

Report and Recommendation of the President

RRP: COO 39118

Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Cook Islands for the Cyclone Emergency Assistance Project

June 2005

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 14 April 2005)

Currency Unit	–	New Zealand dollar (NZ\$)
NZ\$1.00	=	US\$0.726
\$1.00	=	NZ\$1.376

ABBREVIATIONS

ADB	–	Asian Development Bank
AusAID	–	Australian Agency for International Development
CIIC	–	Cook Islands Investment Corporation
CIMS	–	Cook Islands Meteorological Services
GDP	–	gross domestic product
IEE	–	initial environmental examination
km ²	–	square kilometer
kph	–	kilometers per hour
MFEM	–	Ministry of Finance and Economic Management
NZAid	–	New Zealand Aid
PMU	–	project management unit
PSC	–	project steering committee
TA	–	technical assistance
US	–	United States

GLOSSARY

Tropical cyclones, typhoons, or hurricanes are names given to the same phenomenon in different parts of the world. They are weather systems with strong winds that circulate anticlockwise around low-pressure areas in the northern hemisphere and clockwise in the southern hemisphere. They are capable of causing massive destruction in three ways: by high winds, heavy rainfall causing inland flooding; and storm-surge flooding. Tropical cyclones form near the equator near the open sea where the surface temperature is at least 26° Celsius. They may last with destructive power for 2 weeks or more. The warm sea provides the overlying atmosphere with a continuous supply of energy and moisture, first to generate a tropical cyclone and then to maintain its destructive violence as it moves forward. The diameter of a tropical storm, called the eye, may have a diameter ranging from 20–150 kilometers (km) The source of energy is cut off when the storm crosses a coastline and moves inland, thus reducing its destructive power.

The Saffir-Simpson Hurricane Scale uses a 1–5 rating to measure the cyclone's intensity and is used to give an estimate of the potential property damage and flooding expected along the coast from a cyclone landfall. Wind speed is the determining factor in the scale, as storm-surge values are highly dependent on the slope of the continental shelf in the landfall region.

Category

Description of Hurricane

Five	Involving winds greater than 249 km per hour (km/hr) and storm surge generally greater than 6 meters above normal, it is capable of causing complete roof failure on residential and industrial buildings; complete building failure with small utility buildings blown over or away; blowing away shrubs, trees, and signs; destruction of mobile homes; severe and extensive window and door damage; interruption of low-lying escape routes with rising water; major damage to lower floor structures located less than 5 meters above sea level and within 450 meters of the shoreline; and typically requires evacuation of residential areas on low ground within 8–16 km of the shoreline.
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- Four Involving winds of 210–249 km/hr and storm surge generally at 4–6 meters above normal, it is capable of causing extensive curtain-wall failure; complete roof structure failure on small residences; strewn shrubs, trees, and tearing of signs; complete destruction of mobile homes; extensive damage to doors and windows, and interruption of low-lying escape routes with rising water in 3–5 hours before arrival of the hurricane center; and major damage to lower floors and structures near the shore. Terrain lower than 3 meters above sea level may be flooded requiring massive evacuation of residential areas as far inland as 10 km.
- Three Involving winds of 178–209 km/hr and storm surge generally of 3–4 meters above normal, it is capable of causing structural damage to small residences and utility buildings with a minor amount of curtain-wall failure, blowing down trees, destruction of mobile homes and poorly constructed signs, interruption of low-lying escape routes by rising water 3–5 hours before arrival of the hurricane center, destruction of smaller coastal structures due to flooding, damage to larger structures due to battering of floating debris, and continuous inundation of terrain lower than 1.5 meters above mean sea level 13 km or more inland. Evacuation of low-lying residences within several blocks of the shoreline may be required.
- Two Involving winds of 154–176 km/hr and storm surge generally 2–3 meters above normal, it is capable of causing damage to roofing material, doors, and windows of buildings; considerable damage to shrubbery and trees with some trees blown down; damage to mobile homes, poorly constructed signs, and piers; flooding of coastal and low-lying escape routes for 2–4 hours before arrival of the hurricane, and small craft in unprotected anchorages break moorings.
- One Involves winds of 119–153 km/hr with storm surge generally 1.5–2 meters above normal, it may not cause any real damage to building structures, but could damage unanchored mobile homes, shrubbery, and trees, and poorly constructed signs; flood coastal roads; and result in minor pier damage.

NOTE

The fiscal year (FY) of the Government and its agencies ends on 30 June.

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LOAN AND PROJECT SUMMARY

Borrower	The Cook Islands
Classification	Targeting classification: General intervention
	Sector: Multisector
	Subsectors: Transport (ports and roads), water supply and sewerage, power, education, and health
	Theme: Emergency recovery from cyclone damage
	Subtheme: Management of public finances
Environment Assessment	Category B. An initial environmental examination was undertaken (summarized in Appendix 8).
Project Description	The Cyclone Emergency Assistance Project will mitigate social and economic impacts of the 2005 cyclone damage by providing concessional resources for the Government to meet the costs of the recovery under a burden-shared recovery program and thus help the Government manage public finances prudently, despite additional and unforeseen recovery expenditures.
Rationale	The 2005 cyclones caused considerable damage to essential public infrastructure, businesses, and private homes. In the outer islands, disruption of productive activities has possible long-term economic implications. The Government has taken immediate action to implement an emergency assistance program to alleviate the human suffering associated with the cyclone damage, and has prepared a comprehensive recovery assessment and program for mitigating the social and economic impacts. In addition to the recovery costs borne by the business community, the comprehensive damage assessment amounts to US\$7.9 million, an expenditure that would place a considerable burden on the Government budget, redirecting funds from (i) development programs and productive assets to rebuilding activities, and (ii) the reserves built for debt repayment. The Government has requested that a cooperative burden-sharing arrangement, involving households, businesses, the Government, the aid community, and the proposed Project, be implemented to meet the unforeseen and additional recovery expenditures.
Objectives and Scope	The Project's main objective is to contribute to the sustainability of economic growth by minimizing the damaging impact of the 2005 cyclones. The Project supports (i) the Government's capacity to implement a comprehensive recovery action plan to mitigate the socioeconomic impact of the cyclones by financing additional and unforeseen recovery expenditures, and (ii) prudent financial management of Government fiscal resources and continued adherence to the performance ratios under the 1998 Manila Agreement. Eligible items to be financed under the Project include expenditures in all categories of the recovery program, such as (i) cleanup, (ii) reinstatement of public services, (iii) reinstatement of essential structures and buildings, and (iv) materials and supplies.

These categories will restore the functionality of public utilities (such as water and power), education, health, and transport sector services. Eligible expenditures will be selected based on both general criteria aimed at ensuring that project resources are utilized only to respond to the recovery needs; and specific criteria identified under the functional areas. Eligible expenditures include

- (i) **roads:** repair and cleanup of roads, bridges, and drainage;
- (ii) **ports:** restore functionality or to a condition existing before the cyclone damage;
- (iii) **power supply:** repair of power poles, transformers, certain high voltage power lines, distribution lines, and distribution infrastructure;
- (iv) **water supply:** restore facilities to precyclone condition;
- (v) **waste management:** restore facilities to precyclone condition;
- (vi) **buildings:** repair hospitals, health centers, staff quarters, and administrative buildings of government agencies; and
- (vii) **general cleanup:** remove fallen trees and related debris caused by the cyclones.

Cost Estimates

The total project cost, including physical and price contingencies, interest and other charges, is estimated at US\$7.9 million equivalent, comprising US\$1.8 million equivalent (23%) in local currency and US\$6.1 million (77%) in foreign exchange.

Financing Plan

Source	Amount (US\$ million)	%
ADB	2.83	36
Households	2.52	32
Governments of Australia and New Zealand	1.16	15
Government	1.36	17
Total	7.87	100

ADB = Asian Development Bank.

The Asian Development Bank (ADB) will finance 36% of costs under all eligible cost categories of the recovery program. The remainder of the costs will be covered by households (32%), Government of the Cook Islands (15%), and the governments of Australia and New Zealand (17%).

Loan Amount and Terms

A loan of SDR1,895,000 (US\$2.83 million equivalent) will be provided from the Special Funds resources. The loan will have a 40-year term including a grace period of 10 years, an interest rate of 1% per year, and repayment of principal at 2% a year for the first 10 years after the grace period and 4% a year thereafter.

Period of Utilization

Until November 2007

Estimated Project Completion Date	April 2007
Executing Agencies	Ministry of Finance and Economic Management (MFEM)
Implementation Arrangements	MFEM will establish a project management unit, comprising a project manager and an accountant, with a professional accountancy designation. The unit will report to the MFEM financial secretary and operate under the guidance of a steering committee involving the heads of the implementing agencies: (i) Ministry of Works; (ii) Cook Islands Investment Corporation, including the Ports Authority and Te Aponga Uira O Tumu-Te-Varovaro (Te Aponga Uira-Power Authority), Rarotonga; (iii) Office of the Minister for Island Administration; and (iv) representatives of development partner organizations, as appropriate. The disbursements will be made through an imprest account for payments for eligible expenditures selected, based on agreed criteria. The project accounts will be audited annually by external auditors.
Procurement	Procurement of goods, services, and works will be carried out consistent with ADB <i>Guidelines for Procurement</i> with the flexible interpretation permitted for emergency assistance loans provided in accordance with ADB <i>Disaster and Emergency Assistance Policy (2004)</i> to ensure maximum expediency in implementing the recovery program. The proceeds of the ADB loan will finance imports of goods and services, local purchases, and civil works identified under the comprehensive damage assessment. Under ADB <i>Guidelines for Procurement</i> , these may be procured through direct purchase, international shopping, or local competitive bidding, as appropriate. ADB has approved the use of advance procurement, retroactive financing, and local cost financing. Both local and prudent international shopping is recommended with the bid period reduced from 30 to 7–15 days. In the case of local contractors, a registration system that lists approved contractors based on criteria such as experience, and financial and technical capacity may be used. Unit cost tenders are recommended for use of local contractors, reflecting procurement procedures used for normal commercial practices by the private sector. Community participation will be encouraged in all recovery activities.
Consulting Services	Project management will require approximately 58 person-months of consulting services for a project manager; an accountant with a professional accountancy designation; and technical support for specific assessments, detailed design, contract supervision, and quality control. The project manager will engage consultants as needed for specific recovery activities. The Government will select these services in accordance with ADB <i>Guidelines on the Use of Consultants</i> and other arrangements satisfactory to ADB for the engagement of domestic consultants.
Project Benefits and Beneficiaries	The burden-shared recovery program will mitigate the otherwise extended negative impacts of the 2005 cyclone damage, particularly on the poor, and enable the country to recover from

the emergency with only a temporary setback. The immediate benefit of the recovery program is the reinstatement of basic services, including water and power supply, transport sector functionality, and education and health sector services. The Project will support prudent financial management of the Government's fiscal resources enabling maintenance of fiscal viability and debt servicing by maximizing the concessional funding for recovery expenditures.

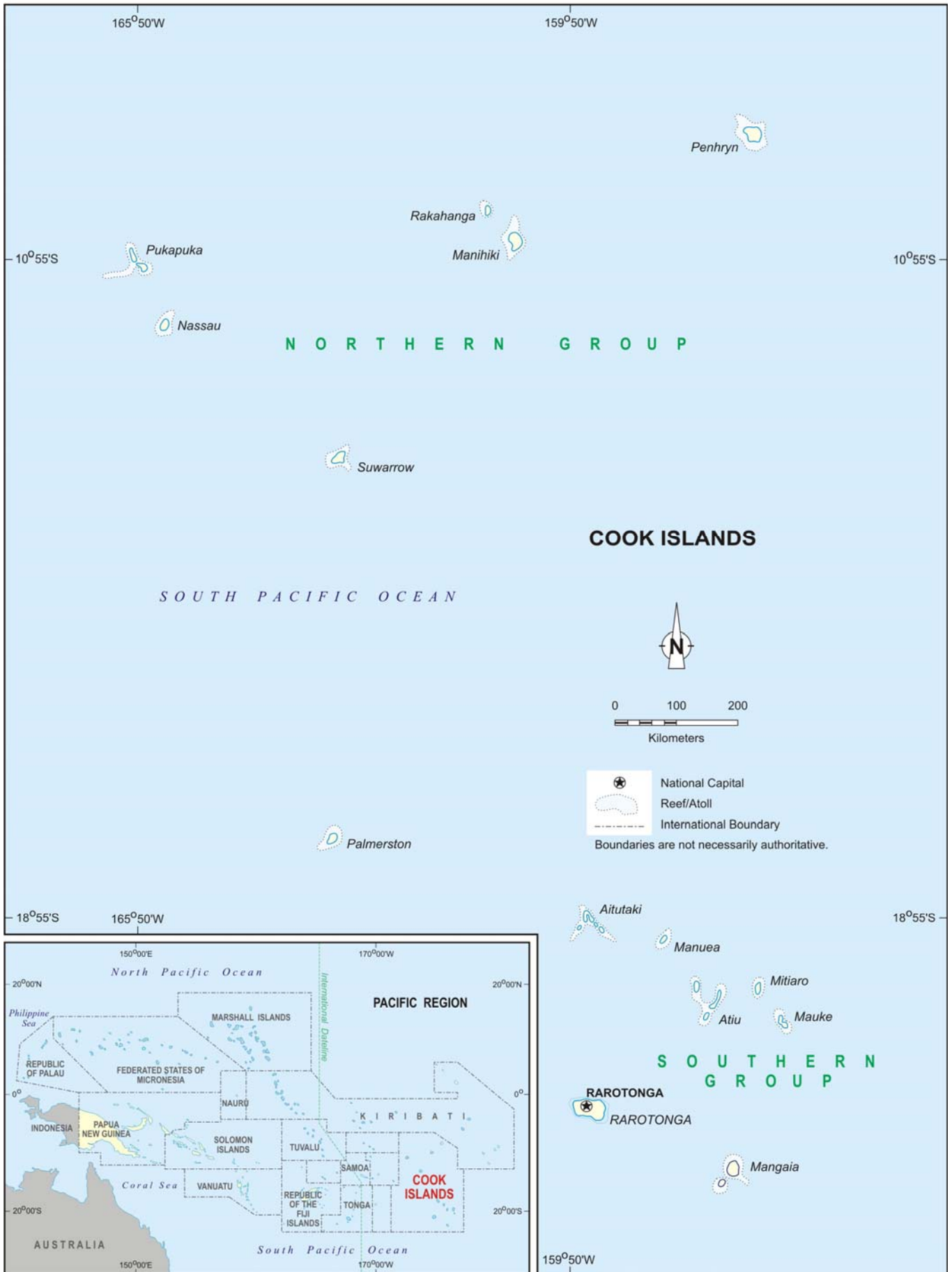
Risks and Assumptions

The risks related to efficient and prudent management of quick-disbursing recovery resources, including corruption and misuse of funds to purposes not related to the recovery phase, are addressed by (i) established and agreed detailed selection criteria; (ii) transparent implementation and monitoring mechanisms involving a group of implementing agencies in the decision making; (iii) engagement of adequate human resources for project management, including for safeguarding financial accounting and control of expenditures under the loan; and (iv) external audit of accounts.

The 24-month implementation period is sufficient, given action already under way under the recovery program, using retroactive funding available under the Project, and streamlined project management procedures.

Technical Assistance

ADB will provide a technical assistance grant of \$600,000 for Strengthening Disaster Management and Mitigation aimed at (i) establishing a rapid, effective, and robust response capability through efficiently coordinated networks of skilled personnel to administer the current and future recovery response operations; and (ii) preparing an integrated and environmentally sustainable infrastructure master plan involving infrastructure designs that incorporate climate change adaptation and disaster mitigation strategies.



I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the Cook Islands for the Cyclone Emergency Assistance Project. The report also describes proposed technical assistance (TA) for Strengthening Disaster Management and Mitigation and if the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, will approve the TA. The design and monitoring framework is in Appendix 1.

II. RATIONALE: ANALYSIS, PROBLEMS, AND OPPORTUNITIES

A. Natural Disasters in the Cook Islands

2. The Cook Islands consists of 15 widely dispersed small islands, comprising two main groups, the southern Cook Islands (Rarotonga, Mangaia, Atiu, Aitutaki, Mauke, Mitiaro, and Manuae and Takukea) and the northern Cook Islands (Nassau, Palmerston, Penrhyn, Manihiki, Rakahanga, Pukapuka, and Suvarrow). Rarotonga, with a land area of 67 square kilometers (km²), is the largest; the smallest is Suvarrow (0.4 km²). The total land area of the country is 240 km², while its exclusive economic zone covers a maritime area of nearly 2 million km². Most of the islands are flat atolls, easily prone to inundation by storm surges. Only Rarotonga is mountainous; its highest peak is 653 meters.

3. The climate is maritime tropical, dominated by easterly trade winds and a marked seasonality in the rainfall regime. The dry season is from May to October and the wet season from November to April. The wet season is also the tropical cyclone season, associated with an easterly shift of the South Pacific Convergence Zone over the country. The climate can vary significantly, especially in relation to the El Niño Southern Oscillation.

4. Tropical cyclone activity is more frequent during an El Niño event, when warmer than normal sea surface temperatures (+26°Celsius [C]) coincide with an eastward migration of the South Pacific Convergence Zone. This occurred in the vicinity of the Cook Islands and the French Polynesia in February–March 2005. During an El Niño event, the southern Cook Islands experiences a reduction in rainfall, to as little as 60% of normal, while in the northern Cook Islands rainfall can increase to as much as 300% above normal.

5. During the 1997/98 El Niño Southern Oscillation event, tropical cyclones Martin and Pam caused extensive damage to property and infrastructure and brought human suffering, including loss of lives. The southern group of islands experienced a prolonged drought. The Asian Development Bank (ADB) supported the economic restoration of Manihiki, Pukapuka, and Rakahanga islands after a disaster caused by Cyclone Martin with the Cyclone Emergency Rehabilitation Project in 1997.¹ The most damaging single cyclone event in recent history was Cyclone Sally in 1987, with damage estimated to reach 66% of the gross domestic product (GDP); it devastated the airport, beach hotels, tourist resorts, and businesses near the sea.

B. 2005 Cyclone Impact

6. Between 4 February and 8 March 2005, the Cook Islands experienced five damaging cyclones. Their wind speeds exceeded 200 kilometers per hour (kph) with cyclone Meena peaking at 280 kph; cyclone Nancy at 241 kph; cyclone Olaf at 259 kph, and cyclone Percy at 212 kph. Four of the five cyclones were given the maximum severity rating of category 5.

¹ ADB. 1997. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Government of the Cook Islands for the Cyclone Emergency Rehabilitation Project*. Manila.

The first three cyclones formed close to Samoa and the last two near Tuvalu with sea surface temperatures recorded at a high of 32°C. The cyclone tracking map and activity is described in Appendix 2.

C. Cyclone Damage Assessment

7. The Government asked the Cook Islands Investment Corporation (CIIC), responsible for the management of public assets, to prepare a damage assessment report on government properties after cyclones Meena, Nancy, and Olaf. In addition, stakeholder ministries prepared separate damage reports on assets under their responsibility. Coordinated by the Office of the Prime Minister, these reports provide a comprehensive damage assessment.

8. **Component 1: Roads, Bridges, and Drainage.** On Rarotonga, Aitutaki, Mauke, and Mangaia, the cyclones caused considerable road damage. The storm surge deposited debris on coastal roads and downed trees. The Ministry of Works engaged in an immediate cleanup operation (commencing 6 February), removing debris (mainly coral rocks and sand) and trees and repairing roads. These operations continued as subsequent cyclones added to the damage. By 9 March, cleanup works and repairs to road pavements were substantially complete.

9. **Component 2: Ports.** Harbors on Rarotonga, Aitutaki, Atiu, Mauke, Mangaia, and Pukapuka were damaged. In the main port of Avatiu on Rarotonga, wharf facilities experienced general damage as a result of Cyclone Meena, and then incurred extensive breakwater damage as a result of cyclones Nancy and Olaf. Damage to the harbor on Aitutaki consisted of scour behind the wharf wall. On Mauke and Mangaia, damaged slipways require urgent temporary repairs to make them useable. On Pukapuka, the wharf wall incurred scour and collapsed, and must be reconstructed. At Avatiu, repairs to wharf facilities are complete, but the harbor basin needs to be cleared of debris. At Aitutaki, repairs to the wharf wall are complete. On Mauke and Mangaia, some clearing has been undertaken to permit use of slipways by small craft; major clearing work remains. No repairs have yet been carried out at Pukapuka.

10. **Component 3: Power Supply.** Power supplies were affected because underground high voltage cables were exposed to sea scour, and sea spray and water damaged six substations. Low voltage feeders were extensively damaged by falling trees. The majority of the low voltage feeders have been temporarily restored but the lines themselves have sustained damage and need to be replaced. The underground high voltage cables remain isolated; no repairs have yet been undertaken. No repairs have been undertaken thus far to the affected substations.

11. **Component 4: Water Supplies.** Water supplies escaped major damage, although tanks and roof catchments on Pukapuka and Nassau were affected. Communal and individual water tanks were either damaged or contaminated by seawater. Therefore, the delivery of fresh drinking water became a priority in the immediate aftermath of Cyclone Percy. However, inhabitants were able to construct temporary water catchments, sufficient for their basic needs. On Rarotonga, access to water treatment facilities was blocked and damaged, and filter media requires replacement due to heavy siltation.

12. **Component 5: Waste Management.** The new waste management landfill in Rarotonga suffered damage to its control center and rain cover along with other minor

damage. The new facility cannot commence operations until this damage is repaired. This facility was financed by the ADB Waste Management Project.²

13. **Component 6: Buildings and Materials.** CIIC assessed damage to Government buildings. Many have severe damage to roofs and consequent damage to internal fixtures and fittings. Similar damage was sustained by many private residences. On Pukapuka, damage to buildings was particularly severe following Cyclone Percy with only a few escaping intact. Repairs commenced immediately on Rarotonga and are ongoing. On other islands, repairs have yet to commence.

14. **Component 7: General Cleanup.** On many islands, fallen trees, debris from the water surge, and wind damage closed roads and passageways, filled drains, and prevented access in general. Removal and deposit of all debris is a high priority.

15. **Agriculture.** The Ministry of Agriculture assessed damage to agriculture on all islands. The extent of loss varies depending on the type of crop and location, but subsistence gardens were particularly affected. Availability of local produce in the markets in mid March was extremely limited with recovery expected to take up to 12 months.

16. **Telecommunications.** Damage to telecommunications was slight and quickly repaired.

17. **Airports.** Airports suffered only minor damage. The Mangaia airstrip sustained erosion damage. The western end of the international airport was protected by bunds and the presence of the main road and seawall. The road did however suffer some scour as did the buried high voltage power cable. The road has been repaired but not the high voltage cable. Further work is necessary at Mangaia as repairs to date are only temporary.

D. Macroeconomic Impact

18. In spite of the common labor market and monetary association with New Zealand, the Cook Island's economy is vulnerable because of its smallness, narrowly based island economy, and political culture that need strong administrative oversight. In response to mounting financial crises, in 1996 the Government adopted an economic reform program to correct economic imbalances and restore debt sustainability with the support of ADB-facilitated debt restructuring.³ The Government remains committed to the objectives of the 1998 Manila Agreement⁴ and the associated reform program aimed at prudent economic management to generate growth and fiscal stability.

19. The country's economy achieved its sixth consecutive year of growth in 2004. Preliminary data indicate that real GDP grew by 3.4%. The primary contributors to GDP of NZ\$238 million (2003), or NZ\$12,965 per capita, are tourism (54%), including the related retail, wholesale, and other consumption and financial services; agriculture and fisheries (16%); transportation (15%), and public administration (12%).

20. The good economic conditions helped strengthen the fiscal position during 2004, leading to small increases in both the operating balance and net lending. Inflation was low at 0.9%, attributable to a combination of an overall sound fiscal position; appreciation of the

² ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Government of the Cook Islands for the Waste Management Project*. Manila.

³ ADB. 1996. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Government of the Cook Islands for the Economic Restructuring Program*. Manila.

⁴ In 1998, ADB served as an honest broker in the restructuring of Cook Island's debt to four countries: France, Italy, Nauru, and New Zealand.

NZ\$ (the currency used by the Cook Islands); and low inflation in New Zealand, the main source of imports.

21. The improved fiscal conditions were recognized in October 2004, when Standard and Poor's Rating Services lifted the long-term rating on the Cook Islands to BB– from B+, reflecting the fourth upward revision of the rating since the initial B–/C rating was assigned in January 1998. This improvement was achieved with debt restructuring, debt repayments, and accumulation of cash debt repayment reserves.

22. However, the Cook Islands was put on credit watch in early 2005 in light of economic threat of the cyclones. Weakening of the Government's credit quality relates to (i) incurred costs to the economy; (ii) recovery expenditures in excess of fiscal capacity; and (iii) weakening fiscal revenues as a result of weaker economic activity after the 2005 cyclones, particularly in the dominant tourism sector.⁵ External assistance, particularly through the Project, is necessary for the Government to meet the recovery expenditures in a manner that fosters prudent financial management of public resources and adherence to the performance ratios agreed in the 1998 Manila Agreement. Concessional funding to support the Government's resource management, reinstatement of normal social and economic activities, and mitigation of the broader negative impacts on the economy will help to restore the credit quality of the country.

E. The Government's Response

1. Emergency Response

23. With tropical cyclones part of the maritime environment of the Cook Islands, the National Hurricane Safety Plan consolidates⁶ procedures and department responsibilities in addressing cyclone threats. In accordance with arrangements under the purview of the International Meteorological Organization, the Cook Islands Meteorological Services (CIMS), a department of the Police, received the 2005 cyclone warnings from the Fiji Regional Meteorological Service Center, in Nadi, Fiji Islands. In addition, CIMS obtained information from a variety of sources on weather patterns and warnings, including from the Honolulu Tsunami Center and Fiji Regional Meteorological Service Center. CIMS disseminated warnings to the chief hurricane safety officer, an assignment designated to the police commissioner under the Hurricane Safety Act of 1973 and to the population through special weather bulletins using three modes of communications: public radio, telephone, and very high frequency radio communications. On the outer islands, local police implemented instructions received and reported back to the chief hurricane safety officer, who in turn briefed the National Emergency Operation Center on the hourly feedback from the islands. Radio Cook Islands broadcast information on the cyclone threat 24 hours a day, and the Government mobilized the Rarotonga Hurricane Center to coordinate disaster preparedness activities in the capital and with other islands. Several evacuation centers were established in response to the cyclones.⁷ Some low-lying areas were evacuated and shelters set up. While the Government did not declare a state of emergency for the first three cyclones, a state of emergency was declared for Pukapuka and Nassau islands during the fourth, given the serious damage and loss of most homes and food crops. Thanks to efficient dissemination of early warning information, no human casualties were incurred.

24. The Government and its agencies managed early warning information dissemination and evacuation, provided emergency relief to the affected population with the support of

⁵ Melbourne, 18 Feb 2005. Press Release. Standard and Poors. www.standardandpoors.com.au.

⁶ Meteorological and disaster management responsibilities are defined in the meteorological Services Act 1995–1996; the National Hurricane Safety Plan 2004–2005; the Tropical Cyclone Standard Operating Procedures for 2004–2005 for CIMS; and instructions issued by the director of CIMS in accordance with the legislation.

⁷ At Arorangi, Avarua, Matavera, Ngatangia, Nikao, and Titikaveka.

international and regional relief agencies, and have undertaken preliminary assessments of the physical damage. Emergency measures were implemented, particularly in the outer islands, to address the disruption of water and food supply, loss of shelter, and other humanitarian needs. These measures are still under way in the remote islands of Pukapuka and Nassau, funded by the Government budget; Pacific Forum; governments of Australia, People's Republic of China, France, and New Zealand; Red Cross; and Samoa-based United Nations Disaster Assessment Group (Table 1).

Table 1: Humanitarian and Emergency Assistance by Development Partners

Purpose	Source	Amount
Relief Funds: blankets, lanterns, relief supplies	Red Cross	NZ\$55,000
Relief Funds: food, fuel, and logistical support	Pacific Forum	NZ\$49,905
Relief Funds: logistics support.	PRC	NZ\$30,000
Relief Funds: food and logistics support	UNDP	US\$50,000
Relief assistance: water, food, fuel, and building materials with transport to Pukapuka and Nassau	NZAid/AusAID	In kind and cash grant
Military team with equipment to support Immediate recovery of shelter in the outer islands (Pukapuka)	France	In kind
Fuel and equipment for the outer islands	Australia	NZ\$200,000
Immediate recovery of temporary housing for Rarotonga; additional housing support is under consideration for Pukapuka and Nassau	NZAid/AusAID	NZ\$200,000 An additional NZ\$240,000 under consideration
Volunteers and equipment for cleanup of Rarotonga	NZAid/AusAID	NZ\$81,000
Heavy machinery	NZAid/AusAID	NZ\$305,000
Heavy machinery (on loan)	NZAid/AusAID	NZ\$320,000
Logistical support	NZAid/AusAID	In kind
Logistical support for provision of relief support to the outer islands	UNDAG	US\$50,000
Telecommunications technicians and heavy equipment	NZAid/AusAID	NZ\$12,000 in kind
Airport landing gear	NZAid/AusAID	NZ\$60,000
Power cables and restoration technicians (Rarotonga, Atiu)	NZAid/AusAID	NZ\$126,000

AusAID = Australian Agency for International Development, NZ = New Zealand, NZAid = New Zealand Aid, PRC = People's Republic of China, UNDAG = United Nations Disaster Assessment Group, UNDP = United Nations Development Programme.

Source: Asian Development Bank.

2. Recovery Response

25. While the National Hurricane Safety Plan provides guidance for disaster management, operational procedures and agency roles in the immediate aftermath of a disaster are not clearly set out or followed, and disaster management is susceptible to inefficiencies. The recovery assessments and response management is spread over several agencies and ad hoc committees, including the 5-person Emergency Operations Committee, enlarged National Disaster Management Team established on 21 February 2005 and chaired by the Prime Minister's chief of staff, Cyclone Aid Coordination Committee established on 24 February 2004, and National Emergency Operation Center convened on an ad hoc basis to respond to the emergency caused by the cyclones. Strengthening of disaster and recovery management, including damage assessment, aid management, and operational coordination is immediately required to ensure rapid, effective, and robust response by an efficient network of skilled personnel and procedures. Strengthening of financial controls is also needed for management of fast-disbursing recovery funds.

3. Development and Prevention

26. The Government recognizes the deficiencies of the immediate response mounted to support emergency and humanitarian action. Accordingly, the Government is keen to review (i) the prevailing regional, national, and subnational strategies for emergency response; (ii) concepts and instruments for crises prevention and application in economic development and development cooperation; (iii) standards for service delivery and essential infrastructure to address weather-related vulnerabilities and protection of key infrastructure and climate change adaptation, including reinforcement of vulnerable structures and adjustment of building and land-use zones; (iv) construction of breakwater protection for the town center, port, other key national assets, and low-lying areas; (v) hazard reduction technology; and (vi) infrastructure management and governance conditions in keeping with the prudent financial management framework provided in the 1998 Manila Agreement. To develop a pragmatic approach, the Government has asked ADB to provide TA to strengthen disaster management and mitigation (paras. 70–71) to review 20-year infrastructure requirements, in accordance with international practices, and prepare an integrated plan to support the economic and social development of the Cook Islands, incorporating climate change adaptation concepts and improvements in infrastructure sector governance.

F. Financing Recovery Needs

27. Since Cyclone Olaf, Government agencies have been occupied with preparing damage assessments with the support of the Government interagency teams for the outer islands, Red Cross, and United Nations Disaster Assessment Group. The recovery assessment identified damage costs on a replacement basis. Restoration of public assets is estimated using selective criteria for reinstating functionality of the service to a safe and productive standard, thus removing facilities that add only limited value to service delivery. Total damage is estimated at NZ\$10.5 million (US\$7.9 million). In spite of the current budget reserves, the Government lacks resources to finance the immediate recovery and reinstatement of basic services.

1. Funding the Recovery Costs

28. Funding of the recovery program will be arranged within provisions of the 1998 Manila Agreement (footnote 3). The Manila Agreement, supported by ADB, enabled the Cook Islands to resolve a serious fiscal and economic crisis and resulted in a rescheduling of debt to the country's official bilateral creditors. The associated reform program led to improved country economic performance. The debt restructuring reduced the face value of the Government's debt by more than 30% and provided concessions on interest rates. The Government's borrowing capacity has since improved with net debt reduced to 38% of GDP (June 2004), compared with 109% in June 1997.

29. By June 2005, debt reserves are expected to amount to NZ\$18.4 million against total borrowings of NZ\$97.8 million. These financial assets are deposited with local commercial banks. Standard & Poor's considers the country's investment rating would be at risk if these reserves are spent before they can be used for debt repayment. To ensure prudent financial management and viability of its public finances, the Government is determined not to spend these reserves to finance the additional and unforeseen expenditures arising from the recovery related to the 2005 cyclones. Moreover, to finance these expenditures, the Government has requested a loan under the ADB Disaster and Emergency Assistance Policy. Due to the high level of concessional resources, the Project will increase the debt service obligation of the Cook Islands by only 0.9% in the first 10 years and by 1.4% in the next 20 years, and will increase the debt to GDP ratio to 41% from the current 38%.

30. The Government revised its forecast for 2004/05 fiscal revenues by a total of NZ\$2.0 million, from NZ\$70 million to NZ\$68 million; NZ\$1.0 million of which is due to the cyclone impact. In response to the damage reports and the related unforeseen demand for fiscal resources, the Government has approved appropriations exceeding budget revenues by NZ\$1.5 million, referring to Section 70(3)(b) of the Constitution, which authorizes expenditure of funds in excess of budget resources without prior approval of the Parliament and equivalent to 1.5% of the total budget. These funds will be expended in addition to the NZ\$480,000 budget allocation for the recovery program.⁸

2. Portfolio Management and Restructuring

31. The ADB program for the Cook Islands includes one loan of \$2.2 million for waste management; the project is near completion.⁹ The project incurred cost overruns due to (i) unfavorable movements in the SDR currencies against the New Zealand dollar, in which project costs were denominated; and (ii) technical reasons. Consequently, the loan proceeds have been expended and are not available for reallocation.

32. The TA portfolio involves two ongoing TAs: Strengthening Economic and Development Planning and Management, and Legal and Institutional Strengthening for Implementation of Cook Islands Environment Act of 2003. The former will be canceled because the Government is making its own resources available for the national planning processes. The latter TA is providing helpful advice on implementation of the Environment Act to the Ministry of National Environmental Services and the Crown Law Office (Office of the Solicitor General).

G. Response of the Development Partners

33. The governments of Australia, People's Republic of China, France, and New Zealand; Pacific Forum, Red Cross; and United Nations agencies, particularly through the United Nations Disaster Assessment Group, provided assistance for immediate humanitarian and emergency relief. The Aid Management Division of the Ministry of Finance and Economic Management (MFEM) manages disbursement of the relief and recovery aid. The donors, particularly the governments of New Zealand and Australia, have agreed to reallocate funds from ongoing aid programs to cover additional restoration requirements related to assets receiving support from these regular aid programs. These funds will contribute to burden-shared financing of the recovery program.

H. Lesson Learned in Disaster Management

1. Development and Prevention

34. In the Pacific, including in the Cook Islands, population centers and economic activities are concentrated in the coastal zones and are vulnerable to the effects of climate change, particularly an increase in extreme weather events, and sea-level rise. The five recent successive cyclones may relate to a changing climate pattern and increased El Niño effect. Concurrently, development and social change have placed pressure on sensitive ecosystems of the Cook Islands.

35. Given the unique climate change vulnerabilities of the Cook Islands, closer management of development will be essential, particularly to protect sensitive coastal areas and foreshores to reduce their vulnerability to the additional stresses arising from climate

⁸ Office of the Deputy Prime Minister. 9 March 2005. Cyclone Recovery Expenditure, Memorandum, Article 70 of the Constitution on Part V: the Public Revenues of the Cook Islands, pp. 673-674.

⁹ ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Cook Islands for the Waste Management Project*. Manila.

change and sea-level rise. Mainstreaming climate change adaptation and sea-level rise issues into Government policy and development programs, particularly in infrastructure standards, is essential. Adaptation and mitigation strategies need to be based on an integrated and comprehensive approach that accounts for sustainability concerns, both environmental and cultural.

36. In the context of the United Nations Framework Convention on Climate Change, the Cook Islands highlights the need for a national adaptation strategy that prioritizes measures to reduce risks associated with climate change. Climate change manifests through increased frequency of extreme weather events rather than long-term trends in average conditions. Adapting to the current climate extremes and variability prevents loss of scarce financial and other resources on disaster recovery and rehabilitation, and is an essential step to withstanding climate changes. Most importantly, climate change adaptation should be incorporated in the design of social as well as infrastructure projects. The Government asked for TA to strengthen disaster management and mitigation (para. 26). The TA will provide a framework for planning infrastructure development to support social and economic welfare improvement in the country through policy and program designs that incorporate climate change adaptation, including climate proofing and mitigation strategies.

2. Disaster and Emergency Management

37. While the country has experienced several major cyclones in the past, the recent 2005 cyclones increased awareness of the need for a robust risk management strategy, and for disaster and emergency management capacity. Experience in addressing the 2005 cyclones reveals that disaster management requires strengthening and clear lines of communication and accountability need to be established. The current disaster management modality is operating without strong guidance and relies on fiscal overspending.

III. THE PROPOSED EMERGENCY ASSISTANCE

A. Impact and Outcome

38. The Government is implementing a countrywide recovery action plan with the objective of reinstating basic social services and economic activities. The objectives of the Project are to support the Government by providing concessional financing for expenditures crucial for recovery.

39. The Project will focus on priority areas identified through consultation with the Government, private sector, civil society, and development partners for reinstatement of basic services. The expenditures under all categories of the comprehensive recovery assessment are eligible for funding under the Project, provided that these relate to (i) cleanup; (ii) infrastructure reinstatement (ports, power supply, water supply and sanitation including waste management, roads, drainage, and bridges); (iii) basic service delivery structures and facilities (schools, hospitals, government service facilities); and (iv) essential materials and supplies (learning materials, refurbishment inventory).

B. Main Features

40. The Project is designed to allow for maximum flexibility. It includes quick-disbursing components and retroactive financing of up to 30% of the loan proceeds—this is available for eligible expenditures incurred prior to project approval. An imprest account will be set up for the loan funds to facilitate payments to suppliers of goods and services, and thus enable the proceeds to benefit the victims of the disaster in a timely manner. The Project is also designed to accommodate changes in the recovery costs, which were at best preliminary at

the time of design, through its flexible design and allotted physical contingencies. At the time of design, all aid partners had not yet received requests from the Government for support. With identification of eligible expenditure categories in the comprehensive damage assessment, the Project fosters effective partnerships by enabling the Government to apply grant aid funding to finance expenditure items and enables funding of the remaining financing gap by the loan proceeds. This design enables prudent public financial management and allows for maximum use of concessional funds in financing the recovery.

C. Outputs

1. Assessment

41. All affected Government agencies prepared damage assessments, including the Ministry of Works (for roads, bridges, drainage, water supplies, and waste management on Rarotonga), Office of the Minister for Island Administration (for roads, power, harbors, and buildings in the outer islands), CIIC (for government buildings and some private buildings and community facilities on Rarotonga and the outer islands), Te Aponga (the power authority covering Rarotonga), Cook Islands Telecommunications (all islands), and the Ports Authority (for Rarotonga and Aitutaki). On the basis of these reports, an overall assessment of damage was compiled into a comprehensive recovery assessment. Both incurred expenditures and planned recovery activities within the scope of the assessment will be eligible for project funding in accordance with the agreed eligibility criteria (paras. 42–51).

2. Eligibility Criteria

42. Using the comprehensive damage assessment, the project steering committee (PSC) (para. 56) will identify and select recovery activities for funding under the Project in accordance with the following general and specific criteria. The recovery activity will

- (i) rehabilitate or reinstate infrastructure and/or facilities damaged as a result of the 2005 cyclones, as included in the comprehensive recovery assessment;
- (ii) incorporate appropriate cyclone-resistant design standards with adequate provision for quality control;¹⁰
- (iii) be technically feasible, cost-effective, financially sustainable, and represent a least-cost alternative with appropriate adjustment for incorporating cyclone-resistant design;
- (iv) include beneficiary consultation in the selection process;
- (v) be completed within the project implementation period, and
- (vi) give priority to activities that restore functionality of the waste management facility funded by the Waste Management Project (footnote 2).

3. Recovery Activities

43. Component-specific criteria were developed for each of the seven components.

44. **Component 1: Roads, Bridges, and Drainage.** The waves generated by the cyclones caused roads in coastal areas on Rarotonga and Aitutaki to be blocked by debris. The debris consisted of rocks and sand washed from the foreshore onto the road, as well as fallen trees and other debris. As a consequence, all roads were impassable necessitating

¹⁰ Cook Islands Buildings Standards Controls and Act 1991; Building Controls and Standards Regulations. 1991; and Building Code 1990.

the use of machines and labor for their clearance. Similarly, drains and bridge waterways were blocked by debris. Scour of road surfaces necessitates repairs to the bituminous seal. Eligible expenditures include the cost of repairs and cleanup of roads, bridges, and drainage.

45. **Component 2: Ports.** Harbors were damaged in Rarotonga, Aitutaki, Atiu, and Pukapuka. All damage to the Aitutaki port will be repaired using the reserves of the Ports Authority. Infrastructure affected includes harbor basins and access channels (requiring clearing of rocks and other debris deposited by the waves), concrete ramps, hard standing areas, storage facilities, electrical equipment, and lighting. Pukapuka wharf requires complete reconstruction. Eligible expenditures include the costs of repairs to ports and harbors necessary to restore functionality or to a condition existing before the cyclone damage.

46. **Component 3: Power Supply.** Power stations did not sustain serious structural damage, however, breakage of overhead power lines, damaged power poles, and damaged transformers and other accessories were incurred both on Aitutaki and Rarotonga. Specific damage was caused on Rarotonga to the high voltage line between Pokioinu and Oasis service station, as well as water damage to 6 substations. Eligible expenditures include repairs to the specific damage on Rarotonga noted here, along with repairs of general damage to the distribution lines and distribution infrastructure on Aitutaki.

47. **Component 4: Water Supply.** Damage to water supply systems includes blockage of access roads, contamination of filter beds, broken pipes, and other damaged water distribution infrastructure. Eligible expenditures include the cost of reinstating the facilities to their precyclone condition. The Project does not include provision for guttering and water tanks unless associated with the restoration of a public building.

48. **Component 5: Waste Management.** Cyclone damage to the newly constructed waste management facilities on Rarotonga and Aitutaki is to be repaired. Eligible expenditures include those necessary to restore the facilities to their precyclone condition.

49. **Component 6: Buildings and Materials.** Government buildings in Rarotonga, Aitutaki, Palmerston, Pukapuka, and Nassau were damaged by the cyclones. In particular, roofs have been affected to varying degrees from limited loss of tin sheeting to complete loss. In many cases, loss may be due to inadequate original construction standard, lack of maintenance, or age. In cases where complete renewal of a roof is considered appropriate, the new roof will be designed, constructed, and certified in accordance with the Building Controls and Standards of the Cook Islands,¹¹ particularly as they relate to cyclone resistance. Eligible expenditures will include repairs to hospitals, health centers, staff quarters, and administrative buildings of government agencies; but will exclude schools being accommodated under other assistance programs.

50. **Component 7: General Cleanup.** On many islands, fallen trees, debris from the water surge, and wind damage closed roads and passageways, filled drains, and prevented access in general. Eligible expenditures include general cleanup of fallen trees, debris from water surge, and other debris.

51. The recovery activities will be selected in accordance with the general and the specific criteria given in paras. 42–50. Relevant Government agencies will submit proposed recovery activities for review of the project management unit (PMU) (para. 57) and for consideration and approval of the PSC. The recovery activity application for project funding

¹¹ Cook Islands Buildings Standards Controls and Act 1991; Building Controls and Standards Regulations. 1991; and Building Code 1990.

includes (i) a description of the recovery activity and design, as warranted; (ii) an account of the use of internal/budget reserves; (iii) a description of efforts made to obtain grant funding; (iv) the proposed procurement process; (v) disbursement plan and time frame; (vi) an environmental assessment and mitigation plan; (vii) a description of beneficiary consultation and results; (viii) performance monitoring indicators and targets; and (ix) a date for the submission of compliance/completion certificate. A format for the recovery activity application is in Appendix 3.

D. Cost Estimates

52. The total estimated cost of the recovery program is NZ\$10.5 million or US\$7.9 million equivalent, including US\$1.8 million equivalent in local currency costs and US\$6.1 in foreign exchange costs. The cost estimates are based on the Government's interagency damage assessment appraised by the ADB Damage Assessment Mission. They incorporate appropriate provisions for loan administration and management to ensure application of good governance for project administration, including safeguarding the quality, timeliness, and economic efficiency for implementation of the recovery activities; financial controls, and adherence to eligibility criteria for expenditures under the Project; interest during implementation of the Project; and contingencies. Table 2 summarizes the cost estimates; Appendix 4 provides details.

Table 2: Cost Estimates and Financing Plan
(US\$ million)

Item	Cost Estimate			Financing				
	Local Costs	Foreign Costs	Total Costs	Households	Government	Aid	ADB	Total
A. Base Costs								
1. Clean Up	0.45	0.52	0.97	0	0.49	0.15	0.33	0.97
2. Reinstatement of Public Services	0.23	1.40	1.63	0	0.60	0.19	0.85	1.63
3. Reinstatement of Essential Structures/Buildings	0.88	3.47	4.35	2.52	0.08	1.02	0.73	4.35
4. Materials and Supplies	0.00	0.05	0.05	0	0	0	0.05	0.05
Subtotal A	1.56	5.44	7.00	2.52	1.17	1.36	1.96	7.00
B. Project Management Cost	0.11	0.29	0.40	0	0	0	0.40	0.40
C. Contingency	0.10	0.33	0.43	0	0	0	0.43	0.43
D. Interest During Construction		0.04	0.04	0	0	0	0.04	0.04
Total	1.77	6.10	7.87	2.52	1.17	1.36	2.83	7.87

ADB = Asian Development Bank.

Source: Asian Development Bank estimates.

E. Financing Plan

53. The Government has requested a loan in various currencies equivalent to Special Drawing Rights 1,895,000.00 (US\$2.83 million equivalent) to help finance the Project. With the current country classification of the Cook Islands as B1 and as provided under the Disaster and Emergency Assistance Policy,¹² the loan will have a 40-year term including a grace period of 10 years, an interest rate of 1% per year and repayment of principal at 2% per year for the first 10 years after the grace period and 4% per year thereafter.¹³

¹² ADB. 2004. *Disaster and Emergency Assistance Policy*. Manila (R71-04); ADB.2004. Disaster and Emergency Assistance. *Operations Manual*, Section No. D7/BP and D7/OM. Available, Lotus Notes database, LNADBG1.

¹³ Due to the emergency nature of the Project, and in accordance with the ADB *Operations Manual* (D7), the terms and conditions of the loan deviate from the standard Asian Development Fund loan terms.

54. Households (32%), Cook Islands Government (15%), and governments of Australia and New Zealand (17%) will contribute to the recovery program. The financing plan is based on local aid coordination meetings, expansion of commercial bank credit for household refurbishment, and the Government's budget records and cabinet submissions for the recovery expenditures. Ongoing verification of the financing plan will be undertaken during review missions. Table 3 summarizes the financing plan.

Table 3: Financing Plan
(US\$ million)

Source	Amount	Percent
Asian Development Bank	2.83	36
Households	2.52	32
Governments of Australia and New Zealand	1.36	17
Government	1.16	15
Total	7.87	100

Source: Asian Development Bank estimates.

F. Implementation Arrangements

1. Executing and Implementing Agency

55. MFEM, as the Executing Agency, will be responsible for coordinating overall project implementation. To ensure efficient implementation, MFEM may coordinate with one or more of the implementing agencies for each project component. The implementing agencies will be (i) the Ministry of Works for components 1, 4, 5, and 7; (ii) the Ports Authority for component 2; (iii) CIIC for component 6, as well as component 3 for activities in Aitutaki; (iv); Te Aponga Uira O Tumu-Te-Varovaro (Te Aponga Uira-Power Authority) for component 3 activities in Rarotonga; and (v) Office of the Minister for Island Administration for components 2, 3, 4, 6, and 7. To ensure interagency coordination and integration of project implementation, MFEM will be assisted by a PSC and PMU.

2. Steering Committee

56. The Government will form a PSC to be chaired by the financial secretary of MFEM and comprising the chief executive officer of CIIC, president of Pukapuka Rarotonga Community, and the chief executive officers of the project implementing agencies, as needed. Representatives of the New Zealand High Commission will participate in the PSC meetings, as warranted. The PSC secretary will be the project manager. The PSC will meet as frequently as required, but no less than quarterly. It will (i) determine the use of funds under the Project within the categories developed by the comprehensive recovery assessment and using the selection criteria; (ii) review quarterly reports, providing a view on project performance in a separate statement; (iii) provide ADB with quarterly reports on project progress; (iv) resolve emerging issues in project implementation, procurement, and community employment, among others; and (v) supported by the PMU, prepare and disseminate information to the public on project activities, with a particular focus on timing of restoration activities, benefits including social and economic impact of the restoration, and application of cyclone-resistant designs, where appropriate. The PSC will be maintained until 30 April 2007.

2. Project Management

57. The PMU will be established by loan effectiveness, be headed by a competent project manager, and include an accountant with a professional accountancy designation. The project manager will administer all aspects of the Project, including its contracts, in accordance with ADB guidelines, and will be accountable to MFEM and ADB for the quality

and timeliness of recovery activity implementation and contract management. The qualified accountant will review proposed expenditures for procurement of goods and services under the Project in accordance with established eligibility criteria. The PMU will be funded under the Project. Terms of reference for the PMU are in Appendix 5.

3. Implementation Schedule

58. The Project will be implemented over 24 months, commencing in May 2005. Every quarter, the PMU will prepare a detailed implementation schedule for recovery activities. The PMU project manager and certified accountant will be selected no later than when the Project is approved and effective. Retroactive financing of eligible expenditures will be made immediately after project approval. The recovery activities under the Project will be completed by April 2007. ADB and the Government will jointly conduct a comprehensive midterm review 1 year after loan approval. The implementation schedule is in Appendix 6.

4. Consulting Services

59. The Project will require approximately 48 person-months of consulting input. In addition to the project manager and an accountant with a professional accountancy designation, a consultant with technical expertise in specific assessment, detailed design, contract supervision, and quality control will be engaged for up to 10 person-months. These consultants will comprise the PMU, which will be located at MFEM. All consultants will be engaged in accordance with ADB *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. Given the tight implementation schedule of the Project, ADB has agreed with the Government that direct engagement of consultants be undertaken, as provided for under these guidelines.

5. Procurement

60. Procurement of goods and services will be carried out consistent with ADB *Guidelines for Procurement*, with the flexible interpretation permitted for emergency assistance loans provided in accordance with the ADB *Disaster and Emergency Assistance Policy (2004)*. The loan proceeds will finance imports of goods and services, local purchases, and civil works identified under the comprehensive recovery assessment. Under ADB *Guidelines for Procurement*, these may be procured through direct purchase, international shopping, or local competitive bidding, as appropriate. Use of advance procurement, retroactive financing, and local cost financing are recommended as are use of competitive processes with the objective of economic efficiency. Both local and prudent international shopping is recommended with the bid period reduced from 30 to 7–15 days. Local competitive bidding may be applied to civil works contracts; international shopping may be applied for civil works contracts with an estimated cost below US\$1,000,000; and direct purchase will be limited to contract amounts of less than US\$100,000. In the case of local contractors, a registration system that lists approved contractors based on criteria such as experience, and financial and technical capacity may be used. Unit cost tenders are recommended for use of local contractors, reflecting procurement procedures for normal private sector commercial practices. ADB procedures for providing reconstruction assistance after disasters allow maximum flexibility, so that project activity can commence promptly.

6. Advance Procurement Action

61. Given the urgency of the recovery activities, ADB approved advance action for the procurement of goods and services, and recruitment of consultants by direct selection, provided this takes place on or after 4 February 2005, the stated date of the first cyclone. The Government has advised that approval of such advance action does not commit ADB to finance any part of the recovery program.

7. Disbursement

62. The Project is designed to provide quick disbursing resources to finance the recovery program. Disbursements are allowed for up to 100% of the eligible project costs. Eligible expenditures will be made through an imprest account, and its replenishment, in accordance with ADB *Disbursement Guidelines* set out in the *Loan Disbursement Handbook* (2001). The project manager, supported by the certified accountant, will be responsible for transactions, replenishments, and use of the imprest account.

63. The imprest account procedure will be used for disbursing funds under all cost categories eligible for financing. The account will be established at a commercial bank situated on Rarotonga. ADB statement of expenditure procedure will be used for reimbursing expenditures and liquidating the imprest account for payments with value equal to or below US\$50,000 each. The currency of the imprest account will be the US dollar, and the maximum initial advance will be US\$500,000. The project manager, supported by the consultant accountant, will be responsible for administrative and accounting tasks under the Project; and will establish adequate internal control, accounting, and auditing procedures to ensure efficient use of the imprest account and its operation.

8. Retroactive Financing

64. For immediate emergency response, up to 30% of the loan proceeds will be considered for retroactive financing for eligible categories of expenditures under the comprehensive recovery assessment. The covered expenditures must have been incurred or paid on or after 4 February 2005 in order to finance urgent expenditures necessary to restore essential public services.¹⁴

9. Project Performance Monitoring and Evaluation

65. Each implementing agency will carry out project performance monitoring and evaluation in accordance with the ADB *Project Performance Monitoring and Evaluation Handbook*. Baseline indicators and targets for each recovery activity will be developed prior to implementation for monitoring purposes as well as for checking against the selection criteria. These will be developed in the recovery activity application and will feed into the quarterly project report.

10. Midterm Review

66. In addition to a schedule of regular reviews to monitor project progress, a comprehensive project review will be carried out 1 year after commencement. The focus of the review is to determine the need for any deviations from the design or implementation of the Project. The review will also assess adequacy of funds, cost overruns, need for reallocations, and other factors including assumptions and risks that might constrain satisfactory project implementation and achievement of development objectives.

¹⁴ The first cyclone occurred on 4 February 2005. The Government focused its resources on relief and recovery action and addressed the damage from the next four cyclones by organizing equipment for the cleanup operation and restoration of public utilities (water, power). These activities are considered of utmost importance as the Cook Islands economy is reliant on tourism; longer-term interruptions would have caused impacts on the revenues, fiscal revenues, investment, and employment, throughout the economy. Financing of expenditures incurred are necessary because of the exceptional circumstances in this case, which prevented an ADB mission from occurring immediately after the first cyclone.

11. Accounts, Audits, and Reports

a. Accounts and Audits

67. The PMU will establish and maintain separate records and accounts for all project expenditures, including individual contracts and other recovery activities. These accounts will be adequate to identify the goods and services financed by the loan proceeds, the financing source, expenditures incurred, and use of local funds; and will provide detailed records on the costing and expenditures of the recovery activities. The accounts will be set up in accordance with sound accounting principles. The financial statements for these accounts will be audited annually using generally accepted accounting principles by externally recruited international auditors acceptable to ADB. The Government will engage international consulting services for the audit in accordance with ADB *Guidelines on the Use of Consultants*. The audited financial statements together with the auditor's report will be forwarded to ADB within 6 months of the end of each related fiscal year.

68. All project activities will be subject to independent performance audits to ensure their transparency and to provide an objective and independent assessment. In addition, ADB will conduct project procurement audits during implementation as part of its regular reviews. ADB also reserves the right to conduct a "special audit" focusing on governance, financial accountability (e.g., certification of accounts), and transparency soon after project completion. The audit costs will be funded under the Project.

b. Reports

69. With the PMU monitoring overall implementation progress, each implementing agency will prepare a brief recovery activity application for funding under the Project. The PMU will prepare a comprehensive quarterly report on project activities. Within 3 months of physical completion of the recovery activities, the Government will provide ADB, through the PMU, with an overall project completion report providing a detailed evaluation of the project design, costs, contractor and consultant performance, social and economic impact, and other details requested by ADB.

IV. TECHNICAL ASSISTANCE

70. The Government recognizes the need to improve its capacity to manage emergency response and develop an effective planning framework for mitigating its vulnerability to climate change. It also concludes that social infrastructure is ill-prepared for weather-related problems, as highlighted under the Climate Change Adaptation Project for the Pacific.¹⁵ The Government has accepted the assertions made under this TA that the country's inherent geographic vulnerability to climate change can be ameliorated by initiating integrated infrastructure and social development, including human resource development. Consequently, the Government intends to implement the recommendations for climate proofing the country, or to enhance the country's adaptive capacity and resilience to climate change and climate variability, including changes in extreme events. Overall, the Government aims to strengthen disaster management and mitigation capacity to ensure that future social and infrastructure program designs incorporate climate change adaptation and mitigation strategies, and are thus capable of delivering the envisaged benefits to the community.

71. ADB will provide a TA grant of \$600,000 for Strengthening Disaster Management and Mitigation. The total cost of the TA will be US\$755,350 equivalent, with \$467,640 in foreign

¹⁵ ADB.2005. *Technical Assistance for the Climate Change Adaptation Program for the Pacific*. Manila.

exchange and \$287,710 equivalent in local currency (Appendix 7). ADB will finance the entire foreign exchange cost (\$467,640) and \$132,360 equivalent of the local currency cost. The TA will be financed on a grant basis by the ADB TA funding program. The Government will contribute \$155,350 equivalent by providing office space and logistical support, office support and counterpart staff, workshop and training, report preparation, and local transportation to remote locations. The TA will support (i) strengthening disaster and emergency management, and (ii) preparation of 20-year integrated and environmentally sustainable infrastructure planning that incorporates climate change adaptation in the recommendations for the design of social and infrastructure development planning and programming. The TA will help the Government establish a rapid, effective, and robust response capability through efficiently coordinated networks of skilled personnel to administer the current and future recovery response operations. Under the long-term master plan, the TA will help the Government adopt a systematic approach to mitigating the country's vulnerability to adverse weather conditions through design of institutions and environmentally sustainable infrastructure with capacity to impede the reoccurrence of a disaster with harmful effects on communities and key infrastructure. The master plan is expected to be updated at least every 5 years in line with good practice. ADB will engage consulting services for the TA in accordance with *ADB Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the selection and engagement of domestic consultants. Qualified individual consulting services will be selected for component 1 of the TA, and the quality and cost-based selection method will be used for selecting international consultant services for component 2 based on simplified technical proposals.

V. PROJECT BENEFITS, IMPACTS, AND RISKS

A. Economic Benefits

72. The burden-shared recovery program will mitigate the otherwise extended negative impacts of the 2005 cyclone damage, particularly on the poor, and enable the country to recover from the emergency with only a temporary setback. The immediate benefit of the recovery program is the reinstatement of basic services, including water and power supply, transport sector functionality—safe road and maritime access, education and health sector services countrywide—all crucial services underpinning the minimum socioeconomic standards in the outer islands and economic welfare of Rarotonga communities. In Rarotonga, restoration of roads, bridges, and water supplies is essential to the economic well-being of the country, particularly ensuring immediate restoration of the tourism sector—the main source of employment and income. In the outer islands, infrastructure is essential for delivering services to poor and disadvantaged groups. Selected recovery activities will be technically feasible, cost-effective, and represent a least-cost alternative with appropriate adjustment for cyclone-resistant design.

73. While an economic impact assessment has not been conducted at this stage, the immediate economic impacts are expected to be temporary and relate to the (i) opportunity costs carried by both public and private outlays to finance recovery that redirects funding from productive assets to the rebuilding activity; (ii) lost revenues in the interim when private and public services are not functional with related employment and socioeconomic impacts; and (iii) temporary loss of agricultural production, with impact on inflation, productivity, and economic growth. These are offset to some extent by the labor intensity of the recovery phase and an estimated additional 60,000 labor-days, or 6% addition to overall employment, particularly in the construction industries. While the country's inflation has been low, the losses in agricultural production with the corresponding increase in food imports are expected to contribute to inflationary pressure. With supply-side shortages characterizing labor and materials markets, the additional demand, particularly on labor and construction materials, can be expected to result in wage and profit increases leading to further inflation.

Regretfully, the inflationary trend impacts most harshly on the poor. Finally, migration away from the outer islands and to international destinations, both long and short term, is expected to increase.

74. The Project supports prudent financial management of Government fiscal resources, enabling maintenance of fiscal viability and debt servicing by maximizing concessional funding for recovery expenditures. With the Project's support, the Government will be able to maintain macroeconomic performance in accordance with the 1998 Manila Agreement financial ratios.¹⁶ This, in turn, will enable the Government to continue with its objectives of attaining the Millennium Development Goals and improving standards of living in the Cook Islands. The Project is expected to contribute to a favorable resolution of the credit check by credit-rating agencies and continue attracting repatriated, international, and domestic private sector investment, particularly to the tourism sector, and thus fuel growth and employment.

75. **Tourism.** Tourism generates 54% of the GDP and is the main export earner with major markets in Australia and New Zealand. While extreme weather events may not significantly affect total tourist arrivals, the economy is highly vulnerable to strong cyclones that can inflict damage on tourism infrastructure, such as hotels, mostly located along coastal areas. Cyclone-motivated reservation cancellations and deferment was temporary and estimated at 20% of the expected hotel occupancy, with March 2005 reservations indicating recovery. Local commercial banks are extending tourism businesses cyclone-related, debt-rescheduling packages that include working capital, rescheduling of loan terms, interest capitalization, and grace periods for amortization and interest payments. Restoration investment and the associated revenue losses are estimated to reach NZ\$10 million and NZ\$5 million, respectively, with about 70% of these funded through external cyclone insurance.¹⁷ In addition, Rarotonga was not able to receive four planned cruise ship calls at Avatiu port, and experienced an associated reduction in total revenues for cruise ship calls by a minimum of NZ\$240,000.¹⁸ While tourism is characterized as resilient, the future cost and availability of cyclone and sea surge insurance and the diminished capacity of the Cook Islands to attract long-haul tourist markets in Europe and North America are areas of concern.

76. **Agriculture.** About 70% of all households are engaged in agricultural activity, either subsistence and/or commercial. The tourism sector is an important market outlet for locally grown produce. With agriculture currently contributing about 7.1% of the country's GDP, the Ministry of Agriculture is researching new varieties of fruit and vegetables, and is initiating projects to revive the citrus, banana, and pineapple-growing industries. Loss of planted agriculture production ranges from 100% in Pukapuka and Nassau, to 50% in Aitutaki and Rarotonga. In Pukapuka, the island population was left totally dependent on imported food and water. In Rarotonga, significant increases in food imports have become necessary due to a partial loss of hydroponic vegetable production that primarily caters to the hotels. Agriculture GDP is expected to be affected with a temporary loss (6–4 months) affecting 78% of arable land with an income loss estimated at 26%, or about NZ\$4.4 million.

77. **Fisheries.** Pearl farming, fishing, and agriculture generate the remainder of GDP. Fisheries, particularly offshore fishing industries, grew fast from nearly nothing since 2002/03. However, after some early success, setbacks have related to inconsistency in quantity of catch required for commercial viability. The Cook Islands also receives about NZ\$1 million a year from tuna fishing access fees. The impact of cyclones on marine fisheries was mostly due to loss of fishing days.

¹⁶ See the design and monitoring framework in Appendix 1.

¹⁷ Cyclone, including sea surge coverage, insurance is generally required by commercial creditors.

¹⁸ Each 600-passenger cruise ship brings a total revenue, including port duties, restaurant, and other retail services ranging from NZ\$60,000 to NZ\$100,000, totaling an estimated revenue loss of NZ\$240,000 for the four calls.

B. Poverty and Other Impacts

78. **Poverty Impact.** Natural disasters affect the poor disproportionately in terms of health, housing, employment, livelihood, and food security. In this case, residents of the remote outer islands have damaged housing and food crops. Damage to port facilities has restricted the delivery of essential supplies, particularly food and fuel. While the Project will not directly address private housing or agriculture, it will assist the poor by restoring port services, rural infrastructure, and community infrastructure facilities.

79. **Social Impacts.** In 2001,¹⁹ the country had a population of 15,017; 5,560 lived on the outer islands. The cyclones affected Atiu with a resident population of 600, Aitutaki 1,743, Mangaia 739, Mauke 469, Mitiaro 226, Nassau 72, Palmerston 48, Pukapuka 662, and Rarotonga 9,451. The most serious social impacts are being experienced by Pukapuka and Nassau, where most of the population lost functionality of their homes and agricultural production, particularly the food staple—taro, which was partly destroyed, leaving the community dependent on food imports, thus exacerbating hardship and poverty. In the other islands, partial damage to homes was common. Countrywide, but particularly in the outer islands, recovery of homes will absorb the limited savings and exacerbate economic difficulties and hardship. In Rarotonga, commercial banks are funding residential recovery with softer than usual terms, thus reallocating financing from home purchase and improvement to refurbishment.

80. **Employment Generation.** The recovery activities funded under the Project are estimated to generate about 60,000 person-days of employment, mostly in the reconstruction and repair of infrastructure. The poverty reduction aspects will be enhanced by contractors using local workers in unskilled and semiskilled tasks.

C. Resettlement

81. The Project will not involve land acquisition or resettlement of any kind as recovery activities are concerned only with restoration of existing facilities. The Project is focused on reinstatement of services and facilities to their precyclone condition using cyclone-resistant designs, where technically feasible, particularly for the benefit of indigenous Cook Islanders, especially in the outer islands. The Project involves no negative impacts on indigenous peoples.

D. Environmental Impacts

82. The Project is classified as category B in accordance with ADB *Environment Policy* (2002). The initial environmental examination (IEE), including the environment management plan, was conducted to determine the degree of likely impacts and describe possible mitigation measures. The Project involves only rehabilitation of previously existing infrastructure previously or currently used for the same purpose. The IEE concluded that the Project is unlikely to generate any significant environmental impact either during construction or during operation. All recovery activities will be required to complete and satisfy an environmental assessment screening checklist during formulation. Recommended mitigation measures will be incorporated in the design of subprojects and contractors' work assignments. Positive impacts will arise from the restoration of water supplies and sanitation facilities, clearing of debris in general, and adoption of cyclone-resistant designs, where possible. The summary IEE is in Appendix 8.

¹⁹ Government of the Cook Islands. 2001. Census of Population and Dwelling. Statistics Office. Rarotonga. Since 2001, an estimated 2,000 Cook Islanders have migrated from the country.

E. Risks

83. The risks related to efficient and prudent management of quick-disbursing recovery resources, including corruption and misuse of funds for purposes not related to the recovery phase, are addressed by (i) established and agreed detailed selection criteria; (ii) transparent implementation and monitoring mechanisms, involving a group of implementing agencies in decision making; (iii) engagement of adequate human resources for project management, including for safeguarding financial accounting and control of expenditures under the loan; and (iv) external audit of the accounts.

84. A 24-month implementation period is sufficient given action already under way under the recovery program for which retroactive funding is available under the Project and the streamlined project management procedures.

VI. ASSURANCES

85. In addition to the standard assurances, the Government has given the following assurances, which are incorporated in the legal documents:

- (i) **Recovery activity selection and eligibility criteria.** The Government will ensure that all recovery activities carried out under the Project meet, to the satisfaction of ADB, the agreed general and specific eligibility criteria and implementation arrangements, and that all such recovery activities are properly controlled and monitored to the satisfaction of ADB.
- (ii) The Government will evaluate each activity proposed for financing under the Project in accordance with the agreed eligibility criteria and will submit all such proposals to ADB for approval. Each financing proposal will include (a) a detailed description of the proposed design; (b) an account of the Government's use of its budget reserves and its efforts to obtain external grant financing for such activity, if applicable; (c) a description of the proposed procurement methodology; (d) the financial disbursement plan, including the proposed timing of disbursements; (e) an environmental assessment and mitigation plan prepared in accordance with Government and ADB environmental requirements; (f) a description of the extent and nature of beneficiary consultations and the results of such consultations; (g) performance monitoring indicators and targets as integrated into the Government's recovery activity application or quarterly reports of the PMU, as applicable; and (h) intended date for the submission of a compliance and completion certificate for such activity.
- (iii) **Operation and maintenance.** The Government will ensure that all facilities restored under the Project are operated and maintained by the responsible implementing agency in accordance with sound policies and practices. In order to facilitate proper maintenance of project facilities, the Government will devise a detailed and comprehensive maintenance plan for such project facilities and the plan will be incorporated into the final project completion report.
- (iv) **Counterpart funds.** The Government will allocate, on a timely basis, adequate counterpart funds from its budget in accordance with its comprehensive recovery assessment and program.
- (v) **Environment and resettlement.** The Government will ensure that the Project is carried out and all project facilities are operated and maintained in accordance with (a) the Environment Act 2003 and all other existing laws, regulations, and

standards of the Government concerning environmental protection; (b) ADB *Environment Policy* (2002); and (c) all environmental mitigation measures set out in the IEE, including the environment management plan, for each project component. The Government will also ensure that the mitigation measures identified by the IEEs are incorporated into the design, rehabilitation, and operation of the project facilities, as applicable.

- (vi) The Government will ensure that no land acquisition or involuntary resettlement will be required for the Project. In the event that land acquisition or involuntary resettlement is required, the Government will prepare a resettlement plan in accordance with applicable Government laws and regulations and ADB Policy on Involuntary Resettlement (1995).²⁰ Any such resettlement plan will be submitted to ADB for review and approval before any resettlement activities are initiated.
- (vii) **Good governance.** Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to investigate, directly or through its agents, any possible financial management or perceived impropriety in implementing the Project. The Government, together with MFEM and the relevant implementing agencies, will agree to cooperate with any such investigation and extend all necessary assistance, including access to all relevant books and records as well as the engagement of independent experts, who may be needed to complete any such investigations in a satisfactory manner. All external costs related to any such investigation by ADB will be borne by the Project.
- (viii) The Government will ensure that the PMU establishes a website for the Project to provide information on how project funds are being used for the intended beneficiaries. The project website will include information on project activities, an update on the timing of project activities, and an analysis of the social and economic impacts of the Project. The project website will also present financial statements; track procurement contract awards; and include information on, among others, the list of participating bidders, name of the winning bidder, basic details on bidding procedures adopted, amount of the contract awarded, and list of goods and/or services purchased and their intended and actual utilization. The Government will also ensure that MFEM and the implementing agencies actively disseminate information, through the use of local media and other appropriate means, on the use of project funds to beneficiaries who do not have access to the project website.
- (ix) **Midterm review.** The Government and ADB will, 1 year after the effective date for the Project, jointly carry out a comprehensive midterm review of the Project. The midterm review will assess the Project's achievements and progress in implementing the project objectives to identify any difficulties or constraints encountered in project implementation and to make adjustments, if necessary, for the remaining project implementation period. Specifically, the midterm review will assess the adequacy of funds, any cost overruns, and any reallocation requirements.

²⁰ ADB. 1998. The Bank's Policy on Involuntary Resettlement. In *Handbook on Resettlement*. Appendix 1. Manila.

VII. RECOMMENDATION

86. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan in various currencies equivalent to Special Drawing Rights 1,895,000.00 to the Cook Islands for the Cyclone Emergency Assistance Project from ADB's Special Funds resources with an interest charge at the rate of 1% per annum and repayment of principal at 2% a year for the first 10 years after the grace period and 4% a year thereafter; a term of 40 years, including a grace period of 10 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan Agreement presented to the Board.

Haruhiko Kuroda
President

9 June 2005

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impacts</p> <ul style="list-style-type: none"> Sustained economic growth 	<ul style="list-style-type: none"> Economic data and indicators—GDP, inflation, credit expansion, consumer spending, fiscal conditions Manila Agreement ratios: <ol style="list-style-type: none"> A ratio of the present value of the debt of the general government¹ sector to GDP of no more than the level as of the end of 2001–2002: approximately 29% Current level: 20.9% (2002–2003) A ratio of wages, salaries, and supplements to GDP for the general government sector of no more than the 2001–2002 level: approximately 15% Current level: 15.5% (2002–2003) A ratio of recurrent purchases of goods and services to GDP for the general Government sector of no more than the 2001–2002 level: approximately 11% Current level: 10.4% (meets condition) (2002–2003) Maintenance of a budget operating surplus in each financial year (i.e., operating 	<ul style="list-style-type: none"> NSO reports Budget documents ADB economic analysis 	<p>Assumptions</p> <ul style="list-style-type: none"> Government will apply the loan to priority eligible and essential project components Government will continue to exercise prudent fiscal policies in accordance with the Manila Agreement <p>Risks</p> <ul style="list-style-type: none"> Loan proceeds are diverted to low priority maintenance and repairs as an addition to normal budgeted routine maintenance allocations

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<ul style="list-style-type: none"> Vulnerability to future cyclones reduced 	<p>revenue to exceed operating expenses every year)</p> <p>Current situation: NZ\$1.1 million (2004–2005) or –1.4% of revenues—to be corrected by the loan</p> <p>5. Borrowing by state-owned enterprises limited to activities that will generate sufficient additional revenue to service the debt</p> <ul style="list-style-type: none"> Minimal damage to repaired infrastructure in the event of future cyclones 		
<p>Outcome</p> <ul style="list-style-type: none"> Normal economic and social activities restored in damaged areas 	<ul style="list-style-type: none"> Recovery leading to restoration of precyclone conditions in affected areas 	<ul style="list-style-type: none"> Quality certified final payments for recovery activities Continuation of government services to small outer island communities, including preventive and curative health services, educational services, water and power utilities, safe port operations Project progress reports Project review missions 	<p>Assumptions</p> <ul style="list-style-type: none"> Government supports enforcement of appropriate building codes Routine maintenance is carried out on rehabilitated structure <p>Risks</p> <ul style="list-style-type: none"> Effects of possible climate change make habitation of low lying atolls untenable Depopulation of outer islands will continue rendering some communities unsustainable
<p>Outputs</p> <p>Rehabilitated infrastructure conforming to appropriate cyclone-resistant standards</p> <p>1. Buildings</p> <ul style="list-style-type: none"> Schools, health centers, 	<ul style="list-style-type: none"> Recovery activity complete by 	<ul style="list-style-type: none"> Project progress reports 	<p>Assumptions</p> <ul style="list-style-type: none"> Timely award of building contracts

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>and community halls and public facilities rehabilitated</p> <p>2. Roads</p> <ul style="list-style-type: none"> • Roads cleared of debris and fallen trees • Damaged bridges or culverts reinstated <p>3. Ports</p> <ul style="list-style-type: none"> • Debris removed from landing ramps • Access channels reinstated • Debris dredged from harbor basins • Port infrastructure reinstated <p>4. Water Supply</p> <ul style="list-style-type: none"> • Reinstatement of access to treatment plants • Damaged treatment facilities repaired • Reinstatement of roof catchments and tanks <p>5. Waste Management</p> <ul style="list-style-type: none"> • Reinstatement of waste management facilities <p>6. Power</p> <ul style="list-style-type: none"> • Reinstatement of key 	<p>April 2007</p> <ul style="list-style-type: none"> • Clearing and reinstatement completed before May 2005 • Clearing and rehabilitation completed before October 2005 • Reinstatement and repairs completed in all areas before October 2006 • Restoration of normal functions by July 2005 • Reinstatement complete by August 2005 	<ul style="list-style-type: none"> • Project review missions • Audit reports • Government review of timely response to disaster • Project progress reports • Audit reports • Project review missions • Project progress reports • Project review missions • Audit reports • Project progress reports • Project review missions • Audit reports • Project progress reports • Project review missions • Audit reports 	<ul style="list-style-type: none"> • Adequate local capacity to undertake the work, including availability of transportation facilities to outer islands • Availability of equipment on outer islands • Adoption of anticorruption measures • Adequate and timely provision of funds • Adequate supplies of building materials <p>Risks</p> <ul style="list-style-type: none"> • Extreme weather conditions continue during project implementation • Inadequate performance by domestic contractors

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>power lines and sub stations</p> <p>7. Materials and Supplies</p> <ul style="list-style-type: none"> Government fittings and furnishings and educational learning materials 	<ul style="list-style-type: none"> Completed by August 2005 	<ul style="list-style-type: none"> Audit reports Project progress reports Project review missions Audit reports 	
<p>Activities with Milestones</p> <p>1.1 ADB to process loan agreement by mid-April 2005</p> <p>1.2 Government to establish steering committee by mid-April 2005</p> <p>1.3 Government to establish imprest account by mid-April 2005</p> <p>1.4 Government to establish PMU by 29 April 2005</p> <p>1.5 ADB to disburse first tranche of funds to imprest account (US\$500,000) by May 2005</p> <p>2.1 Government/PMU to review expenditures eligible for retroactive financing and preparation of imprest account replenishment (US\$500,000) by mid-May 2005</p> <p>2.2. PMU/steering committee to prepare and agree on priority list of project components for implementation by mid-May 2005</p> <p>2.3. PMU to prepare a detailed procurement plan by end-May 2005</p> <p>3.1 Government to complete cleanup by end-March 2005</p> <p>3.1. PMU to commence procurement actions by end-May 2005</p> <p>3.3 PMU to commence bidding by end-May 2005 and award contract by October 2005</p> <p>3.2. Project implementation completed by April 2007</p>			<p>Inputs</p> <ul style="list-style-type: none"> ADB Inputs Process loan and disburse funds to imprest account (US\$500,000) Process imprest replenishments (first replenishment US\$500,000)

ADB = Asian Development Bank, GDP = gross domestic product, NSO = National Statistics Office, PMU = project management unit

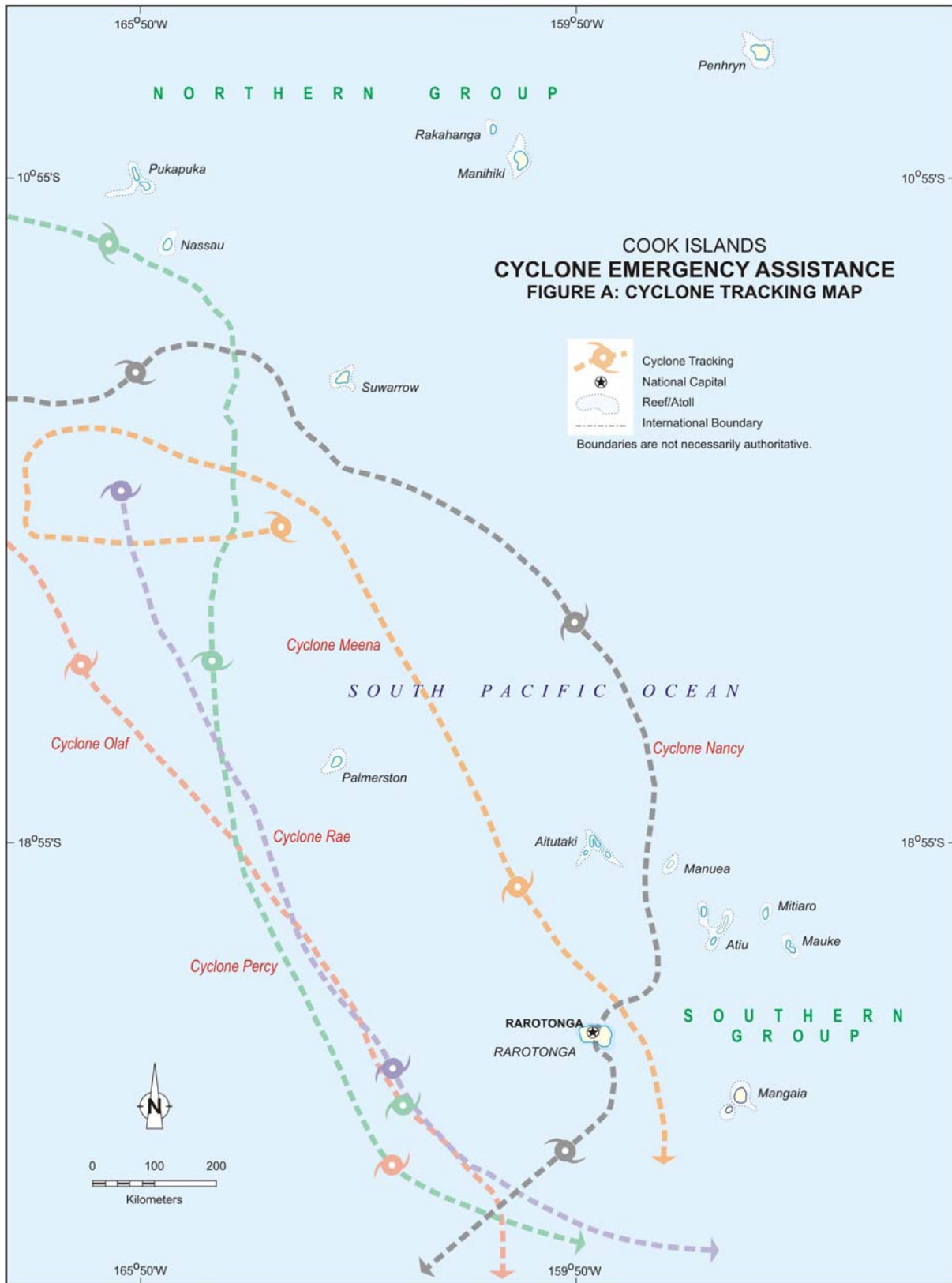
¹ The General Government sector excludes state-owned enterprises so this condition would not apply to state-owned enterprises.

Source: Asian Development Bank.

CYCLONE TRACKING MAP AND ACTIVITY

1. **Meena.** Cyclone Meena, with a maximum severity rating of category 5, began in American Samoa, with the eye of the cyclone moving in an easterly direction. Gaining strength, Meena entered the Cook Islands' territory on 4 February 2005 and passed 145 kilometers (km) northeast of Palmerston, 161 km west of Aitutaki, and 90 km northeast of Rarotonga on 6 February. Meena then moved south toward Mangaia. The winds reached 100 km per hour (kph) on Rarotonga. Wave surges caused substantial damage to the commercial district of Avarua, capital of the Cook Islands. The waves demolished buildings along the waterfront, left rubble strewn on the main road, and damaged the road to the airport, causing road closures. In Aitutaki, the cyclone caused damage to power supply, the port, and buildings, particularly Araura College. In Mauke, the cyclone caused serious damage to the port, whereas in Mangaia, high winds and rough seas affected the airport, water supply, roads, buildings, and the wharf. The National Emergency Operations Centre reported no casualties throughout the archipelago.
2. **Nancy.** A second cyclone, Nancy, followed Meena on 13 February and passed 112 km southwest of Suwarrow, with the center advancing at 148 kph and causing gale-force winds with squally thunderstorms on Palmerston. Aitutaki experienced high seas and strong winds of 95–145 kph, with heavy rain. Nancy passed Rarotonga at 50 km on 15 February, with destructive wind gusts felling many trees and power lines, leaving more than 800 customers without electricity, rendering the main roads impassable owing to debris, and destroying the roofs of a number of buildings (schools, churches, restaurants). The cyclone curled around to the southwest of Rarotonga, with gusts of up to 140 kph recorded. In Atiu, Nancy reached winds of up to 241 kph and brought down power lines, poles, and trees; ripped off roofs; and spread debris on the roads. The strong winds and rain left the majority of houses with water damage. The country's southernmost island, Mangaia, experienced strong gusts of up to 259 kph, inflicting damage on all infrastructure.
3. **Olaf.** A third cyclone, Olaf, merged with Nancy, and reached the west coast of Rarotonga on 17 February, with winds of 259 kph and gusts of 315 kph. Olaf lifted roofs of residences and business establishments, brought down trees, and left households without power or phone connections. Olaf caused storm surges, damaging structures along the coast. When Olaf's eye passed 200 km west of Rarotonga, its winds reached 285 kph and it was given a severity rating of category 4. Reports from outer islands, including Aitutaki and Palmerston, recorded sea surges and wind damage, but no injuries.
4. **Percy.** A fourth cyclone, Percy, with a maximum severity rating of category 5, severely affected the low-lying, fragile, and remote atolls of Pukapuka (population 640) and Nassau (population 72) located 1,140 km north of Rarotonga on 27 February 2005. The eye of the cyclone passed 40 km south of Pukapuka, with the wind gusts estimated at 230 kph. Percy caused damage to most buildings in Pukapuka, including the hospital, school, and churches, and rendered the roads inaccessible owing to strewn debris and fallen trees. No fatalities or injuries were reported. Nassau, located 57 km southwest of Pukapuka, was also severely hit by Percy, which damaged all houses and left only the church, with a torn roof, standing. Women and young children were evacuated from the island until recovery action was completed. Percy passed 200 km southwest of Palmerston, with winds of at least 37 kph and gusts up to 56 kph, with no serious damage reported.
5. **Rae.** A fifth cyclone, Rae, was minimal and passed 320 km southwest of Rarotonga. It stayed at tropical storm strength without escalating to hurricane level. However, warnings for localized flash floods were raised by Fiji Regional Meteorological Service Centre on Rarotonga and Mangaia islands.

Figure A2: Cyclone Tracking Map



FORMAT FOR RECOVERY ACTIVITY APPLICATION

{Title of the Recovery Activity}
Date: {dd mm yyyy}
<p>1. Description of the Recovery Activity {Describe the recovery activity, including its scope and number of beneficiaries. Attach design for any civil works.}</p>
<p>2. Objective and Results {Describe the objective(s), intended result(s), and target indicator(s).}</p>
<p>3. Cost Estimate and Financing Plan {Describe how internal funds will be used. If internal funds are not available, explain if they have already been utilized, and if so for what purpose, Describe efforts to obtain grant funding.}</p>
<p>4. Procurement Process {Describe procurement processes to be followed—direct procurement, local competitive bidding, international shopping, or international competitive bidding. Describe efforts to obtain least-cost prices for the recovery activity.}</p>
<p>5. Disbursement Plan {Provide (i) a time-bound disbursement plan for drawing down the funds, and (ii) an implementation schedule for completion of the recovery activity.}</p>
<p>6. Environmental Impact and Mitigation Plan {Describe any potential environmental impacts of the recovery activity. Provide a clear checklist of responsibilities, with assigned responsibilities for mitigating these impacts.}</p>
<p>7. Beneficiary Consultations {Discuss (i) the number and type of beneficiaries, (ii) when and how these beneficiaries were consulted, and (iii) results of the consultations.}</p>
<p>8. Date of Completion of the Recovery Activity {Provide the date for completion of the activity and identify an appropriate completion certification document.}</p>

DETAILED COST ESTIMATES AND FINANCING PLAN

Item	Cost Estimates			Financing Plan				
	Local	Foreign	Total	Private	Grant	Govt.	SOE	ADB
	Costs	Costs	Cost	US\$	Aid	Budget	Reserves	US\$
	US\$ million	US\$ million	US\$ million	million	US\$ million	US\$ million	US\$ million	million
A. Base Cost								
1. Recovery	0.46	0.53	0.97	0.00	0.15	0.49	0.00	0.33
Clean Up	0.43	0.43	0.85	0.00	0.15	0.38	0.00	0.32
Harbors	0.02	0.06	0.08	0.00	0.00	0.08	0.00	0.00
Airport	0.01	0.03	0.03	0.00	0.00	0.03	0.00	0.00
Water	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01
2. Reinstatement of Public Service	0.24	1.39	1.65	0.00	0.20	0.20	0.40	0.86
Harbors	0.11	0.42	0.53	0.00	0.04	0.00	0.15	0.34
Roads	0.02	0.07	0.09	0.00	0.00	0.00	0.00	0.09
Drainage	0.01	0.02	0.03	0.00	0.00	0.00	0.00	0.03
Bridges	0.02	0.06	0.08	0.00	0.00	0.00	0.00	0.08
Water Supply	0.01	0.05	0.07	0.00	0.00	0.00	0.00	0.07
Power	0.05	0.49	0.55	0.00	0.11	0.05	0.17	0.23
Telecommunications	0.01	0.05	0.06	0.00	0.00	0.00	0.06	0.00
Agriculture	0.00	0.15	0.15	0.00	0.00	0.15	0.00	0.00
Airport	0.01	0.06	0.07	0.00	0.05	0.00	0.02	0.00
Waste Management	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.02
3. Reinstatement of Structures/Buildings	0.88	3.47	4.35	2.52	1.01	0.08	0.00	0.73
a. Essential Government Services²	0.12	1.33	1.44	0.00	0.71	0.00	0.00	0.73
Southern Group	0.10	0.91	1.00	0.00	0.37	0.00	0.00	0.64
Rarotonga (Pop. 9,451)	0.03	0.27	0.29	0.00	0.03	0.00	0.00	0.27
Aitutaki (Pop. 1,743)	0.03	0.28	0.31	0.00	0.18	0.00	0.00	0.13
Atiu (Pop. 600)	0.04	0.36	0.40	0.00	0.16	0.00	0.00	0.24
Mauke (Pop. 469)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mangaia (Pop. 739)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mitiaro (Pop. 226)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Group	0.02	0.42	0.44	0.00	0.34	0.00	0.00	0.09
Pukapuka (Pop. 662)	0.02	0.33	0.35	0.00	0.27	0.00	0.00	0.07
Nassau (Pop. 72)	0.00	0.09	0.09	0.00	0.07	0.00	0.00	0.02
Palmerston (Pop. 48)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b. Other Facilities - All Islands	0.76	2.14	2.90	2.52	0.30	0.08	0.00	0.00
Community Facilities/ Churches	0.05	0.49	0.55	0.47	0.00	0.08	0.00	0.00
Residential	0.71	1.65	2.35	2.05	0.30	0.00	0.00	0.00
4. Materials and Supplies	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.06
Government furniture and fittings	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.02
Education resources	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.04
A. Base Cost Subtotal	1.58	5.45	7.03	2.52	1.36	0.77	0.40	1.98
B. Project Management	0.11	0.29	0.40	0.00	0.00	0.00	0.00	0.40
C. Contingency³	0.10	0.33	0.43	0.00	0.00	0.00	0.00	0.43
Price Contingency	0.05	0.17	0.22	0.00	0.00	0.00	0.00	0.22
Physical Contingency	0.05	0.16	0.21	0.00	0.00	0.00	0.00	0.21
D. Interest During Construction	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.04
Total Estimate	1.79	6.11	7.90	2.52	1.36	0.77	0.40	2.85
Burden sharing (%)				32%	17%	10%	0.05	36%

Notes:

1. Grant aid from the Governments of Australia and New Zealand.

2. Reinstatement of basic service facilities including schools, hospitals, government offices and public amenities.

3. Contingency is calculated on components that receive loan funding at manufacturer's unit value (3%) and physical contingency of 7%.

ADB = Asian Development Bank, Pop = population, SOE = state-owned enterprise

Source: Asian Development Bank estimates.

TERMS OF REFERENCE FOR THE PROJECT MANAGEMENT UNIT

A. Project Management Unit

1. The Cyclone Emergency Assistance Project requires the services of two domestic consultants: a project manager for a total of 24 person-months, and a qualified accountant¹ for a total of 24 person-months. The Government will engage the accountant through the Ministry of Finance and Economic Management (MFEM). The accountant will report to the MFEM secretary. The project management unit (PMU) located at the MFEM, will be staffed by the consultants, and supported by 6 person-months of technical services covering specific assessments, detailed design, contract supervision, and quality control, to be engaged as needed by the project manager. The PMU will guide and be accountable for project management, particularly prudent financial management, and carry out and support timely action, as follows.

- (i) Ensure the Project is implemented (a) in accordance with relevant guidelines of the Asian Development Bank (ADB), these terms of reference, and laws of the Cook Islands, and (b) efficiently, effectively, and economically.
- (ii) Open a project imprest account to facilitate disbursement of project funds in accordance with ADB guidelines on disbursement.
- (iii) Prepare documentation for retroactive financing under the Project.
- (iv) Prepare terms of reference, engage, and manage domestic consulting services required for the Project.
- (v) Prepare tender documents and conduct tendering for all contracts for civil works, equipment, and consulting services, as required and in accordance with ADB *Guidelines for Procurement*. Administer, implement, and monitor international and local contracts for civil works, equipment, and consulting services under the Project.
- (vi) Administer disbursements and imprest account replenishment efficiently and in accordance with the relevant ADB guidelines.
- (vii) Report on recovery activities in accordance with the report and recommendation of the President for the Project and the relevant loan agreement.

B. Terms of Reference for Project Implementation Consulting Services

2. Domestic consulting services are needed to support MFEM with project implementation. Two individually appointed consultants (para. 1) will provide these services.

1. Project Manager

3. The duties of the project manager include the following:

- (i) Assume responsibility for project implementation and reporting to ADB in accordance with relevant ADB guidelines.
- (ii) Provide supporting to MFEM in all project-related matters.
- (iii) Provide management and leadership to the PMU and the project steering committee, prepare terms of reference for the technical support, and manage these terms of reference for the international consultants.

¹ In absence of qualified candidates, an international consultant may be recruited.

- (iv) Facilitate coordination and cooperation between the Project and all other bilateral and multilateral agencies wishing to contribute to the comprehensive recovery program.
- (v) Help identify and implement recovery activities.
- (vi) Help manage and direct all recovery activities.
- (vii) Evaluate and make recommendations for all procurement activities.
- (viii) Approve and certify all payments eligible under the Project.
- (ix) Prepare all documentation required by ADB for the Project, prepare and update the project budget and implementation schedules, and prepare quarterly payment and disbursement requirement forecasts.
- (x) Support the project steering committee, including all its substantive tasks, as committee secretary.
- (xi) Support the project steering committee to prepare and implement the public communication plan covering activities.
- (xii) Arrange tenders for the annual audit and facilitate activities of the auditors.
- (xiii) Facilitate ADB review missions, as requested.
- (xiv) Ensure preparation and implementation of environmental mitigation action plans, as necessary, and compliance with all assurances under the Project.

2. Qualified Accountant

4. The qualified accountant will be responsible for the financial management and administration of all activities funded under the Project, including the recovery activities as well as the payments for consulting services. The scope of tasks includes the following:

- (i) Assist the project manager with all financial and administrative tasks related to project administration and implementation, including financial and administrative management of accounts under the Project, consultant and counterpart contracts, and civil works and equipment supply contracts.
- (ii) Develop and implement cost accounting systems and bookkeeping to facilitate preparation of the required project reports.
- (iii) Ensure that all project-related financial records are accurate, complete, and up-to-date at all times.
- (iv) Help prepare regular cost, commitment, and forecast reports in accordance with MFEM and ADB requirements.
- (v) Evaluate all eligible expenditures for payment by the Project, in accordance with internationally accepted practices and against the selection criteria.
- (vi) Help evaluate all tenders and procurement actions, ensuring that ADB *Guidelines on Procurement* are adhered to as defined under the report and recommendation of the President for the Project and the relevant loan agreement.
- (vii) Help and advise on processes for obtaining all necessary MFEM and ADB approvals for submission of contracts and payments.
- (viii) Process payments, including imprest account replenishments, on all project components as required under the ADB disbursement guidelines.
- (ix) Provide assistance to ADB review missions, as necessary, and with the annual audit.

C. Reporting

5. The consultants will support MFEM with reporting requirements, including the following:

- (i) Within 4 weeks of project commencement, submit a brief inception report outlining a work plan for the recovery activities and project implementation, as well as cost implications, including for consulting services. Provide a bar chart of all project activities.
- (ii) Through brief quarterly progress reports (to be submitted 1 month before the start of each quarter, inform the Government and ADB of project achievements, identify any emerging difficulties in project implementation, and outline proposed solutions. Provide, in clear graphical presentations, project progress; accomplishments of the terms of reference; plans for the next quarter's work, including budgets; and quarterly disbursement and payment forecasts. Include data on the Government's and aid resources expended on the comprehensive recovery program; activities and expenditures; implementation of aid support; and progress in implementing policy initiatives, transport policy and regulations, and organizational changes. Adopt a uniform report format to facilitate project monitoring.
- (iii) On project completion, submit a draft final report summarizing all project activities and recommendations; and outlining continuing training programs, and programs for establishment, implementation, and strengthening of the relevant institutions, including the road condition survey and recommendations for future support.
- (iv) One month after receiving comments on the draft final report from the Government and ADB, submit the final report.

IMPLEMENTATION SCHEDULE

Task Name	2005												2006												2007																
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6											
Appraisal Mission	■																																								
Grant Agreement Negotiations			■																																						
ADB-Multidonor Trust Fund Approved				■																																					
Selection of Project Management Staff				■																																					
Short Road Maintenance Contracts					■																																				
Ongoing Project Supervision					■												■												■												
Procurement of Equipment					■																																				
Full Road Maintenance Contracts					■												■												■												
Prequalification of Contractors				■																																					
Tender and Bid Selection				■																																					
Tender and Bid Selection								■																																	
Backlog Reinstatement Works									■												■																				
Periodic Maintenance Works												■						■																							
Skilled Routine Maintenance Works									■												■																				
Unskilled Routine Maintenance Works									■												■																				
Design for Port Extension				■																																					
Design for Power Rehabilitation				■																																					
Construction Works - Port and Power					■												■												■												
Prequalification of Contractors				■												■												■													
Tender and Bid Selection				■																																					
Mobilization								■																																	
Port Rehabilitation									■												■																				
Power Rehabilitation									■												■																				
Power Sector Master Plan						■						■												■																	
Financial Management to Power Sector						■																																			
Support to Environmental Assessment				■																																					
Inception Mission				■																																					
Technical Review Mission												■																													
Six-month Reviews							■						■							■																					

ADB = Asian Development Bank.

TECHNICAL ASSISTANCE FOR STRENGTHENING DISASTER MANAGEMENT AND MITIGATION

A. Rationale

1. Between 4 February and 8 March 2005, the Cook Islands experienced five damaging cyclones, four of which were assigned a category 5 severity rating and caused damage to homes and essential public infrastructure. The economy was severely disrupted. The Government and its agencies have managed early warning information dissemination and evacuation, and provided emergency relief to the affected population with the support of international and regional relief agencies. Preliminary assessments of the physical damage have been carried out. However, the Government lacks capacity and resources to finance the immediate recovery and reinstatement of basic services.

2. The emergency highlights the need for a long-term strategy and an integrated infrastructure development plan that (i) incorporates climate change adaptation concepts; and (ii) prioritizes the development and implementation of policies and measures to support economic and social development, and ensure maintenance of basic infrastructure against weather-related threats.

3. The social infrastructure is ill-prepared for weather-related threats; this was highlighted by the Climate Change Adaptation Project for the Pacific.¹ The inherent geographic vulnerability of the Cook Islands to climate change can be ameliorated by integrated infrastructure and social development, including human resource development. The country needs to be “climate proofed” by enhancing its adaptive capacity and resilience to climate change and climate variability, including extreme events. Strengthening disaster management and mitigation capacity will help to (i) ensure that future social and infrastructure program designs incorporate climate change adaptation and mitigation strategies, thus allowing delivery of the envisaged benefits to the community; and (ii) disaster management capacity includes the ability to mobilize a robust and rapid response to minimize impact on the fragile economy.

B. Objectives

4. The objectives of the technical assistance (TA) are to (i) assist the Government in strengthening disaster and recovery management, including damage assessment, aid management, and operational coordination; and (ii) establish financial controls required to ensure good governance in managing rapid disbursement of recovery funds. The TA will develop a far-reaching and systematic approach to mitigating the country’s vulnerability to adverse weather conditions under three phases—emergency response, recovery, and the development or establishment of institutions and environmentally sustainable infrastructure capable of preventing the recurrence of disasters. The TA will establish (i) robust disaster management operations and control mechanisms to support not only the efficient and effective implementation of the Cyclone Emergency Assistance Project, but future disasters as well; and (ii) a preventive master plan that will develop long-term preparedness by minimizing the potential harmful impacts of future emergencies.

¹ ADB. 2002. *Technical Assistance for Climate Change Adaptation Program for the Pacific*. Manila (TA 6064-REG, approved for \$0.8 million on November 2002).

C. Scope

5. The TA scope includes (i) immediate establishment of a rapid, effective, and robust response capability through efficiently coordinated networks of skilled personnel to administer disaster mitigation operation; and (ii) preparation of a comprehensive, integrated, and environmentally sustainable infrastructure master plan covering all basic infrastructure, including the transport, water and sanitation, power, and communications sectors in the Cook Islands. The master plan will include an effective governance and policy framework for essential basic service delivery, and management and maintenance of the infrastructure assets. The master plan is expected to be updated at least every 5 years in line with good practice.

D. Outline Terms of Reference

1. Disaster Management Capacity—Component 1

6. A total of 3 person-months of consulting services will be required to develop an integrated plan for mobilizing and coordinating networks of institutions and skilled personnel to respond effectively to imminent crises situations. The assignment includes the following tasks:

- (ii) review existing legislation, regulations, plans, strategies, and instructions related to disaster management;
- (iii) review the regional context of disaster management, agreements, mitigation, and emergency and disaster management strategies; and clearly identify the role the Cook Islands and its institutions play in implementing these plans and agreements;
- (iv) review the capacity and mandates of the participating institutions and their stake in the disaster management coordination and action;
- (v) review the (a) resource sourcing; (b) disbursements required for mobilizing an effective disaster response; and (c) management of disaster funds, including confidence-building and assuring financial prudence and fairness in expending these funds;
- (vi) develop a consensus on best practice tailored to the conditions and the organizational, political, and cultural context of the Cook Islands, to facilitate development of a mechanism and operational procedure for addressing disasters and related recovery actions;
- (vii) prepare the necessary documentation for the required approval processes for the adopted disaster management operation;
- (viii) implement the approach adopted, ensuring all institutions have a clear and comprehensive understanding of their roles and the capacity to carry them out;
- (ix) develop models of best practice and leadership in guiding orderly and systematic disaster management operations; and
- (x) support the Ministry of Finance and Economic Management (MFEM) to maximize all grant assistance for the comprehensive recovery program, including preparation, monitoring, and coordinating the relevant documentation.

2. Preventive Infrastructure Master Plan—Component 2

7. Consulting services will be required to (i) prepare an integrated and environmentally sustainable infrastructure master plan, covering all infrastructure subsectors, including land transport (land, maritime, and air transport); and the water and sanitation, power, and communications sectors; and (ii) review the preventive capacity of infrastructure, management,

legal and regulatory, and policy frameworks under a long-term development program. The consultants' assignment, in consultation with the Government and its agencies, will include the following tasks.

8. **Inception.** The consultants will do the following:

- (i) Prepare terms of reference for the domestic consultants, help with recruitment, and supervise the consultants throughout the TA.;
- (ii) Review all existing records, proposals, documentation, and reports covering the planning for infrastructure under the technical scope of the TA; develop a sustainable database of these records; and identify links, overlap, and complementarities; and summarize these in a clear report.
- (iii) Review the legal framework governing construction and management of the essential assets considered under the TA scope, including legislation for land acquisition and resettlement.
- (iv) Become thoroughly familiar with the current organizational arrangements and plans, management proposals and issues, human resources and budget constraints, as well as the planning for and management of the infrastructure scope under the TA.
- (v) Review all documents, ensuring familiarity with all ongoing civil works and investment planning in the relevant sectors, and become fully familiar with the TA, the clients, and the demand for infrastructure services from stakeholder groups and their representatives.
- (vi) Prepare demand forecasts, and through consultative processes with the relevant sectors and central agencies, develop a clear understanding of and consensus regarding these forecasts.
- (vii) Review the legal framework and approval processes to ensure their (a) adequate incorporation into the approval process for the legislative proposals delivered by the TA, and (b) referencing to the affected and affecting legal texts (e.g., those governing land acquisition).
- (viii) Establish a systematic approach for broad consultations on the TA deliverables to provide stakeholders and relevant sectors and central agencies a clear time-bound plan for reviewing the recommendations made by the TA.
- (ix) Become fully aware of current service levels and prepare forecasts to maximize service delivery performance and alleviate constraints.

9. **Master Plan: Environmental Sustainability and Climate Change Adaptation.** The consultants will undertake the following.

- (i) Review the climate change conditions prevailing in the Cook Islands, including the recommendation of the regional TA on climate change (footnote 1); assess the long-term impacts of the 2005 cyclones on infrastructure; and develop specific recommendations on the building code and regulations, management of assets, and policies, that will mainstream climate change considerations in support of the environmental and economic sustainability of infrastructure against weather-related threats.
- (ii) Based on the data gathered, develop prioritized, economic and least-cost development plans appropriately scaled to meet the demand for service delivery and to incorporate the climate change concepts for each infrastructure area under the TA scope, by using modern modeling tools to integrate sector

development programs and growth potential scenarios, and to incorporate environmental sustainability. This framework incorporates the best practices for private sector development, cost recovery, effectiveness, and efficiency.

- (iii) Apply best practices and international standards in analyzing and recommending a schedule of investment requirements; identify improvement projects and issues arising in their formulation, funding, and implementation; and prepare an integrated sector investment and master plan. This plan incorporate access issues of the remote and less advantaged population segments on the outer islands, and environmental concerns affecting expansion of key income and export earners (e.g., tourism).
- (iv) Review and develop, in consultation with the central and sector agencies, a framework for consultation on the proposed development program, strategies for maximizing concessional assistance for funding the program, and plans for commencing work on the necessary feasibility studies and implementation, identifying throughout the TA implementation agendas and proposed resolution to advance an integrated and environmentally sustainable infrastructure development, maintenance, and operational program.

10. Preventive Capacity Development in Corporate Planning. The consultants will have the following responsibilities:

- (i) Prepare service delivery performance indicators, establish benchmarks, reflect regional comparators, and target service efficiency levels. Determine, in consultation with relevant agencies, programs and operational improvement processes to achieve the set targets. Determine how to use the performance targets to achieve the most effective management structures and processes for achieving the suggested service levels.
- (ii) Review and recommend, as required, business development plans for the technical areas under the scope of the TA, examining and making recommendations on options for increasing the efficiency of subsector operations through outsourcing, including (a) revenue collection, (b) accounting, (c) human resources, and (d) asset management.
- (iii) Assess the feasibility of maximizing private sector involvement in all aspects of operation and maintenance of infrastructure under the TA scope, with reference to improvements in service quality or cost reduction. Recommend appropriate means and structures to secure private sector involvement in such activities. Review market conditions for outsourcing service provision, and recommend ways to improve prices and conditions.
- (iv) Identify requirements for modifying or promulgating transport sector regulations for operation and maintenance. Draft the alternative regulatory instruments and standards, and determine and support implementation of the proposals.
- (v) Determine and support a time-bound process for approving and implementing the agreed legislation and operational proposals, and support their implementation.
- (vi) Arrange and implement a minimum of three tripartite meetings to ensure a close monitoring and consultation process. Help convene and lead stakeholder and aid coordination in information dissemination events in connection with the meetings. Organize workshops for infrastructure sector stakeholders to develop a

- consensus on the proposals and action plans. Clearly document all consultations.
- (vii) Review financing and cost recovery arrangements established for infrastructure development under the TA scope, and recommend ways to improve the overall financing portfolio both for central and stakeholder agencies.

E. Cost Estimates and Financing Plan

11. The total cost of the TA will be US\$755,350 equivalent, with US\$467,640 in foreign exchange and US\$287,710 equivalent in local currency. The Government asked the Asian Development Bank (ADB) to finance \$600,000 equivalent, covering the entire foreign exchange cost (US\$467,640) and US\$132,360 equivalent of the local currency cost. The TA will be financed on a grant basis by the ADB TA funding program. The Government will contribute \$155,350 equivalent, through the provision of office space, logistical support, office support, counterpart staff, workshops and training, and transport (Table A7).

Table A7: Cost Estimates and Financing Plan
(US\$)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank Financing^a			
1. Consultants –components 1			
a. Remuneration	54,000	0	54,000
b. Per Diem	10,800	0	10,800
c. International Travel	6,000	0	6,000
	0	5,000	5,000
2. Consultants – components 2			
a. Remuneration	228,000	0	228,000
b. Per Diem	90,000	0	90,000
c. International Travel	30,000	0	30,000
d. Local Air Travel	0	12,000	12,000
e. Local Consultants	0	54,000	54,000
3. Miscellaneous			
a. Communications	0	5,429	5,429
b. Reports	0	5,000	5,000
c. Consultations	0	19,109	19,109
d. Office Supplies	0	2,500	2,500
e. Local Vehicle Transport	0	15,500	15,500
4. Contingencies	48,840	13,822	62,662
Subtotal (A)	467,640	132,360	600,000
B. Financed by the Government			
1. Office Space and Logistical Support	0	22,500	22,500
2. Office Support and Counterpart Staff	0	75,000	75,000
3. Workshop and Training	0	15,000	15,000
4. Report Preparation	0	4,000	4,000
5. Local Transportation to Remote Locations	0	20,000	20,000
6. Contingencies	0	18,850	18,850
Subtotal (B)	0	155,350	155,350
Total	467,640	287,710	755,350

Source: Asian Development Bank estimates.

F. Implementation Arrangements

12. **Executing Agency.** MFEM, the Executing Agency for the TA, will carry out daily activities in close consultation with the implementing agencies operating essential infrastructure in the Cook Islands and aid agencies supporting development of the selected areas under the TA scope. The TA will be coordinated through (i) a multiagency steering committee comprising members of the disaster management team² under component 1 of the TA; (ii) the agencies involved in managing environmental prevention and sustainable infrastructure under component

² Cabinet Memorandum, 21 February 2005 CM (05) 58.

2 of the TA, and (iii) other relevant members identified during the TA. The TA will be implemented in a highly consultative manner.

13. **Consulting Services.** The TA will require the following consulting services.

1. Disaster Management Capacity—Component 1

14. Component 1 will be implemented over 3 months, commencing in June 2005 and completed by September 2005. ADB will recruit one international individual consultant (responsibilities are outlined in para. 6) with expertise in disaster management in accordance with ADB *Guidelines on the Use of Consultants*, and other arrangements satisfactory to ADB.

2. Preventive Infrastructure Master Plan—Component 2

15. Component 2 will be implemented over 8 months beginning in August 2005 and ending in March 2006. Consulting services include 12 person-months international from an international firm, and 12 person-months of domestic consulting. Expertise will include integrated development programming, institutional restructuring, corporate planning, financial management, administration and control functions, human resource management, outsourcing and contract management, implementation of community-based development, and environmental analysis and climate change adaptation (responsibilities are outlined in paras. 7–10). The services will be engaged in accordance with ADB *Guidelines on the Use of Consultants*.

16. Tripartite meetings of the steering committee, consultants, and ADB will be convened to consider the consultants' reports (paras 17–18). A minimum of three tripartite meetings will be convened to ensure close monitoring and consultation. Coordination of external funding agencies will be conducted in connection with the scheduled tripartite meetings.

G. Reporting Requirements

17. The consultants under component 1 will be required to provide the following reports, in English and of publishable quality: (i) an inception report 2 weeks from commencement of the assignment, (ii) an interim report within 1.5 months from the beginning of the assignment, (iii) a draft final report within 2.5 months from the beginning of the assignment, and (iv) a final report at its conclusion. The reports will be widely disseminated by MFEM.

- (i) **Inception report.** Outline program and milestone targets; the consultants' approach, methodology, and work plan; cost implications for consulting services; and recommendations for changes in the implementation arrangements. Provide a bar chart of all activities and both MFEM and consulting services inputs.
- (ii) **Interim report.** Submit at the midpoint of TA implementation, summarizing all recommendations and concepts developed under the terms of reference; providing a detailed background to the disaster management operation; and identifying issues and decision-making requirements, if any, to facilitate TA progress.
- (iii) **Draft final report.** Summarize TA activities and provide detailed recommendations with corresponding action plans on each item under the terms of reference. Assess constraints and recommend actions for their alleviation,

procedures for effective and robust disaster management operation, and consultation processes undertaken and remaining, if any.

- (iv) **Final report.** Upon receipt of comments on the draft final report from ADB and the stakeholders in the Cook Islands, submit, at latest within 1 month after receipt of such comments, a final report taking into account comments.

18. The consultants under component 2 will submit all reports in English to the Government (five copies) and ADB (three copies). The consultant will organize a minimum of three tripartite meetings to consider the inception, midterm, and draft final reports, and TA progress and status. In connection with these meetings, the consultant will arrange consultation meetings with other aid agencies in the sector. The consultant will prepare and circulate minutes of these meetings, and incorporate comments in the TA reports and activities, as appropriate.

- (xi) **Inception report.** Submit within 4 weeks of the start of the TA, outlining, in accordance with the terms of reference, the consultants' approach, methodology, and work plan, as well as cost implications for consulting services. Provide a bar chart of all TA activities, and recommend changes to the implementation arrangements.
- (xii) **Midterm report.** Summarize all recommendations and concepts developed under the terms of reference; provide detailed background to the sector; and identify issues and decision-making requirements, if any, to facilitate progress under the TA.
- (xiii) **Draft final report.** Submitted on TA completion, summarizing TA activities and providing detailed recommendations, with action plans, on each item under the terms of reference.
- (xiv) **Final report.** Submit this report 1 month after receipt of the comments on the draft final report from the Government and ADB.

SUMMARY INITIAL ENVIRONMENTAL EXAMINATION

A. Introduction

1. The initial environmental examination (IEE) provides basic information about the general environmental settings of the proposed interventions, their potential impacts, magnitude, distribution, and possible affected groups. These are presented according to the different project phases, i.e., from site assessment and design to construction, to operation and maintenance. Mitigation measures are prescribed, together with the proposed environmental monitoring plan, institutional requirements, and public consultation and information disclosure requirements. The IEE procedure follows the Asian Development Bank (ADB) *Environment Policy* (2002) and *Environmental Assessment Guidelines* (2003).

B. Description of Project

2. The Cyclone Emergency Assistance Project intends to fast track the recovery and rehabilitation of damaged public services and in the process lessen the adverse social and economic impact of the cyclones. The Project will finance a major part of the cyclone recovery program to restore the functionality of public utilities (such as water and power), education, health, and transport sector services. Specifically, the Project will (i) repair and clean up roads, bridges, and drainage, particularly in Rarotonga; Aitutaki; Mauke; and Mangaia; (ii) restore the functionality of harbors in Aitutaki, Mangaia, Mauke, Pukapuka, and Rarotonga; (iii) repair the power distribution lines and infrastructure in Aitutaki and Rarotonga; (iv) reinstate the water supply facilities to their precyclone condition, particularly in Pukapuka and Nassau; (v) restore the newly constructed waste management landfill in Rarotonga; and (vi) repair hospitals, health centers, staff quarters, and administrative buildings of government agencies.

C. Description of the Environment

1. Physical Resources

3. The Cook Islands has a tropical oceanic climate with two seasons. The drier months, from April to November, have an average maximum temperature of about 26 degrees Celsius (°C) and an average minimum temperature of about 20°C. The wetter, more humid months, from December to March, have an average maximum temperature of 28°C and an average minimum of 22°C. During the wet season, the Cook Islands can experience severe tropical cyclones. Water supply in Rarotonga is obtained from the water catchments of the mountainous interior of the island. The main sources of drinking water in the other volcanic southern group islands are freshwater lenses and through roof catchments. The main source of drinking water in the northern atolls is from rainwater tanks and cisterns because the groundwater resource is prone to contamination from human waste and salt intrusion.

2. Ecological Resources

4. Biodiversity of the country includes a variety of plants and animal species. Rarotonga has 180 indigenous flowering plants, the Makatea islands have 90 to 100 indigenes, Aitutaki has 40, and the northern atolls vary from 25 in Pukapuka to 18 on Manihiki. The plants of the Cook Islands are widely used by the people. The Natural Heritage Project has documented over 1,007 flowering plants, of which 163 are used for food, 73 for medicines, 52 for agriculture or horticulture, 20 provide timber, and 406 are ornamental (leaves or flowers). Birds include about 20 indigenous resident seabirds and 13 indigenous resident land birds. Six Alaskan shorebirds

regularly spend the southern winter in the country. Two of the uninhabited islands, Takutea in the southern island group and Suwarrow in the northern group, play an important ecological role as bird sanctuaries, both supporting species not found elsewhere in the Cook Islands. Twenty-four coral genera and 58 species have been identified in the Cook Islands mainly on Aitutaki and Rarotonga. Coral reef resources and lagoons provide a very important food source for Cook islanders, particularly in the northern island group and also on some islands of the southern group.

3. Economic Development

5. Despite the Cook Islands' economic vulnerability, it achieved its sixth consecutive year of growth in 2004. Real gross domestic product grew by 3.4% over fiscal year (FY) 2004; its primary contributors are tourism (54%), including the related retail, wholesale, and other consumption and financial services; agriculture and fisheries (16%); transportation (15%); and public administration (12%). Tourism, the leading economic sector, has grown massively since 1971. In 2000, a record of 75,000 people visited the country, bringing huge economic benefits and major developments in tourist infrastructure on both Rarotonga and the northern island of Aitutaki. Fisheries also contribute substantially to the economy: every week, up to 20 tons of fish were exported to markets in Japan and the United States (US). Cook Islands boats caught about 846 tons of tuna worth about US\$3.1 million (gross). The Cook Islands also receives about US\$1 million a year from a fishing treaty that allows a certain number of US tuna fishing boats to operate in the country's exclusive economic zone each year. Black pearls are the Cook Islands' leading export, ranking second to tourism in their importance to the economy. The largest market is Japan which buys about 50% of Cook Islands' production. The remainder is Australia, Europe, Hawaii, and domestic markets. About 70% of all households in the Cook Islands are engaged in some form of agricultural activity for subsistence, commercial, or both. Some agricultural produce is exported to New Zealand.

4. Social and Cultural Resources

6. The indigenous population of the Cook Islands is the Cook Islands Maori, Polynesians closely related ethnically to the indigenous populations of Tahiti and nearby islands and to the New Zealand Maori. The population of the Cook Islands in 2003 was 18,027. Since the economic reform programs of 1995–1996, the population has experienced heavy losses due to migration to Australia and New Zealand. Settlements are mainly concentrated on the coastal zone. Broad social indicators place the Cook Islands toward the top in the Pacific in literacy rates and school enrolment ratios. Life expectancy, infant mortality rates, and access to safe water and sanitation compare well with Pacific neighbors. Access to and quality of social service provision in Rarotonga differs significantly from that on the outer islands. Of the approximately 28 primary schools in the Cook Islands, 10 are in Rarotonga, and out of the 23 schools offering secondary level education, 3 are in Rarotonga. Postsecondary education facilities, however, are limited and are based mainly in Rarotonga, such as the extension center of the University of the South Pacific in Avarua.

D. Screening of Potential Environmental Impacts and Mitigation Measures

7. The main objective of the Project is to help the Cook Islands recover from the devastation wrought by five cyclones that hit the country between February and March 2005. Table A8 presents the potential adverse impact that rehabilitation and construction works may pose for the environment, particularly on the quality of the air, water, soil, wildlife, and

vegetation, as well as the impact on the social and cultural makeup of the local people. Project completion is expected to bring social and economic benefits to local residents.

8. Because the project activities are generally repair works, environmental impacts are predicted to be limited. The identified potential environmental impacts on the air, water, lands, vegetation, wildlife, and the local people, are manageable and could be mitigated as outlined in Table A8. The project management unit (PMU) staff will oversee and monitor the progress of project construction and operational activities. The PMU will have full support from the Government, particularly the Ministry of Finance and Economic Management (MFEM) and the National Environment Service.

E. Institutional Requirements and Environmental Monitoring

1. Institutional Requirements

9. MFEM will be the Executing Agency for the Project, with the Ministry of Works, Cook Island Investment Corporation including the Ports Authority and Te Aponga Uira Power Authority (Rarotonga), and Office of the Minister for Island Administrations as implementing agencies. A PMU, guided by a steering committee, will be created to administer and coordinate daily project activities. The PMU, headed by a project manager, will oversee overall project implementation,. The PMU will ensure that project operations are within the environmental standards set by the IEE and other appropriate policies, rules, and regulations set by the Government. Environmental monitoring and evaluation of project activities will be undertaken by a multipartite monitoring team comprising representatives from the PMU, MFEM, and technical staff from the National Environment Service. Representative(s) from affected communities will be selected to form part of the monitoring team. ADB may join the monitoring team as a technical adviser. Other experts from outside organizations may be included as needed.

2. Environmental Monitoring Plan

10. During the preconstruction phase, the focus of monitoring and evaluation will be the design and location of various project rehabilitation and repair activities. The monitoring team will ensure that the designs incorporate all the mitigating measures identified, to limit, if not totally eliminate, the possible negative impact of project construction activities. Mitigating measures should include the concerns and requirements of the local communities. With the mitigating measures already defined and parameters listed, the monitoring team will then conduct regular inspection activities. Monitoring may be done 6 months immediately after the commencement of construction and other related activities. This will be regularized (either on a monthly or quarterly basis) depending on the need of the Project and requirements of MFEM and ADB. The team will conduct an annual evaluation. If the construction activities cause an unfavorable environmental condition, the monitoring team, through the PMU, will notify the steering committee, which will advise on appropriate action.

F. Public Consultation and Information Disclosure

11. The ADB Damage Assessment Mission held from 11–17 March 2005 identified the urgency of undertaking rehabilitation of damaged areas. Consultations with Government officials concerned, affected local communities, and representatives from aid partners have confirmed that delay in the rehabilitation work would result in more harm to the ailing economy. The local populace is in dire need of public services such as roads, transport, safe water, power,

telecommunication, hospitals, and schools. Reestablishing services would hasten the return of communities to their normal life and performance of their usual social and economic activities.

12. In designing the rehabilitation activities and conduct of actual construction works, care must be taken that the concerns of local people are incorporated in the plans and programs of activities. Further consultations will be conducted during construction to ensure that their needs and requirements are considered. Representatives from the local communities will be invited to form part of the monitoring and evaluation team to examine overall project implementation.

G. Findings, Recommendations, and Conclusion

13. The project activities are mainly clean up and repair and rehabilitation in scope, while new construction activities (if any) will be very minimal. These activities are expected to pose negligible impact on the environment, and are tolerable depending on adherence to the mitigating measures defined. Implementation and subsequent completion of project activities would even result in more benefits, both socially and economically, for Cook Islanders.

14. No component activities of the Project will require a full environmental impact assessment, and therefore, the Project may proceed as planned, and the identified mitigating measures be duly observed during construction and operation and maintenance phases of project implementation. This IEE can therefore be considered as the required environmental assessment for the project and no follow-up environmental impact assessment is needed.

Table A8: Summary of Environmental Impacts, Mitigation Measures, and Monitoring Plan

Phase/Project Activities /Indicators	Potential Impacts and Mitigating Measures ¹		Monitoring Plan		
	Potential Impacts	Proposed Mitigation Measure	Parameters to be monitored	Frequency	Responsible Institutions/Agencies
Preconstruction Phase					
Design and location (and/or relocation) of overall repair, cleanup, and construction activities	<ul style="list-style-type: none"> Road reconstruction may entail earth movement that may lead to soil erosion and contamination of adjacent beach and/or sea areas. Construction materials (e.g., gravel and sand) needed in repair and/or construction work may be taken from adjacent beach areas and result in ecological disturbance. 	<ul style="list-style-type: none"> Overall design of repair works will be climate proofed (cyclone resistant) and in accordance with building controls and standards. Identify a steady and ecologically sound source of construction materials. Undertake consultations for the ecological soundness and social acceptability. 	<ul style="list-style-type: none"> Designs that are approved by authorized officials, and government institutions Memorandum of agreement with local stakeholders 	<ul style="list-style-type: none"> During the initial stage of project inception and preconstruction activities. 	<ul style="list-style-type: none"> Responsible agencies are PMU, MFEM, NES, and representative-officials of ADB. Environment monitoring team
Construction Phase					
	Air Quality <ul style="list-style-type: none"> Dust generation 	<ul style="list-style-type: none"> Frequent watering of the road surface, and compacting of road subgrade using proper machinery Trucks carrying construction materials will be covered 	<ul style="list-style-type: none"> Dust generated Number of trucks that are not properly covered 	Six months after the start of construction and then quarterly to semiannually, and periodic monitoring	PMU, MFEM, NES, and ADB
	Water Quality and Sanitation <ul style="list-style-type: none"> Adverse effect on the quality of water due to erosion and sedimentation. Contamination of surface and ground water by oil, grease, fuel, bitumen, and cement Damage to lagoon from sand mining for construction 	<ul style="list-style-type: none"> Minimize alteration of project design (except for climate proofing) Provide sufficient water supply and sanitation facilities to construction workers 	<ul style="list-style-type: none"> Quantity of water produced from specific source 	Six months after the start of construction and then quarterly to semiannually, and periodic monitoring as the need arises	PMU, MFEM, NES, and ADB
	Lands and Terrestrial Vegetation and Wildlife <ul style="list-style-type: none"> Road repair works may lead to erosion of top and subsoil in the cut slopes of the road 	<ul style="list-style-type: none"> Construct slope protection works (e.g., buttress or retaining walls) 	<ul style="list-style-type: none"> Rate of soil erosion Condition of 	Six months after the start of construction and	PMU, MFEM, NES, and ADB

Phase/Project Activities /Indicators	Potential Impacts and Mitigating Measures ¹		Monitoring Plan		
	Potential Impacts	Proposed Mitigation Measure	Parameters to be monitored	Frequency	Responsible Institutions/Agencies
	<ul style="list-style-type: none"> Disturbance of wildlife due to habitat loss and disturbance. Visual impairment of the scenic features of the natural landscape 	<ul style="list-style-type: none"> Minimize major earthwork during rainy season Rehabilitation of disturbed areas using engineering and vegetative measures 	<ul style="list-style-type: none"> wild plant and animals Aesthetic view of the natural environment 	then quarterly to semiannually, and periodic monitoring as the need arises	
	Waste Materials <ul style="list-style-type: none"> Generation of additional waste materials, not to mention the already scattered cyclone debris 	<ul style="list-style-type: none"> Waste materials will be collected and stockpiled into designated disposal sites away from ecologically vulnerable areas Appropriate waste management procedures to be specified in the contract 	<ul style="list-style-type: none"> Quantity of waste generated Condition of waste disposal areas 	Six months after the start of construction and then quarterly to semiannually, and periodic monitoring as the need arises	PMU, MFEM, NES, and ADB
	Local People and Community <ul style="list-style-type: none"> Generation of short-term employment Change in lifestyle and cultural orientation brought about by exposure to outsiders and/or workers Noise generation due to increase in maritime and terrestrial traffic 	<ul style="list-style-type: none"> Give priority to the local community in hiring Earthmoving activities will be undertaken as much as possible during dry weather. Avoid use of vehicles and/or equipment with excessive exhaust or noise emission 	<ul style="list-style-type: none"> Number of local people employed Number of in- and out-migration Level of noise produced 	Six months after the start of construction and then quarterly to semiannually, and periodic monitoring as the need arises	PMU, MFEM, NES, and ADB
Operation and Maintenance Phase					
	Air Characteristics and Quality <ul style="list-style-type: none"> Increased dust, emission, and noise due to restarted power provisions Emission and vibrations from old engines 	<ul style="list-style-type: none"> Ensure that equipment are in good running condition Regularly do a maintenance check of equipment and facilities Provide silencers, power station sealing, and fitting of noise baffles 	<ul style="list-style-type: none"> Degree of dust emission Level of noise produced 	Quarterly monitoring, depending on the nature of operations Annual evaluation	PMU, MFEM, NES, and ADB
	Water Quality <ul style="list-style-type: none"> Change in water quality Discharge of untreated 	<ul style="list-style-type: none"> Secure transportation and handling of used oil 	<ul style="list-style-type: none"> Quality of water 	Quarterly monitoring,	PMU, MFEM, NES, and ADB

Phase/Project Activities /Indicators	Potential Impacts and Mitigating Measures ¹		Monitoring Plan		
	Potential Impacts	Proposed Mitigation Measure	Parameters to be monitored	Frequency	Responsible Institutions/Agencies
	wastes <ul style="list-style-type: none"> • Groundwater contamination • Improper disposal of septage; diesel and oil spillage that contaminate the water 	<ul style="list-style-type: none"> • Undertake appropriate training and awareness program for equipment operation 		depending on the nature of operations Annual evaluation	
	Lands and Terrestrial Vegetation and Wildlife <ul style="list-style-type: none"> • Decrease in population due to habitat loss, destruction and/or disturbance • Visual impairment of the scenic features of the natural landscape and seascape 	<ul style="list-style-type: none"> • Continuous rehabilitation of cleared and disturbed areas using engineering and vegetative/soil conservation measures 	<ul style="list-style-type: none"> • Natural habitats destroyed • Aesthetic view of the natural environment 	Quarterly monitoring, depending on the nature of operations. Annual evaluation	PMU, MFEM, NES, and ADB
	Local People and Community <ul style="list-style-type: none"> • Loss of access to employment and/or livelihood opportunities • Change in lifestyle and cultural orientation brought about by exposure to outsiders and/or workers • Injury to workers and locals due to poor handling of equipment operations 	<ul style="list-style-type: none"> • Ensure that local people and/or community are given priority in hiring • Undertake appropriate training and awareness program for equipment operations 	<ul style="list-style-type: none"> • Number of local people employed • Rise in criminal offenses • Number of injured workers 	Monitoring and evaluation will be done as the need arises	PMU, MFEM, NES, and ADB

ADB =Asian Development Bank, MFEM =Ministry of Finance and Economic Management, NES = National Environment Service, PMU =project management unit

¹ Unless otherwise stated (in bold font), the potential impacts described and the mitigating measures prescribed apply to all the components (or to some relevant components) of the project and/or the loan's eligible expenditures, i.e., repair of roads, bridges, ports, power supply, water supply, waste management, buildings, and others.

Source: Asian Development Bank.