., Golder, B., Llewellyn, G., O'Gorman, D., 2005. Bismarck Solomon Seas Ecoregion Technical Report. A Long-term Vision for Marine Conservation and Sustainability across Papua, Indonesia, Papua New Guinea and Solomon Islands. Experts Workshop on Marine Biodiversity in the Bismarck Solomon Seas. WWF, Papua New Guinea.

Wilson, S.K., Depczynski, M., Holmes, T.H., Noble, M.M., Radford, B.T., Tinkler, P., Fulton, C.J., 2017. Climatic conditions and nursery habitat quality provide indicators of reef fish recruitment strength. Limnol. Oceanogr. 62, 1868–1880.

Wishner, K.F., Graff, J.R., Martin, J.W., Carey, S., Sigurdsson, H., Seibel, B.A., 2005. Are midwater shrimp trapped in the craters of submarine volcanoes by hydrothermal venting? Deep Sea Res. Part Oceanogr. Res. Pap. 52, 1528–1535.

Witt, V., Ayris, P.M., Damby, D.E., Cimarelli, C., Kueppers, U., Dingwell, D.B., Wörheide, G., 2017. Volcanic ash supports a diverse bacterial community in a marine mesocosm. Geobiology 15, 453–463.

Worm, B., Barbier, E.B., Beaumont, N., Duffy, J.E., Folke, C., Halpern, B.S., Jackson, J.B.C., Lotze, H.K., Micheli, F., Palumbi, S.R., Sala, E., Selkoe, K.A., Stachowicz, J.J., Watson, R., 2006. Impacts of biodiversity loss on ocean ecosystem services. Science 314, 787–790.

Worm, B., Tittensor, D.P., 2011. Range contraction in large pelagic predators. Proc. Natl. Acad. Sci. 108, 11942–11947.

WWF, 2004. Bismarck Solomon Seas Ecoregion. Fact Sheet.

- WWF South Pacific Program, 2003. Pacific ecoregions in action: Bismarck Solomon Seas [WWW Document]. URL http:// www.wwfpacifuc.org.fj/pacific\_ecoregions\_bsse\_index.htm (accessed 9.26.17).
- Xu, G., Lavelle, J.W., 2017. Circulation, hydrography, and transport over the summit of Axial Seamount, a deep volcano in the Northeast Pacific. J. Biophys. Res. Oceans 122, 5404–5422.
- Yesson, C., Taylor, M.L., Tittensor, D.P., Davies, A.J., Guinotte, J., Baco, A.R., Black, J., Hall-Spencer, J.M., Rogers, A.D., 2012. Global habitat suitability of cold-water Octocorals. J. Biogeogr. 39, 1278–1292.
- Yoder, J.A., Kennelly, M.A., Doney, S.C., Lima, I.D., 2010. Are trends in SeaWiFS chlorophyll time-series unusual relative to historic variability? Acta Oceanol. Sin. 29, 1–4.

# 6. APPENDICES

# **APPENDIX 1**

AGENDA FOR THE WORKSHOP ON BIOPHYSICALLY SPECIAL, UNIQUE MARINE AREAS IN THE SOLOMON ISLANDS

# WORKSHOP AGENDA

# VENUE: SOLOMON KITANO MENDANA HOTEL, HONIARA, SOLOMON ISLANDS

DATE: WEDNESDAY 26 JULY 2017

# WORKSHOP OBJECTIVE(S)

Identify, for the Solomon Islands, both inshore and offshore, biophysically special, unique marine areas

| TIME    | ACTIVITIES   | PRESENTERS   |
|---------|--|--|
| 8.30ам  | Registration   |  |
| 9:00ам  | 1. Welcome Remarks and Opening Prayer  | Chair O12 TWG  |
| 9: 10ам | <ul><li>2. Introductions</li><li>a) Overview of meeting</li><li>b) Introductions of participants &amp; expectations</li></ul>  | Chair O12 TWG  |
| 9: 15ам | 3. Background on IOG and MSP in the Solomons and how this workshop outputs will contribute to both (15 min)  | Ms Agnetha Vave-<br>Karamui (MECDM)  |
| 9.30ам  | 4. Presentation on existing data (coral reefs, mangroves, bathymetry, geomorphology, EBSA, species richness, productivity, important bird areas, MPAs, LMMAs etc) (30 min)   | Mr Hans Wendt<br>(MACBIO Project)  |
| 10ам    | <ul> <li>Definition of criteria for the selection of biophysically special, unique marine areas</li> <li>Amount, detail and nature of justification</li> <li>Geographic explicitness</li> <li>Source types and number</li> <li>National/international obligations</li> </ul>   | Dr Leanne Fernandes  |
| 10.30ам | 6. Workshop process for identification of biophysically special, unique marine areas   | Ms Lysa Wini-Simeon  |
| 11ам    | Morning tea  |  |
| 11:15ам | <ul> <li>7. Assessment of biophysically special, unique marine areas INSHORE:</li> <li>Guadalcanal and (incl. Honiara City) and Rennell &amp; Bellona Provinces</li> <li>Choiseul Province</li> <li>Isabel Province</li> <li>Temotu and Makira-Ulawa Provinces</li> <li>Central and Malaita Provinces</li> <li>Western Province</li> </ul> | All – in breakout groups<br>Each group to have:<br>• Facilitator<br>• Rapporteur<br>• GIS support person |
| 1рм     | Lunch  |  |
| 2рм     | 8. Feedback from groups 1–6 (10m min each)   | Group presenters   |
| Зрм     | <ul> <li>9. Assessment of biophysically special, unique marine areas OFFSHORE:</li> <li>Eastern offshore part of the Solomon Islands</li> <li>Central offshore part of the Solomon Islands</li> <li>Western offshore part of the Solomon Islands</li> </ul>  | All – in breakout groups<br>Each group to have:<br>• Facilitator<br>• Rapporteur<br>• GIS support person |
| 4рм     | 10. Feedback from groups (10 minutes each)   | Group presenters   |
| 4:30рм  | 11. Next steps and closing   | Dr Leanne Fernandes &<br>Agnetha Vave-Karamui  |

# **APPENDIX 2**

# LIST OF WORKSHOP PARTICIPANTS AND SOURCES OF ADDITIONAL DATA FROM NON-PARTICIPANTS

| GROUP                    | NAMES            | ORGANISATION          |
|--------------------------|------------------|-----------------------|
| Western Offshore (Brown) | Paul Tua         | MFMR                  |
|                          | John Leqata      | MFMR                  |
|                          | Mary Walenenea   | MFAET                 |
|                          | Ellison Mason    | MFAET                 |
|                          | Maitoo Hauirae   | MFAET                 |
|                          | Daniel Koroi     | FFA                   |
|                          | Cozzirieh Posala | SICCP                 |
|                          | Duta Kauihona    | MFMR                  |
| Eastern Offshore (Blue)  | Mirriam Lidimani | MFAET                 |
|                          | Fred Siho        | SPREP                 |
|                          | Jonathan Wara    | FFA                   |
|                          | Sammy Airahui    | MECDM                 |
|                          | Chelcia Gomese   | WorldFish/MECDM       |
|                          | Stephen Mosese   | MFMR                  |
|                          | Delvene Boso     | WorldFish             |
|                          | Albert Kwatalae  |                       |
|                          | Gavin Bare       | GIS resource person   |
| Central Offshore (Green) | Jacob Kinia      | MoFR                  |
|                          | June Kwanairara  | Trimarine Group (NFD) |
|                          | Helen Aumae      | SIVB/MCT              |
|                          | Samson Maeniuta  | MFMR                  |
|                          | Gregory Benneth  | WorldFish             |
|                          | Nancy Diamana    | MECDM/CCD             |
|                          | Debra Kereseka   | MECDM/ECD             |
|                          | Rosemary Apa     | MECDM/ECD             |
|                          | Rosalie Masu     | MFMR                  |
|                          | Sebastian Misiga | GIS Resource Person   |

# **OFFSHORE SUMA**

| <b>INSHORE SUMA</b> | INS | HOR | E SL | JMA |
|---------------------|-----|-----|------|-----|
|---------------------|-----|-----|------|-----|

| GROUP                     | NAME                 | ORGANISATION         |  |
|---------------------------|----------------------|----------------------|--|
| Isabel Province (Blue)    | Chelcia Gomese       | WorldFish            |  |
|                           | Fred Siho            | SPREP                |  |
|                           | Stephen Mosese       | MFMR                 |  |
|                           | Willie Atu           | TNC                  |  |
|                           | Albert Kwatalea      | SICCP                |  |
|                           | Gavin Bare           | GIS person           |  |
| Central and Malaita       | Delvene Boso         | WorldFish            |  |
| Province (Red)            | Rosemary Apa         | MECDM                |  |
|                           | Debra Kereseka       | MECDM                |  |
|                           | Mirriam Lidimani     | MFAET                |  |
|                           | Jonah Sullivan       | Geoscience           |  |
| Temotu, Makira and        | John Kouni           | РМО                  |  |
| Western Province (Purple) | Jacob Kinia          | MoFR                 |  |
|                           | Rosalie Masu         | MFMR                 |  |
|                           | Helen Aumae          | SIVB/MCT             |  |
|                           | June Kwanairara      | Trimarine Group /NFD |  |
|                           | Nancy Diamana        | MECDM/CCD            |  |
|                           | Sebastian Misigia    | GIS person           |  |
|                           | Cozzirieh Posala     | SICCP                |  |
| Choiseul Province (Brown) | Gregory Benneth      | WorldFish            |  |
|                           | Ellison Mason        | MFAET                |  |
|                           | Anthony Mara         | FFA                  |  |
|                           | Daniel Koroi         | FFA                  |  |
|                           | John Leqata          | MFMR                 |  |
|                           | Samson Maeniuta      | MFMR                 |  |
| Guadalcanal and RenBell   | Brian Aonima         | SIMSA                |  |
| Province (Black)          | Agnetha Vave-Karamui | MECDM                |  |
|                           | Paul Tua             | MFMR                 |  |
|                           | Duta Bero-Kauihona   | MFMR                 |  |
|                           | Maitoo Hauirae       | MFAET                |  |
|                           | Mary Walenenea       | MFAET                |  |

# **APPENDIX 3** WORKSHOP SITE RESPONSE SHEET AND LIST OF MAPS PROVIDED FOR PARTICIPANTS TO DRAW SITES UPON

# Solomon Islands Biophysically Special, Unique Marine Areas Workshop - Worksheet 25 JULY 2017

| Group:                            | Site number: |
|-----------------------------------|--------------|
| Site name:                        |              |
| Location/ geographic description: |              |
| Justification:                    |              |
| Sources:                          |              |
| Any legal obligations:            |              |
| Follow-ups:                       |              |

# LIST OF MAPS FOR PARTICIPANTS TO DRAW UPON

- Inshore Central Islands Province
- Inshore Choiseul Province
- Inshore Guadalcanal Province and Rennel and Bellona Province
- Inshore Isabel Province
- Inshore Makira and Ulawa Province and Temotu Province
- Inshore Malaita Province
- Inshore Western Province
- Offshore Central Area
- Offshore Eastern Area
- Offshore Western Area

# APPENDIX 4 BIOPHYSICAL DATA AVAILABLE DURING THE WORKSHOP

# LIST OF BIOPHYSICAL MAPS AVAILABLE IN HARDCOPY

- SI Overview Map of the Solomon Islands (including islands and provinces)
- SI Bathymetry EEZ (including coastlines)
- SI Geomorphology EEZ
- SI Seamounts EEZ
- SI Seamounts Classification EEZ
- SI Hydrothermal Vents EEZ
- SI Mangroves, Seagrasses and Reefs
- SI Sea Surface Temperatures (SST) EEZ
- SI Chlorophyll-A concentration EEZ
- SI Ocean Productivity EEZ
- SI Upwelling EEZ
- SI Downwelling EEZ
- SI Particulate Organic Carbon flux EEZ
- SI Ocean Surface Currents EEZ
- SI Coral Species Richness EEZ
- SI Turtle Research and Monitoring Database System (TREDS) EEZ
- SI Marine Species Richness (Aquamaps) EEZ
- SI Benthic Marine Species Richness (Aquamaps) EEZ
- SI Pelagic Marine Species Richness (Aquamaps) EEZ
- SI Coldwater Coral Habitat Suitability EEZ
- SI Ecologically and Biologically Significant Areas (EBSAs), and Key Biodiversity Areas (KBAs) EEZ
- SI Important Bird and Biodiversity Areas (IBAs) zoom
- SI Marine Managed Areas

# LIST OF BIOPHYSICAL MAPS AND OTHER DATA AVAILABLE IN GIS

- All of the above
- SI Mixed Layer Depth EEZ
- SI Photosynthetically Available Radiation EEZ
- SI Dissolved Oxygen Concentration EEZ
- SI Particulate Inorganic Carbon Flux EEZ
- SI Phosphate EEZ
- SI pH EEZ
- SI Silicate EEZ
- SI Earthquakes EEZ
- SI Front Count EEZ
- SI Frontal Index EEZ
- SI Marine Pollution EEZ
- SI Nitrate EEZ
- SI Reefs At Risk EEZ
- SI Historic Tsunamis Location EEZ
- SI Historic Earthquakes Location EEZ
- Mean Annual Phytoplankton Concentration EEZ
- SI Diffuse Attenuation Coefficient (per meter of depth) EEZ

# **APPENDIX 5**

# LIST OF SPECIES KNOWN TO OCCUR IN THE SOLOMON ISLANDS WITH INTERNATIONAL AND NATIONAL OBLIGATIONS

The species list was generated through a country- and region-specific search of Species + (www.speciesplus.net) and the IUCN Red List (www.iucnredlist.org). This table was used to verify the obligations for each site, where particular species were known to occur at the site. CITES: The Convention on International Trade in Endangered Species of Wild Fauna and Flora; CMS: Convention on Migratory Species; IUCN: International Union for the Conservation of Nature; NPOA: National Plan of Action; UNCLOS: United Nations Convention on the Law of the Sea; DD: Data Deficient; LC: Least Concern; NT: Near Threatened; VU: Vulnerable; EN: Endangered.

| Таха       | Scientific Name               | Common Name                | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )            | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------|-------------------------------|----------------------------|-------|-----|-------------------------------------|-------------------------------------|---------|------------------|---|--------------|
| Aholeholes | Kuhlia marginata              | Dark-margined<br>flagtail  |       |     | LC                                  | Indo-Pacific                        | yes     |                  |   |              |
| Aholeholes | Kuhlia rupestris              | Jungle perch               |       |     | LC                                  | Indo-Pacific                        | yes     |                  |   |              |
| Alfonsino  | Beryx splendens               | Alfonsino                  | 9     |     | LC                                  | circumglobal                        | no      |                  |   |              |
| Anchovy    | Stolephorus indicus           | Indian anchovy             |       |     | LC                                  | Indo-Pacific                        | yes     |                  |   |              |
| Anchovy    | Thryssa setirostris           | Longjaw Thryssa            |       |     | LC                                  | Indo-Pacific                        | unknown |                  |   |              |
| Angelfish  | Apolemichthys<br>griffisi     | Giffis angelfish           |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Angelfish  | Apolemichthys<br>trimaculatus | Three-spot<br>angelfish    |       |     | LC                                  | Indian Ocean,<br>western<br>Pacific | no      |                  |   |              |
| Angelfish  | Centropyge<br>aurantia        | Golden angelfish           |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Angelfish  | Centropyge bicolor            | Bicolor angelfish          |       |     | LC                                  | Indo-west<br>Pacific                | no      |                  |   |              |
| Angelfish  | Centropyge<br>bispinosus      | Two-spined angelfish       |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Angelfish  | Centropyge colini             | Cocos-Keeling<br>angelfish |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Angelfish  | Centropyge fisheri            | Fisher's<br>angelfish      |       |     | LC                                  | Indo-west<br>Pacific, Pacific       | no      |                  |   |              |
| Angelfish  | Centropyge<br>flavissima      | Lemonpeel<br>angelfish     |       |     | LC                                  | Central Pacific                     | no      |                  |   |              |
| Angelfish  | Centropyge heraldi            | Herald's<br>angelfish      |       |     | LC                                  | Indo-west<br>Pacific, Pacific       | no      |                  |   |              |
| Angelfish  | Centropyge loricula           | Flame angelfish            |       |     | LC                                  | Indo-west<br>Pacific, Pacific       | no      |                  |   |              |
| Angelfish  | Centropyge<br>multicolor      | Multicolor<br>angelfish    |       |     | LC                                  | western and central Pacific         | no      |                  |   |              |
| Angelfish  | Centropyge nox                | Midnight<br>angelfish      |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Angelfish  | Centropyge tibicen            | Keyhole<br>angelfish       |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Angelfish  | Centropyge vrolikii           | Pearl-scaled<br>angelfish  |       |     | LC                                  | Indo-west<br>Pacific, Pacific       | no      |                  |   |              |
| Angelfish  | Chaetodontoplus<br>poliourus  | Greytail<br>angelfish      | 2     |     | LC                                  | western<br>central Pacific          | no      |                  |   |              |
| Angelfish  | Genicanthus<br>Iamarck        | Blackstriped angelfish     | 2     |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Angelfish  | Genicanthus<br>melanospilos   | Spotbreast<br>angelfish    |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |

| Таха       | Scientific Name                 | Common Name                  | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------|---------------------------------|------------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Angelfish  | Genicanthus<br>watanabei        | Blackedged<br>angelfish      |       |     | LC                                  | western and central Pacific   | no      |                  |   |              |
| Angelfish  | Paracentropyge<br>multifasciata | Barred angelfish             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Angelfish  | Pomacanthus<br>annularis        | Bluering<br>angelfish        |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Angelfish  | Pomacanthus imperator           | Emperor<br>angelfish         |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Angelfish  | Pomacanthus navarchus           | Bluegirdled<br>angelfish     |       |     | LC                                  | Coral Triangle                | no      |                  |   |              |
| Angelfish  | Pomacanthus semicirculatus      | Semicircle<br>angelfish      |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Angelfish  | Pomacanthus<br>sexstriatus      | Sixbar angelfish             |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Angelfish  | Pomacanthus<br>xanthometopon    | Yellowface<br>angelfish      |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Angelfish  | Pygoplites<br>diacanthus        | Bluebanded<br>angelfish      |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Anglerfish | Centrophryne<br>spinulosa       | Horned lantern<br>fish       |       |     | LC                                  | circumtropical,<br>deep       | no      |                  |   |              |
| Anglerfish | Ceratias holboelli              | Deepsea angler               |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Anglerfish | Chaenophryne<br>draco           | Anglerfish                   |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Anglerfish | Chaenophryne<br>ramifera        | Anglerfish                   |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Anglerfish | Cryptopsaras<br>couesii         | Warty seadevil               |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Anglerfish | Histrio histrio                 | Sargassum<br>anglerfish      |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Anglerfish | Microlophichthys<br>microlophus | Anglerfish                   |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Anglerfish | Oneirodes<br>eschrichtii        | Bulbous<br>dreamer           |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Anglerfish | Rhynchactis<br>macrothrix       | Whipnose angler              |       |     | DD                                  | widespread,<br>deep           | no      |                  |   |              |
| Anthias    | Luzonichthys waitei             | Slender anthias              |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Anthias    | Luzonichthys<br>whitleyi        | Whitley's splitfin           |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Anthias    | Odontanthias<br>borbonius       | Checked<br>swallowtail       |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Anthias    | Plectranthias nanus             | Pygmy basslet                |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Anthias    | Plectranthias<br>winniensis     | Redblotch<br>basslet         |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Anthias    | Pseudanthias<br>bartlettorum    | Bartlett's anthias           |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Anthias    | Pseudanthias<br>bicolor         | Bicolour anthias             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Anthias    | Pseudanthias<br>cooperi         | Redbar anthias               |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Anthias    | Pseudanthias<br>dispar          | Peach fairy<br>basslet       |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Anthias    | Pseudanthias<br>engelhardi      | Orangebar<br>anthias         |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Anthias    | Pseudanthias<br>gibbosus        | Anthias                      |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Anthias    | Pseudanthias<br>huchtii         | Red-cheeked<br>fairy basslet |       |     | LC                                  | central Indo-<br>Pacific      | no      |                  |   |              |

| Таха                   | Scientific Name              | Common Name                | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> ) | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------------------|------------------------------|----------------------------|-------|-----|-------------------------------------|--------------------------|---------|------------------|---|--------------|
| Anthias                | Pseudanthias<br>hypselosoma  | Stocky anthias             |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Anthias                | Pseudanthias lori            | Lori's anthias             |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Anthias                | Pseudanthias<br>luzonensis   | Yellowlined<br>anthias     |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Anthias                | Pseudanthias parvirostris    | Sunset anthias             |       |     | LC                                  | western<br>Pacific       | no      | 3                |   |              |
| Anthias                | Pseudanthias<br>pascalus     | Amethyst<br>anthias        |       |     | LC                                  | western<br>Pacific       | no      | 3                |   |              |
| Anthias                | Pseudanthias<br>smithvanizi  | Princess anthias           |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Anthias                | Pseudanthias<br>squamipinnis | Lyretail anthias           |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Anthias                | Pseudanthias tuka            | Purple anthias             |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Anthias                | Pseudogramma<br>astigma      | Spotless podge             |       |     | LC                                  | Pacific                  | no      |                  |   |              |
| Anthias                | Serranocirrhitus<br>latus    | Hawkfin anthias            |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Archerfish             | Toxotes jaculatrix           | Banded<br>archerfish       |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Barbeled<br>dragonfish | Photostomias atrox           | Barbeled<br>dragonfish     |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Barbeled<br>dragonfish | Photostomias<br>guernei      | Loosejaw                   |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Barracuda              | Sphyraena<br>barracuda       | Great barracuda            |       |     | LC                                  | circumtropical           | no      |                  |   |              |
| Barracudina            | Arctozenus risso             | Spotted<br>barracudina     |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Barracudina            | Lestidium<br>atlanticum      | Atlantic<br>barracudina    |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |
| Barracudina            | Lestrolepis<br>intermedia    | Barracudina                |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |
| Barracudina            | Magnisudis<br>atlantica      | Duckbill<br>barracudina    |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |
| Barracudina            | Paralepis elongata           | Barracudina                |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Barracudina            | Stemonosudis<br>gracilis     | Translucent<br>barracudina |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Barracudina            | Sudis atrox                  | Hideous<br>barracudina     |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |
| Barreleye              | Opisthoproctus<br>grimaldii  | Grimaldi's<br>barreleye    |       |     | LC                                  | circumtropical,<br>deep  | no      |                  |   |              |
| Barreleye              | Opisthoproctus<br>soleatus   | Barreleye                  |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |
| Barreleye              | Winteria telescopa           | Barreleye                  |       |     | LC                                  | circumtropical,<br>deep  | no      |                  |   |              |
| Basslet                | Liopropoma<br>mitratum       | Pinstriped<br>basslet      |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Basslet                | Liopropoma<br>multilineatum  | Manyline perch             |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Basslet                | Liopropoma swalesi           | Swales' basslet            |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Basslet                | Liopropoma<br>tonstrinum     | Redstriped<br>basslet      |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Basslet                | Lipropoma susumi             | Meteor perch               |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Basslet                | Plectranthias<br>longimanus  | Longfin perchlet           |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Bigeye                 | Cookeolus<br>japonicus       | Deepwater<br>bigeye        |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |

| Таха               | Scientific Name                 | Common Name                | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )          | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------------|---------------------------------|----------------------------|-------|-----|-------------------------------------|-----------------------------------|---------|------------------|---|--------------|
| Bigeye             | Heteropriacanthus<br>cruentatus | Glasseye<br>snapper        |       |     | LC                                  | circumglobal,<br>deep             | no      |                  |   |              |
| Bigeye             | Priacanthus blochii             | Peony bulleye              |       |     | LC                                  | Indo-Pacific                      | no      |                  | 1   |              |
| Bigeye             | Priacanthus hamrur              | Moontail<br>bullseye       |       |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Bigeye             | Priacanthus<br>tayenus          | Purple-spotted bigeye      |       |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Bigeye             | Pristigenys meyeri              | Bigeye                     |       |     | LC                                  | western<br>Pacific                | no      |                  |   |              |
| Billfish           | Tetrapturus<br>angustirostris   | Shortbill<br>spearfish     |       |     | DD                                  | widespread                        | yes     |                  |   |              |
| Billfish           | Xiphias gladius                 | Swordfish                  |       |     | LC                                  | circumglobal                      | yes     |                  |   |              |
| Bivalve            | Hippopus hippopus               | Horse's hoof<br>clam       | II    |     | LR/cd                               | Indo-west<br>Pacific              | no      |                  | Schedule II<br>and Control                        |              |
| Bivalve            | Nicaisolopha<br>tridacnaeformis | Oyster                     |       |     | DD                                  | widespread                        | no      |                  |   |              |
| Bivalve            | Pinctada<br>margaritifera       | Black lipoyster            |       |     |                                     | Indo-Pacific                      | no      |                  | Schedule II and Control                           |              |
| Bivalve            | Pinctada maxima                 | Gold lip oyster            |       |     |                                     | Indo-Pacific                      | no      |                  | Schedule II and Control                           |              |
| Bivalve            | Saccostrea<br>circumsuta        | Oyster                     |       |     | DD                                  | Indo-Pacific                      | no      |                  |   | -            |
| Bivalve            | Saccostrea<br>scyphophilla      | Oyster                     |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Bivalve            | Tridacna crocea                 | Boring clam                | II    |     | LR/lc                               | Indo-west<br>Pacific              | no      |                  | Schedule II and Control                           |              |
| Bivalve            | Tridacna derasa                 | Southern giant clam        | 11    |     | VU                                  | Indo-west<br>Pacific              | no      |                  | Schedule II and Control                           |              |
| Bivalve            | Tridacna gigas                  | Giant clam                 | 11    |     | VU                                  | Indo-Pacific                      | no      | 2                | Schedule II and Control                           |              |
| Bivalve            | Tridacna maxima                 | Small giant clam           | II    |     | LR/cd                               | widespread                        | no      |                  | Schedule II and Control                           |              |
| Bivalve            | Tridacna squamosa               | Fluted giant<br>clam       | II    |     | LR/cd                               | widespread                        | no      |                  | Schedule II<br>and Control                        |              |
| Black seadevil     | Melanocetus<br>murrayi          | Black seadevil             |       |     | LC                                  | circumglobal,<br>deep             | no      |                  |   |              |
| Black<br>seadevils | Melanocetus<br>johnsonii        | Humpback<br>anglerfish     |       |     | LC                                  | widespread,<br>deep               | no      |                  |   |              |
| Blackchin          | Neoscopelus<br>macrolepidotus   | Largescaled<br>lanternfish |       |     | LC                                  | circumglobal,<br>deep             | no      |                  |   |              |
| Blackchin          | Scopelengys tristis             | Pacific blackchin          |       |     | LC                                  | widespread,<br>deep               | no      |                  |   |              |
| Blenny             | Alticus saliens                 | Jumping blenny             |       |     | DD                                  | western and central Pacific       | no      |                  |   |              |
| Blenny             | Alticus sertatus                | Garlanded<br>rockskipper   |       |     | LC                                  | southwest<br>Pacific              | no      |                  |   |              |
| Blenny             | Andamia amphibius               | Blenny                     |       |     | LC                                  | Solomon<br>Islands,<br>Vanuatu    | no      |                  |   |              |
| Blenny             | Aspidontus<br>dussumieri        | Lance blenny               |       |     | LC                                  | Indo-Pacific,<br>Pacific          | no      |                  |   |              |
| Blenny             | Aspidontus<br>taeniatus         | False cleaner              | 9     |     | LC                                  | Central and<br>western<br>Pacific | no      | 2                |   |              |
| Blenny             | Atrosalarias<br>holomelas       | Brown coral<br>blenny      |       |     | LC                                  | Central and<br>western<br>Pacific | no      |                  |   |              |
| Blenny             | Blenniella<br>caudolineata      | Blue-spotted<br>blenny     |       |     | LC                                  | western<br>Pacific                | no      |                  |   |              |

| Таха   | Scientific Name               | Common Name                     | CITES   | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                            | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------|-------------------------------|---------------------------------|---------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Blenny | Blenniella<br>chrysospilos    | Orange-spotted blenny           |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Blenniella<br>periophthalmus  | Blue-dashed rockskipper         |         |     | LC                                  | Indo-west<br>Pacific                                | no      |                  |   |              |
| Blenny | Cirripectes auritus           | Blackflap blenny                |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Cirripectes<br>castaneus      | Chestnut blenny                 |         |     | LC                                  | widespread  | no      |                  |   |              |
| Blenny | Cirripectes<br>chelomatus     | Lady Musgrave<br>blenny         |         |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Blenny | Cirripectes<br>filamentosus   | Filamentous<br>blenny           |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Cirripectes<br>polyzona       | Barred blenny                   |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Cirripectes quagga            | Squiggly blenny                 |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Cirripectes<br>stigmaticus    | Red-streaked blenny             |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Cirrisalarias<br>bunares      | Hairy blenny                    |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Crossosalarias<br>macrospilus | Triplespot blenny               |         |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Blenny | Ecsenius axelrodi             | Axelrod's comb-<br>tooth blenny |         |     | LC                                  | Indonesia,<br>PNG,<br>Solomon<br>Islands            | no      |                  |   |              |
| Blenny | Ecsenius bicolor              | Bicolor blenny                  |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Ecsenius lividanalis          | Blue-headed com<br>blenny       | b-tooth |     | LC                                  | Coral Triangle                                      | no      |                  |   |              |
| Blenny | Ecsenius midas                | Midas blenny                    |         |     | LC                                  | Indo-west<br>Pacific                                | no      |                  |   |              |
| Blenny | Ecsenius namiyei              | Black comb-<br>tooth blenny     |         |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Blenny | Ecsenius pictus               | White-lined comb<br>blenny      | -tooth  |     | LC                                  | Coral Triangle                                      | no      |                  |   |              |
| Blenny | Ecsenius prooculis            | Striped coralblenny             |         |     | LC                                  | PNG,<br>Solomon<br>Islands                          | no      |                  |   |              |
| Blenny | Ecsenius sellifer             | Saddle blenny                   |         |     | LC                                  | Palau, PNG,<br>Solomon<br>Islands                   | no      |                  |   |              |
| Blenny | Ecsenius tessera              | Blenny                          |         |     | LC                                  | New<br>Caledonia,<br>Solomon<br>Islands,<br>Vanuatu | no      |                  |   |              |
| Blenny | Ecsenius trilineatus          | Three-lined<br>blenny           |         |     | LC                                  | Coral Triangle                                      | no      |                  |   |              |
| Blenny | Ecsenius<br>yaeyamaensis      | Pale-spotted com<br>blenny      | btooth  |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Enchelyurus<br>kraussii       | Krauss's blenny                 |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Entomacrodus caudofasciatus   | Bartail blenny                  |         |     | LC                                  | western and central Pacific                         | no      |                  |   |              |
| Blenny | Entomacrodus<br>cymatobiotus  | Pacific<br>rockskipper          |         |     | LC                                  | Pacific   | no      |                  |   |              |
| Blenny | Entomacrodus<br>decussatus    | Wavyline<br>rockskipper         |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Blenny | Entomacrodus<br>niuafoouensis | Tattoo-chin<br>rockskipper      |         |     | LC                                  | Pacific   | no      |                  |   |              |
| Blenny | Entomacrodus<br>striatus      | Blackspotted rockskipper        |         |     | LC                                  | Indo-Pacific,<br>Pacific                            | no      |                  |   |              |
| Blenny | Entomacrodus<br>thalassinus   | Reef margin<br>blenny           |         |     | LC                                  | Indo-Pacific  | no      |                  |   |              |

| Таха   | Scientific Name                 | Common Name                        | CITES   | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                 | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------|---------------------------------|------------------------------------|---------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Blenny | Entomacrodus<br>williamsi       | William's<br>rockskipper           |         |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Blenny | Exallias brevis                 | Leopard blenny                     |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Glyptoparus<br>delicatulus      | Delicate blenny                    |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Istiblennius lineatus           | Black-lined<br>blenny              |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Laiphognathus<br>multimaculatus | Spotty blenny                      |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Meiacanthus<br>anema            | Threadless<br>blenny               |         |     | DD                                  | Coral Triangle                           | yes     |                  |   |              |
| Blenny | Meiacanthus<br>atrodorsalis     | Forktail blenny                    |         |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Blenny | Meiacanthus<br>crinitus         | Hairytail<br>fangblenny            |         |     | LC                                  | Indonesia,<br>PNG,<br>Solomon<br>Islands | no      |                  |   |              |
| Blenny | Meiacanthus<br>ditrema          | One-striped poiso<br>blenny        | on-fang |     | LC                                  | Coral Triangle                           | no      |                  |   |              |
| Blenny | Meiacanthus<br>grammistes       | Striped poison-<br>fang blenny     |         |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Blenny | Nannosalarias<br>nativitatis    | Christmas<br>blenny                |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Omobranchus<br>elongatus        | Chevroned<br>blenny                |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Omobranchus<br>obliquus         | Mangrove<br>blenny                 |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Parablennius<br>intermedius     | Horned blenny                      |         |     | LC                                  | restricted                               | no      |                  |   |              |
| Blenny | Petroscirtes<br>breviceps       | Short-head<br>sabretooth<br>blenny |         |     | LC                                  | Indo-Pacific                             | yes     |                  |   |              |
| Blenny | Petroscirtes<br>mitratus        | Highfinned<br>blenny               |         |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Blenny | Petroscirtes<br>thepassii       | Thepas'<br>sabretooth<br>blenny    |         |     | LC                                  | restricted                               | no      |                  |   |              |
| Blenny | Petroscirtes<br>variabilis      | Variable<br>sabretooth<br>blenny   |         |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Blenny | Petroscirtes xestus             | Bearded<br>sabretooth<br>blenny    |         |     | LC                                  | Indo-Pacific                             | no      | 5                |   |              |
| Blenny | Plagiotremus<br>laudandus       | Bicolour<br>fangblenny             |         |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Blenny | Plagiotremus<br>rhinorhynchos   | Bluestriped<br>fangblenny          |         |     | LC                                  | Indo-Pacific                             | no      | 3                |   |              |
| Blenny | Plagiotremus<br>tapeinosoma     | Piano<br>fangblenny                |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Blenny | Praealticus<br>bilineatus       | Blenny                             |         |     | LC                                  | central Indo-<br>Pacific                 | no      |                  |   |              |
| Blenny | Praealticus striatus            | Blenny                             |         |     | LC                                  | central Indo-<br>Pacific                 | no      |                  |   |              |
| Blenny | Rhabdoblennius<br>snowi         | Snow blenny                        |         |     | LC                                  | South Pacific                            | no      |                  |   |              |
| Blenny | Salarias<br>alboguttatus        | Whitespotted<br>blenny             |         |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Blenny | Salarias<br>ceramensis          | Ceram blenny                       |         |     | LC                                  | Coral Triangle                           | no      |                  |   |              |
| Blenny | Salarias fasciatus              | Banded<br>jewelled-blenny          |         |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |

| Таха               | Scientific Name              | Common Name                     | CITES | СМS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)           | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------------|------------------------------|---------------------------------|-------|-----|-------------------------------------|-----------------------|---------|------------------|---|--------------|
| Blenny             | Salarias guttatus            | Blue-spot blenny                |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Blenny             | Salarias<br>segmentatus      | Segmented blenny                |       |     | LC                                  | Coral Triangle        | no      |                  |   |              |
| Blenny             | Stanulus<br>seychellensis    | Seychelles<br>blenny            |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Blenny             | Xiphasia<br>matsubarai       | Japanese snake<br>blenny        |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Blind cusk<br>eels | Aphyonus<br>gelatinosus      | Gelatinous<br>blindfish         |       |     | LC                                  | widespread,<br>deep   | no      |                  |   |              |
| Boa                | Candoia bibroni              | Solomon Island<br>tree boa      | II    |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Boarfish           | Antigonia capros             | Deep-bodied<br>boarfish         |       |     | LC                                  | widespread,<br>deep   | no      |                  |   |              |
| Booby              | Sula dactylatra              | Masked booby                    |       |     | LC                                  | 211000000             | no      |                  |   |              |
| Booby              | Sula leucogaster             | Brown booby                     |       |     | LC                                  | 223000000             | no      |                  |   |              |
| Booby              | Sula sula                    | Red-footed booby                |       |     | LC                                  | 185000000             | yes     |                  |   |              |
| Bream              | Nemipterus<br>hexodon        | Ornate threadfin bream          |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Bream              | Pentapodus<br>aureofasciatus | Yellowstripe<br>threadfin bream |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Bream              | Pentapodus<br>caninus        | Smalltoothed whiptail           |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Bream              | Pentapodus<br>trivittatus    | Threestriped whiptail           |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Bream              | Scolopsis affinis            | Two-lined<br>monocle bream      |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Bream              | Scolopsis ciliata            | Saw-jawed<br>Monocle Bream      |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Bream              | Scolopsis lineata            | Striped monocle bream           |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Bream              | Scolopsis<br>margaritifera   | Pearly monocle<br>bream         |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Bream              | Scolopsis<br>temporalis      | Bald-spot<br>monocle bream      |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Bream              | Scolopsis trilineata         | Three-lined Monoc<br>Bream      | le    |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Bristlemouth       | Cyclothone<br>acclinidens    | Bent-tooth<br>bristlemouth      |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Bristlemouth       | Cyclothone alba              | Pale<br>bristlemouth            |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Bristlemouth       | Cyclothone braueri           | Brauer's<br>bristlemouth        |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Bristlemouth       | Cyclothone<br>microdon       | Smalltooth<br>bristlemouth      |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Bristlemouth       | Cyclothone pallida           | Bicolored<br>bristlemouth       |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Bristlemouth       | Cyclothone<br>parapallida    | Shadow<br>bristlemouth          |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Bristlemouth       | Cyclothone<br>pseudopallida  | Slender<br>bristlemouth         |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Bristlemouth       | Diplophos taenia             | Pacific<br>portholefish         |       |     | LC                                  | circumglobal          | no      |                  |   |              |
| Bristlemouth       | Gonostoma<br>atlanticum      | Bristlemouth                    |       |     | LC                                  | widespread,<br>deep   | no      |                  |   |              |
| Bristlemouth       | Gonostoma<br>elongatum       | Elongated<br>bristlemouth       |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Butterflyfish      | Chaetodon auriga             | Threadfin<br>butterflyfish      |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |

| Таха          | Scientific Name                | Common Name                         | CITES | смз | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|---------------|--------------------------------|-------------------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Butterflyfish | Chaetodon<br>baronessa         | Eastern triangular<br>butterflyfish |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon bennetti             | Bennett's<br>butterflyfish          |       |     | DD                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>burgessi          | Burgess's<br>butterflyfish          |       |     | LC                                  | western<br>Pacific                            | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>citrinellus       | Citron<br>butterflyfish             |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>ephippium         | Saddleback<br>butterflyfish         |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>flavirostris      | Dusky<br>butterflyfish              |       |     | LC                                  | widespread                                    | no      |                  |   |              |
| Butterflyfish | Chaetodon kleinii              | Whitespotted butterflyfish          |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>lineolatus        | Lined<br>butterflyfish              |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon lunula               | Redstripe<br>butterflyfish          |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>lunulatus         | Oval butterflyfish                  |       |     | LC                                  | western<br>Pacific                            | no      | 3                |   |              |
| Butterflyfish | Chaetodon<br>melannotus        | Blackbacked<br>butterflyfish        |       |     | LC                                  | Indo-west<br>Pacific                          | no      | 3                |   |              |
| Butterflyfish | Chaetodon<br>mertensii         | Orangebar<br>butterflyfish          |       |     | LC                                  | western<br>Pacific                            | no      |                  |   |              |
| Butterflyfish | Chaetodon meyeri               | Scrawled<br>butterflyfish           |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>ocellicaudus      | Spot-tail<br>butterflyfish          |       |     | DD                                  | Coral Triangle                                | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>octofasciatus     | Eight-stripe<br>butterflyfish       |       |     | LC                                  | Indo-west<br>Pacific                          | no      | 3                |   |              |
| Butterflyfish | Chaetodon<br>ornatissimus      | Ornate<br>butterflyfish             |       |     | LC                                  | Indo-west<br>Pacific                          | no      | 3                |   |              |
| Butterflyfish | Chaetodon<br>oxycephalus       | Spot-nape<br>butteflyfish           |       |     | LC                                  | Indo-west<br>Pacific                          | no      | 3                |   |              |
| Butterflyfish | Chaetodon<br>pelewensis        | Dot and dash<br>butterflyfish       |       |     | LC                                  | south Pacific                                 | no      | 3                | 2   |              |
| Butterflyfish | Chaetodon plebius              | Blueblotch<br>butterflyfish         |       |     | LC                                  | western<br>Pacific                            | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>punctatofasciatus | Spotband<br>butterflyfish           |       |     | LC                                  | south Pacific                                 | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>quadrimaculatus   | Fourspot<br>butterflyfish           |       |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Butterflyfish | Chaetodon rafflesii            | Latticed<br>butteflyfish            |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>reticulatus       | Reticulated butterflyfish           |       |     | DD                                  | western and central Pacific                   | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>semeion           | Dotted<br>butterflyfish             |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>speculum          | Oval-spot<br>butterflyfish          |       |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>trifascialis      | Triangulate<br>butterflyfish        |       |     | LC                                  | widespread                                    | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>ulietensis        | Pacific double-sad                  | ddle  |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>unimaculatus      | Teardrop<br>butterflyfish           |       |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Butterflyfish | Chaetodon<br>vagabundus        | Vagabond<br>butterflyfish           |       |     | LC                                  | widespread                                    | no      |                  |   |              |

| Таха                 | Scientific Name                 | Common Name                       | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|----------------------|---------------------------------|-----------------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Butterflyfish        | Coradion<br>chrysozonus         | Goldengirdled coralfish           |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Butterflyfish        | Forcipiger<br>flavissimus       | Long-nosed butterflyfish          |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Butterflyfish        | Forcipiger<br>longirostris      | Black long-nosed<br>butterflyfish |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Butterflyfish        | Hemitaurichthys<br>polylepis    | Pyramid<br>butterflyfish          |       |     | LC                                  | Central<br>western<br>Pacific | no      |                  |   |              |
| Butterflyfish        | Heniochus<br>acuminatus         | Bannerfish                        |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Butterflyfish        | Heniochus<br>chrysostomus       | Pennant<br>bannerfish             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Butterflyfish        | Heniochus<br>monoceros          | Masked<br>bannerfish              |       |     | LC                                  | Indo-Pacific                  | no      |                  | 2   |              |
| Butterflyfish        | Heniochus<br>singularis         | Singular<br>bannerfish            |       |     | LC                                  | Indo-Pacific,<br>Pacific      | no      |                  |   |              |
| Butterflyfish        | Heniochus varius                | Humpbacked coralfish              |       |     | LC                                  | western and central Pacific   | no      |                  |   |              |
| Cardinalfish         | Apogon<br>amboinensis           | Ambon<br>cardinalfish             |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Cardinalfish         | Apogonichthys ocellatus         | Ocellated cardinalfish            |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Cardinalfish         | Nectamia fusca                  | Ghost<br>cardinalfish             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Cardinalfish         | Ostorhinchus<br>compressus      | Ochre-striped cardinalfish        |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Cardinalfish         | Ostorhinchus<br>lateralis       | Humpback<br>cardinalfish          |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Cardinalfish         | Ostorhinchus<br>margaritophorus | Red-striped cardinalfish          |       |     | LC                                  | Coral Triangle                | no      |                  |   |              |
| Cardinalfish         | Ostorhinchus sealei             | Seale's<br>cardinalfish           |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Cardinalfish         | Taeniamia<br>buruensis          | Buru cardinalfish                 |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Cardinalfish         | Yarica hyalosoma                | Humpbacked cardinalfish           |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Cardinalfish         | Zapogon evermanni               | Cave<br>cardinalfish              |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Chub                 | Kyphosus<br>cinerascens         | Highfin chub                      |       |     | LC                                  | widespread                    | no      | 3                |   |              |
| Chub                 | Kyphosus sectatrix              | Bermuda chub                      |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Clingfish            | Diademichthys<br>lineatus       | Urchin clingfish                  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Clingfish            | Discotrema<br>crinophilum       | Crinoid clingfish                 |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Clingfish            | Lepadichthys bolini             | Bolin's clingfish                 |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Clingfish            | Lepadichthys minor              | Dwarf clingfish                   |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Codlet               | Bregmaceros<br>nectabanus       | Smallscale<br>codlet              |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Collared<br>wriggler | Paraxenisthmus<br>springeri     | Springer's<br>wriggler            |       |     | LC                                  | Solomon<br>Islands            | no      |                  |   |              |
| Collared<br>wriggler | Rotuma lewisi                   | Collared wriggler                 |       |     | LC                                  | Central Indo-<br>Pacific      | no      |                  |   |              |
| Collared<br>wriggler | Tyson belos                     | Arrow wriggler                    |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Collared<br>wriggler | Xenisthmus clarus               | Clear wriggler                    |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Collared<br>wriggler | Xenisthmus<br>eirospilus        | Spotted wriggler                  |       |     | LC                                  | southwest<br>Pacific          | no      |                  |   |              |

| Таха  | Scientific Name               | Common Name    | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )             | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|-------------------------------|----------------|-------|-----|-------------------------------------|--------------------------------------|---------|------------------|---|--------------|
| Coral | Acanthastrea<br>amakusensis   | Mussid coral   | II    |     |                                     | Indo-west<br>Pacific                 | no      |                  |   |              |
| Coral | Acanthastrea<br>bowerbanki    | Mussid coral   | II    |     | VU                                  | Indo-west<br>Pacific, rare           | no      |                  |   |              |
| Coral | Acanthastrea brevis           | Mussid coral   | II    |     | VU                                  | widespread,<br>uncommon              | no      |                  |   |              |
| Coral | Acanthastrea<br>echinata      | Mussid coral   | II    |     | LC                                  | Indo-west<br>Pacific, Pacific        | no      |                  |   |              |
| Coral | Acanthastrea<br>faviaformis   | Mussid coral   | II    |     | VU                                  | Indo-west<br>Pacific                 | no      |                  |   |              |
| Coral | Acanthastrea<br>hemprichii    | Mussid coral   | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon    | no      |                  |   |              |
| Coral | Acanthastrea hillae           | Mussid coral   | II    |     | NT                                  | Indo-west<br>Pacific                 | no      |                  |   |              |
| Coral | Acanthastrea<br>ishigakiensis | Mussid coral   | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon    | no      |                  |   |              |
| Coral | Acanthastrea<br>regularis     | Mussid coral   | 11    |     | VU                                  | Indo-west<br>Pacific                 | no      |                  |   |              |
| Coral | Acanthastrea<br>rotundoflora  | Mussid coral   | 11    |     | NT                                  | Indo-west<br>Pacific                 | no      |                  |   |              |
| Coral | Acanthastrea<br>subechinata   | Mussid coral   | II    |     | NT                                  | Central Indo-<br>Pacific             | no      |                  |   |              |
| Coral | Acrhelia horrescens           | Oculinid coral | 11    |     |                                     | Indo-west<br>Pacific                 | no      |                  |   |              |
| Coral | Acropora<br>abrolhosensis     | Acropora coral | 11    |     | VU                                  | central Indo-<br>Pacific             | no      |                  |   |              |
| Coral | Acropora<br>abrotanoides      | Acropora coral | II    |     | LC                                  | widespread,<br>reef                  | no      |                  |   |              |
| Coral | Acropora aculeus              | Acropora coral | II    |     | VU                                  | central Indo-<br>Pacific             | no      |                  |   |              |
| Coral | Acropora<br>anthocercis       | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon              | no      |                  |   |              |
| Coral | Acropora aspera               | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon              | no      |                  |   |              |
| Coral | Acropora austera              | Acropora coral | II    |     | NT                                  | Indo-Pacific                         | no      |                  |   |              |
| Coral | Acropora awi                  | Acropora coral | II    |     | VU                                  | central Indo-<br>Pacific             | no      | 3                |   |              |
| Coral | Acropora batunai              | Acropora coral | II    |     | VU                                  | central Indo-<br>Pacific             | no      |                  |   |              |
| Coral | Acropora bifurcata            | Acropora coral | II    |     | DD                                  | central<br>Indo-Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Acropora<br>brueggemanni      | Acropora coral | II    |     |                                     | Indo-Pacific                         | no      | 3                |   |              |
| Coral | Acropora carduus              | Acropora coral | II    |     | NT                                  | widespread                           | no      |                  |   |              |
| Coral | Acropora<br>caroliniana       | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Acropora cerealis             | Acropora coral |       |     | LC                                  | widespread                           | no      |                  |   |              |
| Coral | Acropora<br>chesterfieldensis | Acropora coral | II    |     | LC                                  | south Pacific, rare                  | no      |                  |   |              |
| Coral | Acropora clathrata            | Acropora coral | II    |     | LC                                  | widespread                           | no      |                  |   |              |
| Coral | Acropora<br>cophodactyla      | Acropora coral | II    |     | DD                                  | central<br>Indo-Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Acropora copiosa              | Acropora coral |       |     | DD                                  | rare                                 | no      |                  |   |              |

| Таха  | Scientific Name           | Common Name    | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                 | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|---------------------------|----------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Acropora<br>crateriformis | Acropora coral | II    |     |                                     | Indo-Pacific                                | no      |                  |   |              |
| Coral | Acropora cuneata          | Acropora coral | II    |     |                                     | widespread                                  | no      |                  |   |              |
| Coral | Acropora cytherea         | Acropora coral | II    |     | LC                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora dendrum          | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon                     | no      |                  |   |              |
| Coral | Acropora desalwii         | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon        | no      |                  |   |              |
| Coral | Acropora digitifera       | Acropora coral | II    |     | NT                                  | widespread,<br>uncommon                     | no      |                  |   |              |
| Coral | Acropora divaricata       | Acropora coral | II    |     | NT                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora donei            | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon                     | no      |                  |   |              |
| Coral | Acropora echinata         | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon                     | no      |                  |   |              |
| Coral | Acropora<br>efflorescens  | Acropora coral | II    |     | DD                                  | Indo-Pacific                                | no      |                  |   |              |
| Coral | Acropora elseyi           | Acropora coral | II    |     | LC                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora exquisita        | Acropora coral | II    |     | DD                                  | central Indo-<br>Pacific                    | no      |                  |   |              |
| Coral | Acropora florida          | Acropora coral | II    |     | NT                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora formosa          | Acropora coral | II    |     | NT                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora<br>gemmifera     | Acropora coral | II    |     | LC                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora globiceps        | Acropora coral | II    |     | VU                                  | Indo-west<br>Pacific and<br>central Pacific | no      |                  |   |              |
| Coral | Acropora gomezi           | Acropora coral | II    |     | DD                                  | central<br>Indo-Pacific,<br>uncommon        | no      |                  |   |              |
| Coral | Acropora grandis          | Acropora coral | 11    |     | LC                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora granulosa        | Acropora coral | II    |     | NT                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora<br>hoeksemai     | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon        | no      |                  |   |              |
| Coral | Acropora horrida          | Acropora coral | II    |     | VU                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora humilis          | Finger coral   | II    |     | NT                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora<br>hyacinthus    | Brush coral    | II    |     | NT                                  | widespread                                  | no      |                  |   |              |
| Coral | Acropora indonesia        | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon        | no      |                  |   |              |
| Coral | Acropora inermis          | Acropora coral | II    |     | DD                                  | widespread,<br>uncommon                     | no      |                  |   |              |
| Coral | Acropora insignis         | Acropora coral | II    |     | DD                                  | Indo-west<br>Pacific,<br>uncommon           | no      |                  |   |              |
| Coral | Acropora<br>intermedia    | Acropora coral | II    |     |                                     | widespread                                  | no      |                  |   |              |
| Coral | Acropora irregularis      | Acropora coral | II    |     | DD                                  | Indo-Pacific                                | no      |                  |   |              |
| Coral | Acropora<br>jacquelineae  | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon        | no      |                  |   |              |
| Coral | Acropora<br>kimbeensis    | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon        | no      |                  |   |              |

| Таха  | Scientific Name           | Common Name    | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                               | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|---------------------------|----------------|-------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Coral | Acropora kirstyae         | Acropora coral | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon                      | no      |                  |   |              |
| Coral | Acropora latistella       | Acropora coral | Ш     |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora listeri          | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon                                | no      |                  |   |              |
| Coral | Acropora lokani           | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon                   | no      |                  |   |              |
| Coral | Acropora<br>longicyathus  | Acropora coral | II    |     | LC                                  | Indian Ocean,<br>Indo-Pacific,<br>Pacific              | no      |                  |   |              |
| Coral | Acropora loripes          | Acropora coral | 11    |     | NT                                  | widespread   | no      |                  |   |              |
| Coral | Acropora lovelli          | Acropora coral | II    |     | VU                                  | Indian Ocean,<br>Indo-Pacific,<br>Pacific              | no      |                  |   |              |
| Coral | Acropora lutkeni          | Acropora coral | 11    |     | NT                                  | Indian Ocean,<br>Indo-Pacific,<br>Pacific              | no      |                  |   |              |
| Coral | Acropora meridiana        | Acropora coral | II    |     | DD                                  | Indo-Pacific,<br>uncommon                              | no      |                  |   |              |
| Coral | Acropora<br>microclados   | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon                                | no      |                  |   |              |
| Coral | Acropora<br>microphthalma | Acropora coral | II    |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora millepora        | Acropora coral | II    |     | NT                                  | widespread   | no      |                  |   |              |
| Coral | Acropora mirabilis        | Acropora coral | II    |     | DD                                  | Indo-Pacific,<br>uncommon                              | no      |                  |   |              |
| Coral | Acropora<br>monticulosa   | Acropora coral | II    |     | NT                                  | Indian Ocean,<br>Indo-Pacific,<br>Pacific              | no      |                  |   |              |
| Coral | Acropora multiacuta       | Acropora coral | 11    |     | VU                                  | Indo-Pacific   | no      |                  |   |              |
| Coral | Acropora nana             | Acropora coral | II    |     | NT                                  | Indian Ocean,<br>Indo-Pacific,<br>Pacific              | no      |                  |   |              |
| Coral | Acropora nasuta           | Acropora coral | II    |     | NT                                  | widespread   | no      |                  |   |              |
| Coral | Acropora navini           | Acropora coral | II    |     | DD                                  | Central Indo-<br>Pacific                               | no      |                  |   |              |
| Coral | Acropora nobilis          | Acropora coral | 11    |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora orbicularis      | Acropora coral | II    |     | DD                                  | northern<br>Indian Ocean,<br>central Indo-<br>Pacific  | no      |                  |   |              |
| Coral | Acropora palifera         | Acropora coral | Ш     |     | 0                                   | widespread   | no      |                  |   |              |
| Coral | Acropora palmerae         | Acropora coral | II    |     | VU                                  | Indian Ocean,<br>Indo-Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Acropora paniculata       | Acropora coral | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon                      | no      |                  |   |              |
| Coral | Acropora parilis          | Acropora coral | II    |     | DD                                  | Indo-west<br>Pacific                                   | no      |                  |   |              |
| Coral | Acropora pichoni          | Acropora coral | II    |     | NT                                  | Indo-Pacific   | no      |                  |   |              |
| Coral | Acropora pinguis          | Acropora coral | II    |     | DD                                  | Indo-Pacific   | no      |                  |   |              |
| Coral | Acropora plana            | Acropora coral | II    |     | DD                                  | central<br>Indo-Pacific,<br>uncommon                   | no      |                  |   |              |

| Таха  | Scientific Name           | Common Name    | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                           | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|---------------------------|----------------|-------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Coral | Acropora plumosa          | Acropora coral | II    |     | VU                                  | central<br>Indo-Pacific,<br>uncommon               | no      |                  |   |              |
| Coral | Acropora polystoma        | Acropora coral | II    |     | VU                                  | widespread,<br>uncommon                            | no      |                  |   |              |
| Coral | Acropora prostrata        | Acropora coral | II    |     | DD                                  | Indo-west<br>Pacific,<br>uncommon                  | no      |                  |   |              |
| Coral | Acropora pulchra          | Acropora coral | II    |     | LC                                  | widespread,<br>uncommon                            | no      |                  |   |              |
| Coral | Acropora rambleri         | Acropora coral | II    |     | DD                                  | Indo-Pacific, rare                                 | no      |                  |   |              |
| Coral | Acropora retusa           | Acropora coral | II    |     | VU                                  | Indian Ocean,<br>Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Acropora robusta          | Acropora coral | II    |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora rosaria          | Acropora coral | 11    |     | DD                                  | Indian Ocean,<br>Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Acropora<br>samoensis     | Acropora coral | II    |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora<br>sarmentosa    | Acropora coral | II    |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Coral | Acropora secale           | Acropora coral |       |     | NT                                  | widespread   | no      |                  |   |              |
| Coral | Acropora selago           | Acropora coral | II    |     | NT                                  | widespread,<br>uncommon                            | no      |                  |   |              |
| Coral | Acropora<br>solitaryensis | Acropora coral | II    |     | VU                                  | Indo-west<br>Pacific                               | no      |                  |   |              |
| Coral | Acropora speciosa         | Acropora coral | II    |     | VU                                  | Indo-Pacific,<br>Pacific                           | no      |                  |   |              |
| Coral | Acropora spicifera        | Acropora coral | Ш     |     | VU                                  | widespread   | no      |                  |   |              |
| Coral | Acropora striata          | Acropora coral | II    |     | VU                                  | Indo-Pacific,<br>Pacific                           | no      |                  |   |              |
| Coral | Acropora subglabra        | Acropora coral | II    |     | LC                                  | Indian Ocean,<br>Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Acropora subulata         | Acropora coral | II    |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora tenuis           | Acropora coral | II    |     | NT                                  | widespread   | no      |                  |   |              |
| Coral | Acropora tortuosa         | Acropora coral | II    |     | LC                                  | Indo-west<br>Pacific and<br>central Pacific        | no      |                  |   |              |
| Coral | Acropora turaki           | Acropora coral | II    |     | VU                                  | Indo-Pacific,<br>Pacific                           | no      |                  |   |              |
| Coral | Acropora tutuilensis      | Acropora coral | II    |     | DD                                  | widespread   | no      |                  |   |              |
| Coral | Acropora<br>valenciennesi | Acropora coral | II    |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora valida           | Acropora coral | II    |     | LC                                  | widespread   | no      |                  |   |              |
| Coral | Acropora vaughani         | Acropora coral | II    |     | VU                                  | Indian Ocean,<br>Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Acropora verweyi          | Acropora coral | II    |     | VU                                  | Indian Ocean,<br>Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Acropora walindii         | Acropora coral | II    |     | VU                                  | Indo-Pacific, rare                                 | no      |                  |   |              |
| Coral | Acropora wallaceae        | Acropora coral | II    |     | DD                                  | Indo-Pacific,<br>uncommon                          | no      |                  |   |              |

| Таха  | Scientific Name              | Common Name          | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|------------------------------|----------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Acropora yongei              | Acropora coral       | II    |     | LC                                  | Indian Ocean,<br>Indo-west<br>Pacific, central<br>Pacific | no      |                  |   |              |
| Coral | Alveopora allingi            | Alveopora<br>species | II    |     | VU                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Alveopora catalai            | Poritid coral        | II    |     | NT                                  | Indo-Pacific,<br>uncommon                                 | no      | 3                |   |              |
| Coral | Alveopora<br>fenestrata      | Alveopora<br>species | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon                         | no      |                  |   |              |
| Coral | Alveopora minuta             | Poritid coral        | II    |     | EN                                  | Central Indo-<br>Pacific                                  | no      |                  |   |              |
| Coral | Alveopora ocellata           | Alveopora<br>species | II    |     | DD                                  | Indo-west<br>Pacific, rare                                | no      |                  |   |              |
| Coral | Alveopora<br>spongiosa       | Alveopora<br>species | II    |     | NT                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Alveopora<br>verrilliana     | Alveopora<br>species | II    |     | VU                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Anacropora forbesi           | Poritid coral        | II    |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Coral | Anacropora matthai           | Poritid coral        | II    |     | VU                                  | Central Indo-<br>Pacific                                  | no      |                  |   |              |
| Coral | Anacropora pillai            | Poritid coral        | 11    |     | DD                                  | Central Indo-<br>Pacific                                  | no      |                  |   |              |
| Coral | Anacropora<br>puertogalerae  | Poritid coral        | II    |     | VU                                  | Indo-Pacific,<br>uncommon                                 | no      |                  |   |              |
| Coral | Anacropora<br>reticulata     | Poritid coral        | II    |     | VU                                  | Central Indo-<br>Pacific                                  | no      |                  |   |              |
| Coral | Anacropora spinosa           | Poritid coral        | II    |     | EN                                  | Indo-Pacific,<br>rare                                     | no      |                  |   |              |
| Coral | Astreopora<br>cucullata      | Acroporid coral      | II    |     | VU                                  | widespread,<br>rare                                       | no      |                  |   |              |
| Coral | Astreopora<br>expansa        | Poritid coral        | II    |     | NT                                  | Indo-Pacific  | no      |                  |   |              |
| Coral | Astreopora gracilis          | Acroporid coral      | Ш     |     | LC                                  | widespread  | no      |                  |   |              |
| Coral | Astreopora<br>incrustans     | Poritid coral        | II    |     | VU                                  | Central Indo-<br>Pacific                                  | no      |                  |   |              |
| Coral | Astreopora listeri           | Acroporid coral      | Ш     |     | LC                                  | widespread  | no      |                  |   |              |
| Coral | Astreopora<br>macrostoma     | Poritid coral        | II    |     | NT                                  | Indo-Pacific  | no      | 3                |   |              |
| Coral | Astreopora<br>myriophthalma  | Acroporid coral      | II    |     | LC                                  | widespread  | no      |                  |   |              |
| Coral | Astreopora randalli          | Acroporid coral      | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon                         | no      |                  |   |              |
| Coral | Astreopora<br>suggesta       | Acroporid coral      | II    |     | LC                                  | widespread,<br>uncommon                                   | no      |                  |   |              |
| Coral | Australogyra zelli           | Poritid coral        | II    |     | VU                                  | Indo-Pacific  | no      |                  |   |              |
| Coral | Australomussa<br>rowleyensis | Poritid coral        | II    |     | NT                                  | Indo-west<br>Pacific                                      | no      |                  |   |              |
| Coral | Barabattoia<br>amicorum      | Favid coral          | II    |     | LC                                  | widespread,<br>uncommon                                   | no      |                  |   |              |
| Coral | Barabattoia laddi            | Favid coral          | II    |     | VU                                  | Indo-west<br>Pacific                                      | no      |                  |   |              |

| Таха  | Scientific Name                 | Common Name        | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|---------------------------------|--------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Blastomussa wellsi              | Mussid coral       | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  | <u>0</u>  |              |
| Coral | Cantharellus jebbi              | Fungid coral       | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Caulastraea furcata             | Favid coral        | 11    |     |                                     | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Caulastrea curvata              | Favid coral        | II    |     | VU                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Caulastrea<br>echinulata        | Favid coral        | II    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Caulastrea tumida               | Favid coral        | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Coeloseris mayeri               | Agaricid coral     | 11    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Coscinaraea<br>columna          | Siderastrid coral  | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Coscinaraea crassa              | Siderastrid coral  | II    |     | NT                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Coscinaraea<br>exaesa           | Siderastrid coral  | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Coscinaraea wellsi              | Siderastrid coral  | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Ctenactis<br>albitentaculata    | Fungid coral       | II    |     | NT                                  | Indo-Pacific,<br>uncommon                     | no      |                  |   |              |
| Coral | Ctenactis crassa                | Fungid coral       | 11    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Ctenactis echinata              | Fungid coral       | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Cynarina lacrymalis             | Mussid coral       | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Cyphastrea<br>agassizi          | Favid coral        | II    |     | VU                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Cyphastrea chalcidicum          | Favid coral        | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Cyphastrea decadia              | Favid coral        | II    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Cyphastrea<br>japonica          | Favid coral        | II    |     | LC                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Cyphastrea<br>microphthalma     | Favid coral        | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Cyphastrea ocellina             | Favid coral        | II    |     | VU                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Cyphastrea serailia             | Favid coral        | П     |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Diploastrea<br>heliopora        | Favid coral        | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Distichopora livida             | Stylerastrid coral | II    |     |                                     | Indo-west<br>Pacific, rare                    | no      |                  |   |              |
| Coral | Echinomorpha<br>nishihirai      | Pectinid coral     | 11    |     | NT                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Echinophyllia<br>aspera         | Pectinid coral     | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Echinophyllia<br>costata        | Pectinid coral     | 11    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Echinophyllia<br>echinata       | Pectinid coral     | II    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific, rare        | no      |                  |   |              |
| Coral | Echinophyllia<br>echinoporoides | Pectinid coral     | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |

| Таха  | Scientific Name            | Common Name           | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|----------------------------|-----------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Echinophyllia patula       | Pectinid coral        | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Echinophyllia<br>pectinata | Pectinid coral        | II    |     | DD                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Echinopora<br>gemmacea     | Favid coral           | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Echinopora<br>hirsutissima | Favid coral           | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Echinopora horrida         | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Echinopora<br>Iamellosa    | Favid coral           | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Echinopora<br>mammiformis  | Favid coral           | II    |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Echinopora<br>pacificus    | Favid coral           | II    |     | NT                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Echinopora taylorae        | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Euphyllia cristata         | Caryophyllid<br>coral | II    |     | VU                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Euphyllia divisa           | Caryophyllid<br>coral | II    |     | NT                                  | central Pacific                               | no      |                  |   |              |
| Coral | Euphyllia<br>glabrescens   | Caryophyllid<br>coral | II    |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Euphyllia<br>paraancora    | Caryophyllid<br>coral | II    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Euphyllia<br>yaeyamaensis  | Caryophyllid<br>coral | II    |     | NT                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Favia danae                | Favid coral           | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Favia favus                | Favid coral           | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Favia helianthoides        | Favid coral           | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Favia lizardensis          | Favid coral           | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Favia maritima             | Favid coral           | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Favia marshae              | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Favia matthaii             | Favid coral           | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Favia maxima               | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Favia pallida              | Favid coral           | П     |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Favia rotumana             | Favid coral           | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Favia rotundata            | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Favia speciosa             | Favid coral           | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Favia stelligera           | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Favia truncatus            | Favid coral           | II    |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Favia veroni               | Favid coral           |       |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |

| Таха  | Scientific Name           | Common Name  | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                       | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|---------------------------|--------------|-------|-----|-------------------------------------|-----------------------------------|---------|------------------|---|--------------|
| Coral | Favites abdita            | Favid coral  | 11    |     | NT                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Favites acuticollis       | Favid coral  | II    |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Favites bestae            | Favid coral  | II    |     | NT                                  | Indo-west<br>Pacific, rare        | no      |                  |   |              |
| Coral | Favites chinensis         | Favid coral  | 11    |     | NT                                  | widespread                        | no      |                  |   |              |
| Coral | Favites complanata        | Favid coral  | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Favites flexuosa          | Favid coral  | II    |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Favites halicora          | Favid coral  | 11    |     | NT                                  | widespread                        | no      |                  |   |              |
| Coral | Favites<br>micropentagona | Favid coral  | II    |     | NT                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Favites<br>paraflexuosa   | Favid coral  | II    |     | NT                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Favites pentagona         | Favid coral  | II    |     | LC                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Favites russelli          | Favid coral  |       |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Favites stylifera         | Favid coral  | 11    |     | NT                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Favites vasta             | Favid coral  | 11    |     | NT                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Fungia concinna           | Fungid coral | 11    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Fungia distorta           | Fungid coral | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Fungia fragilis           | Fungid coral | II    |     | LC                                  | Indo-Pacific,<br>uncommon         | no      |                  |   |              |
| Coral | Fungia fralinae           | Fungid coral | II    |     | LC                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Fungia fungites           | Fungid coral |       |     | NT                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Fungia granulosa          | Fungid coral | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Fungia hexagonalis        | Fungid coral | II    |     | LC                                  | Indo-west<br>Pacific, rare        | no      |                  |   |              |
| Coral | Fungia horrida            | Fungid coral | II    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Fungia klunzingeri        | Fungid coral | II    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Fungia moluccensis        | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Fungia<br>paumotensis     | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Fungia repanda            | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Fungia scabra             | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Fungia scruposa           | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Fungia scutaria           | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Fungia sinensis           | Fungid coral |       |     | LC                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Fungia somervillei        | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Fungia spinifer           | Fungid coral | 11    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Fungia tenuis             | Fungid coral | II    |     | LC                                  | widespread                        | no      |                  |   |              |

| Таха  | Scientific Name             | Common Name    | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|-----------------------------|----------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Fungia vaughani             | Fungid coral   | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Galaxea acrhelia            | Oculinid coral | II    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Galaxea astreata            | Oculinid coral | II    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Galaxea<br>fascicularis     | Oculinid coral | II    |     | NT                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Galaxea<br>horrescens       | Coral          | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Galaxea paucisepta          | Oculinid coral | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Gardineroseris<br>planulata | Agaricid coral | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Goniastrea aspera           | Favid coral    | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Goniastrea<br>australensis  | Favid coral    | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Goniastrea<br>edwardsi      | Favid coral    | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Goniastrea favulus          | Favid coral    | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Goniastrea minuta           | Favid coral    | II    |     | NT                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Goniastrea<br>palauensis    | Favid coral    | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Goniastrea<br>pectinata     | Favid coral    | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Goniastrea ramosa           | Favid coral    |       | -   | VU                                  | Coral Triangle                                | no      |                  |   |              |
| Coral | Goniopora burgosi           | Poritid coral  | II    |     | VU                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Goniopora columna           | Poritid coral  | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Goniopora<br>djiboutiensis  | Poritid coral  | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Goniopora<br>eclipsensis    | Poritid coral  | II    |     | LC                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Goniopora lobata            | Poritid coral  | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Goniopora minor             | Poritid coral  | II    |     | NT                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Goniopora<br>palmensis      | Poritid coral  | II    |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Goniopora<br>pandoraensis   | Poritid coral  | II    |     | LC                                  | Indo-Pacific,<br>uncommon                     | no      |                  |   |              |
| Coral | Goniopora<br>somaliensis    | Poritid coral  | II    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Goniopora stokesi           | Poritid coral  | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Goniopora<br>stutchburyi    | Poritid coral  | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Goniopora<br>tenuidens      | Poritid coral  | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Halomitra clavator          | Fungid coral   | II    |     | VU                                  | Coral Triangle                                | no      |                  |   |              |
| Coral | Halomitra pileus            | Fungid coral   | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |

| Таха  | Scientific Name                | Common Name            | CITES | СМS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|--------------------------------|------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Heliofungia<br>actiniformis    | Fungid coral           | 11    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Heliopora coerulea             | Blue coral             | 1/11  |     | VU                                  | Indo-Pacific,<br>Pacific                      | no      |                  |   |              |
| Coral | Herpolitha limax               | Fungid coral           | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Herpolitha weberi              | Fungid coral           | 11    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Heterocyathus<br>aequicostatus | Caryophyllid<br>coral  | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Heteropsammia<br>cochlea       | Dendrophyllid<br>coral | 11    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Hydnophora exesa               | Merulinid coral        | Ш     |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Hydnophora<br>grandis          | Merulinid coral        | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Hydnophora<br>microconos       | Merulinid coral        | II    |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Hydnophora pilosa              | Merulinid coral        | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Hydnophora rigida              | Merulinid coral        | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Isopora<br>crateriformis       | Acroporid coral        |       |     | VU                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Isopora cylindrica             | Acroporid coral        | II    |     | DD                                  | Indonesia,<br>PNG,<br>Solomon<br>Islands      | no      |                  |   |              |
| Coral | Isopora palifera               | Catch bowl coral       | II    |     | NT                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Leptastrea bottae              | Favid coral            | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Leptastrea<br>inaequalis       | Favid coral            | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Leptastrea pruinosa            | Favid coral            | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Leptastrea<br>purpurea         | Favid coral            | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Leptastrea<br>transversa       | Favid coral            |       |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Leptoria phrygia               | Favid coral            | II    |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Leptoseris<br>explanata        | Agaricid coral         | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Leptoseris gardineri           | Agaricid coral         | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Leptoseris<br>hawaiiensis      | Agaricid coral         | II    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Leptoseris<br>incrustans       | Agaricid coral         | II    |     | VU                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Leptoseris<br>mycetoseroides   | Agaricid coral         | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Leptoseris<br>papyracea        | Agaricid coral         | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Leptoseris scabra              | Agaricid coral         | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Leptoseris solida              | Agaricid coral         | 11    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |

| Таха  | Scientific Name               | Common Name        | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|-------------------------------|--------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Leptoseris striata            | Agaricid coral     | II    |     | NT                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Leptoseris<br>tubulifera      | Agaricid coral     | II    |     | LC                                  | Indo-west<br>Pacific                          | no      | 3                |   |              |
| Coral | Leptoseris yabei              | Agaricid coral     | II    |     | VU                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Lithophyllon mokai            | Fungid coral       | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon             | no      | <u>.</u>         |   |              |
| Coral | Lobophyllia<br>corymbosa      | Mussid coral       | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      | 2                |   |              |
| Coral | Lobophyllia<br>dentatus       | Mussid coral       | 11    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Lobophyllia<br>flabelliformis | Mussid coral       | 11    |     | VU                                  | Indo-west<br>Pacific                          | no      | 3                |   |              |
| Coral | Lobophyllia hataii            | Mussid coral       | 11    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Lobophyllia<br>hemprichii     | Mussid coral       | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Lobophyllia<br>pachysepta     | Mussid coral       | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Lobophyllia robusta           | Mussid coral       | 11    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Madracis kirbyi               | Pocilloporid coral | 11    |     | LC                                  | widespread,<br>uncommon                       | no      | 3                |   |              |
| Coral | Merulina ampliata             | Merulinid coral    | II    |     | LC                                  | widespread                                    | no      |                  | 1   |              |
| Coral | Merulina scabricula           | Merulinid coral    |       |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Micromussa<br>amakusensis     | Mussid coral       | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Micromussa<br>diminuta        | Mussid coral       | 11    |     | DD                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Micromussa minuta             | Mussid coral       | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Millepora<br>dichotoma        | Hydrozoan          | 11    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Millepora exaesa              | Hydrozoan          | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Millepora intricata           | Hydrozoan          | II    |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Millepora murrayi             | Hydrozoan          | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Millepora<br>platyphylla      | Fire coral         | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Millepora tenera              | Milleporid coral   | 11    |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Montastrea<br>annuligera      | Favid coral        | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Montastrea<br>colemani        | Favid coral        | II    |     | NT                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Montastrea curta              | Favid coral        | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Montastrea<br>magnistellata   | Favid coral        | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Montastrea<br>multipunctata   | Favid coral        | II    |     | VU                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Montastrea<br>salebrosa       | Favid coral        | 11    |     | VU                                  | Central Indo-<br>Pacific                      | no      |                  |   |              |

| Таха  | Scientific Name                | Common Name     | CITES | СМS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                       | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|--------------------------------|-----------------|-------|-----|-------------------------------------|-----------------------------------|---------|------------------|---|--------------|
| Coral | Montastrea<br>valenciennesi    | Favid coral     | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Montipora<br>aequituberculata  | Acroporid coral | 11    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora altasepta            | Acroporid coral | II    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora angulata             | Acroporid coral | 11    |     | VU                                  | widespread,<br>rare               | no      |                  |   |              |
| Coral | Montipora<br>australiensis     | Acroporid coral | II    |     | VU                                  | Indo-west<br>Pacific, rare        | no      |                  |   |              |
| Coral | Montipora cactus               | Acroporid coral | Ш     |     | VU                                  | restricted                        | no      |                  |   |              |
| Coral | Montipora calcarea             | Acroporid coral | II    |     | VU                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora caliculata           | Acroporid coral | II    |     | VU                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora capitata             | Acroporid coral | II    |     | NT                                  | Indo-Pacific,<br>Pacific          | no      |                  |   |              |
| Coral | Montipora<br>capricornis       | Acroporid coral | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Montipora<br>cebuensis         | Acroporid coral | II    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora confusa              | Acroporid coral | 11    |     | NT                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora<br>corbettensis      | Acroporid coral | II    |     | VU                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora<br>crassituberculata | Acroporid coral | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Montipora danae                | Acroporid coral | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora<br>delicatula        | Acroporid coral | 11    |     | VU                                  | Coral Triangle                    | no      |                  |   |              |
| Coral | Montipora digitata             | Acroporid coral | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora<br>efflorescens      | Acroporid coral | II    |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora effusa               | Acroporid coral | II    |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora floweri              | Acroporid coral | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Montipora foliosa              | Acroporid coral | II    |     | NT                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Montipora foveolata            | Acroporid coral | II    |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora friabilis            | Acroporid coral | II    |     | VU                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Montipora grisea               | Acroporid coral | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora hirsuta              | Acroporid coral | 11    |     | NT                                  | Coral Triangle                    | no      |                  |   |              |
| Coral | Montipora hispida              | Acroporid coral |       |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora hodgsoni             | Acroporid coral | II    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora<br>hoffmeisteri      | Acroporid coral |       |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora<br>incrassata        | Acroporid coral | II    |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora informis             | Acroporid coral | II    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Montipora<br>mactanensis       | Acroporid coral | II    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |

| Таха  | Scientific Name           | Common Name           | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                       | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|---------------------------|-----------------------|-------|-----|-------------------------------------|-----------------------------------|---------|------------------|---|--------------|
| Coral | Montipora<br>malampaya    | Acroporid coral       | II    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora millepora       | Acroporid coral       | II    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Montipora mollis          | Acroporid coral       | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora<br>monasteriata | Acroporid coral       | II    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Montipora niugini         | Acroporid coral       | II    |     | NT                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora nodosa          | Acroporid coral       | II    |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Montipora orientalis      | Acroporid coral       | 11    |     | VU                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Montipora<br>palawanensis | Acroporid coral       | II    |     | NT                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora<br>peltiformis  | Acroporid coral       | 11    |     | NT                                  | widespread,<br>uncommon           | no      | 3                |   |              |
| Coral | Montipora porites         | Acroporid coral       | 11    |     | NT                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora<br>samarensis   | Acroporid coral       | 11    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora<br>spongodes    | Acroporid coral       | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora spumosa         | Acroporid coral       | II    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Montipora stellata        | Acroporid coral       | II    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Montipora<br>tuberculosa  | Acroporid coral       | II    |     | LC                                  | Indo-west<br>Pacific              | no      | 2                |   |              |
| Coral | Montipora<br>turgescens   | Acroporid coral       | II    |     | LC                                  | Indo-west<br>Pacific              | no      | 2                |   |              |
| Coral | Montipora turtlensis      | Acroporid coral       | II    |     | VU                                  | Indo-Pacific,<br>uncommon         | no      |                  |   |              |
| Coral | Montipora undata          | Acroporid coral       | II    |     | NT                                  | Indo-Pacific,<br>uncommon         | no      |                  |   |              |
| Coral | Montipora venosa          | Acroporid coral       | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Montipora<br>verrucosa    | Acroporid coral       | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Montipora<br>verruculosus | Acroporid coral       | II    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Montipora<br>vietnamensis | Acroporid coral       | II    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Mycedium<br>elephantotus  | Pectinid coral        | II    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Mycedium mancaoi          | Pectinid coral        | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Mycedium robokaki         | Pectinid coral        | 11    |     | LC                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Nemenzophyllia<br>turbida | Caryophyllid<br>coral | 11    |     | VU                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Coral | Oulastrea crispata        | Favid coral           | II    |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Oulophyllia<br>bennettae  | Favid coral           | II    |     | NT                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Oulophyllia crispa        | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon | no      | 2                |   |              |

| Таха  | Scientific Name               | Common Name           | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                       | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|-------------------------------|-----------------------|-------|-----|-------------------------------------|-----------------------------------|---------|------------------|---|--------------|
| Coral | Oulophyllia levis             | Favid coral           | II    |     | LC                                  | western<br>Pacific                | no      |                  |   |              |
| Coral | Oxypora<br>crassispinosa      | Pectinid coral        | 11    |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Oxypora glabra                | Pectinid coral        | II    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Oxypora lacera                | Pectinid coral        | II    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |
| Coral | Pachyseris foliosa            | Agaricid coral        | II    |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pachyseris<br>gemmae          | Agaricid coral        | II    |     | NT                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pachyseris rugosa             | Agaricid coral        | II    |     | VU                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pachyseris<br>speciosa        | Agaricid coral        | 11    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Palauastrea<br>ramosa         | Astrocoenid<br>coral  | 11    |     | NT                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Paraclavarina<br>triangularis | Merulinid coral       |       |     | NT                                  | restricted                        | no      |                  |   |              |
| Coral | Pavona bipartita              | Agaricid coral        | II    |     | VU                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Pavona cactus                 | Agaricid coral        | 11    |     | VU                                  | widespread                        | no      |                  |   |              |
| Coral | Pavona clavus                 | Agaricid coral        |       |     | LC                                  | widespread                        | no      | -                |   |              |
| Coral | Pavona decussata              | Agaricid coral        |       |     | VU                                  | widespread                        | no      |                  |   |              |
| Coral | Pavona duerdeni               | Agaricid coral        | II    |     | LC                                  | widespread,<br>uncommon           | no      |                  |   |              |
| Coral | Pavona explanulata            | Agaricid coral        |       |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Pavona frondifera             | Agaricid coral        |       | -   | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Pavona maldivensis            |                       |       |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Pavona minuta                 | Agaricid coral        |       |     | NT                                  | widespread                        | no      |                  |   |              |
| Coral | Pavona varians                | Agaricid coral        | 11    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Pavona venosa                 | Agaricid coral        | II    |     | VU                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pectinia alcicornis           | Pectinid coral        | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Pectinia ayleni               | Pectinid coral        | II    |     | NT                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pectinia elongata             | Pectinid coral        | II    |     | NT                                  | Indo-Pacific,<br>uncommon         | no      |                  |   |              |
| Coral | Pectinia lactuca              | Pectinid coral        | II    |     | VU                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pectinia maxima               | Pectinid coral        | 11    |     | EN                                  | Coral Triangle                    | no      |                  |   |              |
| Coral | Pectinia paeonia              | Pectinid coral        | II    |     | NT                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pectinia pygmaeus             | Pectinid coral        | II    |     | NT                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Pectinia teres                | Pectinid coral        | II    |     | NT                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Coral | Physogyra<br>lichtensteini    | Caryophyllid<br>coral | II    |     | VU                                  | widespread                        | no      |                  |   |              |
| Coral | Platygyra acuta               | Favid coral           | II    |     | NT                                  | Indo-Pacific                      | no      |                  |   |              |
| Coral | Platygyra contorta            | Favid coral           | 11    |     | LC                                  | widespread                        | no      |                  |   |              |
| Coral | Platygyra daedalea            | Favid coral           | II    |     | LC                                  | Indo-west<br>Pacific, Pacific     | no      |                  |   |              |

| Таха  | Scientific Name               | Common Name           | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|-------------------------------|-----------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Platygyra lamellina           | Favid coral           | II    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Platygyra pini                | Favid coral           | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Platygyra<br>ryukyuensis      | Favid coral           | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      | 2                |   |              |
| Coral | Platygyra sinensis            | Favid coral           | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Platygyra verweyi             | Favid coral           | 11    |     | NT                                  | western<br>Pacific                            | no      |                  |   |              |
| Coral | Platygyra<br>yaeyamaensis     | Favid coral           | II    |     | VU                                  | western<br>Pacific                            | no      |                  |   |              |
| Coral | Plerogyra discus              | Euphylid coral        | II    |     | VU                                  | Central Indo-<br>Pacific                      | no      | 2                |   |              |
| Coral | Plerogyra simplex             | Caryophyllid<br>coral | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Plerogyra sinuosa             | Caryophyllid<br>coral | II    |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Plesiastrea<br>versipora      | Favid coral           | II    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Pocillopora<br>damicornis     | Pocilloporid<br>coral | 11    | -   | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Pocillopora elegans           | Pocilloporid<br>coral | II    | -   | VU                                  | widespread                                    | no      |                  |   |              |
| Coral | Pocillopora eydouxi           | Pocilloporid<br>coral | II    |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Pocillopora<br>kelleheri      | Pocilloporid<br>coral | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Pocillopora<br>meandrina      | Pocilloporid<br>coral | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Pocillopora<br>verrucosa      | Pocilloporid<br>coral | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Pocillopora<br>woodjonesi     | Pocilloporid<br>coral | II    |     | LC                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Pocillopora zelli             | Pocilloporid<br>coral | II    |     | LC                                  | Oceanic west<br>Pacific                       | no      |                  |   |              |
| Coral | Podabacia<br>crustacea        | Fungid coral          | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Podabacia<br>motuporensis     | Fungid coral          | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Polyphyllia<br>novaehiberniae | Fungid coral          | II    |     | NT                                  | oceanic west<br>Pacific                       | no      |                  |   |              |
| Coral | Polyphyllia talpina           | Fungid coral          | 11    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Porites annae                 | Poritid coral         | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Porites attenuata             | Poritid coral         | II    |     | VU                                  | central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Porites<br>australiensis      | Poritid coral         | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Porites cumulatus             | Poritid coral         | II    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Porites cylindrica            | Poritid coral         | II    |     | NT                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Porites deformis              | Poritid coral         | II    |     | NT                                  | central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Porites densa                 | Poritid coral         | II    |     | NT                                  | central Indo-<br>Pacific                      | no      |                  |   |              |

| Таха  | Scientific Name             | Common Name       | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act  | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|-----------------------------|-------------------|-------|-----|-------------------------------------|---|---------|---|---|--------------|
| Coral | Porites eridani             | Poritid coral     | II    |     | EN                                  | central Indo-<br>Pacific                      | no      |   |   |              |
| Coral | Porites flavus              | Poritid coral     | II    |     | DD                                  | Indonesia,<br>PNG,<br>Solomon<br>Islands      | no      |   |   |              |
| Coral | Porites<br>horizontalata    | Poritid coral     | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon             | no      |   |   |              |
| Coral | Porites latistella          | Poritid coral     | II    |     | LC                                  | Indo-Pacific                                  | no      |   |   |              |
| Coral | Porites latistellata        | Poritid coral     | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |   |   |              |
| Coral | Porites lichen              | Poritid coral     | II    |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Porites lutea               | Poritid coral     | II    |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Porites monticulosa         | Poritid coral     | II    |     | LC                                  | widespread                                    | no      | 2<br>5<br>5<br>6<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8 |   |              |
| Coral | Porites murrayensis         | Poritid coral     | II    |     | NT                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |   |   |              |
| Coral | Porites nigrescens          | Poritid coral     | II    |     | VU                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |   |   |              |
| Coral | Porites profundus           | Poritid coral     | II    |     | LC                                  | Indo-Pacific                                  | no      |   |   |              |
| Coral | Porites rugosa              | Poritid coral     | II    |     | VU                                  | central Indo-<br>Pacific                      | no      |   |   |              |
| Coral | Porites rus                 | Poritid coral     | 11    |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Porites sillimaniana        | Poritid coral     | П     |     | VU                                  | Indo-Pacific                                  | no      |   |   |              |
| Coral | Porites solida              | Poritid coral     | 11    |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Porites stephensoni         | Poritid coral     | II    |     | NT                                  | Indo-Pacific                                  | no      |   |   |              |
| Coral | Porites tuberculosa         | Poritid coral     | II    |     | VU                                  | central Indo-<br>Pacific                      | no      |   |   |              |
| Coral | Porites vaughani            | Poritid coral     | II    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |   |   |              |
| Coral | Psammocora<br>contigua      | Siderastrid coral | II    |     | NT                                  | widespread                                    | no      |   |   |              |
| Coral | Psammocora<br>digitata      | Siderastrid coral | II    |     | NT                                  | widespread                                    | no      |   |   |              |
| Coral | Psammocora<br>explanulata   | Siderastrid coral | 11    |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Psammocora<br>haimeana      | Siderastrid coral |       |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Psammocora<br>nierstraszi   | Siderastrid coral |       |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Psammocora<br>profundacella | Siderastrid coral | 11    |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Psammocora<br>superficialis | Siderastrid coral | II    |     | LC                                  | widespread                                    | no      |   |   |              |
| Coral | Psammocora<br>vaughani      | Siderastrid coral | 11    |     | NT                                  | western<br>Pacific                            | no      |   |   |              |
| Coral | Pseudosiderastrea<br>tayami | Siderastrid coral | 11    |     | NT                                  | Indo-Pacific                                  | no      |   |   |              |
| Coral | Sandalolitha<br>dentata     | Fungid coral      | II    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |   |   |              |
| Coral | Sandalolitha<br>robusta     | Fungid coral      | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |   |   |              |

| Таха  | Scientific Name              | Common Name            | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------|------------------------------|------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Coral | Scapophyllia<br>cylindrica   | Merulinid coral        | 11    |     | LC                                  | Indo-west<br>Pacific,<br>Pacific,<br>uncommon | no      |                  |   |              |
| Coral | Scolymia vitiensis           | Mussid coral           | 11    |     | NT                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Seriatopora<br>aculeata      | Pocilloporid coral     | II    |     | VU                                  | central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Seriatopora<br>caliendrum    | Pocilloporid<br>coral  | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Seriatopora<br>dendritica    | Pocilloporid coral     | II    |     | VU                                  | central Indo-<br>Pacific                      | no      |                  |   |              |
| Coral | Seriatopora<br>guttatus      | Pocilloporid<br>coral  | II    |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Seriatopora hystrix          | Pocilloporid<br>coral  | II    |     | LC                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Seriatopora stellata         | Pocilloporid<br>coral  | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Siderastrea<br>savignyana    | Siderastrid coral      | II    |     | LC                                  | Indo-Pacific                                  | no      | 3                |   |              |
| Coral | Stylocoeniella<br>armata     | Astrocoenid<br>coral   | II    |     | LC                                  | widespread                                    | no      | 2                |   |              |
| Coral | Stylocoeniella<br>guentheri  | Astrocoenid<br>coral   | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Stylophora pistillata        | Pocilloporid<br>coral  | II    |     | NT                                  | Indo-west<br>Pacific, Pacific                 | no      |                  |   |              |
| Coral | Stylophora<br>subseriata     | Pocilloporid<br>coral  | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Symphyllia agaricia          | Mussid coral           | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Symphyllia hassi             | Mussid coral           | II    |     | VU                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Symphyllia radians           | Mussid coral           | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Symphyllia recta             | Mussid coral           | 11    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Symphyllia<br>valenciennesii | Mussid coral           | II    |     | LC                                  | Indo-west<br>Pacific                          | no      |                  |   |              |
| Coral | Trachyphyllia<br>geoffroyi   | Trachyphyllid<br>coral | II    |     | NT                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Tubipora musica              | Organ pipe coral       | II    |     | NT                                  | widespread                                    | no      |                  |   |              |
| Coral | Turbinaria frondens          | Dendrophyllid<br>coral | II    |     | LC                                  | widespread                                    | no      |                  |   |              |
| Coral | Turbinaria<br>irregularis    | Dendrophyllid<br>coral | 11    |     | LC                                  | Indo-Pacific                                  | no      |                  |   |              |
| Coral | Turbinaria<br>mesenterina    | Dendrophyllid<br>coral | II    |     | VU                                  | widespread                                    | no      |                  |   |              |
| Coral | Turbinaria patula            | Dendrophyllid<br>coral | II    |     | VU                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |
| Coral | Turbinaria peltata           | Dendrophyllid<br>coral | II    |     | VU                                  | widespread                                    | no      |                  |   |              |
| Coral | Turbinaria stellulata        | Dendrophyllid<br>coral | 11    |     | VU                                  | widespread,<br>uncommon                       | no      |                  |   |              |
| Coral | Zoopilus echinatus           | Fungid coral           | II    |     | LC                                  | Indo-west<br>Pacific,<br>uncommon             | no      |                  |   |              |

| Таха        | Scientific Name                 | Common Name C                 | CITES  | смз  | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )           | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------------|---------------------------------|-------------------------------|--------|------|-------------------------------------|------------------------------------|---------|------------------|---|--------------|
| Cormorant   | Microcarbo<br>melanoleucos      | Little pied cormorant         |        |      | LC                                  | 25700000                           | no      |                  |   |              |
| Cormorant   | Phalacrocorax carbo             | Great cormorant               |        |      | LC                                  | 304000000                          | yes     |                  |   |              |
| Crake       | Amaurornis cinerea              | White-browed crake            |        |      | LC                                  | 32500000                           | no      |                  |   |              |
| Crocodile   | Crocodylus porosus              | Estuarine<br>crocodile        | II     |      | LC                                  | Indo-Pacific                       | no      |                  | Schedule I -<br>Spe                               |              |
| Crustacean  | Acanthacaris<br>tenuimana       | Prickly deep-sea<br>lobster   |        |      | LC                                  | Indo-west<br>Pacific               | unknown |                  |   |              |
| Crustacean  | Birgus latro                    | Cocounut crab                 |        |      | DD                                  | Indo-Pacific                       | no      |                  |   |              |
| Crustacean  | Palinurellus<br>wieneckii       | Indo-Pacific furry<br>lobster |        |      | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Crustacean  | Panulirus<br>penicillatus       | Pronghorn spiny<br>lobster    |        |      | LC                                  | widespread                         | no      |                  |   |              |
| Crustacean  | Polycheles typhlops             | Decapod                       |        |      | LC                                  | widespread                         | no      |                  |   |              |
| Crustacean  | Stereomastis helleri            | Decapod                       |        |      | LC                                  | western<br>Pacific, deep           | no      |                  |   |              |
| Curlew      | Numenius<br>tahitiensis         | Bristle-thighed curlew        |        | 1/11 | VU                                  | 95900                              | yes     |                  |   |              |
| Cusk-eel    | Abyssobrotula<br>galatheae      | Cusk-eel                      |        |      | LC                                  | cosmopolitan,<br>deep waters       | no      |                  |   |              |
| Cusk-eel    | Acanthonus<br>armatus           | Bony-eared<br>assfish         |        |      | LC                                  | circumglobal,<br>deep              | no      | 9                |   |              |
| Cusk-eel    | Apagesoma<br>delosommatus       | Cusk-eel                      |        |      | LC                                  | rare, deep                         | no      | 2                |   |              |
| Cusk-eel    | Bassozetus<br>compressus        | Abyssal cusk-eel              |        |      | LC                                  | widespread,<br>deep                | no      |                  |   |              |
| Cusk-eel    | Diancistrus<br>novaeguineae     | New Guinea vivipar<br>brotula | ous    |      | LC                                  | western<br>central Pacific         | no      |                  |   |              |
| Cusk-eel    | Spectrunculus<br>grandis        | Giant cusk-eel                |        |      | LC                                  | circumglobal,<br>deep              | no      |                  |   |              |
| Cutlassfish | Trichiurus lepturus             | Common hairtail               |        |      | LC                                  | circumglobal                       | no      |                  |   |              |
| Damselfish  | Abudefduf lorenzi               | Blacktail<br>sergeant         |        |      | LC                                  | western and central Pacific        | no      |                  |   |              |
| Damselfish  | Abudefduf<br>septemfasciatus    | Seven-banded sergeant         |        |      | LC                                  | Indo-Pacific                       | no      | 2                |   |              |
| Damselfish  | Abudefduf<br>sexfasciatus       | Scissortail<br>sergeant       |        |      | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Damselfish  | Abudefduf sordidus              | Blackspot<br>sergeant         |        |      | LC                                  | Indo-Pacific                       | no      | 9                |   |              |
| Damselfish  | Abudefduf<br>vaigiensis         | Five-banded sergeant          |        |      | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Damselfish  | Acanthochromis polyacanthus     | Spiny chromis                 |        |      | LC                                  | Indo-<br>Australian<br>archipelago | no      |                  |   |              |
| Damselfish  | Amblyglyphidodon<br>aureus      | Golden damsel                 |        |      | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Damselfish  | Amblyglyphidodon<br>curacao     | Black-snouted sergeant-major  |        |      | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Damselfish  | Amblyglyphidodon<br>leucogaster | White-breasted serg           | geant- |      | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Damselfish  | Amblyglyphidodon<br>ternatensis | Ternate damsel                |        |      | VU                                  | Coral Triangle                     | no      |                  |   |              |
| Damselfish  | Amblypomacentrus<br>breviceps   | Black-banded<br>demoiselle    |        |      | LC                                  | Coral Triangle                     | no      |                  |   |              |
| Damselfish  | Amphiprion<br>chrysopterus      | Orange-fin<br>anemonefish     |        |      |                                     | Indo-Pacific                       | no      |                  | Schedule I -<br>Exp                               |              |
| Damselfish  | Amphiprion clarkii              | Clark's<br>anemonefish        |        |      |                                     | Indo-Pacific                       | no      |                  | Schedule I -<br>Exp                               |              |

| Таха       | Scientific Name               | Common Name                           | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                             | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM                                 |
|------------|-------------------------------|---------------------------------------|-------|-----|-------------------------------------|--|---------|------------------|---|--|
| Damselfish | Amphiprion<br>leucokranos     | Whitebonnet<br>anemonefish            |       |     |                                     | Indo-Pacific   | no      |                  | Schedule I -<br>Exp                               |  |
| Damselfish | Amphiprion<br>melanopus       | Black<br>anemonefish                  |       |     | LC                                  | Indo-west<br>Pacific                                 | no      |                  | Schedule I -<br>Exp                               |  |
| Damselfish | Amphiprion percula            | Clown<br>anemonefish                  |       |     | LC                                  | Indo-west<br>Pacific                                 | no      |                  | Schedule I -<br>Exp                               |  |
| Damselfish | Amphiprion perideraion        | Pink<br>anemonefish                   |       |     | LC                                  | western<br>Pacific                                   | no      |                  | Schedule I -<br>Exp                               | <ul> <li>Prohibited</li> <li>orts</li> </ul> |
| Damselfish | Amphiprion<br>polymnus        | Saddleback<br>clownfish               |       |     | LC                                  | western<br>Pacific                                   | no      |                  | Schedule I -<br>Exp                               | <ul> <li>Prohibited</li> <li>orts</li> </ul> |
| Damselfish | Amphiprion<br>sandaracinos    | Orange skunk<br>clownfish             |       |     | LC                                  | Indo-Pacific   | no      |                  | Schedule I -<br>Exp                               | <ul> <li>Prohibited<br/>orts</li> </ul>      |
| Damselfish | Chromis alpha                 | Yellow-speckled chromis               |       |     | LC                                  | Indo-Pacific   | no      |                  |   |  |
| Damselfish | Chromis<br>amboinensis        | Ambon chromis                         |       |     | LC                                  | Coral Triangle                                       | no      |                  |   |  |
| Damselfish | Chromis analis                | Yellow chromis                        |       |     | LC                                  | western<br>Pacific                                   | no      |                  |   |  |
| Damselfish | Chromis atripes               | Dark-fin chromis                      |       |     | LC                                  | western<br>Pacific                                   | no      |                  |   |  |
| Damselfish | Chromis caudalis              | Blue-axil<br>chromis                  |       |     | LC                                  | Indo-Pacific   | no      |                  |   |  |
| Damselfish | Chromis delta                 | Deep reef<br>chromis                  |       |     | LC                                  | western<br>Pacific                                   | no      |                  |   |  |
| Damselfish | Chromis elerae                | Twin-spot<br>chromis                  |       |     | LC                                  | Indo-Pacific   | no      |                  |   |  |
| Damselfish | Chrysiptera<br>unimaculata    | One-spot<br>demoiselle                |       |     | LC                                  | Indo-Pacific   | no      |                  |   |  |
| Damselfish | Neopomacentrus<br>aquadulcis  | Damselfish                            |       |     | EN                                  | PNG,<br>Solomon<br>Islands                           | no      |                  |   |  |
| Damselfish | Neopomacentrus<br>taeniurus   | Freshwater<br>damsel                  |       |     | DD                                  | Indo-Pacific   | no      |                  |   |  |
| Damselfish | Premnas<br>biaculeatus        | Spinecheek<br>anemonefish             |       |     |                                     | Indo-Pacific   | no      |                  | Schedule I -<br>Exp                               |  |
| Dartfish   | Ptereleotris evides           | Blackfin dartfish                     |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific                        | no      |                  |   |  |
| Dartfish   | Ptereleotris<br>heteroptera   | Blacktail goby                        |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific                        | no      |                  |   |  |
| Dolphin    | Globicephala<br>macrorhynchus | Short-finned pilot whale              | 11    |     | DD                                  | tropical, warm<br>subtropical,<br>deep waters        | unknown |                  |   |  |
| Dolphin    | Grampus griseus               | Risso's dolphin                       | II    | П   | LC                                  | cosmopolitan,<br>deep waters                         | unknown | 3                |   |  |
| Dolphin    | Peponocephala<br>electra      | Melon-headed<br>whale                 | II    |     | LC                                  | circumtropical                                       | no      |                  |   |  |
| Dolphin    | Stenella attenuata            | Pantropical spotted dolphin           | 11    | 11  | LC                                  | circumtropical                                       | no      | 5                |   |  |
| Dolphin    | Stenella<br>coeruleoalba      | Striped dolphin                       | 11    | 11  | LC                                  | widespread   | no      | <u>.</u>         |   |  |
| Dolphin    | Stenella longirostris         | Spiner dolphin                        | II    | II  | DD                                  | circumtropical<br>and<br>subtropical                 | unknown |                  | 3   |  |
| Dolphin    | Steno bredanensis             | Rough-toothed<br>dolphin              | II    |     | LC                                  | circumtropical<br>and<br>subtropical,<br>deep waters | unknown |                  |   |  |
| Dolphin    | Tursiops aduncus              | Indo-Pacific<br>bottlenose<br>dolphin | II    | II  | DD                                  | Indo-Pacific   | no      |                  |   |  |

| Таха        | Scientific Name                  | Common Name                     | CITES | смѕ  | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------------|----------------------------------|---------------------------------|-------|------|-------------------------------------|--|---------|------------------|---|--------------|
| Dolphin     | Tursiops truncatus               | Common<br>bottlenose<br>dolphin | II    | 1/11 | LC                                  | circumglobal                               | no      |                  |   |              |
| Dolphinfish | Coryphaena<br>hippurus           | Dolphinfish                     |       |      | LC                                  | widespread                                 | yes     |                  |   |              |
| Dottyback   | Amsichthys knighti               | Knight's<br>dottyback           |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |              |
| Dottyback   | Cypho<br>purpurascens            | Oblique-lined<br>dottyback      |       |      | LC                                  | restricted                                 | no      |                  |   |              |
| Dottyback   | Lubbockichthys<br>multisquamatus | Manyscaled<br>dottyback         |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |              |
| Dottyback   | Pictichromis paccagnellae        | Royal dottyback                 |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |              |
| Dottyback   | Pseudochromis<br>bitaeniatus     | Two-lined<br>dottyback          |       |      | LC                                  | tropical west<br>Pacific                   | no      |                  |   |              |
| Dottyback   | Pseudochromis<br>cyanotaenia     | Bluebarred<br>dottyback         |       |      | LC                                  | western<br>Pacific                         | no      |                  |   |              |
| Dottyback   | Pseudochromis<br>jamesi          | Spot-tail<br>dottyback          |       |      | LC                                  | south-west<br>Pacific                      | no      |                  |   |              |
| Dottyback   | Pseudochromis<br>marshallensis   | Marshall<br>dottyback           |       |      | LC                                  | western<br>Pacific                         | no      |                  |   |              |
| Dottyback   | Pseudochromis<br>tapeinosoma     | Horseshoe-tailed dottyback      |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |              |
| Dottyback   | Pseudoplesiops<br>annae          | Anna's dottyback                |       |      | LC                                  | western<br>Pacific                         | no      |                  |   |              |
| Dottyback   | Pseudoplesiops<br>rosae          | Rose Island<br>dottyback        |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |              |
| Dottyback   | Pseudoplesiops<br>typus          | Ring-eyed<br>dottyback          |       |      | LC                                  | western<br>Pacific                         | no      |                  |   |              |
| Dottyback   | Pseudoplesiops<br>wassi          | Fleckfin<br>dottyback           |       |      | LC                                  | western<br>Pacific                         | no      |                  |   |              |
| Dragnofish  | Aristostomias<br>Iunifer         | Dragonfish                      |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |
| Dragonfish  | Astronesthes<br>indicus          | Dragonfish                      |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |
| Dragonfish  | Bathophilus<br>schizochirus      | Dragonfish                      |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |
| Dragonfish  | Eurypegasus<br>draconis          | Short dragonfish                |       |      | LC                                  | widespread                                 | no      |                  |   |              |
| Dragonfish  | Eustomias braueri                | Dragonfish                      |       |      | DD                                  | widespread,<br>deep                        | no      |                  |   |              |
| Dragonfish  | Eustomias<br>macrurus            | Scaleless<br>dragonfish         |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |
| Dragonfish  | Eustomias<br>satterleei          | Dragonfish                      |       |      | LC                                  | Subtropical,<br>temperate,<br>deep         | no      |                  |   |              |
| Dragonfish  | Eustomias simplex                | Dragonfish                      |       |      | LC                                  | Subtropical,<br>temperate,<br>deep         | no      |                  |   |              |
| Dragonfish  | Flagellostomias<br>boureei       | Longbarb<br>dragonfish          |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |
| Dragonfish  | Grammatostomias<br>dentatus      | Barbeled<br>dragonfish          |       |      | LC                                  | widespread,<br>deep                        | no      |                  |   |              |
| Dragonfish  | Idiacanthus fasciola             |                                 |       |      | LC                                  | circumglobal,<br>temperate,<br>subtropical | no      |                  |   |              |
| Dragonfish  | Malacosteus niger                | Black loosejaw                  |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |
| Dragonfish  | Melanostomias<br>melanops        | Dragonfish                      |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |
| Dragonfish  | ,<br>Melanostomias<br>valdiviae  | Valdivia black<br>dragonfish    |       |      | LC                                  | circumglobal,<br>deep                      | no      |                  |   |              |

| Таха       | Scientific Name               | Common Name                    | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                     | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------|-------------------------------|--------------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Dragonfish | Photonectes<br>margarita      | Dragonfish                     |       |     | LC                                  | widespread,<br>deep                             | no      |                  |   |              |
| Dragonfish | Photonectes<br>parvimanus     | Dragonfish                     |       |     | LC                                  | Subtropical,<br>temperate,<br>deep              | no      |                  |   |              |
| Dragonfish | Stomias affinis               | Dragonfish                     |       |     | LC                                  | circumglobal,<br>deep                           | no      |                  |   |              |
| Dragonfish | Thysanactis dentex            | Dragonfish                     |       |     | LC                                  | widespread,<br>deep                             | no      |                  |   |              |
| Driftfish  | Cubiceps capensis             | Cape cigarfish                 |       |     | LC                                  | circumtropical, rare                            | no      |                  |   |              |
| Driftfish  | Cubiceps<br>pauciradiatus     | Bigeye cigarfish               |       |     | LC                                  | widespread,<br>deep                             | no      |                  |   |              |
| Driftfish  | Nomeus gronovii               | Man-of-war fish                |       |     | LC                                  | circumglobal,<br>deep                           | no      |                  |   |              |
| Driftfish  | Psenes arafurensis            | Banded driftfish               |       |     | LC                                  | circumglobal                                    | no      |                  |   |              |
| Driftfish  | Psenes cyanophrys             | Freckled driftfish             |       |     | LC                                  | circumglobal                                    | no      |                  |   |              |
| Driftfish  | Psenes pellucidus             | Bluefin driftfish              |       |     | LC                                  | circumglobal                                    | no      |                  |   |              |
| Duck       | Anas superciliosa             | Pacific black<br>duck          |       |     | LC                                  | 49800000  | no      |                  |   |              |
| Eel        | Anguilla marmorata            | Marbled eel                    |       |     | LC                                  | western and<br>central Pacific,<br>Indian Ocean | yes     |                  |   |              |
| Eel        | Anguilla<br>megastoma         | Pacific long-<br>finned eel    |       |     | DD                                  | Pacific   | yes     |                  |   |              |
| Egret      | Ardea alba                    | Great white egret              |       | П   | LC                                  | 34000000  | yes     |                  |   |              |
| Egret      | Egretta sacra                 | Pacific reef-egret             |       |     | LC                                  | 88800000  | yes     |                  |   |              |
| Emperor    | Gnathodentex<br>aureolineatus | Goldspot<br>emperor            |       |     | LC                                  | widespread                                      | no      |                  |   |              |
| Emperor    | Gymnocranius<br>euanus        | Japanese large-<br>eyed bream  |       |     | LC                                  | western<br>Pacific                              | no      |                  |   |              |
| Emperor    | Gymnocranius<br>grandoculis   | Blue-lined large-<br>eye bream |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus<br>amboinensis      | Ambon emperor                  |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Emperor    | Lethrinus atkinsoni           | Pacific yellowtail emperor     |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus<br>erythracanthus   | Orange-spotted emperor         |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus<br>erythropterus    | Longfin emperor                |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus harak               | Thumbprint<br>emperor          |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus lentjan             | Pinkear emperor                |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Emperor    | Lethrinus<br>nebulosus        | Spangled<br>emperor            |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus obsoletus           | Orange-striped<br>emperor      |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus olivaceus           | Longnose<br>emperor            |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus<br>rubrioperculatus | Spotcheek<br>emperor           |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus<br>semicinctus      | Black-spot<br>emperor          |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Emperor    | Lethrinus<br>variegatus       | Slender emperor                |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Emperor    | Lethrinus<br>xanthochilus     | Yellowlip<br>emperor           |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |

| Таха           | Scientific Name              | Common Name                     | CITES | СМS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|----------------|------------------------------|---------------------------------|-------|-----|-------------------------------------|----------------------------|---------|------------------|---|--------------|
| Emperor        | Monotaxis<br>grandoculis     | Bigeye bream                    |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Emperor        | Monotaxis<br>heterodon       | Redfin emperor                  |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| False moray    | Kaupichthys<br>brachychirus  | Shortfin false<br>moray         |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Fangtooth      | Anoplogaster<br>cornuta      | Common<br>fangtooth             |       |     | LC                                  | widespread,<br>deep        | no      |                  |   |              |
| Filefish       | Pervagor<br>melanocephalus   | Redtail filefish                |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Filefish       | Pervagor<br>nigrolineatus    | Blacklined filefish             |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Flathead       | Cociella punctata            | Spotted flathead                |       |     | LC                                  | western<br>central Pacific | no      |                  |   |              |
| Flathead       | Cymbacephalus<br>beauforti   | Crocodile fish                  |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Flathead       | Onigocia oligolepis          | Largescaled flathead            |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Flathead       | Onigocia<br>pedimacula       | Broadband<br>flathead           |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Flathead       | Sunagocia<br>otaitensis      | Fringelip<br>flathead           |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Flathead       | Thysanophrys<br>celebica     | Celebes flathead                |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Flathead       | Thysanophrys<br>chiltonae    | Longsnout<br>flathead           |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Flounder       | Asterorhombus<br>intermedius | Blotched fliunder               |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Flounder       | Engyprosopon<br>grandisquama | Largescale<br>flounder          |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Flutemouth     | Aulostomus<br>chinensis      | Flutemouth                      |       |     | LC                                  | widespread                 | no      |                  |   |              |
| Flutemouth     | Fistularia<br>commersonii    | Flutemouth                      |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Flutemouth     | Fistularia petimba           | Red cornetfish                  |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Flying fish    | Cheilopogon<br>furcatus      | Spotfin flying fish             |       |     | LC                                  | circumtropical             | no      |                  |   |              |
| Flying fish    | Cheilopogon<br>heterurus     | Blotchwing flying fish          |       |     | LC                                  | widespread                 | no      |                  |   |              |
| Flying fish    | Cheilopogon<br>nigricans     | Blacksail<br>flyingfish         |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Flying fish    | Exocoetus volitans           | Two-winged<br>flying fish       |       |     | LC                                  | circumtropical             | yes     |                  |   |              |
| Flying fish    | Hirundichthys<br>speculiger  | Black-finned flying fish        |       |     | LC                                  | circumtropical             | yes     |                  |   |              |
| Flying gurnard | Dactyloptera<br>orientalis   | Oriental flying<br>gurnard      |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Frigatebird    | Fregata ariel                | Lesser<br>frigatebird           |       |     | LC                                  | 167000000                  | no      |                  |   |              |
| Frigatebird    | Fregata minor                | Great frigatebird               |       |     | LC                                  | 126000000                  | no      |                  |   |              |
| Frogfish       | Antennatus<br>nummifer       | Spotfin frogfish                |       |     | LC                                  | widespread,<br>deep        | no      |                  |   |              |
| Fusilier       | Caesio caerulaurea           | Blue and gold fusilier          |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Fusilier       | Caesio lunaris               | Lunar fusilier                  |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Fusilier       | Caesio teres                 | Yellow and<br>blueback fusilier |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Fusilier       | Gymnocaesio<br>gymnoptera    | Slender fusilier                |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |

| Таха       | Scientific Name            | Common Name              | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                       | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------|----------------------------|--------------------------|-------|-----|-------------------------------------|-----------------------------------|---------|------------------|---|--------------|
| Fusilier   | Pterocaesio<br>digramma    | Double-lined<br>fusilier |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Fusilier   | Pterocaesio<br>lativittata | Whiteband<br>fusilier    |       |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Fusilier   | Pterocaesio marri          | Marr's fusilier          |       |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Fusilier   | Pterocaesio pisang         | Banana fusilier          |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Fusilier   | Pterocaesio<br>tessellata  | Onestripe fusilier       |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Fusilier   | Pterocaesio tile           | Dark-banded<br>fusilier  |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific     | no      |                  |   |              |
| Fusilier   | Pterocaesio<br>trilineata  | Three-lined<br>fusilier  |       |     | LC                                  | western<br>Pacific                | no      |                  |   |              |
| Garden eel | Gorgasia maculata          | Whitespotted garden eel  |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Cerithium coralium         | Coral cerith             |       |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Gastropod  | Conus achatinus            | Turtle cone              |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus acutangulus          | Sharp-angled cone        |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus adamsonii            | Rhododendron cone        |       |     | LC                                  | Central Indo-<br>Pacific          | no      |                  |   |              |
| Gastropod  | Conus ammiralis            | Admiral cone             |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus arenatus             | Sand-dusted cone         |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus artoptus             | Tender cone              |       |     | LC                                  | Coral Triangle                    | no      |                  |   |              |
| Gastropod  | Conus aulicus              | Court cone               |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus aureus               | Aureus cone              |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus auricomus            | Gold-leaf cone           |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus australis            | Austral cone             |       |     | LC                                  | western<br>Pacific                | no      |                  |   |              |
| Gastropod  | Conus baileyi              | Cone snail               |       |     | LC                                  | western<br>Pacific,<br>restricted | no      | 2                |   |              |
| Gastropod  | Conus balteatus            | Mauritian cone           |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus bandanus             | Banded marble cone       |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus betulinus            | Betuline cone            |       |     | LC                                  | Indo-west<br>Pacific              | no      |                  |   |              |
| Gastropod  | Conus biliosus             | Bilious cone             |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus boeticus             | Boeticus cone            |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus bullatus             | Bubble cone              |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus canonicus            | Tiger cone               |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus capitaneus           | Captain cone             |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus catus                | Cat cone                 |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus chaldaeus            | Worm cone                |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus cinereus             | Sunburnt cone            |       |     | LC                                  | western<br>Pacific                | no      |                  |   |              |
| Gastropod  | Conus circumactus          | Cone snail               |       |     | LC                                  | Indo-Pacific                      | no      |                  |   |              |
| Gastropod  | Conus circumcisus          | Auger cone               |       |     | LC                                  | western<br>Pacific                | no      | <u>.</u>         |   |              |
| Gastropod  | Conus coccineus            | Scarlet cone             |       |     | LC                                  | Coral Triangle                    | no      |                  |   |              |

| Таха      | Scientific Name    | Common Name            | CITES | СМЗ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                         | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-----------|--------------------|------------------------|-------|-----|-------------------------------------|-------------------------------------|---------|------------------|---|--------------|
| Gastropod | Conus coelinae     | Celine's cone          |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Gastropod | Conus coffeae      | Coffee cone            |       |     | LC                                  | western and central Pacific         | no      |                  |   |              |
| Gastropod | Conus collisus     | Stigmatic cone         |       |     | LC                                  | Indian Ocean,<br>western<br>Pacific | no      |                  |   |              |
| Gastropod | Conus comatosa     | Comatose cone          |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Gastropod | Conus consors      | Singed cone            |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus corallinus   | Cone snail             |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Gastropod | Conus coronatus    | Crowned cone           |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus crocatus     | Saffron cone           |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Gastropod | Conus cumingii     | Cuming's cone          |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus cylindraceus | Cylindrical cone       |       |     | LC                                  | Indian Ocean,<br>western<br>Pacific | no      |                  |   |              |
| Gastropod | Conus distans      | Distant cone           |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus ebraeus      | Black-and-white cone   |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus eburneus     | lvory cone             |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus eldredi      | Cone snail             |       |     | DD                                  | central Pacific                     | no      |                  |   |              |
| Gastropod | Conus emaciatus    | False virgin cone      |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus episcopatus  | Dignified cone         |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus excelsus     | Excelsior cone         |       |     | LC                                  | Central Indo-<br>Pacific            | no      |                  |   |              |
| Gastropod | Conus ferrugineus  | Cone snail             |       |     | LC                                  | Central Indo-<br>Pacific            | no      |                  |   |              |
| Gastropod | Conus flavidus     | Yellow Pacific<br>cone |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus flavus       | Cone snail             |       |     | LC                                  | Coral Triangle                      | no      |                  |   |              |
| Gastropod | Conus floccatus    | Snow-flaked cone       |       |     | LC                                  | Coral Triangle                      | no      |                  |   |              |
| Gastropod | Conus floridulus   | Cone snail             |       |     | LC                                  | Central Indo-<br>Pacific            | no      |                  |   |              |
| Gastropod | Conus frigidus     | Frigid cone            |       |     | LC                                  | Central and<br>western<br>Pacific   | no      |                  |   |              |
| Gastropod | Conus gabryae      | Cone snail             |       |     | DD                                  | Solomon<br>Islands                  | no      |                  |   |              |
| Gastropod | Conus generalis    | General cone           |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus geographus   | Geography cone         |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus gilvus       | Cone snail             |       |     | LC                                  | Coral Triangle                      | no      |                  |   |              |
| Gastropod | Conus glans        | Acorn cone             |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus glaucus      | Glaucous cone          |       |     | LC                                  | Coral Triangle                      | no      |                  |   |              |
| Gastropod | Conus gloriamaris  | Glory of the Sea cone  |       |     | LC                                  | Coral Triangle                      | no      |                  |   |              |
| Gastropod | Conus granum       | Cone snail             |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Gastropod | Conus hopwoodi     | Cone snail             |       |     | LC                                  | Coral Triangle                      | no      |                  |   |              |
| Gastropod | Conus hyaena       | Hyena cone             |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Gastropod | Conus hypochlorus  | Cone snail             |       | -   | DD                                  | Coral Triangle                      | no      |                  |   |              |

| Таха      | Scientific Name   | Common Name        | CITES | СМЗ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                            | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-----------|-------------------|--------------------|-------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Gastropod | Conus imperialis  | Imperial cone      |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus joliveti    | Cone snail         |       |     | DD                                  | Fiji, Indonesia,<br>Solomon<br>Islands | no      | 5                |   |              |
| Gastropod | Conus kinoshitai  | Kinoshita's cone   |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus legatus     | Ambassador<br>cone |       |     | LC                                  | Indo-Pacific                           | no      | 3                |   |              |
| Gastropod | Conus lenavati    | Cone snail         |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus leobrerai   | Cone snail         |       |     | LC                                  | Philippines,<br>Solomon<br>Islands     | no      |                  |   |              |
| Gastropod | Conus leopardus   | Leopard cone       |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus lienardi    | Lienard's cone     |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus litoglyphus | Lythograph cone    |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus litteratus  | Lettered cone      |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus lividus     | Livid cone         |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus loroisii    | Cone snail         |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus lynceus     | Lynceus cone       |       |     | LC                                  | western<br>Pacific                     | no      |                  |   |              |
| Gastropod | Conus magnificus  | Magnificent cone   |       |     | LC                                  | western<br>Pacific                     | no      |                  |   |              |
| Gastropod | Conus magus       | Magical cone       |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus marmoreus   | Marbled cone       |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus memiae      | Memi's cone        |       |     | LC                                  | western<br>Pacific                     | no      |                  |   |              |
| Gastropod | Conus miles       | Soldier cone       |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus miliaris    | Thousand-spot cone |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus mitratus    | Mitred cone        |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus moluccensis | Molucca cone       |       |     | LC                                  | Indian Ocean,<br>western<br>Pacific    | no      |                  |   |              |
| Gastropod | Conus monachus    | Supreme cone       |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus moreleti    | Cone snail         |       |     | LC                                  | Indian Ocean,<br>western<br>Pacific    | no      |                  |   |              |
| Gastropod | Conus moylani     | Cone snail         |       |     | DD                                  | Solomon<br>Islands                     | no      |                  |   |              |
| Gastropod | Conus mucronatus  | Deep-groved cone   |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus muriculatus | Muricate cone      |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus musicus     | Music cone         |       |     | LC                                  | Central Indo-<br>Pacific               | no      |                  |   |              |
| Gastropod | Conus mustelinus  | Ermine cone        |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus neptunus    | Neptune cone       |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus nussatella  | Nussatella cone    |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus obscurus    | Obscure cone       |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus ochroleucus | Perfect cone       |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus omaria      | Omaria cone        |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |
| Gastropod | Conus parius      | Parian cone        |       |     | LC                                  | Coral Triangle                         | no      |                  |   |              |
| Gastropod | Conus pertusus    | Lovely cone        |       |     | LC                                  | Indo-Pacific                           | no      |                  |   |              |

| Таха      | Scientific Name          | Common Name        | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                     | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-----------|--------------------------|--------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Gastropod | Conus planorbis          | Ringed cone        |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus praecellens        | Admirable cone     |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus proximus           | Proximus cone      |       |     | LC                                  | western<br>Pacific                              | no      |                  |   |              |
| Gastropod | Conus pulicarius         | Flea cone          |       |     | LC                                  | Central and<br>western<br>Pacific               | no      |                  |   |              |
| Gastropod | Conus quercinus          | Oak cone           |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus radiatus           | Rayed cone         |       |     | LC                                  | western<br>Pacific                              | no      |                  |   |              |
| Gastropod | Conus ranonganus         | Cone snail         |       |     | LC                                  | Coral Triangle                                  | no      |                  |   |              |
| Gastropod | Conus rattus             | Rat cone           |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus recluzianus        | Recluz cone        |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus retifer            | Netted cone        |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus roseorapum         | Cone snail         |       |     | LC                                  | western<br>Pacific                              | no      |                  |   |              |
| Gastropod | Conus saecularis         | Cone snail         |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus<br>sanguinolentus  | Blood-stained cone |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus sertacinctus       | Cone snail         |       |     | LC                                  | Coral Triangle                                  | no      |                  |   |              |
| Gastropod | Conus<br>solomonensis    | Cone snail         |       |     | DD                                  | Solomon<br>Islands                              | no      |                  |   |              |
| Gastropod | Conus sponsalis          | Sponsal cone       |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus<br>stercusmuscarum | Fly-specked cone   |       |     | LC                                  | western<br>Pacific                              | no      |                  |   |              |
| Gastropod | Conus stramineus         | Nisus cone         |       |     | LC                                  | Coral Triangle                                  | no      |                  |   |              |
| Gastropod | Conus striatellus        | Cone snail         |       |     | LC                                  | Indo-west<br>Pacific                            | no      |                  |   |              |
| Gastropod | Conus striatus           | Striated cone      |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus striolatus         | Cone snail         |       |     | LC                                  | western<br>Pacific                              | no      |                  |   |              |
| Gastropod | Conus stupa              | Cone snail         |       |     | LC                                  | Coral Triangle                                  | no      |                  |   |              |
| Gastropod | Conus subulatus          | Cone snail         |       |     | DD                                  | Philippines,<br>Solomon<br>Islands,<br>Thailand | no      |                  |   |              |
| Gastropod | Conus sulcatus           | Grooved cone       |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus suratensis         | Surat cone         |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus tenuistriatus      | Thin-line cone     |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus terebra            | Cone snail         |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus tessulatus         | Tessellated cone   |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus textile            | Textile cone       |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus tribblei           | Tribble's cone     |       |     | LC                                  | western<br>Pacific                              | no      |                  |   |              |
| Gastropod | Conus tulipa             | Tulip cone         |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus varius             | Freckled cone      |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus vexillum           | Flag cone          |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus viola              | Violet cone        |       |     | LC                                  | Coral Triangle                                  | no      |                  |   |              |
| Gastropod | Conus virgo              | Cone snail         |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |
| Gastropod | Conus voluminalis        | Voluminous<br>cone |       |     | LC                                  | Indo-Pacific                                    | no      |                  |   |              |

| Таха      | Scientific Name                 | Common Name                 | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                              | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-----------|---------------------------------|-----------------------------|-------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Gastropod | Conus zebra                     | Cone snail                  |       |     | DD                                  | Indonesia,<br>PNG,<br>Solomon<br>Islands | no      |                  |   |              |
| Gastropod | Neripteron bensoni              | Gastropod                   |       |     | LC                                  | restricted                               | no      |                  |   |              |
| Gastropod | Neritilia vulgaris              | Gastropod                   |       |     | LC                                  | Pacific                                  | no      |                  |   |              |
| Glassfish | Ambassis interrupta             | Long-spined<br>glassfish    |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Goatfish  | Mulloidichthys<br>flavolineatus | Yellowstripe<br>goatfish    |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Goatfish  | Mulloidichthys<br>vanicolensis  | Yellowfin<br>goatfish       |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goatfish  | Parupeneus<br>barberinoides     | Bicolor goatfish            |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Goatfish  | Parupeneus<br>barnerinus        | Dash-and-dot<br>goatfish    |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goatfish  | Parupeneus ciliatus             | Whitesaddle<br>goatfish     |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific            | no      |                  |   |              |
| Goatfish  | Parupeneus<br>crassilabris      | Thicklipped<br>goatfish     |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goatfish  | Parupeneus<br>cyclostomus       | Goldsaddle<br>goatfish      |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Goatfish  | Parupeneus<br>heptacanthus      | Cinnabar<br>goatfish        |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Goatfish  | Parupeneus indicus              | Indian goatfish             |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goatfish  | Parupeneus<br>multifasciatus    | Banded goatfish             |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goatfish  | Parupeneus<br>pleurostigma      | Sidespot<br>goatfish        |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific            | no      |                  |   |              |
| Goatfish  | Upeneus vittatus                | Yellowstriped goatfish      |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Amblyeleotris<br>wheeleri       | Gorgeous<br>shrimpgoby      |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Ancistrogobius<br>yanoi         | Yano's goby                 |       |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Goby      | Asterropteryx<br>ensifera       | Miller's damsel             |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Asterropteryx<br>spinosa        | Eyebar spiny<br>goby        |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Goby      | Awaous<br>melanocephalus        | Largesnout goby             |       |     | DD                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Awaous ocellaris                | Goby                        |       |     | LC                                  | Melanesia                                | no      |                  |   |              |
| Goby      | Bryaninops<br>erythrops         | Erythrops goby              |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Bryaninops loki                 | Loki whip-goby              |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Bryaninops tigris               | Black coral goby            |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Bryaninops yongei               | Seawhip goby                |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Cabillus tongarevae             | Tongareva goby              |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Callogobius clitellus           | Saddled goby                |       |     | LC                                  | Coral Triangle                           | no      |                  |   |              |
| Goby      | Cryptocentrus caeruleomaculatus | Blue-speckled shrimpgoby    |       |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Goby      | Cryptocentrus<br>strigilliceps  | Target<br>shrimpgoby        |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Ctenogobiops<br>aurocingulus    | Gold-streaked<br>shrimpgoby |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Goby      | Ctenogobiops<br>crocineus       | Silverspot<br>shrimpgoby    |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |

| Таха | Scientific Name                | Common Name               | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> ) | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------|--------------------------------|---------------------------|-------|-----|-------------------------------------|--------------------------|---------|------------------|---|--------------|
| Goby | Ctenogobiops<br>feroculus      | Sandy<br>shrimpgoby       |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Goby | Ctenogobiops<br>maculosus      | Seychelles<br>shrimpgoby  |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Eviota atriventris             | Blackbelly<br>dwarfgoby   |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota bifasciata              | Twostripe<br>dwarfgoby    |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota cometa                  | Comet<br>dwarfgoby        |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota fallax                  | Twin dwarfgoby            |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota lachdeberei             | Redlight<br>dwarfgoby     |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota lacrimae                | Teared<br>dwarfgoby       |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota latifasciata            | Brown-banded<br>dwarfgoby |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota nebulosa                | Palespot<br>dwarfgoby     |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Goby | Eviota prasites                | Hairfin<br>dwarfgoby      |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota punctulata              | Finspot<br>dwarfgoby      |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota<br>queenslandica        | Queensland<br>dwarfgoby   |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Goby | Eviota sigillata               | Adorned<br>dwarfgoby      |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Eviota smaragdus               | Earspot pygmy<br>goby     |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Eviota sparsa                  | Speckled pygmy<br>goby    |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Exyrias belissimus             | Mud reef-goby             |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Feia nympha                    | Nymph goby                |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Fusigobius<br>duospilus        | Barenaped goby            |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Fusigobius<br>humeralis        | Shoulderspot sandgoby     |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Goby | Fusigobius<br>neophytus        | Sand goby                 |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Goby | Gnatholepis<br>ophthalmotaenia | Goby                      |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Goby | Gobiopsis exigua               | Goby                      |       |     | LC                                  | central Pacific          | no      |                  |   |              |
| Goby | Gobiopsis<br>quinquecincta     | Fiveband<br>barbelgoby    |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Istigobius ornatus             | Ornate goby               |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Istigobius spence              | Pearl goby                |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Goby | Koumansetta<br>hectori         | Hector's goby             |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Goby | Koumansetta<br>rainfordi       | Old glory                 |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Goby | Lentipes kaaea                 | Goby                      |       |     | LC                                  | western<br>Pacific       | yes     |                  |   |              |
| Goby | Lentipes<br>solomonensis       | Goby                      |       |     | DD                                  | Solomon<br>Islands       | yes     |                  |   |              |
| Goby | Lotilia klausewitzi            | Whitecap<br>shrimpgoby    |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |

| Таха | Scientific Name                | Common Name              | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------|--------------------------------|--------------------------|-------|-----|-------------------------------------|----------------------------|---------|------------------|---|--------------|
| Goby | Macrodontogobius<br>wilburi    | Largetooth goby          |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Mahidolia<br>mystacina         | Flagfin<br>Shrimpgoby    |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Mangarinus<br>waterousi        | Goby                     |       |     | DD                                  | Coral Triangle             | no      |                  |   |              |
| Goby | Mugilogobius<br>notospilus     | Pacific<br>mangrove goby |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Goby | Oligolepis<br>acutipennis      | Paintedfin goby          |       |     | DD                                  | Indo-Pacific               | yes     |                  |   |              |
| Goby | Oligolepis stomias             | Plain teardrop<br>goby   |       |     | DD                                  | western<br>Pacific         | yes     |                  |   |              |
| Goby | Palutrus<br>scapulopunctatus   | Scapular goby            |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Paragobiodon<br>echinocephalus | Redhead coral goby       |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Paragobiodon<br>Iacunicolus    | Blackfin coral goby      |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Paragobiodon<br>melanosomus    | Dark coral goby          |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Goby | Paragobiodon<br>xanthosomus    | Emerald coral goby       |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Pleurosicya<br>coerulea        | Blue coral ghost goby    |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Pleurosicya fringilla          | Staghorn<br>ghostgoby    |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Pleurosicya micheli            | Michel's ghost<br>goby   |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Pleurosicya<br>mossambica      | Toothy goby              |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Pleurosicya<br>muscarum        | Ghost goby               |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Pleurosicya plicata            | Plicata ghost<br>goby    |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Priolepis inhaca               | Brick goby               |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Goby | Priolepis<br>semidoliata       | Barrel goby              |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Psammogobius<br>biocellatus    | Sleepy goby              |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Pseudogobius<br>poicilosoma    | Northern fatnose<br>goby |       |     | LC                                  | restricted                 | no      |                  |   |              |
| Goby | Redigobius<br>balteatus        | Girdled goby             |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Goby | Sicyopterus<br>Iagocephalus    | Goby                     |       |     | LC                                  | Indo-Pacific               | yes     |                  |   |              |
| Goby | Sicyopterus<br>longifilis      | Goby                     |       |     | DD                                  | restricted                 | yes     |                  |   |              |
| Goby | Sicyopus<br>discordipinnis     | Goby                     |       |     | DD                                  | restricted                 | yes     |                  |   |              |
| Goby | Sicyopus<br>zosterophorus      | Goby                     |       |     | LC                                  | western<br>Pacific         | yes     |                  |   |              |
| Goby | Stenogobius hoesei             | Goby                     |       |     | LC                                  | PNG,<br>Solomon<br>Islands | yes     |                  |   |              |
| Goby | Stiphodon atratus              | Goby                     |       |     | LC                                  | western<br>Pacific         | yes     |                  |   |              |
| Goby | Stiphodon birdsong             | Goby                     |       |     | LC                                  | restricted                 | yes     |                  |   |              |
| Goby | Stiphodon<br>rutilaureus       | Goby                     |       |     | LC                                  | western<br>Pacific         | yes     |                  |   |              |

| Таха     | Scientific Name               | Common Name                   | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)           | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|----------|-------------------------------|-------------------------------|-------|-----|-------------------------------------|-----------------------|---------|------------------|---|--------------|
| Goby     | Stiphodon semoni              | Goby                          |       |     | DD                                  | western<br>Pacific    | yes     |                  |   |              |
| Goby     | Trimma anaima                 | Sharp-eye<br>pygmy-goby       |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Trimma annosum                | Grey-bearded<br>pygmy-goby    |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Goby     | Trimma benjamini              | Ring-eye pygmy-<br>goby       |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma<br>capostriatum        | Pygmy-goby                    |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma emeryi                 | Emery's goby                  |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Trimma fangi                  | Fang's pygmy-<br>goby         |       |     | LC                                  | Coral Triangle        | no      |                  |   |              |
| Goby     | Trimma flavatrum              | Wasp pygmy-<br>goby           |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma haimassum              | Blood-spot<br>pygmy-goby      |       |     | LC                                  | Coral Triangle        | no      |                  |   |              |
| Goby     | Trimma halonevum              | Redspot<br>dwarfgoby          |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Goby     | Trimma hayashii               | Four-eye pygmy-<br>goby       |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma hoesei                 | Forktail<br>dwarfgoby         |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Goby     | Trimma lantana                | Lantana<br>dwarfgoby          |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma<br>macrophthalmum      | Flame goby                    |       |     | LC                                  | western<br>Pacific    | no      | 3                |   |              |
| Goby     | Trimma maiandros              | Meander<br>dwarfgoby          |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Trimma milta                  | Redearth<br>dwarfgoby         |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma nasa                   | Nasal dwarfgoby               |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma okinawae               | Okinawa rubble<br>goby        |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma preclarum              | Exquisite<br>pygmy-goby       |       |     | LC                                  | western<br>Pacific    | no      |                  |   |              |
| Goby     | Trimma stobbsi                | Stobbs'<br>dwarfgoby          |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Trimma taylori                | Yellow cave<br>goby           |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Trimma tevegae                | Blue-striped<br>cave goby     |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Goby     | Trimmatom nanus               | Midget<br>dwarfgoby           |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Valenciennea parva            | Parva goby                    |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Valenciennea<br>puellaris     | Maiden goby                   |       |     | LC                                  | Indo-Pacific          | no      |                  | · · · · · · · · · · · · · · · · · · ·             |              |
| Goby     | Vanderhorstia<br>ambanoro     | Ambanoro<br>shrimpgoby        |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Goby     | Vanderhorstia<br>ornatissima  | Ornate<br>shrimpgoby          |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Goby     | Vanderhorstia<br>phaeostictus | Yellowfoot<br>shrimpgoby      |       |     | DD                                  | western<br>Pacific    | no      |                  |   |              |
| Godwit   | Limosa limosa                 | Black-tailed<br>godwit        |       | II  | NT                                  | widespread            | yes     |                  |   |              |
| Greeneye | Chlorophthalmus<br>agassizi   | Agassiz's<br>thread-sail fish |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Grouper  | Aethaloperca rogaa            | Redmouth grouper              |       |     | DD                                  | Indo-west<br>Pacific  | no      |                  |   |              |

| Таха    | Scientific Name                  | Common Name              | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)              | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|---------|----------------------------------|--------------------------|-------|-----|-------------------------------------|--------------------------|---------|------------------|---|--------------|
| Grouper | Anyperodon<br>leucogrammicus     | Slender grouper          |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Aporops bilinearis               | Blotched podge           |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Belonoperca<br>chabanaudi        | Arrowhead<br>soapfish    |       |     | LC                                  | Indo-Pacific             | no      |                  | 2   |              |
| Grouper | Cephalopholis<br>argus           | Peacock grouper          |       |     | LC                                  | Indo-Pacific,<br>Pacific | no      |                  |   |              |
| Grouper | Cephalopholis<br>aurantia        | Golden hind              |       |     | DD                                  | Indo-Pacific             | no      | 2                |   |              |
| Grouper | Cephalopholis<br>boenak          | Chocolate hind           |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Grouper | Cephalopholis<br>cyanostigma     | Bluespotted hind         |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Grouper | Cephalopholis<br>leopardus       | Leopard hind             |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Cephalopholis<br>microprion      | Freckled hind            |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Grouper | Cephalopholis<br>miniata         | Coral hind               |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Cephalopholis<br>polleni         | Harlequin hind           |       |     | LC                                  | Indo-Pacific, rare       | no      |                  |   |              |
| Grouper | Cephalopholis<br>sexmaculata     | Sixblotch hind           |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Cephalopholis<br>sonnerati       | Tomato hind              |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Cephalopholis<br>spiloparaea     | Strawberry hind          |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Cephalopholis<br>urodeta         | Darkfin hind             |       |     | LC                                  | Pacific                  | no      |                  |   |              |
| Grouper | Cromileptes altivelis            | Humpback<br>grouper      |       |     | VU                                  | western<br>Pacific       | no      |                  |   |              |
| Grouper | Epinephelus<br>amblycephalus     | Banded grouper           |       |     | DD                                  | western<br>Pacific       | no      |                  |   |              |
| Grouper | Epinephelus<br>areolatus         | Areolate grouper         |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>chlorostigma      | Brownspotted grouper     |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>coeruleopunctatus | White-spotted grouper    |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>coioides          | Orange-spotted grouper   |       |     | NT                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>corallicola       | Coral grouper            |       |     | DD                                  | western<br>Pacific       | no      | 3                |   |              |
| Grouper | Epinephelus<br>cyanopodus        | Speckled blue grouper    |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Grouper | Epinephelus<br>fasciatus         | Blacktip grouper         |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>fuscoguttatus     | Brown-marbled<br>grouper |       |     | NT                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>hexagonatus       | Hexagon<br>grouper       |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>howlandi          | Blacksaddle<br>grouper   |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>lanceolatus       | Queensland<br>grouper    |       |     | VU                                  | widespread               | no      |                  |   |              |
| Grouper | Epinephelus<br>macrospilos       | Snubnose<br>grouper      |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Grouper | Epinephelus<br>maculatus         | Highfin grouper          |       |     | LC                                  | Pacific                  | no      |                  |   |              |

| Таха    | Scientific Name              | Common Name              | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|---------|------------------------------|--------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Grouper | Epinephelus<br>magniscuttis  | Speckled<br>grouper      |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Grouper | Epinephelus<br>malabaricus   | Malabar grouper          |       |     | NT                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Epinephelus<br>melanostigma  | One-blotch<br>grouper    |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Grouper | Epinephelus merra            | Honeycomb<br>grouper     |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Epinephelus miliaris         | Netfin grouper           |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Grouper | Epinephelus<br>morrhua       | Comet grouper            |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Epinephelus<br>octofasciatus | Eightbar grouper         |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Grouper | Epinephelus ongus            | White-streaked grouper   |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Grouper | Epinephelus<br>polyphekadion | Camouflage<br>grouper    |       |     | NT                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Epinephelus<br>polystigma    | White-dotted grouper     |       |     | DD                                  | Coral Triangle                | no      |                  |   |              |
| Grouper | Epinephelus<br>quoyanus      | Longfin grouper          |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Grouper | Epinephelus<br>spilotoceps   | Foursaddle<br>grouper    |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Grouper | Epinephelus<br>tauvina       | Greasy grouper           |       |     | DD                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Epinephelus<br>undulosus     | Wavy-lined<br>grouper    |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Grouper | Gracila<br>albomarginata     | Masked grouper           |       |     | DD                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Grammistes<br>sexlineatus    | Sixlined soapfish        |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Grammistops<br>ocellatus     | Ocellated soapfish       |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Plectropomus<br>areolatus    | Squaretail coral trout   |       |     | VU                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Plectropomus<br>laevis       | Blacksaddled coral trout |       |     | VU                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Plectropomus<br>leopardus    | Leopard coral trout      |       |     | NT                                  | western<br>Pacific            | no      |                  |   |              |
| Grouper | Plectropomus<br>maculatus    | Bar-cheeked coral trout  |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Grouper | Plectropomus oligacanthus    | Highfin coral<br>trout   |       |     | NT                                  | western<br>Pacific            | no      |                  |   |              |
| Grouper | Pogonoperca<br>punctata      | Bearded<br>soapfish      |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Pseudogramma polyacantha     | Boldspot<br>soapfish     |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Grouper | Suttonia lineata             | Freckleface<br>podge     |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Variola<br>albimarginata     | White-edged<br>lyretail  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grouper | Variola louti                | Yellow-edged<br>lyretail |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Grunter | Mesopristes<br>argenteus     | Silver grunter           |       |     | LC                                  | Indo-Pacific                  | yes     |                  |   |              |
| Grunter | Mesopristes<br>cancellatus   | Tapiroid grunter         |       |     | LC                                  | Indo-Pacific                  | yes     |                  |   |              |
| Grunter | Terapon jarbua               | Jarbua terapon           |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |

| Таха        | Scientific Name                    | Common Name                  | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )      | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------------|------------------------------------|------------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Gulper eels | Eurypharynx<br>pelecanoides        | Pelican gulper<br>eel        |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Halosaur    | Aldrovandia affinis                | Allied halosaur              |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Hammerjaw   | Omosudis lowii                     | Hammerjaw                    |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Hatchetfish | Argyropelecus<br>aculeatus         | Lovely<br>hatchetfish        |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Hatchetfish | Argyropelecus<br>gigas             | Giant hatchetfish            |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Hatchetfish | Argyropelecus<br>sladeni           | Hatchetfish                  |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Hatchetfish | Sternoptyx<br>diaphana             | Diaphanous<br>hatchetfish    |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Hatchetfish | Sternoptyx<br>pseudobscura         | Highliht<br>hatchetfish      |       |     | LC                                  | circumtropical,<br>deep       | no      |                  |   |              |
| Hatchetfish | Sternoptyx<br>pseudodiaphana       | False oblique<br>hatchetfish |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Hatchetfish | Valenciennellus<br>tripunctulatus  | Constellationfish            |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Hawkfish    | Amblycirrhitus<br>bimacula         | Twinspot<br>hawkfish         |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Hawkfish    | Amblycirrhitus<br>unimacula        | Hawkfish                     |       |     | LC                                  | Indo-Pacific,<br>Pacific      | no      |                  |   |              |
| Hawkfish    | Cirrhitichthys falco               | Coral hawkfish               |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Hawkfish    | Cirrhitichthys<br>oxycephalus      | Coral hawkfish               |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Hawkfish    | Cirrhitus pinnulatus               | Stocky hawkfish              |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Hawkfish    | Neocirrhites<br>armatus            | Flame hawkfish               |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Hawkfish    | Oxycirrhites typus                 | Longnose<br>hawkfish         |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Hawkfish    | Paracirrhites<br>arcatus           | Arc-eye<br>hawkfish          |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Hawkfish    | Paracirrhites<br>forsteri          | Blackside<br>hawkfish        |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Hawkfish    | Paracirrhites<br>hemistictus       | Whitespot<br>hawkfish        |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Herring     | Chirocentrus dorab                 | Dorab wolf-<br>herring       |       |     | LC                                  | Indo-Pacific                  | unknown |                  |   |              |
| Herring     | Dussumieria<br>elopsoides          | Slender rainbow sardine      |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Herring     | Elops hawaiiensis                  | Giant herring                |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Herring     | Encrasicholina<br>heteroloba       | Shorthead<br>anchovy         |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Herring     | Encrasicholina<br>pseudoheteroloba | Anchovy                      |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Herring     | Encrasicholina<br>punctifer        | Buccaneer<br>anchovy         |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Herring     | Herklotsichthys<br>quadrimaculatus | Bluestripe<br>herring        |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Herring     | Sardinella melanura                | Blacklip<br>sardinella       |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Herring     | Spratelloides<br>delicatulus       | Delicate round herring       |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Lancetfish  | Alepisaurus<br>brevirostris        | Lancetfish                   |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |

| Таха         | Scientific Name                  | Common Name                | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                             | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------|----------------------------------|----------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Lanternbelly | Synagrops<br>japonicus           | Blackmouth splitfin        |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Benthosema<br>suborbitale        | Lanternfish                |       |     | LC                                  | widespread,<br>mesopelagic              | no      |                  |   |              |
| Lanternfish  | Bolinichthys<br>distofax         | Lanternfish                |       |     | LC                                  | circumtropical,<br>subtropical,<br>deep | no      |                  |   |              |
| Lanternfish  | Bolinichthys<br>photothorax      | Spurcheek<br>lanternfish   |       |     | LC                                  | circumtropical,<br>subtropical,<br>deep | no      |                  |   |              |
| Lanternfish  | Bolinichthys<br>supralateralis   | Stubby<br>lanternfish      |       |     | LC                                  | circumtropical,<br>subtropical,<br>deep | no      |                  |   |              |
| Lanternfish  | Centrobranchus<br>nigroocellatus | Lanternfish                |       |     | LC                                  | widespread                              | no      |                  |   |              |
| Lanternfish  | Ceratoscopelus<br>warmingii      | Lanternfish                |       |     | LC                                  | widespread                              | no      |                  |   |              |
| Lanternfish  | Diaphus anderseni                | Andersen's<br>lanternfish  |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus<br>brachycephalus        | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus effulgens                | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus fragilis                 | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus lucidus                  | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus lucidus                  | Lutken's<br>lanternfish    |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus mollis                   | Soft lanternfish           |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus<br>perspicillatus        | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus<br>problematicus         | Problematic<br>lanternfish |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diaphus splendidus               | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Diogenichthys<br>atlanticus      | Longfin<br>Ianternfish     |       |     | LC                                  | circumtropical                          | no      |                  |   |              |
| Lanternfish  | Hygophum hygomii                 | Bermuda<br>Ianternfish     |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Hygophum<br>reinhardtii          | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Lampadena<br>luminosa            | Lanternfish                |       |     | LC                                  | circumglobal,<br>deep                   | no      |                  |   |              |
| Lanternfish  | Lampanyctus alatus               | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Lampanyctus<br>festivus          | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Lampanyctus<br>nobilis           | Noble lanternfish          |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Lampanyctus<br>pusillus          | Pygmy<br>lanternfish       |       |     | LC                                  | widespread,<br>deep                     | yes     |                  |   |              |
| Lanternfish  | Lampanyctus<br>tenuiformis       | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Lampanyctus<br>vadulus           | Nacreous<br>Ianternfish    |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Lanternfish  | Lobianchia<br>gemellarii         | Gemellar's<br>lanternfish  |       |     | LC                                  | widespread,<br>deep                     | yes     |                  |   |              |
| Lanternfish  | Myctophum<br>asperum             | Lanternfish                |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |

| Таха          | Scientific Name                | Common Name                   | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> ) | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|---------------|--------------------------------|-------------------------------|-------|-----|-------------------------------------|--------------------------|---------|------------------|---|--------------|
| Lanternfish   | Myctophum<br>nictidulum        | Spotted<br>lanternfish        |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Lanternfish   | Myctophum<br>obtusirostre      | Lanternfish                   |       |     | LC                                  | widespread,<br>deep      | no      | 2                |   |              |
| Lanternfish   | Myctophum<br>selenops          | Lanternfish                   |       |     | LC                                  | widespread,<br>deep      | no      | 8                |   |              |
| Lanternfish   | Nannobrachium<br>lineatum      | Lanternfish                   |       |     | LC                                  | circumglobal,<br>deep    | no      | 2                |   |              |
| Lanternfish   | Norolychnus<br>valdiviae       | Topside<br>lanternfish        |       |     | LC                                  | widespread,<br>deep      | no      | 2                |   |              |
| Lanternfish   | Symbolophorus<br>rufinus       | Rufous<br>lanternfish         |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Lanternfish   | Taaningichthys<br>bathyphilus  | Deepwater<br>lanternfish      |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Leatherjacket | Acreichthys<br>tomentosus      | Bristletail filefish          |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Leatherjacket | Aluterus monoceros             | Unicorn<br>leatherjacket      |       |     | LC                                  | widespread               | no      | 3<br>            |   |              |
| Leatherjacket | Amanses scopas                 | Broom<br>leatherjacket        |       |     | LC                                  | Indo-west<br>Pacific     | no      | 8                |   |              |
| Leatherjacket | Cantherhines<br>dumerilii      | Whitespotted filefish         |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Leatherjacket | Cantherhines pardalis          | Honeycomb<br>filefish         |       |     | LC                                  | widespread               | no      |                  |   |              |
| Leatherjacket | Lagocephalus<br>gloveri        | Brown-backed toadfish         |       |     | DD                                  | Indo-Pacific             | no      |                  |   |              |
| Leatherjacket | Lagocephalus<br>suezensis      | Leatherjacket                 |       |     | LC                                  | Indo-Pacific             | no      | <u>.</u>         |   |              |
| Leatherjacket | Oxymonacanthus<br>longirostris | Harlequin filefish            |       | -   | VU                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Leatherjacket | Paraluteres<br>prionurus       | Blacksaddled<br>leatherjacket |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Leatherjacket | Pervagor<br>janthinosoma       | Ear-spot filefish             |       |     | LC                                  | Indo-west<br>Pacific     | no      | 8                |   |              |
| Leatherjacket | Torquigener<br>hypselogeneion  | Orange-spotted toadfish       |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Lightfish     | Ichthyococcus<br>ovatus        | Ovate lightfish               |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |
| Lightfish     | Vinciguerria<br>nimbaria       | Oceanic lightfish             |       |     | LC                                  | circumglobal,<br>deep    | no      |                  |   |              |
| Lionfish      | Dencrochirus<br>brachypterus   | Dwarf lionfish                |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Lionfish      | Dencrochirus zebra             | Zebra lionfish                |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Lionfish      | Pterois antennata              | Banded lionfish               |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Lionfish      | Pterois volitans               | Common lionfish               |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Lizardfish    | Saurida gracilis               | Gracile lizardfish            |       |     | LC                                  | Indo-Pacific,<br>Pacific | no      |                  |   |              |
| Lizardfish    | Synodus binotatus              | Twispot<br>lizardfish         |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Lizardfish    | Synodus<br>capricornis         | Capricorn<br>lizardfish       |       |     | LC                                  | widespread               | no      |                  |   |              |
| Lizardfish    | Synodus<br>dermatogenys        | Sand lizardfish               |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Lizardfish    | Synodus jaculum                | Blackspot<br>lizardfish       |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Lizardfish    | Synodus variegatus             | Variegated<br>lizardfish      |       |     | LC                                  | Indo-west<br>Pacific     | no      | -                |   |              |

| Таха                | Scientific Name               | Common Name                  | CITES  | СМS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                  | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|---------------------|-------------------------------|------------------------------|--------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Lizardfish          | Trachinocephalus<br>myops     | Snakefish                    |        |     | LC                                  | circumtropical                               | no      |                  |   |              |
| Longfin<br>escolars | Scombrolabrax<br>heterolepis  | Longfin escolar              |        |     | LC                                  | widespread,<br>deep                          | no      |                  |   |              |
| Louvar              | Luvarus imperialis            | Louvar                       |        |     | LC                                  | circumglobal                                 | no      |                  |   |              |
| Mackerel            | Acanthocybium<br>solandri     | Wahoo                        |        |     | LC                                  | cosmopolitan,<br>tropical, warm<br>temperate | yes     |                  |   |              |
| Mackerel            | Grammatorcynus<br>bilineatus  | Double-lined<br>mackerel     | 2      |     | LC                                  | Indo-west<br>Pacific                         | yes     |                  |   |              |
| Mackerel            | Lepidocybium<br>flavobrunneum | Escolar                      |        |     | LC                                  | widespread                                   | no      |                  |   |              |
| Mackerel            | Rastrelliger<br>brachysoma    | Short mackerel               |        |     | DD                                  | Pacific                                      | yes     |                  |   |              |
| Mackerel            | Rastrelliger<br>kanagurta     | Indian mackerel              |        |     | DD                                  | Indo-west<br>Pacific                         | yes     |                  |   |              |
| Mackerel            | Scomberoides tala             | Barred<br>queenfish          |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mackerel            | Scomberoides tol              | Needlescaled<br>Queenfish    |        |     | LC                                  | Indo-west<br>Pacific                         | no      |                  |   |              |
| Mackerel            | Scomberomorus<br>commerson    | Narrow-barred Sp<br>mackerel | banish |     | NT                                  | Indo-west<br>Pacific                         | yes     |                  |   |              |
| Mangrove            | Avicennia alba                | Mangrove                     |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mangrove            | Bruguiera cylindrica          | Mangrove                     | -      |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mangrove            | Bruguiera<br>gymnorhiza       | Oriental<br>mangrove         |        |     | LC                                  | widespread                                   | no      |                  |   |              |
| Mangrove            | Bruguiera parviflora          | Mangrove                     |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mangrove            | Bruguiera<br>sexangula        | Mangrove                     |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mangrove            | Ceriops tagal                 | Yellow mangrove              |        |     | LC                                  | widespread                                   | no      |                  |   |              |
| Mangrove            | Excoecaria<br>agallocha       | Euphorbia                    |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mangrove            | Excoecaria indica             | Mangrove                     |        |     | DD                                  | western<br>Pacific                           | no      |                  |   |              |
| Mangrove            | Lumnitzera littorea           | Mangrove                     |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mangrove            | Rhizophora<br>apiculata       | Mangrove                     |        |     | LC                                  | western<br>Pacific                           | no      |                  |   |              |
| Mangrove            | Rhizophora<br>mucronata       | Mangrove                     |        |     | LC                                  | western<br>Pacific                           | no      |                  |   |              |
| Mangrove            | Rhizophora stylosa            | Red mangrove                 |        |     | LC                                  | Indo-west<br>Pacific                         | no      |                  |   |              |
| Mangrove            | Sonneratia alba               | Mangrove                     |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mangrove            | Sonneratia<br>caseolaris      | Mangrove                     |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Marlin              | Kajikia audax                 | Striped marlin               |        |     | NT                                  | widespread                                   | yes     |                  |   |              |
| Marlin              | Makaira indica                | Black marlin                 |        |     | DD                                  | Indo-Pacific                                 | yes     |                  |   |              |
| Marlin              | Makaira nigricans             | Blue marlin                  |        |     | LC                                  | circumtropical                               | yes     |                  |   |              |
| Milkfish            | Chanos chanos                 | Milkfish                     |        |     | LC                                  | Indo-Pacific,<br>Pacific                     | no      |                  |   |              |
| Mojarra             | Gerres erythrourus            | Deep-bodied<br>mojarra       |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mojarra             | Gerres<br>filamentosus        | Whipfin mojarra              |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mojarra             | Gerres longirostris           | Strongspine<br>siverbiddy    |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |
| Mojarra             | Gerres oblongus               | Slender<br>silverbiddy       |        |     | LC                                  | Indo-Pacific                                 | no      |                  |   |              |

| Таха         | Scientific Name            | Common Name              | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------|----------------------------|--------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Mojarra      | Gerres oyena               | Common<br>silverbiddy    |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Mola         | Masturus<br>lanceolatus    | Sharptailed<br>sunfish   |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Mola         | Mola mola                  | Ocean sunfish            |       |     | VU                                  | circumglobal                  | no      |                  |   |              |
| Moorish idol | Zanclus cornutus           | Moorish idol             |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Mullet       | Chelon macrolepis          | Largescale<br>mullet     |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Mullet       | Chelon<br>melinopterus     | Otomebora<br>mullet      |       | -   | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Mullet       | Crenimugil<br>crenilabis   | Fringelip mullet         |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Mullet       | Moolgarda perusii          | Longfinned<br>mullet     |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Mullet       | Mugil cephalus             | Flathead mullet          |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Mullet       | Valamugil<br>buchanani     | Bluetail mullet          |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Needlefish   | Ablennes hians             | Flat needlefish          |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Needlefish   | Tylosurus acus             | Agujon<br>needlefish     |       |     | LC                                  | widespread                    | yes     |                  |   |              |
| Oarfish      | Regalecus glesne           | Giant oarfish            |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Octopus      | Amphitretus<br>pelagicus   | Octopus                  |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Octopus      | Argonauta argo             | Octopus                  |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Octopus      | Argonauta<br>boettigeri    | Octopus                  |       | -   | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Octopus      | Argonauta hians            | Octopus                  |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Octopus      | Bolitaena pygmaea          | Octopus                  |       |     | LC                                  | circumtropical,<br>deep       | no      |                  |   |              |
| Octopus      | Haliphron atlanticus       | Octopus                  |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Octopus      | Japetella diaphana         | Octopus                  |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Octopus      | Tremoctopus<br>gracilis    | Palmate octopus          |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Octopus      | Vitreledonella<br>richardi | Octopus                  |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Owl          | Tyto alba                  | Common barn-<br>owl      | II    |     | LC                                  | 330000000                     | no      |                  |   |              |
| Parrotfish   | Bolbometopon<br>muricatum  | Bumphead<br>parrotfish   |       |     | VU                                  | Indo-Pacific                  | no      | Regu             | lation 29   |              |
| Parrotfish   | Calotomus<br>carolinus     | Starry-eye<br>parrotfish |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Parrotfish   | Calotomus<br>spinidens     | Spinytooth<br>parrotfish |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Parrotfish   | Cetoscarus<br>ocellatus    | Spotted<br>parrotfish    |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Parrotfish   | Chlorurus bleekeri         | Bleeker's<br>parrotfish  |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Parrotfish   | Chlorurus frontalis        | Tanfaced<br>parrotfish   |       |     | LC                                  | Indo-Pacific,<br>rare         | no      |                  |   |              |
| Parrotfish   | Chlorurus<br>japanensis    | Palecheek<br>parrotfish  |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Parrotfish   | Chlorurus<br>microrhinus   | Steephead<br>parrotfish  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Parrotfish   | Chlorurus spilurus         | Bullethead<br>parrotfish |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |

| Таха       | Scientific Name              | Common Name                     | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                    | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------|------------------------------|---------------------------------|-------|-----|-------------------------------------|--------------------------------|---------|------------------|---|--------------|
| Parrotfish | Hipposcarus<br>longiceps     | Pacific longnose<br>parrotfish  |       |     | LC                                  | Pacific                        | no      |                  |   |              |
| Parrotfish | Leptoscarus<br>vaigiensis    | Marbled parrotfish              |       |     | LC                                  | Indo-Pacific                   | no      |                  | 2   |              |
| Parrotfish | Scarus altipinnis            | Filament-fin<br>parrotfish      |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus dimidiatus            | Yellowbarred parrotfish         |       |     | LC                                  | western<br>Pacific             | no      |                  |   |              |
| Parrotfish | Scarus<br>flavipectoralis    | Yellowfin<br>parrotfish         |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus forsteni              | Forsten's<br>parrotfish         |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus frenatus              | Bridled parrotfish              |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus globiceps             | Globehead<br>parrotfish         |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus niger                 | Swarthy<br>parrotfish           |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific  | no      |                  |   |              |
| Parrotfish | Scarus psittacus             | Common<br>parrotfish            |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus pyrrostethus          | Blue-banded<br>parrotfish       |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific  | no      |                  |   |              |
| Parrotfish | Scarus quoyi                 | Quoy's parrotfish               |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus rivulatus             | Surf parrotfish                 |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus<br>rubroviolaceus     | Redlip parrotfish               |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific  | no      |                  |   |              |
| Parrotfish | Scarus spinus                | Greensnout<br>parrotfish        |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus tricolor              | Tricolour<br>parrotfish         |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Parrotfish | Scarus<br>xanthopleura       | Red parrotfish                  |       |     | LC                                  | western<br>Pacific             | no      |                  |   |              |
| Pearleye   | Benthalbella infans          | Zugmeyer's<br>pearleye          |       |     | LC                                  | circumglobal,<br>deep          | no      |                  |   |              |
| Pearleye   | Scopelarchoides<br>danae     | Pearleye                        |       |     | LC                                  | circumglobal,<br>deep          | no      |                  | 2   |              |
| Pearleye   | Scopelarchus<br>analis       | Blackbelly<br>pearleye          |       |     | LC                                  | circumglobal,<br>deep          | no      |                  |   |              |
| Pearleye   | Scopelarchus<br>guentheri    | Staring pearleye                |       |     | LC                                  | circumtropical,<br>subtropical | no      |                  |   |              |
| Pearleye   | Scopelarchus<br>michaelsarsi | Bigeye<br>pearleyes             |       |     | LC                                  | circumglobal,<br>deep          | no      |                  |   |              |
| Petrel     | Calonectris<br>leucomelas    | Streaked<br>shearwater          |       |     | NT                                  | 45800000                       | yes     |                  |   |              |
| Petrel     | Fregetta tropica             | Black-bellied<br>storm-petrel   |       |     | LC                                  | 21200000                       | yes     |                  |   |              |
| Petrel     | Pseudobulweria<br>becki      | Beck's petrel                   |       |     | CR                                  | 770000                         | yes     |                  | Schedule I -<br>Exp                               |              |
| Petrel     | Pterodroma<br>heraldica      | Herald petrel                   |       |     | LC                                  | 91000000                       | yes     |                  |   |              |
| Pipefish   | Bhanotia fasciolata          | Corrugated pipefish             |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Pipefish   | Choeroichthys<br>brachysoma  | Short-bodied pipefish           |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Pipefish   | Choeroichthys<br>cinctus     | Barred<br>shortbody<br>pipefish |       |     | LC                                  | western<br>Pacific             | no      |                  |   |              |
| Pipefish   | Choeroichthys sculptus       | Sculptured pipefish             |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |
| Pipefish   | Corythoichthys<br>amplexus   | Brown-banded<br>pipefish        |       |     | LC                                  | Indo-Pacific                   | no      |                  |   |              |

| Таха     | Scientific Name                  | Common Name                 | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                              | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|----------|----------------------------------|-----------------------------|-------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Pipefish | Corythoichthys<br>haematopterus  | Blood-spot<br>pipefish      |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Corythoichthys<br>intestinalis   | Scribbled<br>pipefish       |       |     | LC                                  | Pacific                                  | no      |                  |   |              |
| Pipefish | Corythoichthys<br>nigripectus    | Black-breasted<br>pipefish  |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Corythoichthys ocellatus         | Ocellated pipefish          |       |     | LC                                  | Coral Triangle                           | no      | 2                | 2   |              |
| Pipefish | Doryrhamphus<br>excisus          | Bluestripe<br>pipefish      |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Doryrhamphus<br>janssi           | Janss's pipefish            |       |     | LC                                  | Central Indo-<br>Pacific                 | no      |                  |   |              |
| Pipefish | Dunckerocampus<br>dactyliophorus | Banded pipefish             |       |     | DD                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Dunckerocampus<br>naia           | Naia pipefish               |       |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Pipefish | Festucalex<br>erythraeus         | Red pipefish                |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Festucalex rufus                 | Red pipefish                |       |     | DD                                  | Indonesia,<br>PNG,<br>Solomon<br>Islands | no      |                  |   |              |
| Pipefish | Halicampus<br>dunckeri           | Duncker's<br>pipefish       |       |     | LC                                  | Indo-Pacific                             | no      | 2                |   |              |
| Pipefish | Halicampus<br>macrorhynchus      | Ornate pipefish             |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Halicampus<br>mataafae           | Samoan pipefish             |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Halicampus nitidus               | Glittering<br>pipefish      |       |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Pipefish | Hippichthys<br>heptagonus        | Reticulated freshw pipefish | ater  |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Pipefish | Hippichthys<br>penicillus        | Beady pipefish              |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Pipefish | Hippichthys spicifer             | Belly-barred<br>pipefish    |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Micrognathus<br>andersonii       | Anderson's<br>pipefish      |       |     | LC                                  | Indo-Pacific                             | no      | 2                |   |              |
| Pipefish | Micrognathus<br>brevirostris     | Pygmy pipefish              |       |     | LC                                  | Indo-Pacific                             | no      | 2                |   |              |
| Pipefish | Microphis<br>brachyurus          | Opossum<br>pipefish         |       |     | LC                                  | Indo-Pacific                             | yes     | 2                |   |              |
| Pipefish | Microphis leiaspis               | Barhead pipefish            |       |     | LC                                  | Indo-Pacific                             | yes     | 2                | 2   |              |
| Pipefish | Microphis<br>manadensis          | Manado pipefish             |       |     | LC                                  | Indo-Pacific                             | unknown |                  |   |              |
| Pipefish | Microphis retzii                 | Ragged-tail<br>pipefish     |       |     | LC                                  | western<br>Pacific                       | unknown |                  |   |              |
| Pipefish | Phoxocampus<br>belcheri          | Rock pipefish               |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Solenostomus<br>paradoxus        | Ornate ghost<br>pipefish    |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Syngnathoides<br>biaculeatus     | Alligator pipefish          |       |     | DD                                  | widespread                               | no      |                  |   |              |
| Pipefish | Trachyrhamphus<br>bicoarctatus   | Double-ended pipefish       |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Pipefish | Trachyrhamphus<br>Iongirostris   | Long-head<br>pipefish       |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Plover   | Arenaria interpres               | Ruddy turnstone             |       | II  | LC                                  | 27600000                                 | yes     |                  |   |              |
| Plover   | Calidris acuminata               | Sharp-tailed sandpiper      |       | 11  | LC                                  | 667000                                   | yes     |                  |   |              |

| Таха       | Scientific Name              | Common Name                 | CITES | СМS | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )      | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------|------------------------------|-----------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Plover     | Limosa lapponica             | Bar-tailed godwit           |       | 11  | NT                                  | 9050000                       | yes     |                  |   |              |
| Plover     | Pluvialis fulva              | Pacific golden plover       |       | 11  | LC                                  | >20000                        | yes     |                  |   |              |
| Plover     | Pluvialis squatarola         | Grey plover                 |       |     | LC                                  | 17300000                      | yes     |                  |   |              |
| Ponyfish   | Aurigequula<br>fasciata      | Striped ponyfish            |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Ponyfish   | Eubleekeria<br>splendens     | Splendid<br>ponyfish        |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Ponyfish   | Gazza achlamys               | Smalltoothed ponyfish       |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Ponyfish   | Gazza minuta                 | Toothed ponyfish            |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Ponyfish   | Leiognathus<br>equulus       | Common<br>ponyfish          |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Pufferfish | Arothron hispidus            | Whitespotted puffer         |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Pufferfish | Arothron manilensis          | Narrowlined puffer          |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  | · · · · · · · · · · · · · · · · · · ·             |              |
| Pufferfish | Arothron mappa               | Map puffer                  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Pufferfish | Arothron meleagris           | Guineafowl<br>puffer        |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Pufferfish | Arothron<br>nigropunctatus   | Black-spotted puffer        |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Pufferfish | Arothron stellatus           | Star puffer                 |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Pufferfish | Canthigaster<br>amboinensis  | Canthigaster<br>amboinensis |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Pufferfish | Canthigaster<br>axiologus    | Pufferfish                  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Pufferfish | Canthigaster<br>bennetti     | Bennet's<br>pufferfish      |       |     | LC                                  | widespread                    | no      | 3                |   |              |
| Pufferfish | Canthigaster<br>compressa    | Compressed toby             |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |
| Pufferfish | Canthigaster<br>epilampra    | Lantern toby                |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Pufferfish | Canthigaster<br>ocellicincta | Shy toby                    |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Pufferfish | Canthigaster papua           | Papua toby                  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Pufferfish | Canthigaster<br>solandri     | Spotted sharpnose           |       |     | LC                                  | Indo-Pacific,<br>Pacific      | no      |                  |   |              |
| Pufferfish | Chilomycterus<br>reticulatus | Fewspined porcupinefish     |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Pufferfish | Diodon eydouxi               | Pelagic<br>porcupinefish    |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Pufferfish | Diodon holocanthus           | Balloon<br>porcupinefish    |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Pufferfish | Diodon hystrix               | Spotfish<br>porcupinefish   |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Pufferfish | Lagocephalus<br>lagocephalus | Oceanic puffer              |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Pufferfish | Lagocephalus<br>sceleratus   | Sivercheeked<br>toadfish    |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Pufferfish | Sphoeroides<br>pachygaster   | Blunthead<br>pufferfish     |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Pufferfish | Takifugu oblongus            | Oblong blow fish            |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Rabbitfish | Siganus argenteus            | Forktail<br>rabbitfish      |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Rabbitfish | Siganus doliatus             | Barred rabbitfish           |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |

| Таха       | Scientific Name            | Common Name              | CITES | CMS  | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                               | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM                                 |
|------------|----------------------------|--------------------------|-------|------|-------------------------------------|---|---------|------------------|---|--|
| Rabbitfish | Siganus javus              | Java rabbitfish          |       |      | LC                                  | Indo-Pacific                              | no      |                  |   |  |
| Rabbitfish | Siganus lineatus           | Lined rabbitfish         |       |      | LC                                  | Indo-west<br>Pacific                      | no      |                  |   |  |
| Rabbitfish | Siganus puellus            | Masked<br>rabbitfish     |       |      | LC                                  | Indo-west<br>Pacific                      | no      |                  | 2   |  |
| Rabbitfish | Siganus<br>punctatissimus  | Fine-spotted rabbitfish  |       |      | LC                                  | western<br>Pacific                        | no      |                  |   |  |
| Rabbitfish | Siganus punctatus          | Gold-spotted rabbitfish  |       |      | LC                                  | Indo-west<br>Pacific                      | no      |                  |   |  |
| Rabbitfish | Siganus randalli           | Randall's<br>rabbitfish  |       |      | LC                                  | western<br>Pacific                        | no      |                  |   |  |
| Rabbitfish | Siganus spinus             | Mottled<br>rabbitfish    |       |      | LC                                  | western<br>Pacific                        | no      |                  |   |  |
| Rabbitfish | Siganus<br>vermiculatus    | Vermiculated spinefoot   |       |      | LC                                  | Indo-Pacific                              | no      |                  |   |  |
| Raptor     | Haliaeetus sanfordi        | Sanford's sea<br>eagle   |       |      | VU                                  | PNG,<br>Solomon<br>Islands                | no      |                  |   | <ul> <li>Prohibited</li> <li>orts</li> </ul> |
| Raptor     | Haliastur indus            | Brahminy kite            |       |      | LC                                  | 45300000                                  | no      |                  |   |  |
| Raptor     | Pandion haliaetus          | Osprey                   |       |      | LC                                  | 228000000                                 | yes     |                  |   |  |
| Ray        | Aetobatus ocellatus        | Spotted eagle ray        |       |      | VU                                  | circumtropical                            | no      |                  |   |  |
| Ray        | Hexatrygon bickelli        | Sixgill stingray         |       |      | LC                                  | Indo-Pacific                              | no      |                  |   |  |
| Ray        | Himantura uarnak           | Reticulate<br>whipray    |       |      | VU                                  | Indo-west<br>Pacific                      | no      |                  |   |  |
| Ray        | Manta alfredi              | Reef mata ray            | II    |      | VU                                  | circumtropical<br>ad subtropical,<br>reef | yes     |                  |   |  |
| Ray        | Manta birostris            | Manta ray                | II    | 1/11 | VU                                  | circumglobal                              | yes     |                  |   |  |
| Ray        | Mobula tarapacana          | Sicklefin devil<br>ray   | 11    | 1/11 | VU                                  | circumglobal                              | yes     |                  |   |  |
| Ray        | Neotrygon kuhlii           | Bluespotted stingray     |       |      | LC                                  | widespread                                | no      |                  | 2   | 5  |
| Ray        | Pastinachus ater           | Broad cowtail<br>ray     |       |      | LC                                  | western<br>Pacific                        | no      |                  |   |  |
| Ray        | Pateobatis fai             | Pink whipray             |       |      | VU                                  | widespread                                | no      |                  |   |  |
| Ray        | Taeniura lymma             | Bluestpotted fantail ray |       |      | NT                                  | Indo-west<br>Pacific                      | no      |                  | 2   |  |
| Ray        | Taeniurops meyeni          | Blotched fantail ray     |       |      | VU                                  | Indo-west<br>Pacific                      | no      |                  |   |  |
| Ray        | Tetronarce<br>nobiliana    | Giant torpedo<br>ray     |       |      | DD                                  | widespread                                | no      |                  |   |  |
| Ray        | Urogymnus<br>asperrimus    | Porcupine ray            |       |      | VU                                  | Indo-west<br>Pacific                      | no      |                  |   |  |
| Ray        | Urogymnus<br>granulatus    | Mangrove<br>whipray      |       |      | VU                                  | Indo-west<br>Pacific                      | no      |                  |   |  |
| Razorfish  | Aeoliscus strigatus        | Coral shrimpfish         |       |      | DD                                  | Indo-west<br>Pacific                      | no      |                  |   |  |
| Razorfish  | Centriscus cristatus       | Smooth razorfish         |       |      | DD                                  | western<br>Pacific                        | no      |                  |   |  |
| Remora     | Echeneis naucrates         | Remora                   |       |      | LC                                  | circumtropical                            | no      |                  |   |  |
| Remora     | Phtheirichthys<br>lineatus | Slender<br>suckerfish    |       |      | LC                                  | circumglobal                              | no      |                  |   |  |
| Remora     | Remora australis           | Whale remora             |       |      | LC                                  | circumtropical,<br>subtropical            | no      |                  |   |  |
| Remora     | Remora osteochir           | Marlin suckerfish        |       |      | LC                                  | circumtropical,<br>subtropical            | no      |                  |   |  |

| Таха               | Scientific Name                 | Common Name                 | CITES | СМЗ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                             | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------------|---------------------------------|-----------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Remora             | Remora remora                   | Common remora               |       |     | LC                                  | circumtropical,<br>subtropical          | no      |                  |   |              |
| Ribbonfish         | Desmodema<br>polystictum        | Polkadot<br>ribbonfish      |       |     | LC                                  | circumglobal,<br>deep, rare             | no      |                  |   |              |
| Ribbonfish         | Zu cristatus                    | Scalloped ribbonfish        |       |     | LC                                  | circumglobal,<br>deep                   | no      |                  |   |              |
| Ridgehead          | Melamphaes<br>longivelis        | Ridgehead                   |       |     | DD                                  | widespread,<br>deep                     | no      |                  |   |              |
| Ridgehead          | Melamphaes<br>polylepis         | Ridgehead                   |       |     | DD                                  | circumtropical,<br>deep                 | no      |                  |   |              |
| Ridgehead          | Melamphaes simus                | Ridgehead                   |       |     | LC                                  | circumglobal,<br>deep                   | no      |                  |   |              |
| Ridgehead          | Poromitra<br>crassiceps         | Crested bigscale            |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Ridgehead          | Poromitra<br>megalops           | Ridgehead                   |       |     | DD                                  | widespread,<br>deep                     | no      |                  |   |              |
| Ridgehead          | Scopeloberyx<br>robustus        | Longjaw<br>bigscale         |       |     | DD                                  | circumtropical,<br>subtropical,<br>deep | no      |                  |   |              |
| Ridgehead          | Scopelogadus<br>mizolepis       | Ragged bigscale             |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Sabretooth<br>fish | Odontostomops<br>normalops      | Sabretooth fish             |       |     | LC                                  | widespread,<br>deep                     | no      |                  |   |              |
| Sailfish           | lstiophorus<br>platypterus      | Sailfish                    |       |     | LC                                  | widespread                              | yes     |                  |   |              |
| Sand-darter        | Gobitrichinotus<br>radiocularis | Sandfish                    |       |     | LC                                  | western<br>Pacific                      | no      |                  |   |              |
| Sand-darter        | Kraemeria<br>cunicularia        | Transparent sound dart      |       |     | LC                                  | western<br>Pacific                      | no      |                  |   |              |
| Sand-diver         | Trichonotus<br>elegans          | Long-rayed sand-diver       |       |     | LC                                  | Indo-Pacific                            | no      |                  |   |              |
| Sand-diver         | Trichonotus setiger             | Spotted sand-<br>diver      |       |     | LC                                  | Indo-Pacific                            | no      |                  |   |              |
| Sandburrower       | Limnichthys<br>fasciatus        | Barred<br>sandburrower      |       |     | LC                                  | south Pacific                           | no      |                  |   |              |
| Sandburrower       | Limnichthys nitidus             | Donaldson's<br>sandburrower |       |     | LC                                  | Indo-Pacific                            | no      |                  |   |              |
| Sawtooth eel       | Stemonidium<br>hypomelas        | Black sawtooth eel          |       |     | LC                                  | Pacific, deep                           | no      |                  |   |              |
| Scorpionfish       | Caracanthus<br>maculatus        | Spotted coral croucher      |       |     | LC                                  | Indo-west<br>Pacific                    | no      |                  |   |              |
| Scorpionfish       | Caracanthus<br>unipinna         | Pygmy coral<br>croucher     |       |     | LC                                  | Indo-west<br>Pacific                    | no      |                  |   |              |
| Scorpionfish       | Dendrochirus<br>biocellatus     | Twospot<br>turkeyfish       |       |     | LC                                  | Indo-west<br>Pacific                    | no      |                  |   |              |
| Scorpionfish       | Ectreposebastes<br>imus         | Mid-water<br>scorpionfish   |       |     | LC                                  | circumglobal,<br>deep                   | no      |                  |   |              |
| Scorpionfish       | Parascorpaena<br>aurita         | Golden<br>scorpionfish      |       |     | LC                                  | Indo-west<br>Pacific                    | no      |                  |   |              |
| Scorpionfish       | Parascorpaena<br>moultoni       | Coral perch                 |       |     | LC                                  | Indo-Pacific                            | no      |                  |   |              |
| Scorpionfish       | Pontinus<br>rhodochrous         | Scorpionfish                |       |     | LC                                  | Indo-west<br>Pacific                    | no      |                  |   |              |
| Scorpionfish       | Pterois<br>paucispinula         | Lionfish                    |       |     | LC                                  | western<br>Pacific                      | no      |                  |   |              |
| Scorpionfish       | Pterois radiata                 | Radial firefish             |       |     | LC                                  | Indo-west<br>Pacific                    | no      |                  |   |              |
| Scorpionfish       | Rhinopias aphanes               | Weedy<br>scorpionfish       |       |     | LC                                  | western<br>Pacific                      | no      |                  |   |              |
| Scorpionfish       | Scorpaenodes<br>minor           | Minor<br>scorpionfish       |       |     | LC                                  | Indo-west<br>Pacific                    | no      |                  |   |              |

| Таха         | Scientific Name              | Common Name                | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )      | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------|------------------------------|----------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Scorpionfish | Scorpaenodes<br>varipinnis   | Blotchfin<br>scorpionfish  |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Scorpionfish | Scorpaenoides<br>albaiensis  | Splitfin<br>scorpionfish   |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Scorpionfish | Scorpaenoides<br>guamensis   | Guam<br>scorpionfish       |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Scorpionfish | Scorpaenoides<br>parvipinnis | Shortfinned scorpionfish   |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Scorpionfish | Scorpaenopsis<br>diabolus    | False stonefish            |       |     | LC                                  | Indo-west<br>Pacific          | no      | <u>9</u>         |   |              |
| Scorpionfish | Scorpaenopsis<br>macrochir   | Flasher<br>scorpionfish    |       |     | LC                                  | Indo-west<br>Pacific          | no      | 2                |   |              |
| Scorpionfish | Scorpaenopsis<br>papuensis   | Papuan<br>scorpionfish     |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Scorpionfish | Scorpaenopsis<br>possi       | Poss's<br>scorpionfish     |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Scorpionfish | Scorpaenopsis<br>vittapinna  | Bandfin<br>scorpionfish    |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Scorpionfish | Sebastapistes<br>cyanostigma | Yellowspotted scorpionfish |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Scorpionfish | Sebastapistes<br>strongia    | Barchin<br>scorpionfish    |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Scorpionfish | Setarches<br>guentheri       | Deepwater<br>scorpionfish  |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Scorpionfish | Taenianotus<br>triacanthus   | Leaf scorpionfish          |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber | Actinopyga<br>caerulea       | Blue sea<br>cucumber       |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Sea cucumber | Actinopyga<br>echinites      | Deepwater<br>redfish       |       |     | VU                                  | western and central Pacific   | no      | 5                |   |              |
| Sea cucumber | Actinopyga<br>Iecanora       | Stonefish                  |       |     | DD                                  | western<br>Pacific            | no      |                  |   |              |
| Sea cucumber | Actinopyga<br>mauritiana     | Surf redfish               |       |     | VU                                  | Indo-Pacific                  | no      | 2                |   |              |
| Sea cucumber | Actinopyga miliaris          | Hairy blackfish            |       |     | VU                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber | Bohadschia argus             | Leopardfish                |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber | Bohadschia<br>marmorata      | Brown sandfish             |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Sea cucumber | Bohadschia similis           | Chalkfish                  |       |     | DD                                  | western and central Pacific   | no      |                  |   |              |
| Sea cucumber | Bohadschia<br>tenuissima     | Sea cucumber               |       |     | DD                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Sea cucumber | Bohadschia<br>vitiensis      | Brown sandfish             |       |     | DD                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber | Holothuria arenicola         | Sea cucumber               |       |     | DD                                  | widespread                    | no      |                  |   |              |
| Sea cucumber | Holothuria atra              | Lollyfish                  |       |     | LC                                  | widespread                    | no      | -                |   |              |
| Sea cucumber | Holothuria coluber           | Snakefish                  |       |     | LC                                  | Pacific                       | no      |                  |   |              |
| Sea cucumber | Holothuria<br>discrepans     | Sea cucumber               |       |     | DD                                  | Indo-West<br>Pacific          | no      |                  |   |              |
| Sea cucumber | Holothuria edulis            | Pinkfish                   |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber | Holothuria<br>erinaceaus     | Sea cucumber               |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber |                              | Sea cucumber               |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber |                              | Sea cucumber               |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Sea cucumber |                              | White teatfish             |       |     | VU                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |

| Таха         | Scientific Name               | Common Name                 | CITES | СМЗ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                           | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------|-------------------------------|-----------------------------|-------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Sea cucumber | Holothuria hilla              | Sea cucumber                |       |     | LC                                  | Indo-West<br>Pacific                               | no      |                  |   |              |
| Sea cucumber | Holothuria<br>impatiens       | Bottleneck sea<br>cucumber  |       |     | DD                                  | circumtropical                                     | no      |                  |   |              |
| Sea cucumber | Holothuria inhabilis          | Sea cucumber                |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Holothuria kubaryi            | Sea cucumber                |       |     | DD                                  | American<br>Samoa,<br>Samoa,<br>Solomon<br>Islands | no      |                  |   |              |
| Sea cucumber | Holothuria lessoni            | Golden sandfish             |       |     | EN                                  | western<br>central Pacific                         | no      |                  |   |              |
| Sea cucumber | Holothuria<br>leucospilota    | White thread fish           |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Holothuria olivacea           | Sea cucumber                |       |     | DD                                  | Indo-west<br>Pacific                               | no      | 9                |   |              |
| Sea cucumber | Holothuria pardalis           | Sea cucumber                | -     |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Holothuria pervicax           | Sea cucumber                |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Holothuria rigida             | Sea cucumber                |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Holothuria scabra             | Golden sandfish             |       |     | EN                                  | Indo-Pacific                                       | no      |                  | Schedule II and Control                           |              |
| Sea cucumber | Holothuria<br>verrucosa       | Sea cucumber                |       |     | LC                                  | Indo-Pacific                                       | no      | 2                |   |              |
| Sea cucumber | Holothuria whitmaei           | Black teatfish              |       |     | EN                                  | Pacific  | no      |                  |   |              |
| Sea cucumber | Labidodemas<br>rugosum        | Sea cucumber                |       |     | LC                                  | Indo-west<br>Pacific                               | no      |                  |   |              |
| Sea cucumber | Labidodemas<br>semperianum    | Sea cucumber                |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Pearsonothuria<br>graeffei    | Blackspotted sea cucumber   |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Stichopus<br>chloronotus      | Greenfish                   |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Stichopus<br>herrmanni        | Curryfish                   |       |     | VU                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Stichopus horrens             | Selenka's sea<br>cucumber   |       |     | DD                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Stichopus<br>monotuberculatus | Sea cucumber                |       |     | DD                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Stichopus naso                | Sea cucumber                |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Stichopus<br>pseudohorrens    | Sea cucumber                |       |     | DD                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Thelenota ananas              | Prickly redfish             |       |     | EN                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea cucumber | Thelenota anax                | Amberfish                   |       |     | DD                                  | Indo-west<br>Pacific                               | no      |                  |   |              |
| Sea cucumber | Thelenota<br>rubralineata     | Sea cucumber                |       |     | DD                                  | western<br>Pacific                                 | no      |                  |   |              |
| Sea snake    | Acalyptophis<br>peronii       | Horned sea<br>snake         |       |     | LC                                  | Indo-Pacific                                       | unknown |                  |   |              |
| Sea snake    | Acrochordus<br>granulatus     | Little filesnake            |       |     | LC                                  | widespread   | no      |                  |   |              |
| Sea snake    | Laticauda colubrina           | Columbrine sea<br>krait     |       |     | LC                                  | Indo-west<br>Pacific                               | no      |                  |   |              |
| Sea snake    | Laticauda crockeri            | Rennell Island<br>sea krait |       |     | VU                                  | Solomon<br>Islands                                 | no      |                  |   |              |
| Sea snake    | Laticauda<br>laticaudata      | Brown-lipped<br>sea snake   |       |     | LC                                  | Indo-Pacific                                       | no      |                  |   |              |
| Sea snake    | Pelamis platura               | Yellow-bellied<br>sea snake |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific                      | no      |                  |   |              |

| Таха       | Scientific Name                | Common Name                | CITES | СМS  | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM   |
|------------|--------------------------------|----------------------------|-------|------|-------------------------------------|--|---------|------------------|---|--|
| Sea turtle | Caretta caretta                | Loggerhead<br>turtle       | I     | 1/11 | VU                                  | circumglobal,<br>temperate,<br>subtropical | yes     |                  |   | lule I –<br>d Exports  |
| Sea turtle | Chelonia mydas                 | Green turtle               | I     | 1/11 | EN                                  | circumglobal                               | yes     |                  |   | lule I –<br>d Exports  |
| Sea turtle | Dermochelys<br>coriacea        | Leatherback<br>turtle      | I     | 1/11 | VU                                  | circumglobal                               | yes     |                  |   | lule I –<br>d Exports  |
| Sea turtle | Eretmochelys<br>imbricata      | Hawksbill turtle           | I     | I/II | CR                                  | circumtropical<br>and<br>subtropical       | yes     |                  |   | lule I –<br>d Exports  |
| Sea turtle | Lepidochelys<br>olivacea       | Olive Ridley<br>turtle     | I     | 1/11 | VU                                  | circumtropical                             | yes     | 3                |   | lule I –<br>d Exports  |
| Seagrass   | Syringodium<br>isoetifolium    | Seagrass                   |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |  |
| Seagrass   | Thalassia<br>hemprichii        | Turtle grass               |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |  |
| Seagrass   | Thalassodendron ciliatum       | Seagrass                   |       |      | LC                                  | Indo-Pacific                               | no      |                  |   |  |
| Seahorse   | Hippocampus<br>bargibanti      | Bargibant's seahorse       |       |      | DD                                  | Indo-west<br>Pacific                       | no      |                  |   |  |
| Seahorse   | Hippocampus<br>denise          | Denise's pygmy<br>seahorse |       | -    | DD                                  | western<br>Pacific                         | no      |                  |   |  |
| Seahorse   | Hippocampus<br>histrix         | Spiny seahorse             | II    |      | VU                                  | Uncertain                                  | no      |                  |   |  |
| Seahorse   | Hippocampus kuda               | Spotted seahorse           | II    |      | VU                                  | widespread,<br>rare                        | no      |                  |   |  |
| Seahorse   | Hippocampus<br>pontohi         | Pontoh's pygmy<br>seahorse |       |      | LC                                  | Indo-west<br>Pacific                       | no      |                  |   |  |
| Shark      | Carcharhinus<br>albimarginatus | Silvertip shark            |       |      | VU                                  | Indo-Pacific                               | no      |                  |   |  |
| Shark      | Carcharhinus<br>amblyrhynchos  | Grey reef shark            |       |      | NT                                  | Indo-west<br>Pacific                       | no      |                  |   |  |
| Shark      | Carcharhinus<br>cautus         | Nervous shark              |       |      | DD                                  | restricted                                 | no      |                  |   |  |
| Shark      | Carcharhinus<br>falciformis    | Silky shark                | II    | II   | NT                                  | widespread                                 | yes     |                  |   | No retention<br>allowed in<br>WPCFP<br>vessels as<br>of December<br>2013 |
| Shark      | Carcharhinus<br>limbatus       | Common<br>blacktip shark   |       |      | NT                                  | Indo-Pacific                               | no      |                  |   |  |
| Shark      | Carcharhinus<br>longimanus     | Oceanic whitetip<br>shark  | 11    |      | VU                                  | circumglobal                               | no      |                  |   | No retention<br>allowed in<br>WPCFP<br>vessels as of<br>March 2012       |
| Shark      | Carcharhinus<br>melanopterus   | Blacktip reef<br>shark     |       |      | NT                                  | Indo-Pacific                               | no      |                  |   |  |
| Shark      | Carcharhinus<br>plumbeus       | Sandbar shark              |       |      | VU                                  | circumglobal                               | no      |                  |   |  |
| Shark      | Carcharhinus<br>sorrah         | Spot-tail shark            |       |      | NT                                  | Indo-west<br>Pacific                       | no      |                  |   |  |
| Shark      | Carcharodon<br>carcharias      | White shark                | II    | 1/11 | VU                                  | circumglobal                               | yes     |                  |   |  |
| Shark      | Centrophorus<br>moluccensis    | Smallfin gulper<br>shark   |       |      | DD                                  | Indo-west<br>Pacific                       | no      |                  |   |  |
| Shark      | Eucrossorhinus<br>dasypogon    | Tasselled<br>wobbegong     |       |      | LC                                  | western<br>Pacific                         | no      |                  |   |  |
| Shark      | Galeocerdo cuvier              | Tiger shark                |       |      | NT                                  | Indo-Pacific                               | no      |                  |   |  |
| Shark      | Hexanchus<br>nakamurai         | Bigeyed sixgill<br>shark   |       |      | DD                                  | widespread,<br>deep                        | no      |                  |   |  |

| Таха       | Scientific Name               | Common Name                | CITES | смѕ  | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                                  | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM  |
|------------|-------------------------------|----------------------------|-------|------|-------------------------------------|--|---------|------------------|---|---|
| Shark      | lago garricki                 | Longnose<br>houndshark     |       |      | LC                                  | Indo-west<br>Pacific                         | no      |                  |   |   |
| Shark      | Isurus oxyrinchus             | Shortfin mako              |       | II   | VU                                  | circumglobal,<br>temperate,<br>tropical      | yes     |                  |   |   |
| Shark      | Nebrius ferrugineus           | Tawny nurse<br>shark       |       |      | VU                                  | Indo-Pacific                                 | no      |                  |   |   |
| Shark      | Negaprion<br>acutidens        | Sharptooth<br>Iemon shark  |       |      | VU                                  | Indo-Pacific                                 | no      | 3                |   |   |
| Shark      | Prionace glauca               | Blue shark                 |       |      | NT                                  | widespread                                   | no      |                  |   |   |
| Shark      | Pristis clavata               | Dwarf sawfish              | I     | 1/11 | EN                                  | western<br>Pacific                           | no      |                  |   |   |
| Shark      | Rhincodon typus               | Whale shark                | II    |      | VU                                  | cosmopolitan,<br>tropical, warm<br>temperate | yes     |                  |   | Purse seines<br>may not be<br>set in school<br>of tuna<br>associated<br>with a Whale<br>Shark as of<br>December<br>2012 |
| Shark      | Somniosus<br>antarcticus      | Southern<br>sleeper shark  |       |      | DD                                  | southwest<br>Pacific                         | no      |                  |   |   |
| Shark      | Sphyrna lewini                | Scalloped<br>hammerhead    | II    |      | EN                                  | circumglobal,<br>warm, coastal               | yes     |                  |   |   |
| Shark      | Stegostoma<br>fasciatum       | Zebra shark                |       |      | EN                                  | widespread                                   | no      |                  |   |   |
| Shark      | Triaenodon obesus             | Whitetip reef<br>shark     |       |      | NT                                  | Indo-Pacific                                 | no      |                  |   |   |
| Shearwater | Ardenna carneipes             | Flesh-footed<br>shearwater |       |      | NT                                  | 188000000                                    | yes     |                  |   |   |
| Shearwater | Ardenna pacifica              | Wedge-tailed<br>shearwater |       | -    | LC                                  | 16000000                                     | yes     |                  |   |   |
| Shearwater | Ardenna<br>tenuirostris       | Short-tailed<br>shearwater |       | -    | LC                                  | 155000000                                    | yes     |                  |   |   |
| Shearwater | Puffinus bailloni             | Tropical<br>shearwater     |       |      | LC                                  | 94600000                                     | yes     |                  |   |   |
| Shearwater | Puffinus heinrothi            | Heinroth's<br>shearwater   |       |      | VU                                  | 500000                                       | yes     |                  |   |   |
| Silverside | Atherinomorus<br>duodecimalis | Tropical<br>silverside     |       |      | LC                                  | Indo-west<br>Pacific                         | no      |                  |   |   |
| Skua       | Stercorarius<br>parasiticus   | Arctic Jaeger              |       |      | LC                                  | 148000000                                    | yes     |                  |   |   |
| Skua       | Stercorarius<br>pomarinus     | Pomarine<br>Jaeger         |       |      | LC                                  | 95200000                                     | yes     |                  |   |   |
| Sleeper    | Belobranchus<br>belobranchus  | Throatspine<br>gudgeon     |       | -    | DD                                  | Coral Triangle                               | yes     |                  |   |   |
| Sleeper    | Bostrychus sinensis           | Four-eyed<br>sleeper       |       | -    | LC                                  | Indo-west<br>Pacific                         | no      |                  |   |   |
| Sleeper    | Bunaka gyrinoides             | Greenbacked<br>guavina     |       |      | LC                                  | Coral Triangle                               | no      |                  |   |   |
| Sleeper    | Butis amboinensis             | Ambon gudgeon              |       |      | LC                                  | Coral Triangle                               | no      |                  |   |   |
| Sleeper    | Butis butis                   | Duckbill sleeper           |       |      | LC                                  | Indo-Pacific                                 | no      |                  |   |   |
| Sleeper    | Calumia profunda              | Deepreef<br>coralgudgeon   |       |      | LC                                  | western<br>Pacific                           | no      |                  |   |   |
| Sleeper    | Eleotris<br>acanthopoma       | Spinecheek<br>gudgeon      |       |      | LC                                  | western<br>Pacific                           | no      |                  |   |   |
| Sleeper    | Eleotris fusca                | Dusky sleeper              |       |      | LC                                  | Indo-Pacific                                 | no      |                  |   |   |
| Sleeper    | Giuris margaritacea           | Snakehead<br>gudgeon       |       |      | LC                                  | Indo-Pacific                                 | no      |                  |   |   |

| Таха              | Scientific Name              | Common Name                   | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)           | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------------------|------------------------------|-------------------------------|-------|-----|-------------------------------------|-----------------------|---------|------------------|---|--------------|
| Sleeper           | Ophiocara<br>porocephala     | Spangled<br>gudgeon           |       |     | LC                                  | Indo-Pacific          | yes     |                  |   |              |
| Slickhead         | Talismania<br>antillarum     | Antillean<br>slickhead        |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Smelt whiting     | Sillago sihama               | Silver sillago                |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Snake<br>mackerel | Diplospinus<br>multistriatus | Striped escolar               |       |     | LC                                  | circumtropical        | no      |                  |   |              |
| Snake<br>mackerel | Nealotus tripes              | Black snake<br>mackerel       |       |     | LC                                  | widespread            | no      |                  |   |              |
| Snake<br>mackerel | Promethichthys prometheus    | Promethean<br>escolar         |       |     | LC                                  | circumtropical        | no      |                  |   |              |
| Snaketooth        | Dysalotus alcocki            | Snaketooth                    |       |     | LC                                  | widespread,<br>deep   | no      | 3                |   |              |
| Snaketooth        | Dysalotus<br>oligoscolus     | Snaketooth                    |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Snaketooth        | Kali indica                  | Snaketooth                    |       |     | LC                                  | widespread,<br>deep   | no      |                  |   |              |
| Snaketooth        | Kali kerberti                | Snaketooth                    |       |     | LC                                  | widespread,<br>deep   | no      |                  |   |              |
| Snaketooth        | Kali macrura                 | Snaketooth                    |       |     | LC                                  | widespread,<br>deep   | no      |                  | 2   |              |
| Snaketooth        | Pseudoscopelus<br>altipinnis | Snaketooth                    |       |     | LC                                  | circumglobal,<br>deep | no      |                  |   |              |
| Snaketooth        | Pseudoscopelus<br>scriptus   | Snaketooth                    |       | -   | LC                                  | widespread,<br>deep   | no      |                  |   |              |
| Snaketooth        | Pseudoscopelus<br>scutatus   | Snaketooth                    |       | -   | LC                                  | widespread            | no      |                  |   |              |
| Snapper           | Aphareus furca               | Small-toothed jobfish         |       |     | LC                                  | widespread            | no      |                  |   |              |
| Snapper           | Aphareus rutilans            | Rusty jobfish                 |       |     | LC                                  | widespread            | no      |                  |   |              |
| Snapper           | Aprion virescens             | Green jobfish                 |       |     | LC                                  | widespread            | no      |                  |   |              |
| Snapper           | Etelis carbunculus           | Deepwater red<br>snapper      |       |     | LC                                  | widespread,<br>deep   | no      |                  |   |              |
| Snapper           | Etelis coruscans             | Deepwater longtail<br>snapper | red   |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Snapper           | Etelis radiosus              | Pale snapper                  |       |     | LC                                  | Indo-Pacific,<br>deep | no      |                  |   |              |
| Snapper           | Lipocheilus<br>carnolabrum   | Tang's snapper                |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Snapper           | Lutjanus<br>argentimaculatus | Mangrove jack                 |       |     | LC                                  | Indo-Pacific          | yes     | 2                |   |              |
| Snapper           | Lutjanus biguttatus          | Two-spot<br>banded snapper    |       |     | LC                                  | Coral Triangle        | no      |                  |   |              |
| Snapper           | Lutjanus bohar               | Red bass                      |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Snapper           | Lutjanus boutton             | Moluccan<br>snapper           |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Snapper           | Lutjanus<br>ehrenbergii      | Blackspot<br>snapper          |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Snapper           | Lutjanus<br>fulviflamma      | Blackspot<br>snapper          |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Snapper           | Lutjanus fulvus              | Blacktail<br>snapper          |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |
| Snapper           | Lutjanus gibbus              | Humpback red snapper          |       |     | LC                                  | Indo-west<br>Pacific  | no      |                  |   |              |
| Snapper           | Lutjanus johnii              | John's snapper                |       |     | LC                                  | Indo-west<br>Pacific  | yes     |                  |   |              |
| Snapper           | Lutjanus kasmira             | Bluebanded snapper            |       |     | LC                                  | Indo-Pacific          | no      |                  |   |              |

| Таха        | Scientific Name                   | Common Name                | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> ) | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------------|-----------------------------------|----------------------------|-------|-----|-------------------------------------|--------------------------|---------|------------------|---|--------------|
| Snapper     | Lutjanus lunulatus                | Lunartail<br>snapper       |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Lutjanus lutjanus                 | Bigeye snapper             |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Snapper     | Lutjanus<br>monostigma            | Onespot<br>snapper         |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Lutjanus papuensis                | Snapper                    | -     |     | DD                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Lutjanus<br>quinquelineatus       | Five-lined<br>snapper      |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Lutjanus rivulatus                | Blubberlip<br>snapper      |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Lutjanus<br>rufolineatus          | Golden-lined<br>snapper    |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Lutjanus russellii                | Russell's<br>snapper       |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Lutjanus<br>semicinctus           | Black-banded<br>snapper    |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Lutjanus timoriensis              | Timor snapper              |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Lutjanus vitta                    | Brownstripe red<br>snapper |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Macolor macularis                 | Midneight<br>snapper       |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Macolor niger                     | Black and white snapper    |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Paracaesio<br>kusakarii           | Saddleback<br>snapper      |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Paracaesio sordida                | Blue snapper               |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Paracaesio stonei                 | Stone's fusilier           |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Paracaesio<br>xanthura            | Yellowtail blue<br>snapper |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Pinjalo lewisi                    | Red pinjalo                |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Snapper     | Pristipomoides<br>argyrogrammicus | Ornate jobfish             |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Pristipomoides<br>auricilla       | Goldflag jobfish           | -     |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Pristipomoides<br>filamentosus    | Crimson jobfish            |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Pristipomoides<br>flavipinnis     | Golden eye<br>jobfish      |       |     | LC                                  | Pacific                  | no      |                  |   |              |
| Snapper     | Pristipomoides<br>multidens       | Goldbanded<br>jobfish      |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Pristipomoides<br>sieboldii       | Lavender jobfish           |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Pristipomoides<br>zonatus         | Oblique-banded<br>jobfish  |       |     | LC                                  | Indo-Pacific             | no      |                  |   |              |
| Snapper     | Symphorichthys spilurus           | Sailfisn snapper           |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snapper     | Symphorus<br>nematophorus         | Chinamanfish               |       |     | LC                                  | western<br>Pacific       | no      |                  |   |              |
| Snipe eel   | Nemichthys<br>curvirostris        | Spotted snipe eel          |       |     | LC                                  | widespread,<br>deep      | no      |                  |   |              |
| Snipe eel   | Nemichthys<br>scolopaceus         | Slender snipe<br>eel       |       |     | LC                                  | circumglobal,<br>deep    | yes     |                  |   |              |
| Soldierfish | Myripristis adusta                | Shadowfin<br>soldierfish   |       |     | LC                                  | Indo-west<br>Pacific     | no      |                  |   |              |
| Soldierfish | Myripristis berndti               | Bigscale<br>soldierfish    |       |     | LC                                  | widespread               | no      |                  |   |              |

| Таха         | Scientific Name              | Common Name                 | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                        | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------|------------------------------|-----------------------------|-------|-----|-------------------------------------|------------------------------------|---------|------------------|---|--------------|
| Soldierfish  | Myripristis botche           | Blacktip<br>soldierfish     |       |     | LC                                  | Indo-west<br>Pacific               | no      |                  |   |              |
| Soldierfish  | Myripristis<br>hexagona      | Blacktip<br>soldierfish     |       |     | LC                                  | Indo-Pacific,<br>Pacific           | no      | 3                |   |              |
| Soldierfish  | Myripristis kuntee           | Shoulderbar<br>soldierfish  |       |     | LC                                  | Indo-Pacific                       | no      | 3                |   |              |
| Soldierfish  | Myripristis murdjan          | Pinecone<br>soldierfish     |       |     | LC                                  | Indo-Pacific,<br>Pacific           | no      |                  |   |              |
| Soldierfish  | Myripristis pralinia         | Big eye<br>soldierfish      |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Soldierfish  | Myripristis<br>trachyacron   | Roughskull<br>soldierfish   |       |     | LC                                  | western<br>Pacific                 | no      |                  |   |              |
| Soldierfish  | Myripristis violacea         | Lattice<br>soldierfish      |       |     | LC                                  | Indo-Pacific                       | no      | 3                |   |              |
| Soldierfish  | Myripristis vittata          | Whitetip<br>soldierfish     |       |     | LC                                  | Indo-west<br>Pacific               | no      |                  |   |              |
| Soldierfish  | Plectrypops lima             | Shy soldierfish             |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific      | no      |                  |   |              |
| Soldierfish  | Sargocentron cornutum        | Threespot<br>squirrelfish   |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Soldierfish  | Sargocentron iota            | Dwarf<br>squirrelfish       |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Soldierfish  | Sargocentron<br>melanospilos | Blackblotch<br>squirrelfish |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Soldierfish  | Sargocentron<br>microstoma   | Smallmouth squirrelfish     |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Soldierfish  | Sargocentron praslin         | Brownspot<br>squirrelfish   |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Soldierfish  | Sargocentron<br>tiereoides   | Pink squirrelfish           |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Soldierfish  | Sargocentron<br>violaceum    | Violet squirrelfish         |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Sole         | Dexillus muelleri            | Tufted sole                 |       |     | LC                                  | Central Indo-<br>Pacific           | no      |                  |   |              |
| Sole         | Pardachirus<br>pavoninus     | Peacock sole                |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Sole         | Pardachirus<br>poropterus    | Mottled sole                |       |     | DD                                  | restricted                         | no      |                  |   |              |
| Sole         | Soleichthys<br>heterorhinus  | Banded sole                 |       |     | LC                                  | Indo-west<br>Pacific               | no      |                  |   |              |
| Spinyfin     | Diretmoides<br>pauciradiatus | Longwing spinyfin           |       |     | LC                                  | circumglobal,<br>deep              | no      |                  |   |              |
| Spinyfin     | Diretmus argenteus           | Siver spinyfin              |       |     | LC                                  | circumglobal,<br>deep,<br>uncommon | no      |                  |   |              |
| Sprat        | Spratelloides<br>gracilis    | Silver sprat                |       |     | LC                                  | widespread                         | no      |                  |   |              |
| Squid        | Idiosepius<br>pygmaeus       | Two-toned<br>pygmy squid    |       |     | DD                                  | Indo-west<br>Pacific               | no      |                  |   |              |
| Squid        | Sepia latimanus              | Broadclub<br>cuttlefish     |       |     | DD                                  | widespread                         | no      |                  |   |              |
| Squid        | Sthenoteuthis oualaniensis   | Squid                       |       |     | LC                                  | circumtropical                     | no      |                  |   |              |
| Squid        | Thysanoteuthis rhombus       | Diamondback<br>squid        |       |     | LC                                  | circumtropical,<br>subtropical     | no      |                  |   |              |
| Squirrelfish | Neoniphon<br>argenteus       | Clearfin<br>squirrelfish    |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |
| Squirrelfish | Neoniphon<br>opercularis     | Blackfin<br>squirrelfish    |       |     | LC                                  | Indo-west<br>Pacific               | no      |                  |   |              |
| Squirrelfish | Neoniphon<br>sammara         | Spotfin<br>squirrelfish     |       |     | LC                                  | Indo-Pacific                       | no      |                  |   |              |

| Таха         | Scientific Name              | Common Name                 | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                               | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------|------------------------------|-----------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Squirrelfish | Ostichthys kaianus           | Deepwater<br>squirrelfish   |       |     | LC                                  | widespread,<br>deep                       | no      |                  |   |              |
| Squirrelfish | Sargocentron caudimaculatum  | Tailspot<br>squirrelfish    |       |     | LC                                  | Indo-Pacific                              | no      |                  |   |              |
| Squirrelfish | Sargocentron<br>diadema      | Crowned squirrelfish        |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific             | no      |                  |   |              |
| Squirrelfish | Sargocentron punctatissimum  | White-spotted squirrelfish  |       |     | LC                                  | Indo-Pacific                              | no      |                  |   |              |
| Squirrelfish | Sargocentron<br>rubrum       | Redcoat<br>squirrelfish     |       | -   | LC                                  | Indian Ocean,<br>Indo-Pacific             | no      |                  |   |              |
| Squirrelfish | Sargocentron<br>spiniferum   | Spinecheek<br>squirrelfish  |       | 0   | LC                                  | Indo-west<br>Pacific                      | no      |                  |   |              |
| Squirrelfish | Sargocentron tiere           | Blue-lined<br>squirrelfish  |       |     | LC                                  | Indo-west<br>Pacific                      | no      |                  |   |              |
| Sunfish      | Ranzania laevis              | Dwarf sunfish               |       |     | LC                                  | circumtropical                            | no      |                  |   |              |
| Surgeonfish  | Acanthurus bariene           | Blackspot<br>surgeonfish    |       |     | LC                                  | western<br>Pacific                        | no      |                  |   |              |
| Surgeonfish  | Acanthurus blochii           | Ringtail<br>surgeonfish     |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific,<br>Pacific | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>dussumieri     | Eyestripe<br>surgeonfish    |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus fowleri           | Fowler's<br>surgeonfish     |       |     | LC                                  | Coral Triangle                            | no      |                  |   |              |
| Surgeonfish  | Acanthurus guttatus          | Whitespotted surgeonfish    |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus lineatus          | Striped<br>surgeonfish      |       |     | LC                                  | Indo-west<br>Pacific, Pacific             | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>maculiceps     | Spotted-face<br>surgeonfish |       |     | LC                                  | Indo-west<br>Pacific                      | no      |                  |   |              |
| Surgeonfish  | Acanthurus mata              | Elongate<br>surgeonfish     |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>nigricans      | Blackear<br>surgeonfish     |       |     | LC                                  | Pacific                                   | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>nigricauda     | Black-barred<br>surgeonfish |       |     | LC                                  | Indo-Pacific                              | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>nigrofuscus    | Brown<br>surgeonfish        |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>olivaceus      | Orange band surgeonfish     |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>pyroferus      | Mimic<br>surgeonfish        |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>thompsoni      | Thompson's surgeonfish      |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>triostegus     | Convict tang                |       | -   | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Acanthurus<br>xanthopterus   | Yellow-mask<br>surgeonfish  |       |     | LC                                  | Indo-Pacific                              | no      |                  |   |              |
| Surgeonfish  | Ctenochaetus<br>binotatus    | Twospot<br>bristletooth     |       |     | LC                                  | Indo-Pacific                              | no      |                  |   |              |
| Surgeonfish  | Ctenochaetus<br>cyanocheilus | Short-tail<br>bristletooth  |       |     | LC                                  | western<br>Pacific                        | no      |                  |   |              |
| Surgeonfish  | Ctenochaetus<br>striatus     | Striped<br>bristletooth     |       |     | LC                                  | widespread                                | no      |                  |   |              |
| Surgeonfish  | Ctenochaetus<br>tominiensis  | Orangetipped bristletooth   |       |     | LC                                  | western<br>Pacific                        | no      |                  |   |              |
| Surgeonfish  | Naso annulatus               | Whitemargin<br>unicornfish  |       |     | LC                                  | Indo-Pacific                              | no      |                  |   |              |
| Surgeonfish  | Naso<br>brachycentron        | Humpback<br>unicornfish     |       |     | LC                                  | Indo-Pacific                              | no      |                  |   |              |

| Таха               | Scientific Name             | Common Name                | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------------------|-----------------------------|----------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Surgeonfish        | Naso brevirostris           | Palefin<br>unicornfish     |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Surgeonfish        | Naso hexacanthus            | Sleek<br>unicornfish       |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Surgeonfish        | Naso lituratus              | Orangespine<br>unicornfish |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Surgeonfish        | Naso lopezi                 | Slender<br>unicornfish     |       |     | LC                                  | Indo-Pacific                  | no      | 2                |   |              |
| Surgeonfish        | Naso minor                  | Blackspine<br>unicornfish  |       |     | LC                                  | Indo-Pacific                  | no      | 2                |   |              |
| Surgeonfish        | Naso thynnoides             | Singlespine<br>unicornfish |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Surgeonfish        | Naso tonganus               | Bulbnose<br>unicornfish    |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Surgeonfish        | Naso unicornis              | Bluespine<br>unicornfish   |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Surgeonfish        | Paracanthurus<br>hepatus    | Blue tang                  |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      | 2                |   |              |
| Surgeonfish        | Zebrasoma scopas            | Brushtail tang             |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Surgeonfish        | Zebrasoma<br>veliferum      | Sailfin tang               |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Sweetlips          | Plectorhinchus<br>gibbosus  | Brown sweetlips            |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Sweetlips          | Pomadasys<br>argenteus      | Silver javelin             |       | -   | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Tapertail          | Radiicephalus<br>elongatus  | Tapertail                  |       | -   | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Tarpon             | Megalops<br>cyprinoides     | Indo-Pacific<br>tarpon     |       |     | DD                                  | Indo-west<br>Pacific          | yes     |                  |   |              |
| Tattler            | Tringa brevipes             | Grey-tailed<br>tattler     |       | II  | NT                                  | 7560000                       | yes     |                  |   |              |
| Tattler            | Tringa incana               | Wandering tattler          |       | 11  | LC                                  | 2450000                       | yes     |                  |   |              |
| Telescopefish      | Gigantura chuni             | Gigantura                  |       |     | LC                                  | widespread,<br>deep           | no      |                  |   |              |
| Telescopefish      | Gigantura elegans           | Indian<br>telescopefish    |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Tern               | Anous minutus               | Black noddy                |       |     | LC                                  | 164000000                     | no      |                  |   |              |
| Tern               | Anous stolidus              | Brown noddy                |       |     | LC                                  | 215000000                     | no      |                  |   |              |
| Tern               | Gygis alba                  | Common white tern          |       |     | LC                                  | 137000000                     | no      |                  |   |              |
| Tern               | Onychoprion<br>anaethetus   | Bridled tern               |       |     | LC                                  | 169000000                     | yes     |                  |   |              |
| Tern               | Onychoprion<br>fuscatus     | Sooty tern                 |       |     | LC                                  | 195000000                     | yes     |                  |   |              |
| Tern               | Onychoprion<br>lunatus      | Grey-backed<br>tern        |       |     | LC                                  | 29100000                      | no      |                  |   |              |
| Tern               | Sterna dougallii            | Roseate tern               |       | Ш   | LC                                  | 120000000                     | yes     |                  |   |              |
| Tern               | Sterna hirundo              | Common tern                |       | II  | LC                                  | 112000000                     | yes     |                  |   |              |
| Tern               | Sterna sumatrana            | Black-naped tern           |       |     | LC                                  | 61800000                      | yes     |                  |   |              |
| Tern               | Sternula albifrons          | Little tern                |       | II  | LC                                  | 130000000                     | yes     |                  |   |              |
| Tern               | Thalasseus bergii           | Lesser crested tern        |       |     | LC                                  | 142000000                     | yes     |                  |   |              |
| Threadfin<br>bream | Scolopsis bilineata         | Two-lined<br>monocle bream |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Tilefish           | Hoplolatilus<br>fourmanoiri | Yellowspotted tilefish     |       |     | LC                                  | restricted                    | no      |                  |   |              |

| Таха                | Scientific Name                 | Common Name             | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|---------------------|---------------------------------|-------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Tinselfish          | Xenolepidichthys<br>dalgleishi  | Spotted<br>tinselfish   |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Toothed<br>seadevil | Neoceratias spinifer            | Toothed seadevil        |       |     | LC                                  | circumglobal,<br>deep         | no      |                  |   |              |
| Trevally            | Alectis ciliaris                | African<br>Pompano      |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Trevally            | Carangoides bajad               | Orangespotted trevally  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Trevally            | Carangoides<br>coeruleopinnatus | Bluefin kingfish        |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Trevally            | Carangoides ferdau              | Banded trevally         |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Trevally            | Carangoides<br>fulvoguttatus    | Yellow-spotted trevally |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Trevally            | Carangoides<br>gymnostethus     | Bludger                 |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Trevally            | Carangoides<br>hedlandensis     | Bumpnose<br>trevally    |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Trevally            | Carangoides<br>oblongus         | Coachwhip<br>trevally   |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Trevally            | Carangoides<br>orthogrammus     | Island jack             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Trevally            | Carangoides<br>plagiotaenia     | Barcheek<br>trevally    |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Trevally            | Caranx ignobilis                | Giant trevally          |       |     | LC                                  | widespread                    | no      |                  |   |              |
| Trevally            | Caranx lugubris                 | Black trevally          |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Trevally            | Caranx<br>melampygus            | Bluefin trevally        |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Trevally            | Caranx papuensis                | Brassy trevally         |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Trevally            | Caranx<br>sexfasciatus          | Bigeye trevally         |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Trevally            | Decapterus<br>macarellus        | Mackerel scad           |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Trevally            | Decapterus<br>macrosoma         | Shortfin scad           |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Trevally            | Decapterus tabl                 | Roughear scad           |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Trevally            | Elegatis bipinnulata            | Rainbow runner          |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Trevally            | Gnathanodon<br>speciosus        | Golden trevally         |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Trevally            | Naucrates ductor                | Pilotfish               |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Trevally            | Scomberoides<br>Iysan           | Doublespotted queenfish |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Trevally            | Selar boops                     | Oxeye scad              |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Trevally            | Selar<br>crumenophthalmus       | Bigeye scad             |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Trevally            | Seriola dumerilii               | Greater<br>amberjack    |       |     | LC                                  | circumglobal                  | no      |                  |   |              |
| Trevally            | Seriola rivoliana               | Longfin<br>yellowtail   |       |     | LC                                  | circumtropical                | no      |                  |   |              |
| Trevally            | Trachinotus bailloni            | Small spotted dart      |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Trevally            | Trachinotus blochii             | Snubnose<br>pompano     |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Trevally            | Uraspis helvola                 | Whitetongue<br>jack     |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Triggerfish         | Canthidermis<br>maculata        | Rough<br>triggerfish    |       |     | LC                                  | circumglobal                  | no      |                  |   |              |

| Таха        | Scientific Name                   | Common Name                         | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-------------|-----------------------------------|-------------------------------------|-------|-----|-------------------------------------|---|---------|------------------|---|--------------|
| Triggerfish | Melichthys niger                  | Black triggerfish                   |       |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Triggerfish | Sufflamen<br>fraenatum            | Bridled<br>triggerfish              |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific                       | no      |                  |   |              |
| Triplefin   | Ceratobregma<br>helenae           | Helena's triplefin                  |       |     | LC                                  | Pacific   | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>elegans         | Hourglass<br>triplefin              |       |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>fasciatus       | Tiny threefin                       |       |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>flavoccipitis   | Yellownape<br>triplefin             |       |     | LC                                  | Central Indo-<br>Pacific                            | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>fuscoventer     | Blackbelly<br>triplefin             |       |     | LC                                  | Central Indo-<br>Pacific                            | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>hemimelas       | Halfblack<br>triplefin              |       |     | LC                                  | Pacific   | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>mirabilis       | Miracle triplefin                   |       |     | LC                                  | Coral Triangle                                      | no      | 3                |   |              |
| Triplefin   | Enneapterygius<br>nanus           | Pygmy triplefin                     |       |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>niger           | Black triplefin                     |       |     | LC                                  | New<br>Caledonia,<br>Solomon<br>Islands,<br>Vanuatu | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>nigricauda      | Blacktail triplefin                 |       |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>pallidoserialis | Pale white-<br>spotted triplefin    |       |     | LC                                  | western<br>Pacific                                  | no      | 3                |   |              |
| Triplefin   | Enneapterygius<br>philippinus     | Minute triplefin                    |       |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>rhabdotus       | Umpire triplefin                    |       |     | LC                                  | western<br>central Pacific                          | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>rubicauda       | Redtail triplefin                   |       |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>signicauda      | Flagtail triplefin                  |       |     | LC                                  | western<br>Pacific                                  | no      | 3                |   |              |
| Triplefin   | Enneapterygius<br>tutuilae        | High hat triplefin                  |       |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Triplefin   | Enneapterygius<br>williamsi       | William's triplefin                 |       |     | LC                                  | western<br>central Pacific                          | no      | 2                |   |              |
| Triplefin   | Helcogramma chica                 | Little hooded<br>triplefin          |       |     | LC                                  | Indo-west<br>Pacific                                | no      |                  |   |              |
| Triplefin   | Helcogramma<br>fuscipectoris      | Fourspot triplefin                  |       |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Triplefin   | Helcogramma<br>hudsoni            | Hudnson's<br>triplefin              |       |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Triplefin   | Helcogramma nigra                 | Triplefin                           |       |     | LC                                  | western<br>central Pacific                          | no      |                  |   |              |
| Triplefin   | Helcogramma<br>novaecaledoniae    | New Caledonia<br>triplefin          |       |     | LC                                  | New<br>Caledonia,<br>Solomon<br>Islands             | no      |                  |   |              |
| Triplefin   | Helcogramma<br>rhinoceros         | Rhinoceros<br>triplefin             |       |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Triplefin   | Helcogramma<br>striata            | Tropical striped triplefin          |       |     | LC                                  | Indo-Pacific  | no      |                  |   |              |
| Triplefin   | Helcogramma<br>trigloides         | Triplefin                           |       |     | LC                                  | western<br>Pacific                                  | no      |                  |   |              |
| Triplefin   | Norfolkia<br>brachylepis          | Tropical scaly-<br>headed triplefin |       |     | LC                                  | Indo-west<br>Pacific                                | no      |                  |   |              |
| Triplefin   | Norfolkia thomasi                 | Thomas' triplefin                   |       |     | LC                                  | restricted  | no      |                  |   |              |

| Таха       | Scientific Name              | Common Name                  | CITES | CMS  | IUCN<br>Red List<br>Assess-<br>ment | Range (km <sup>2</sup> )             | Migrant   | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|------------|------------------------------|------------------------------|-------|------|-------------------------------------|--------------------------------------|-----------|------------------|---|--------------|
| Triplefin  | Springerichthys<br>kulbickii | Kulbicki's<br>triplefin      |       |      | LC                                  | western<br>central Pacific           | no        |                  |   |              |
| Triplefin  | Ucla xenogrammus             | Largemouth<br>triplefin      |       |      | LC                                  | Indo-Pacific                         | no        |                  |   |              |
| Tropicbird | Phaethon lepturus            | White-tailed<br>tropicbird   |       |      | LC                                  | 161000000                            | yes       |                  |   |              |
| Tropicbird | Phaethon<br>rubricauda       | Red-tailed<br>tropicbird     |       |      | LC                                  | 95100000                             | yes       |                  |   |              |
| Tuna       | Euthynnus affinis            | Mackerel tuna                |       |      | LC                                  | Indo-west<br>Pacific                 | yes       |                  |   |              |
| Tuna       | Gymnosarda<br>unicolor       | Dogtooth tuna                |       |      | LC                                  | Indo-Pacific                         | yes       | 3                |   |              |
| Tuna       | Thunnus alalunga             | Albacore                     |       |      | NT                                  | circumglobal                         | yes       |                  |   |              |
| Tuna       | Thunnus albacares            | Yellowfin tuna               |       |      | NT                                  | worldwide                            | yes       |                  |   |              |
| Tuna       | Thunnus obesus               | Bigeye tuna                  |       |      | VU                                  | circumtropical                       | yes       |                  |   |              |
| Viperfish  | Chauliodus sloani            | Sloan's viperfish            |       |      | LC                                  | circumglobal,<br>deep                | no        |                  |   |              |
| Wader      | Actitis hypoleucos           | Common<br>sandpiper          |       |      | LC                                  | 47200000                             | yes       |                  |   |              |
| Wader      | Calidris alba                | Sanderling                   |       |      | LC                                  | 13600000                             | yes       |                  |   |              |
| Wader      | Calidris ferruginea          | Curlew<br>sandpiper          |       | 11   | NT                                  | 3050000                              | yes       |                  |   |              |
| Wader      | Calidris ruficollis          | Red-necked stint             |       |      | NT                                  | 3360000                              | yes       |                  |   |              |
| Wader      | Charadrius<br>leschenaultii  | Greater<br>sandplover        |       | 11   | LC                                  | 9850000                              | yes       |                  |   |              |
| Wader      | Charadrius<br>mongolus       | Lesser<br>sandplover         |       | 11   | LC                                  | 47100000                             | yes       |                  |   |              |
| Wader      | Esacus<br>magnirostris       | Beach thick-<br>knee         |       |      | NT                                  | 29800000                             | no        |                  |   |              |
| Wader      | Numenius<br>phaeopus         | Whimbrel                     |       | 11   | LC                                  | 31100000                             | yes       |                  |   |              |
| Wader      | Tringa nebularia             | Common<br>greenshank         |       | 11   | LC                                  | 18700000                             | yes       |                  |   |              |
| Waryfish   | Ahliesaurus berryi           | Waryfish                     |       |      | LC                                  | widespread,<br>deep                  | no        |                  |   |              |
| Waspfish   | Tetraroge barbata            | Mangrove<br>waspfish         |       |      | LC                                  | western<br>Pacific                   | no        |                  |   |              |
| Whale      | Balaenoptera edeni           | Bryde's whale                | I     | П    | DD                                  | circumglobal,<br>warm                | uncertain |                  |   |              |
| Whale      | Balaenoptera<br>omurai       | Omura's whale                | II    |      | DD                                  | Indo-Pacific,<br>rare                | unknown   |                  |   |              |
| Whale      | Feresa attenuata             | Pygmy killer<br>whale        | II    |      | DD                                  | circumtropical                       | no        |                  |   |              |
| Whale      | Kogia breviceps              | Pygmy sperm<br>whale         | II    |      | DD                                  | widespread                           | no        |                  |   |              |
| Whale      | Kogia sima                   | Dwarf sperm<br>whale         | II    |      | DD                                  | circumtropical<br>and<br>subtropical | unknown   |                  |   |              |
| Whale      | Lagenodelphis<br>hosei       | Fraser's dolphin             | 11    | II   | LC                                  | circumtropical                       | no        |                  |   |              |
| Whale      | Megaptera<br>novaeangliae    | Humpback<br>whale            | I     | I    | LC                                  | cosmopolitan                         | yes       |                  |   |              |
| Whale      | Mesoplodon<br>densirostris   | Blainville's<br>beaked whale | 11    |      | DD                                  | circumtropical                       | no        |                  |   |              |
| Whale      | Orcinus orca                 | Killer whale                 | 11    | Ш    | DD                                  | circumglobal                         | no        |                  |   |              |
| Whale      | Physeter<br>macrocephalus    | Sperm whale                  | I     | 1/11 | VU                                  | circumglobal                         | no        |                  |   |              |
| Whale      | Pseudorca<br>crassidens      | Flase killer<br>whale        | II    |      | DD                                  | circumtropical                       | no        |                  |   |              |

| Таха      | Scientific Name                  | Common Name               | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                         | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|-----------|----------------------------------|---------------------------|-------|-----|-------------------------------------|-------------------------------------|---------|------------------|---|--------------|
| Whale     | Ziphius cavirostris              | Cuvier's beaked<br>whale  | II    | I   | LC                                  | circumglobal                        | no      |                  |   |              |
| Whalefish | Barbourisia rufa                 | Redvelvet<br>whalefish    |       |     | LC                                  | circumglobal,<br>deep, rare         | no      |                  |   |              |
| Whalefish | Cetostoma regani                 | Pink flabby<br>whalefish  |       |     | DD                                  | circumglobal,<br>deep               | no      |                  |   |              |
| Whalefish | Ditropichthys storeri            | Doublekeeled<br>whalefish |       |     | DD                                  | circumglobal,<br>deep               | no      | 2                |   |              |
| Whalefish | Rondeletia loricata              | Redmouth<br>whalefish     |       |     | LC                                  | circumglobal,<br>deep               | no      |                  |   |              |
| Wormfish  | Gunnellichthys<br>curiosus       | Curious<br>wormfish       |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wormfish  | Gunnellichthys<br>monostigma     | Onespot<br>wormfish       |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wormfish  | Gunnellichthys pleurotaenia      | Onestripe<br>wormfish     |       |     | LC                                  | Indo-Pacific                        | no      | 3                |   |              |
| Wormfish  | Gunnellichthys viridescens       | Yellowstripe<br>wormfish  |       |     | LC                                  | Indo-west<br>Pacific                | no      | 3                |   |              |
| Wormfish  | Nemateleotris<br>decora          | Elegant firefish          |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wormfish  | Nemateleotris<br>helfrichi       | Helfrich's<br>dartfish    |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wormfish  | Paragunnellichthys seychellensis | Sychelles<br>wormfish     |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wormfish  | Parioglossus<br>formosus         | Beautiful hover<br>goby   |       |     | LC                                  | Indo-Pacific                        | no      | <u>.</u>         |   |              |
| Wormfish  | Parioglossus<br>lineatus         | Lined hover<br>goby       |       |     | DD                                  | Japan, Palau,<br>Solomon<br>Islands | no      | 3                |   |              |
| Wormfish  | Parioglossus nudus               | Naked hover<br>goby       |       |     | LC                                  | western<br>Pacific                  | no      |                  |   |              |
| Wormfish  | Parioglossus<br>palustris        | Borneo hoverer            |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wormfish  | Ptereleotris<br>uroditaenia      | Flagtail dartfish         |       |     | LC                                  | Coral Triangle                      | no      |                  |   |              |
| Wrasse    | Anampses<br>caeruleopunctatus    | Bluespotted<br>wrasse     |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific       | no      |                  |   |              |
| Wrasse    | Anampses<br>meleagrides          | Marble wrasse             |       |     | LC                                  | Indo-west<br>Pacific                | no      |                  |   |              |
| Wrasse    | Anampses<br>neoguinaicus         | Black-banded<br>wrasse    |       |     | LC                                  | Indo-west<br>Pacific                | no      |                  |   |              |
| Wrasse    | Anampses twistii                 | Yellowbreasted<br>wrasse  |       |     | LC                                  | widespread                          | no      | 3                |   |              |
| Wrasse    | Bodianus<br>anthioides           | Lyre-tail hogfish         |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wrasse    | Bodianus axillaris               | Turncoat hogfish          |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wrasse    | Bodianus dictynna                | Hogfish                   |       |     | LC                                  | Indo-west<br>Pacific                | no      |                  |   |              |
| Wrasse    | Bodianus<br>Ioxozonus            | Blackfin hogfish          |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wrasse    | Bodianus<br>mesothorax           | Yellowspotted hogfish     |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wrasse    | Cheilinus chlorurus              | Floral wrasse             |       |     | LC                                  | Indo-Pacific                        | no      |                  | -   |              |
| Wrasse    | Cheilinus fasciatus              | Redbreasted<br>wrasse     |       |     | LC                                  | Indo-west<br>Pacific                | no      |                  |   |              |
| Wrasse    | Cheilinus<br>oxycephalus         | Snooty wrasse             |       |     | LC                                  | Indo-Pacific                        | no      |                  |   |              |
| Wrasse    | Cheilinus undulatus              | Humphead<br>wrasse        | 11    |     | EN                                  | widespread                          | no      |                  |   |              |

| Таха   | Scientific Name                 | Common Name              | CITES | смѕ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------|---------------------------------|--------------------------|-------|-----|-------------------------------------|----------------------------|---------|------------------|---|--------------|
| Wrasse | Cheilio inermis                 | Cigar wrasse             |       |     | LC                                  | widespread                 | no      |                  |   |              |
| Wrasse | Choerodon<br>anchorago          | Orange-dotted tuskfish   |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Wrasse | Choerodon jordani               | Jordan's tuskfish        |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Wrasse | Choerodon<br>schoenleinii       | Blackspot<br>tuskfish    |       | -   | NT                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Cirrhilabrus<br>beauperryi      | Beau's wrasse            |       |     | LC                                  | PNG,<br>Solomon<br>Islands | no      |                  |   |              |
| Wrasse | Cirrhilabrus<br>exquisitus      | Exquisite wrasse         |       |     | DD                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Cirrhilabrus<br>punctatus       | Dotted wrasse            |       | -   | LC                                  | restricted                 | no      |                  |   |              |
| Wrasse | Cirrhilabrus pylei              | Pyle's wrasse            |       |     | LC                                  | Coral Triangle             | no      |                  |   |              |
| Wrasse | Cirrhilabrus<br>rubrimarginatus | Red-margined<br>wrasse   |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Cirrhilabrus<br>scottorum       | Scott's wrasse           |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Cirrhilabrus walindi            | Walindi fairy-<br>wrasse |       |     | LC                                  | PNG,<br>Solomon<br>Islands | no      |                  |   |              |
| Wrasse | Coris aygula                    | Humphead<br>wrasse       |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Coris batuensis                 | Schroeder's<br>wrasse    |       | 0   | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Coris dorsomacula               | Spotfin wrasse           |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Coris gaimard                   | Clown wrasse             | 2     |     | LC                                  | Indo-Pacific,<br>Pacific   | no      |                  |   |              |
| Wrasse | Cymolutes<br>praetextatus       | Knife razorfish          |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Diproctacanthus<br>xanthurus    | Yellowtail tubelip       |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Wrasse | Epibulus brevis                 | Dwarf slingjaw<br>wrasse |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Wrasse | Epibulus insidiator             | Slingjaw wrasse          |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Gomphosus varius                | Bird wrasse              | 9     |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Halichoeres argus               | Peacock wrasse           |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Halichoeres<br>biocellatus      | Biocellate<br>wrasse     |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Wrasse | Halichoeres<br>chloropterus     | Pastel-green<br>wrasse   |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Wrasse | Halichoeres<br>chrysus          | Golden wrasse            |       |     | LC                                  | Indo-west<br>Pacific       | no      |                  |   |              |
| Wrasse | Halichoeres claudia             | Claudia's wrasse         |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Halichoeres<br>hartzfeldii      | Orange-lined<br>wrasse   |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Wrasse | Halichoeres<br>hortulanus       | Checkerboard<br>wrasse   |       |     | LC                                  | Indo-Pacific               | no      |                  | · · · · · · · · · · · · · · · · · · ·             |              |
| Wrasse | Halichoeres<br>leucurus         | Chain-line<br>wrasse     |       |     | LC                                  | Coral Triangle             | no      |                  |   |              |
| Wrasse | Halichoeres<br>margaritaceus    | Pearlspot<br>wrasse      |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Halichoeres<br>marginatus       | Dusky wrasse             |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |
| Wrasse | Halichoeres<br>melanurus        | Tail-spot wrasse         |       |     | LC                                  | western<br>Pacific         | no      |                  |   |              |
| Wrasse | Halichoeres<br>melasmapomus     | Ocellated<br>wrasse      |       |     | LC                                  | Indo-Pacific               | no      |                  |   |              |

| Таха   | Scientific Name                 | Common Name                  | CITES | СМЗ | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                              | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------|---------------------------------|------------------------------|-------|-----|-------------------------------------|--|---------|------------------|---|--------------|
| Wrasse | Halichoeres<br>miniatus         | Circle-cheek<br>wrasse       |       |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Wrasse | Halichoeres<br>papilionaceus    | Schwarz's<br>wrasse          |       |     | LC                                  | Coral Triangle                           | no      |                  |   |              |
| Wrasse | Halichoeres<br>prosopeion       | Twotone wrasse               |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Wrasse | Halichoeres<br>richmondi        | Richmond's<br>wrasse         |       |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Wrasse | Halichoeres<br>scapularis       | Brownbanded<br>wrasse        |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Wrasse | Halichoeres<br>trimaculatus     | Three-spot<br>wrasse         |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Hemigymnus<br>fasciatus         | Banded thicklip<br>wrasse    |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Hemigymnus<br>melapterus        | Blackedge<br>thicklip wrasse |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Hologymnosus<br>annulatus       | Ringed wrasse                |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Hologymnosus<br>doliatus        | Narrow-banded<br>wrasse      |       |     | LC                                  | Indo-Pacific                             | no      | 8                |   |              |
| Wrasse | Hologymnosus<br>longipes        | Sidespot<br>longface wrasse  |       |     | LC                                  | restricted                               | no      |                  |   |              |
| Wrasse | Iniistius aneitensis            | Pale razorfish               | 2<br> |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Iniistius baldwini              | Baldwin's<br>razorfish       |       |     | LC                                  | Pacific                                  | no      |                  |   |              |
| Wrasse | Iniistius celebicus             | Bronzespot<br>razorfish      |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Wrasse | Iniistius pavo                  | Peacock<br>razorfish         |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Labrichthys<br>unilineatus      | Tubelip wrasse               |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Labroides bicolor               | Bicolor<br>cleanerfish       |       |     | LC                                  | widespread                               | no      |                  |   |              |
| Wrasse | Labroides<br>dimidiatus         | Cleaner wrasse               |       |     | LC                                  | Indo-Pacific                             | no      | 2                |   |              |
| Wrasse | Labroides<br>pectoralis         | Blackspot<br>cleaner wrasse  |       |     | LC                                  | Indo-west<br>Pacific                     | no      |                  |   |              |
| Wrasse | Labropsis alleni                | Allen's tubelip              |       |     | LC                                  | Indo-west<br>Pacific                     | no      | 2                |   |              |
| Wrasse | Labropsis australis             | Southern tubelip             |       |     | LC                                  | restricted                               | no      |                  |   |              |
| Wrasse | Labropsis<br>xanthonota         | Wedgetailed<br>wrasse        |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Leptojulis polylepis            | Blackspot<br>V-wrasse        |       |     | LC                                  | Indonesia,<br>PNG,<br>Solomon<br>Islands | no      |                  |   |              |
| Wrasse | Macropharyngodon<br>meleagris   | Blackspotted<br>wrasse       |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Macropharyngodon<br>negrosensis | Yellowspotted<br>wrasse      |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Novaculichthys taeniorus        | Rockmover<br>wrasse          |       |     | LC                                  | widespread                               | no      |                  |   |              |
| Wrasse | Oxycheilinus<br>bimaculatus     | Comettailed<br>wrasse        |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |
| Wrasse | Oxycheilinus<br>celebicus       | Slender maori<br>wrasse      |       |     | LC                                  | western<br>Pacific                       | no      |                  |   |              |
| Wrasse | Oxycheilinus<br>digramma        | Cheeklined<br>wrasse         |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific            | no      |                  |   |              |
| Wrasse | Oxycheilinus<br>orientalis      | Oriental maori<br>wrasse     |       |     | LC                                  | Indo-Pacific                             | no      |                  |   |              |

| Таха   | Scientific Name                | Common Name               | CITES | CMS | IUCN<br>Red List<br>Assess-<br>ment | Range (km²)                   | Migrant | Fisheries<br>Act | Wildlife<br>Protection<br>and Manage-<br>ment Act | WCFPC<br>CMM |
|--------|--------------------------------|---------------------------|-------|-----|-------------------------------------|-------------------------------|---------|------------------|---|--------------|
| Wrasse | Oxycheilinus<br>unifasciatus   | Ringtail maori<br>wrasse  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Paracheilinus<br>filamentosus  | Filament-fin<br>wrasse    | 2     |     | LC                                  | western<br>Pacific            | no      | 2                |   |              |
| Wrasse | Paracheilinus<br>rubricaudalis | Redtail<br>flasherwrasse  | -     |     | LC                                  | restricted                    | no      | 2                |   |              |
| Wrasse | Pseudocheilinops<br>ataenia    | Pink-streaked<br>wrasse   | -     |     | LC                                  | western<br>central Pacific    | no      |                  |   |              |
| Wrasse | Pseudocheilinus<br>evanidus    | Disappearing<br>wrasse    |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Wrasse | Pseudocheilinus<br>hexataenia  | Sixlined wrasse           |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Wrasse | Pseudocheilinus<br>octotaenia  | Eight-lined<br>wrasse     |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Wrasse | Pseudocoris<br>heteroptera     | Torpedo wrasse            |       |     | LC                                  | Indo-Pacific                  | no      | 9                |   |              |
| Wrasse | Pseudocoris<br>yamashiroi      | Redspot wrasse            |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      | 2                |   |              |
| Wrasse | Pseudodax<br>moluccanus        | Chisel-tooth<br>wrasse    |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Pseudojuloides<br>cerasinus    | Candy wrasse              |       |     | DD                                  | Pacific                       | no      | 9                |   |              |
| Wrasse | Pteragogus cryptus             | Cryptic wrasse            |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      | 9                |   |              |
| Wrasse | Pteragogus<br>enneacanthus     | Red-striped<br>wrasse     |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Wrasse | Pteragogus<br>flagellifer      | Flagfin wrasse            |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Stethojulis<br>bandanensis     | Red-spot wrasse           |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Stethojulis<br>strigiventer    | Silverstreaked<br>wrasse  |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Stethojulis trilineata         | Three-lined<br>wrasse     |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Wrasse | Thalassoma<br>amblycephalum    | Blunthead<br>wrasse       |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Wrasse | Thalassoma<br>hardwicke        | Sixbar wrasse             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Thalassoma lunare              | Moon wrasse               |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Thalassoma<br>lutescens        | Sunset wrasse             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Thalassoma<br>nigrofasciatum   | Blackbar wrasse           |       |     | LC                                  | western and central Pacific   | no      |                  |   |              |
| Wrasse | Thalassoma<br>purpureum        | Purple wrasse             |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Thalassoma<br>quinquevittatum  | Fivestripe<br>wrasse      |       |     | LC                                  | Indo-Pacific                  | no      |                  |   |              |
| Wrasse | Thalassoma<br>trilobatum       | Christmas<br>wrasse       |       |     | LC                                  | Indo-west<br>Pacific          | no      |                  |   |              |
| Wrasse | Wetmorella<br>nigropinnata     | Blackspot pygmy<br>wrasse |       |     | LC                                  | Indian Ocean,<br>Indo-Pacific | no      |                  |   |              |
| Wrasse | Xyrichtys halsteadi            | Halstead's<br>razorfish   |       |     | LC                                  | western<br>Pacific            | no      |                  |   |              |







Marine and Coastal Biodiversity Management in Pacific Island Countries

