



Bay of Bengal Large Marine Ecosystem Project



Socio-economic monitoring report for
St. Martin's Island, Bangladesh

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**Socio-economic monitoring report
for
St. Martin's island,
Bangladesh**

**based on
fieldwork conducted by trainees at the**

**SocMon Workshop
held in
Cox's Bazar and St. Martin's Island**

2-11 January, 2015

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Acronyms used

BDT	Bangladesh taka (local currency)
BGB	Border Guard of Bangladesh
BOBLME	Bay of Bengal Large Marine Ecosystem
BPL	Below Poverty Line
DC	District Commissioner - Chief Officer of the District Administration
Dhatri	Traditional midwife
ECA	Ecologically Critical Area
FAO	Food and Agriculture Organisation
GEF	Global Environmental Facility
Madrassa/moktob	Religious school
MPA	Marine Protected Area
NGO	Non-Governmental Organisation
NOAA	National Oceanic and Atmospheric Administration
PA	Protected area
SAP	Strategic Action Programme
SEA	South East Asia
UNO	Upazilla Nirbahi Officer - a functionary of the Upazilla Council
UP	Union Parishad - lowest level of elected administrative body - normally made of a group of villages
Upazilla	Administrative division between the Union and the District - equivalent of a Sub-District
VCG	Village Conservation Group
VDP	Village Defense Post

1. Introduction

The world's tropical coasts are home to over two billion people, many of whom live in poverty and depend on coastal resources and ecosystems, such as fish, beaches, and mangrove forests, for their livelihood, sustenance and cultural traditions. In these coastal areas, development and poverty are often encountered side-by-side, and this combination places severe pressure on coastal ecosystems which frequently suffer from overexploitation, resource degradation and reduction in the services provided by ecosystems to people who depend on them.

Efforts to ensure that coastal development is sustainable and that the functions of coastal ecosystems are maintained have increasingly realised that understanding the people and communities that make use of coastal resources is as important as understanding the ecological processes that underpin coastal livelihoods. This situation is typified by the Bay of Bengal Region, where coastal areas are often particularly subject to multiple pressures from rising population density, high levels of poverty among coastal dwellers and increasing levels of industrial development. The complexity of social and economic conditions in coastal communities throughout the region makes socio-economic monitoring particularly important to allow communities, managers and decision-makers to understand how issues affecting coastal resources are evolving and to identify priority areas for intervention and management. Where conservation of critical habitats is being undertaken, socio-economic monitoring can serve to involve local communities in resource management decisions, provide adaptive management strategies to reflect local needs, and facilitate understanding of the importance of marine and coastal resources.

SocMon is an approach and set of tools that has evolved over the last decades to facilitate coastal planning, management and sustainable use. SocMon, which stands for the Global Socio-economic Monitoring Initiative for Coastal Management, has been working since 2001 through regional and local partners to facilitate community-based socioeconomic monitoring in communities living in coastal regions of the world. Household and community level data are collected to inform planners and decision-makers about levels of dependence on coral reef resources, perceptions of resource conditions, threats to marine and coastal resources, and support for marine management strategies such as marine protected areas. To date, over 60 assessments have been completed in 30 countries. There are currently seven regions throughout the world that are successfully conducting socioeconomic monitoring through the SocMon Initiative: Caribbean, Central America, Southeast Asia, Western Indian Ocean, Pacific Islands, South Asia and Brazil. SocMon fills a critical need by advancing a global and regional understanding of human interactions with and dependence on coastal resources. The United States (US) National Oceanic and Atmospheric Administration (NOAA) serves as the coordinating body for this global initiative. Within Asia, the Socioeconomic Monitoring for Southeast Asia (SocMon SEA) and South Asia (SocMon SA) centres have been established with coordinating centres in the Philippines and India, respectively.

1.1. SocMon South Asia

The SocMon South Asia node has been active in promoting the SocMon approach in the region over the last 14 years, working in several locations in India, Sri Lanka and the Maldives and has contributed to creating a significant body of experience and expertise in India, the Maldives and Sri Lanka. In 2014, the Bay of Bengal Large Marine Ecosystem Project (BOBLME) undertook to support further capacity-strengthening activities in the region in order to extend knowledge and skills on SocMon approaches in South Asia.

The Bay of Bengal Large Marine Ecosystem Project (BOBLME) is an initiative funded primarily by the Global Environment Facility (GEF), with co-financing from Norway, the Swedish International Development Agency, FAO, participating Governments and the National Oceanic and Atmosphere Administration (NOAA). The project's first phase runs from 2009-2015 with the global objective of ensuring a healthy ecosystem and sustainability of living resources for the benefit of the coastal populations of the Bay of Bengal Large Marine Ecosystem (BOBLME). The development objectives of the project were to support a series of strategic interventions that would result in and provide critical inputs into the Strategic Action Programme

(SAP), whose implementation will lead to enhanced food security and reduced poverty for coastal communities.

As part of the programme of SocMon capacity-strengthening workshops supported by BOBLME, a training workshop was organised in Bangladesh, hosted by Marinelife alliance, headed by M. Zahirul Islam (Chief Executive) based in Cox's Bazar. The focus of this workshop was on St. Martin's Island, a significant coastal environment in terms of biodiversity in the area and the surrounded by the only coral reef area in the country. The training workshop was held at the Hotel Shaibal, Cox Bazar and on St. Martin's Island, Bangladesh from 2-11 January 2015. A total of 14 participants coming from various state-level government agencies and civil society groups/non-governmental organizations participated.

This workshop aimed to introduce SocMon approaches to Bangladesh, where the approach has not previously been applied, and support the development of stronger measures to protect the delicate environment of St. Martin's Island and its status as an Ecologically Critical Area (ECA).

As part of the workshop activities, participants, supported by the training team, undertook a 4-day mission to St. Martin's Island to collect data on the social and economic conditions of the local population and lay the basis for on-going SocMon activities there. The workshop participants on St. Martin's Island practicing a range of data collection methods in the field. These included observation, key informant interviews, gathering stories, and focus group discussions with women's groups, fishers and Union Parishad Members. Participants tried out visual techniques with local respondents to produce a seasonal diagram and an activity and resource map. They also toured the island to observe the various ecological habitats and resources present on the Island.

This report presents the findings from this field work and is intended to represent a 'work-in-progress' that will be added to and developed upon in the future as more SocMon work is carried out on the island.

2. Study area

St. Martin's Island is located in the Bay of Bengal, about 9 km south of the tip of the Teknaf Peninsula, the southernmost point of mainland Bangladesh, and 8 km west of the coast of Myanmar at the mouth of the Naf River. It is a small island with an area of about 8 km² and is 16 km long and 500 m wide in some areas while it is very narrow in the Golachipa area. The local name of the island is Narikel Jinjira, meaning "Coconut Island" and was named St. Martin's Island during British occupation. The first settlers were Arabian sailors who settled on the island 250 years ago. It is the only known place where corals are found in Bangladesh.



Figure 1 Map of St. Martin's Island

Besides the main island, the territory of St. Martin's Island includes three small uninhabited coral islands, the principle of which is called Cheradia which is occasionally attached to the mainland at low tide. The island is divided into three sections known as Uttarpara, Golachipa and Dakshinpara.

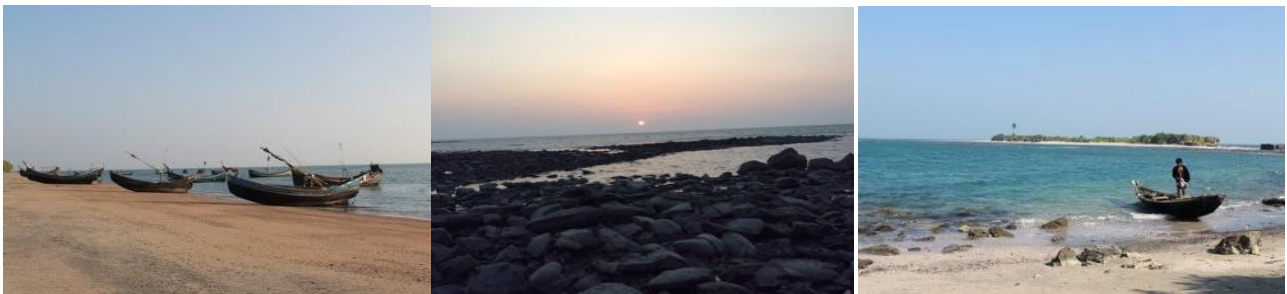


Figure 2 Landscape diversity in St. Martin's Island

St. Martin's Island is one of the most popular tourist destinations in Bangladesh. The island annually attracts thousands of tourists because of its beautiful land and seascapes and clear sea water. St. Martin's Island has an important ecological value as one of the few remaining nesting places in the region for several species of globally threatened marine turtles, as well as being a wintering site for migratory birds. Due to its favourable and unique environmental conditions, it is the only place in Bangladesh where coral colonies are found.

3. The people of St. Martin's Island

There are currently 1,200 households and approximately 8,000 people living on St. Martin's Island according to data obtained from the Union Parishad office. The voter registry showed that there were 1,342 males and 1,379 females registered. Households are found in clusters and are scattered in the North and South of the Island.

Historically, the first people to settle on St. Martin's Island apparently came from what is now Myanmar with 13 families arriving some 200 years ago. Those who currently identify themselves as islanders are descendents of these original families. Over the years, other people from mainland Bangladesh, and particularly from around the Noakhali area, have settled on the island as well. Most of these people are originally fishers and fish processors by trade, with seaweed collection for trade with Myanmar constituting an important seasonal activity in the past, although this has declined in importance in recent years.

In addition to those settled on the island there are between 2,000 to 3,000 people from outside who move seasonally to the island and are involved mostly in tourism-related activities and construction work. There is also a group of 50-60 *rohinga* families from Myanmar who settled on the island between 15-20 years ago and are now well established there, having married into the local population in many cases and being particularly active as fishing crew (as they reportedly accept lower wages compared to local fishers).

4. Community infrastructure

The island's infrastructure however seems to have developed primarily with the comfort of tourists in mind rather than that of the inhabitants. The only way to reach St. Martin's Island is by ferry from Teknaf. During the winter months, when seas are calm, there is a lot of traffic to and from the mainland with 7 ferries catering to the tourists who visit the island mainly for day trips. However, during the rainy season, the island is isolated from the mainland and can be difficult to reach. The only mode of transport on the island is by cycle rickshaw van and most people walk from place to place as there is no road on which vehicles can travel. Tourists use speed boats to go to visit Cheradia Island. Electricity is generated by diesel generators and supplied to the local community for 5 hours a day. All the hotels and resorts on the island have their own generators.

Table 1 provides an overview of the infrastructure available on St. Martin's Island.

4.1. Educational services

There is one school/college on the island which teaches up to Grade 11 starting from this year (2015). There are also 1 government primary school, 2 non-government primary schools and 15 *madrassa/mokthob* where religious studies are undertaken. 34% of the population is reported to have never attended school. 55% have a primary education, 10% senior school certificate and less than 1% have a higher school certificate or degree.

4.2. Health services

A hospital building exists on the island but it has been closed for some time and there are no doctors or nurses on the island. Local midwives known as *dhatri* help women through childbirth. There are 9 pharmacies that provide medicines for the sick and the pharmacist plays the role of doctor on the island. For more significant ailments, the islanders have to go to the mainland to get treated and often children die due to lack of health facilities on the island. During the time the team visited the island there was a floating hospital, The Rongdhonu Friendship Hospital, anchored near the island. We were informed that it was the first time such facilities were provided to the islanders and that the floating hospital was to stay in St. Martin's Island for 21 days.

4.3. Water and sewerage

Water for drinking, cooking and bathing is obtained from tube wells with hand pumps and there are 600 wells on the island. The tourist hotels and "resorts" have running water that is dispensed from overhead storage tanks and motor pumps. Only 48% of the population has a toilet in their households. Toilets do not have septic tanks and the sewage is not treated on the island before it is disposed into the marine environment.

Table 1 Community Infrastructure, services and ownership patterns

A - Education		E - Health facilities		H - Communications		K - Fisheries infrastructure	
Schools & colleges	1	Hospital	1	Internet points	1	Cold storage/ice plants	0
NGO private school	2	Pharmacies	9	Cell phone operators	4	Ice merchant/agent	1
Government primary school	1	Midwife	1	Post office	1	L - Law & order	
<i>Madrassa/moktob</i> (religious schools)	15	<i>Dhatri</i> (traditional midwife)	5	I - Transportation		VDP	9
B - Drinking water		F - Social services		Transport boats	14	Police sub-station	1
Tube wells	600	Support to elderly people	205	Jetty	1	M - Beach management	
Motor pumps	162	Support to widows	176	Ferries	4	Life guard	1
C - Religious facilities		Support to disabled	122	Speed boats (tourist season only)	12	N - Electricity supply	
Mosques	13	BPL (Below Poverty Line) support (% HH)	70%	J - Credit facilities		Diesel generators for the community (5 hrs/day)	4
Graveyards	6	G - Sewage & sanitation		Private money lenders		Hotels with own power supply (%)	100%
Eidgah	2	Sanitary toilets (% HH)	48%	Banks	0	Solar power facilities (% HH)	28%
D - Disaster preparedness				Mobile banking points	5	O - Land ownership	
Cyclone shelters	1					Local people (% land)	65%
						Other (% land)	35%



Figure 3 Modes of transport on St. Martin's Island

5. Coastal and marine activities

The SocMon team conducted focus group discussions with fishers and other islanders to learn about the livelihood opportunities available on St. Martin's. As a visualization technique, they used resource and activity mapping. From this, it emerged that the islanders are well aware of the ecological goods and services found in St. Martin's Island. They were able to illustrate the seasonal calendar for activities as well as a seasonal calendar for the availability of fish species. They also participated in making a resource and activity map for St. Martin's Island. These diagrams were later refined on the computer.

Seasonal Calendar													
Gear used and Activity	Winter		Hot season			Monsoon				winter			
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bhasha Jal (drift Surface gillnet 4.5 cm)	100% of fishers target Hilsha					100% fishers							
Bhasha Jal (nylon 2.5 cm)	flying fish, mogil sp, milk fish and others												
Shila Jal (bottom set gill net)										40 % of fishers			
Dooba Jal (drifting sunken gill net)	50% of Fishers									50 % of fishers			
Flying Fish (Basha Jal further out)										40% fishers			
Jaki Jal (cast net)	Approximately 15-20 fishers /day in the inland waters and coast												
Tana Jal (shore seine)	Approximately 5% fishers around the island sandy beaches												
Single Hook & Line	Target sp snapper, grouper												
Drying Fish	100 % of fisher HH												
Shell Collection (coral area)	6 households									12 HH			
Shell area (shore)	6 households												
Agriculture (paddy)						35% of HH							
water melon, vegetables (chili, onion, brinjal, potato)													
Coconut	99% of HH												
Tourism guest houses and allied businesses	30 % HH												
Animal rearing (goat, cow, hen)						50% of HH							

Figure 4 Seasonal calendar for key livelihoods activities on St. Martin's Island

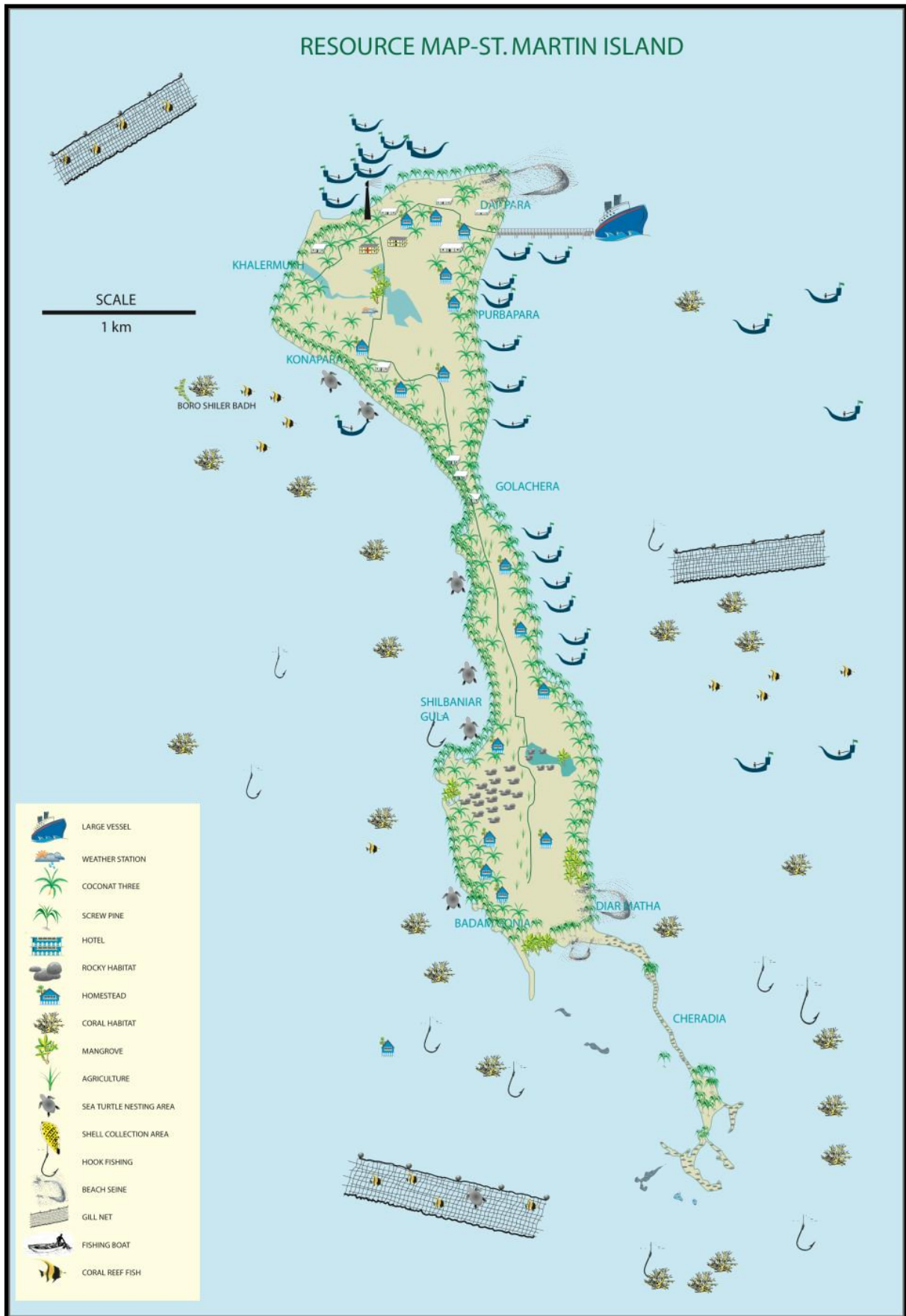


Figure 5 Resource activity Map of St. Martin's Island

Livelihoods on the island mainly revolve around coastal and marine activities. The seasonal calendar for activities in Figure 4 shows that the households have multiple sources of income and rely on fisheries, shell collection, agriculture, animal rearing and tourism-associated businesses. The main livelihood opportunities occur during the winter season from October to March. June to August is the Hilsa (*Tenualosa ilisha*) fisheries season and at that time 100% of the fishers concentrate on Hilsa fishing. Fishing primarily for household consumption, using single hooks and line, cast nets and shore seines, is carried on by about 5% of the fishers throughout the year.

Most of the men of the island are primarily fishermen and many also undertake fish drying and processing. Agriculture is also an important employment activity with women and children helping out in the work. With the island increasingly becoming more popular as a tourist destination for Bangladeshis from the mainland, tourism is playing a steadily larger role in employment. However, many of the tourist facilities (resorts and hotels) are owned and controlled by businessmen from off the island and islanders realise limited benefits from tourism. The local businesses catering to the tourists are souvenir shops, sea food restaurants and van pullers located near the jetty. A significant proportion of the land on the island is now owned by these mainland businessmen. Local land owners who have sold their land to outsiders often move to the south of the island which was previously uninhabited.

Figure 5 shows a resource activity map, of St. Martin's Island. The map was prepared during a focus group discussion with fishers in Dakhinpara and later validated with another group of fishers in Uttarpara. This shows how St. Martin's Island is made up of different habitats and ecosystems. The habitats found include rocky shores, rocky terrestrial habitat, coral colonies, sand dunes, screw pines, mangroves and wetland. All these habitats are now threatened due to human activity and changes in land use. The wetland in Dakhinpara is threatened as it has been recently purchased by entrepreneurs from Dhaka for the construction of a tourist resort. Some of these threatened areas are illustrated in Figure 6.



Figure 6 Habitats under threat due to land use changes on St. Martin's Island

Figure 7 shows the seasonal calendar for fish species availability. One can note from the seasonal calendars and the resource activity calendar that the fishers have very good traditional knowledge of the ecological goods and services found in and around St. Martin's Island and they time their activities accordingly.

Seasonal Calendar (Fish Species)												
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hilsha, chandana hilsha												
Pomfret (sanda), black, white, roop foli												
surma maitia, Bom Maitia, Hangoor, Talia												
tuna, datina												
safila												
Ribbon fish (shuri max)												
Haisha												
Poa (sundari fish)												
Kiski (anchovy)												
Ulva												
Gujja (catfish)												
flying fish (pakhi mash)												
tailia												
Bull mas												
coral mas (snapper)												
shil coral mas (snapper ?)												
Bish Koi												
lobster (3 sp)												
loah muri												

Figure 7 Seasonal calendar (fish species)

Figures 8 below shows a matrix of coastal activities on the island, products, impacts, possible remedial action for the island, and numbers of people involved.

Figure 7b Matrix of Coastal Activity, Technology used, Impact, Suggestion and the number of HH involved						
Coastal activity	Technology Used	Products	Total No.	Impact	Suggestion	People involved in season
Agriculture	Tractor - 4. Traditional (Cattle plough) - 5	Rice, Vegetable melon, chili, onion, lemon		Land erosion Insecticide & Fertilizer Harmful for coastal biodiversity	Organic Fertilizer should be used	40%
Tourism (10-12 Lakh/ year)	Brick Hotel Resort. Bamboo & wood Resort. Tent Resort,		60 160 04	Create wastage Garbage	Control no. of tourist/ day Reduce no. of resort Control No of Tourists	50%
Tourist transport	Boat & Ship	Engine boat Speed boat Tourist ship	20 15 07	Discharge Oil anchor damage Human waste, Destroy Habitat	Control Oil pollution Wastage	10%

Figure 8 Agricultural & tourism-related activities on St. Martin's Island

Figure 9 gives details on extractive activities in the marine and coastal environment carried out on and around St. Martin's Island.

Figure 7a Matrix of coastal activity, Technology used, Impact, Suggestion and the number of HH involved							
Coastal activity	Technology used	Description of the gear used	Target sp	Species Composition	Impact	Suggestion	Fisherman Involved in Season
Fisheries	Bhasha Jal/ Floating net/ Drift net. Mechanized wooden boat used for net setup	Made by nylon net. Plastic float are use with a plastic rope to float one part of net in another part of net sink in water by using led made weight. Mesh size (4.5). Length(1+02)km and weight (20-22)	Hilsha	Hilsha 80%, Pomfret 15% in others 5%.	Barrier for turtle	Net should not be set up at turtle swimming zone	100% (Jun, July, Aug)
	Shila Jal/ Drift net	Made by plastic net. Setup on rock or rocky area at # Intertidal zone or Sub littoral zone at the time of low tide. Mesh size (2.5)*.	Lobster	Lobster 40%, Snapper 10%, Grouper 10%, Risa 20%, Others 20%	It destroys Sea weed and coral habitat.	Should not be used at intertidal zone.	40%(Oct, Nov, Dec, Jan, Feb)
	Dooba Jal/ sunken Drift net	Made by Nylon at net. This net use at mid water. Mesh size 2* Length not specific weidth (15)*. Wooden boat (megnipiside) use for net set up.	Fishes small in size	Ribon fish 30%, Bombay duck 20%, Jatka 20%, Poca 10%, others 20%	Harmful for fish biodiversity 90% of fish use for dry.	Should not be used near the nursery Ground.	50%(Oct.→ March)
	Tana Jal/ Seine net	Made by nylon net. Net up to (1 or 2)km in length & (20-22)* in weidth. Mesh size varied from (0.5 to 2)*. (12 to 15) fisherman are involved in one net	No target Fish	Chapila 90%, Kachki & small Shrimp 10%	Last Fish Biodiversity & harmful for other aquatic organism	Should not use the net which is small in mesh size.	5% (Jan. to Dec.)
	Jhaki Jal/ Cast net	Made by Nylon can be use it by own hand by through in water & take it by a rope.	Bata/ other shallow water fish.	Various types	Low impact	Can be used for family Consumption.	10 to 15 people
	Hook	A single hook adjust with one ending part of a rope & another part of the rope sometimes keep in hand or attach with a bamboo stick. Bait use in hook to catch fish	Grouper snapper	- -	Low Impact	Environment Friendly catch. Can be used for local consumption or H.H.	100 to 150 people
Shell collection	Hand Hammer Iron road	People collect by hand picking or Hammer & Iron Road to remove the shell or coral from the rock.	Coral, Shell →Jhinuk →Shamuk →Cilon →Shank	Various types of Coral & Shell	Cost biodiversity	Should be preserve to protect the Island.	Very few family. (5/6) family among the community

Figure 9 Extractive activities in the marine & coastal environment on St. Martin's Island

Figure 10 provides a list of all the species of fish found in the dry fish shops targeting tourists on St. Martin's Island. There are 29 species of fish sold here. It was interesting to note that some of the dry fish sold here is brought from Teknaf and Cox's Bazar. This point was highlighted during the discussion as some of the participants noted that the dry fish sold in tourist shops at Cox Bazar had identical packaging. And there is no packaging facility at St. Martin's Island. The SocMon team highlighted the need to have further discussion with the ship owners to find out where they sourced the dry fish and ornaments they are selling.

Table 4 Dry Fish sold in the shops near the Jetty					
Fish Species	Ratio of weight wet/dry	Ratio of price wet/dry	Fish Species	Ratio of weight wet/dry	Ratio of price wet/dry
Kalo Chanda	2:1	1000/1600	Jatka	2.5/1	80/120
Foli chanda	2:1	1000/1600	Chouka Phaisala		120/300
tek chanda	2:1	300/600	Kawa macch	2.5/1	100/280
Kachki	3:1	120/300	Alva	3:1	50/200
Chapila	3:1	50/150	Kata chanda	5:1	20/120
Pakhi Macch	2.5:1	200/400	koral macch	2.5/1	450/900
Churi mach	3:1	100/400	tuna macch	2.5/1	350/800
Maitta	2:1	500/1200	Guizza mach	2.5/1	280/700
Shurma	2:1	500/1200	Dorian Vetki	2.5/1	600/1000
Kamila	2:1	300/500	Hangor	2.5/1	180/600
Chingri	5:1	120/300	koral macch	2.5/1	120/320
Poa	3:1	300/500	pathore koppal	2.5/1	300/400
Chapa	2:1	400/500	Chandana llish	3:1	150/400
Loitta	4:1	150/500	Shapla Pata	3:1	200/420

Figure 10 Dry fish sold in the shops near the jetty

6. Material style of life

Four types of dwelling units are found on the island. These are similar to the dwelling units found in the coastal areas of Cox's Bazar district. The followings types of houses are found in the island:

- **House made of polythene:** 10% of the Island dwellings have a roof and wall made of polythene and bamboo and pillars of bamboo and tree branches (*Pandanus* sp.). Floor is of soil.
- **One roof house:** 1% of the dwellings have a roof made of galvanised tin sheet, wall of bamboo/galvanised tin sheet/bricks and a floor of soil.
- **Two roof house:** 40% of the dwellings have a roof made of 2 separate parts and made of galvanised tin sheet, concrete pillars or coconut poles, walls of galvanised tin sheets or wood, and a cement floor.
- **Four roof galvanised tin sheet/tin-shed house:** Approximately 48% of the dwellings have roofs made of 4 separate parts of galvanised tin sheeting, walls of tin sheets, bricks/stone and cement and CC floor.
- **Building:** 1% of the island buildings have roof made of re-enforced concrete or re-enforced concrete and mud tiles.

60% of the houses have no toilets and no electricity. We were told by the UP chairperson that the islanders have to get written permission from the environment department to construct toilets. Most islanders use a kerosene wick lamp for lighting and firewood for cooking. A few houses have solar panels but most are dependent on the 4 community generators to provide electricity for 4-5 hours in the evening from 6-10 p.m. The situation is slightly better at the north end of the island where electricity is supplied from a diesel generator from 6-11 p.m. every day.



Figure 11 House types on St. Martin's Island

7. Status of women

Women are not very visible on the island as they do not venture outside their home space. There are no self-help groups. As a result of affirmative action measures introduced by the government, 3 women are members of the Union Parishad as per government rules. The most influential people of the islands are the 12 members of the Union Parishad since they have more exposure with people from outside the island such as with the navy, coast guard, etc. To understand the situation of women the participants collected two illustrative stories of women with different positions in society.

Parveen Akhter, 23 years old is a village bride. Her father is a fisherman. When she was 14, her fisherman father arranged her marriage to Illias, who is a daily wage labour on a fishing boat. She doesn't read and write. Every morning her husband goes to sea at 8 or 9 am at morning and returns home at 12 a.m. Parveen lives with her husband and two children. Her in-laws live separately. She has two children, Shaikot Ara, a 8 year old girl, and Omor, a 6 month-old baby boy. Parveen is a housewife. Her daily chores consist of gathering firewood, fetching water, cooking and caring for her children. When her children fall sick she takes them to a doctor at the jetty. She spends her free time chatting with her friends who live around her home. She obeys her husband and that is why she doesn't take up any paid work. Her husband buys groceries for two or three days at one time. Her husband earns about 270 taka daily. He doesn't stop his work for illness till now but in cloudy weather he earns no taka since the trawler boat doesn't go out to fish. All her dreams and aspirations are focused around her husband and children. She feels very happy when her husband romances her with gifts after coming home at night. On the other hand, when her husband uses slang, scolds or shouts at her she feels very unhappy and sits in the corner of her home. She thinks that if she was educated her life would be better and that is why she wants her child to be educated and have more opportunities in life.

Rozina Akhter, aged 33, is a female UP member. She has completed class 7. She had a love marriage, marrying her cousin when she was 17. They have 4 children, 2 boys and 2 girls. They are all studying. She feels that she has no competition among other women on the island as a UP member because of her educational status and she wants higher education for her children. After marriage she has lived with her husband's family. She has 4 brothers-in-law and 4 sisters-in-law. Everybody lives in the same house. Her husband does toll business (he has leased the Cheradia area and gets commission from tourists who visit it) during the tourism period in Cheradia. He sells fish during the non-tourism period. During the tourism period, which lasts 3 months, he earns BDT 300,000 per month. During the remaining 9 months he earns BDT 100,000 in total. Rozina Akhter has wanted to be a UP member since childhood with the aim of taking care of women on St. Martin's Island. She was also influenced by her father, who was also a UP member for her village. She has done many things for women as a UP member since 2010. She provides them with goats and chicken for rearing and self-dependency. She established one tube-well for a cluster of 10 families. She facilitated repair of a school, mosque, *madrassa* and various *kacha* and *pakka* roads. She distributes the relief among the villagers of her own area (ward nos 7, 8, and 9). She gets very sad when she is not given sufficient relief money/aid to be distributed. Every Thursday she meets with her villagers and listens to their problems. She tries to solve their problems. Now her dream is to be Chairman of the UP and serve the people further. Her only wish is that she will have a peaceful life with her family and the villagers.

8. Governance

8.1. Administrative structure

The island is governed by a Union Parishad which is the lowest rural administrative and local government unit in Bangladesh. A Union Parishad consists of 12 members including three members exclusively reserved for women. A Chairman heads the group and members are elected from the different wards of the island. They are primarily responsible for agricultural, industrial and community development within the local limits of the Union. However, from the information gathered from the Union Parishad members and the local people, it was evident that the island was effectively governed directly from the mainland Teknaf and Cox's Bazar administration.

The local government arrangements for Bangladesh are outlined in the box below.

Position of the island in the Local Government/Administration tiers

Prime Minister/Ministry

Civil Division (7 in the county) headed by Divisional Commissioner (Government Official)

District headed by Deputy Commissioner (Government Official) Cox's Bazar

Upazilla Nirbahi (Executive) Officer (Government Official) - Teknaf

Union Parishad headed by elected Chairperson (the Island) St. Martin's Island

8.2. Laws applicable to the island and biodiversity in the island

The following key legislation relative to the environment, fisheries and biodiversity on the island were identified through discussions with key informants.

1. Land Acquisition Act, 1950
2. Forest Act, 1927
3. Fish Act, 1950
4. Bangladesh Wildlife (Preservation) Order, 1973 (Repealed)
5. Wildlife (Preservation and Security) Act, 2012
6. Fish Act, 1985
7. Bangladesh Environment Conservation Act, 1995
8. Plant Protection Act
9. Environment Rules
10. Ecologically Critical Area Rules

8.3. Government offices present in the island

A number of government offices are present on the island and these are listed below.

1. Border Guard of Bangladesh (BGB)
2. Bangladesh Naval Forces
3. Bangladesh Coast Guard
4. Bangladesh Police
5. Hospital (Ministry of Health)
6. Department of Environment (Ministry of Environment and Forests)
7. Weather Department (Prime Minister's Office)
8. Light House (Ministry of Ships and Ports)
9. Post office (Ministry of Communication)

8.4. Environmental groups and committees

Various environmental groups and committees are active on the island and these are listed here.

1. Village Conservation Groups (VCGs) headed by one person in each village – 5 VCGs covering villages of St. Martin's Island
2. Union ECA Coordination Committee headed by the concerned Union Chairperson of St. Martin's Island
3. Upazilla ECA Coordination Committee Upazilla Nirbahi Officer (UNO) Teknaf
4. District ECA Coordination Committee headed by the concerned Deputy Commissioner (DC) Cox's Bazar
5. Central ECA Coordination Committee in the Ministry of Environment and Forests headed by the Minister

8.5. Associations

A number of associations are also present on the island and represent the interests of different groups of people involved in fisheries related livelihoods.

1. Trawler Services Association - Mechanized boats/tractors carrying passengers between Teknaf (mainland) and the island
2. Fishermen Association - for the welfare of the fishermen of the island
3. Fish Traders Association - who deals (buy from the fishermen who catch fishes in the sea) in fishes.

9. Perceptions survey

The results of the survey carried out to assess perceptions on protected areas in St. Martin's Island showed that the opinion of what a Protected Area (PA) or Ecologically Critical Area (ECA) varied greatly among the respondents. They were asked what a PA/ECA was in their opinion and the largest percentage stated that they were areas with limited access (68%). This category was followed by about similar numbers saying they were either open access (15%) or areas with combinations of open, limited and no excess, i.e., an area with zones of varying levels of accessibility. This shows that while most of them have an idea of what protected areas mean, some of the respondents did not understand that they were areas that are provided some level of protection to the environment.

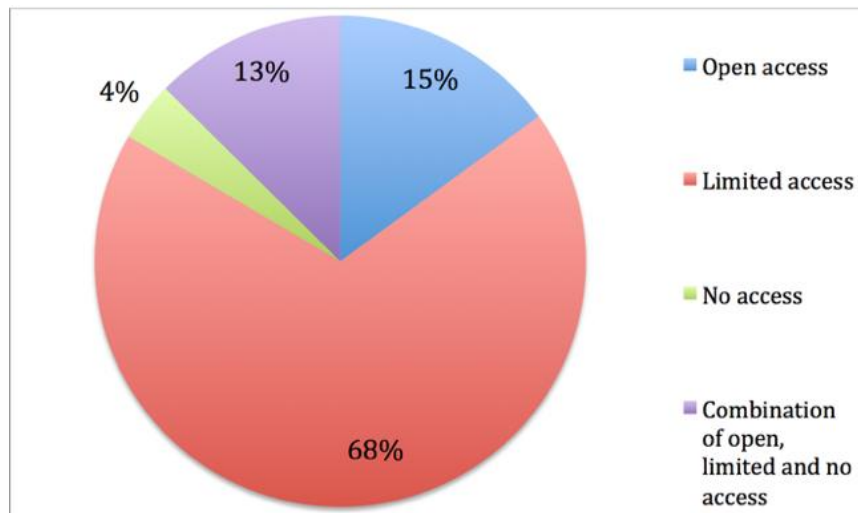


Figure 12 Opinion of local people on what a Protected Area (PA) or Ecological Critical Area (ECA) is

The respondents were then given some options and asked of their opinion on the benefits of protecting a natural area. Results are shown in Figure 13 below. Majority of them (about 72%) stated that all the options given were important benefits derived from protecting a natural area. These options included safeguarding income, preserving for future generations, increase in natural resources, protection of the island and increase in aesthetic value. Approximately 8% responded that it was a combination of the benefit options given.

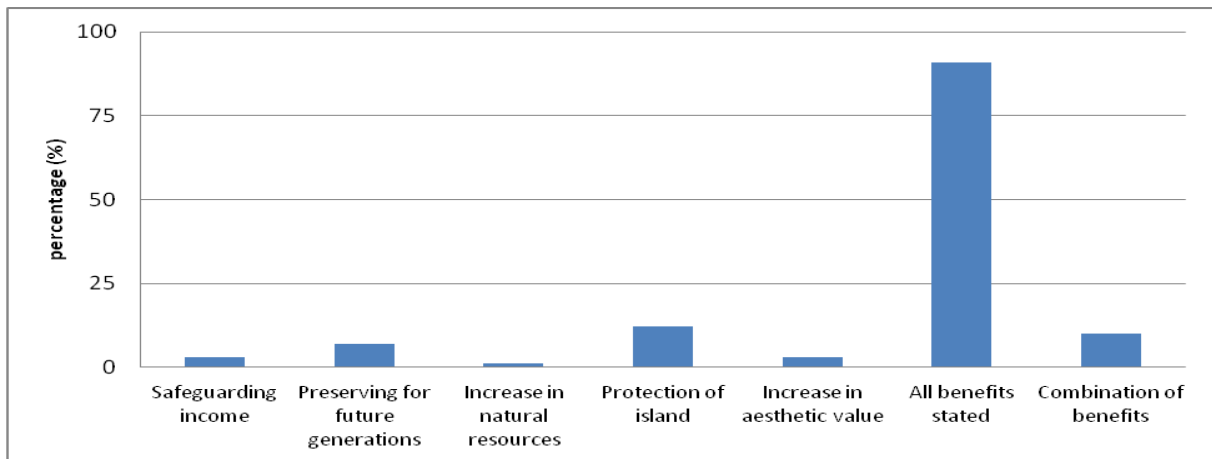


Figure 13 Benefits of protecting a natural area

The respondents were also asked to indicate the extent to which they agreed with the following statements relating to the environment on St. Martin's Island:

- Coral habitats are important for protecting land from storm waves
- The seagrass beds provide food to turtles
- Coral habitat provide us with beautiful fish and shells
- Mangroves are important as nursery grounds for sea animals
- Living corals are more beautiful than the curio shop corals
- I would like future generations to enjoy the mangroves
- I would like future generations to enjoy the screwpine (*keya*)
- I would like future generations to enjoy the sea beach
- Fishing should be restricted in certain areas to allow the fish and corals to grow
- We should close some areas so that future generations will be able to have natural environments

The following graph (Figure 14) shows responses given:

Overall there was agreement with all of the environmental statements. Among the respondents, the highest percentage of disagreement was with the statement that fishing should be restricted in certain areas to allow the fish and corals to grow. This response is understandable considering that most families rely on fishing for their livelihood and restriction of fishing in some areas would hinder their activities. As the education level of the respondents was quite low (mostly no formal education or only primary education) they would not see the benefits of protecting an area that would create the “spill over effect” of fishes moving from the PA to the fishing zones, thus increasing their catch. The responses to the statements show the importance of the environment and its biodiversity to local people.

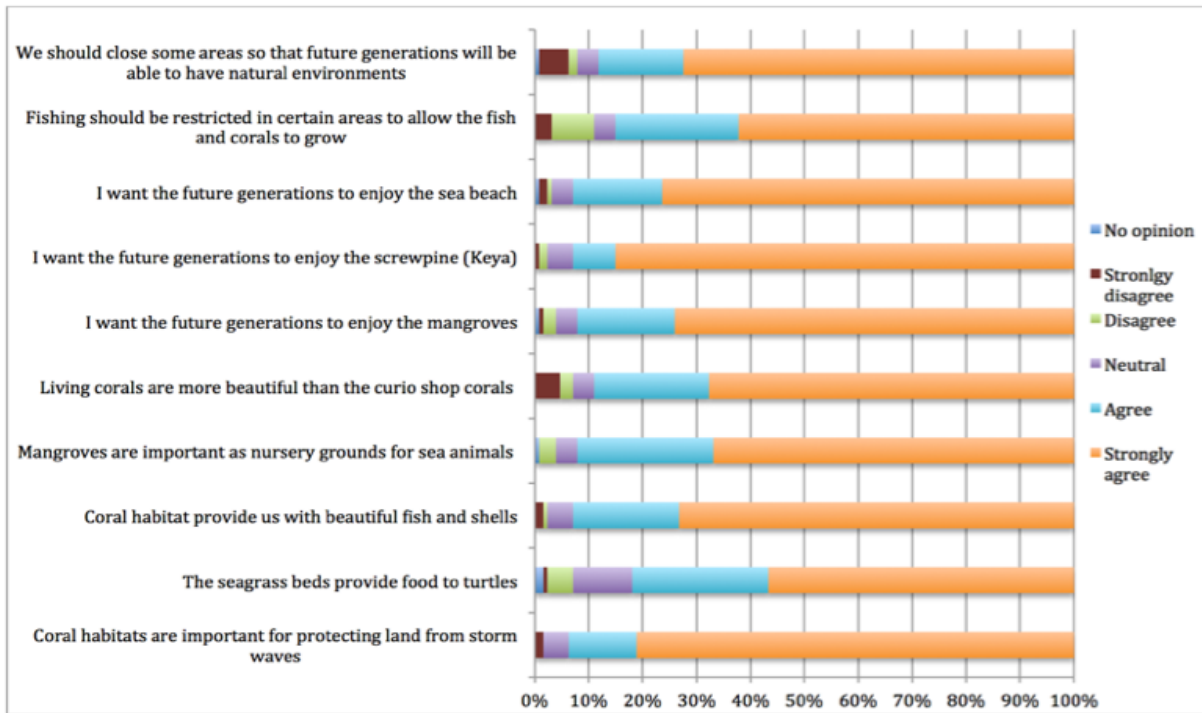


Figure 14 Agreement with environmental value statements

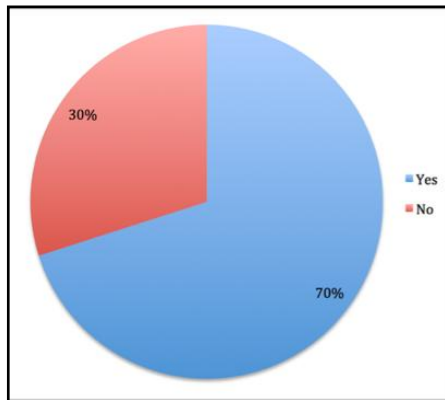


Figure 16 Can Protected Areas be effectively implemented on St. Martin's Island?

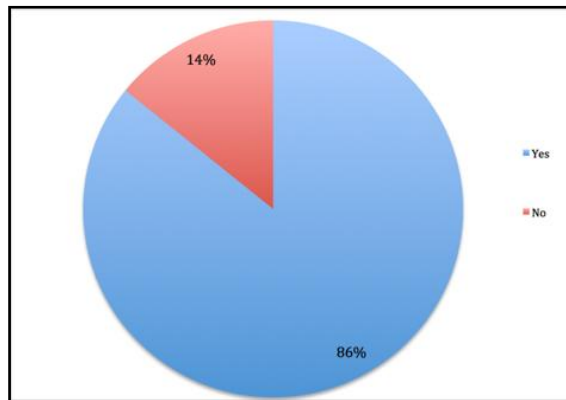


Figure 15 Are you aware that St. Martin's Island has been declared an ECA and is protected under the law?

When asked of their opinion on the possibility of effectively implementing protected areas on St. Martin's Island, the response was very positive (86%).

From the survey it appears that most people were aware that St. Martin's Island has been declared an ECA and is protected under the law (70%). Speaking to the locals it also became clear that, while they knew it was an ECA and protected, they were not very sure of what this status entailed. It could be that many of them have heard the term used with reference to the island in different contexts.

A similar question was then posed to them about the protection status of corals and the percentage of respondents that was aware that corals were protected was slightly lower (64%). St. Martin's Island is the only known area where isolated coral colonies are found in Bangladesh. Considering the low level of coral found on the island in such a small area, it is alarming to see the numbers of bleached coral skeletons that are sold in the curio shops.

This indicates that awareness on the importance of corals to the environment and to humans, particularly given the importance of coral for the protection of the island from the cyclones that regularly affect the area, is very low and needs to be increased on the island as well as among those from the surrounding mainland areas.

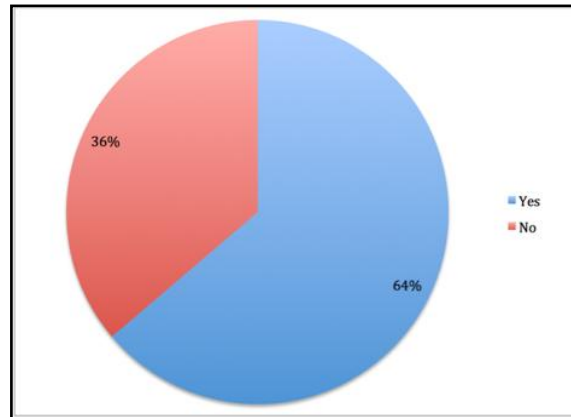


Figure 17 Are you aware that corals are protected under the Wildlife Act?

Respondents were also asked if extractive activities should be allowed in protected areas and 65% of the respondents stated that it should be allowed. In contrast 34% did not agree with removal of natural resources from protected areas. This probably indicates the high levels of dependence of the local people on the natural resources for their livelihoods and a subsequent unwillingness to see access to these resources restricted.

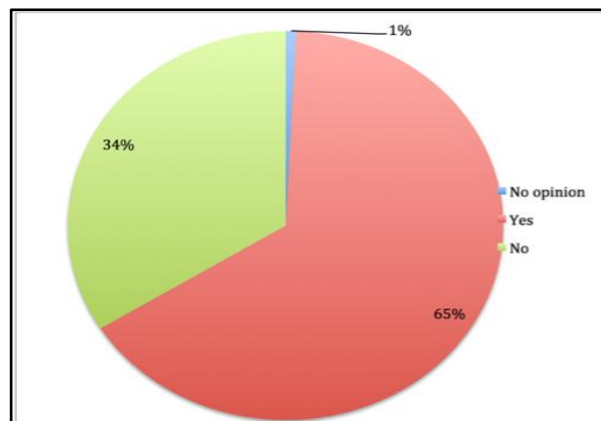


Figure 18 Do you think that the use/collecton of natural resources should be allowed within a protected area?

The following question was posed to assess the perception of the local people on the barriers to effective implementation of management of PAs:

What in your opinion are the barriers to effective implementation of management?

- Lack of will from local authorities
- Lack of will from the Government
- Lack of capacity of the local authorities
- Lack of awareness about benefits of MPAs

- e. Lack of awareness about management of MPAs
- f. Financial constraints
- g. All of the above
- h. Other. Please specify _____

The results are shown in Figure 19.

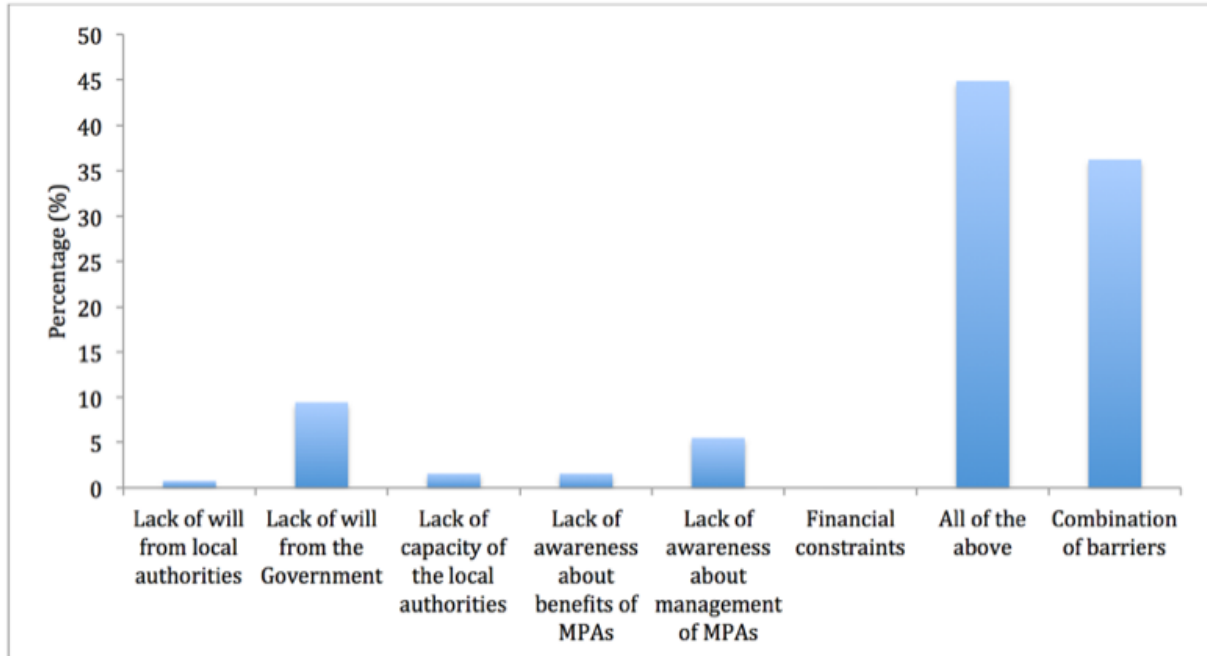


Figure 19 What in your opinion are the barriers to effective implementation of management?

The majority of respondents agreed that the will of local and government authorities, capacity and awareness and financial assets all contributed to the effective implementation of management of PAs. Lack of will of the government was stated as the sole most important barrier by 9% of respondents. It is interesting to see that financial constraints was not seen, in isolation, as a barrier to effective implementation of management of PAs.

When asked what can be done to facilitate management of the protected area on St. Martin's, a range of ideas were provided. These include mostly natural resource and biodiversity conservation activities, social development, and education and awareness-raising. Another proposal was to remove the *rohinga* community. Conflict resolution should be explored to ensure the communities can live harmoniously together on the small island.

It should be noted that 96% of the 127 respondents were male. As it was a training survey and since difficulties were faced with language barriers, we did not insist on the surveyors targeting a certain gender. As it is, the culture of the island requires woman to stay at home and it was difficult to have access to them. The workshop participants were advised of the importance to include views of both genders in future surveys.

The age of the respondents was quite normally distributed with most belonging to the 15-35 years age category. The relatively high numbers of respondents in the over 55 age category is probably the result of more of this group being available for interviews at the time of the survey as they are mostly retired.

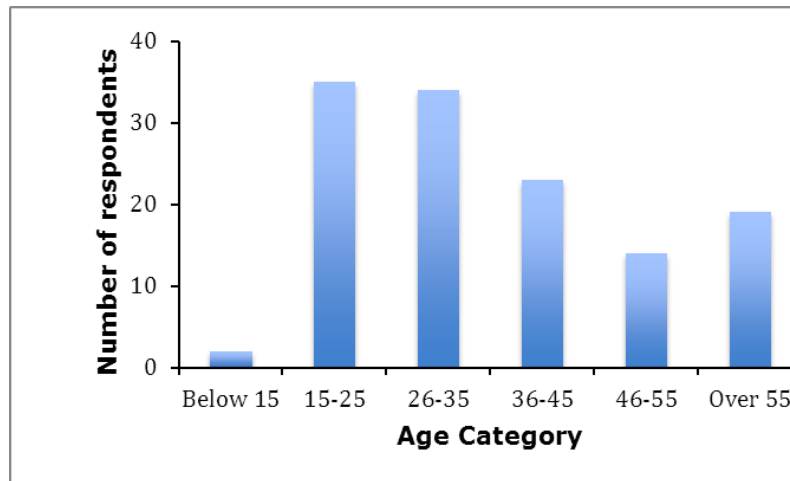


Figure 20 Age categories of respondents for the perceptions survey

Majority of respondents either had no formal education or only primary level education. Only very few had done any higher education with even less completing University. There were 2 university graduates from St. Martin's Island who were working on the island as a teacher and journalist respectively. The other 3 graduates were among the 4 from the mainland who responded to the questionnaire.

The educational level of respondents in the survey is shown in Figure 21 below.

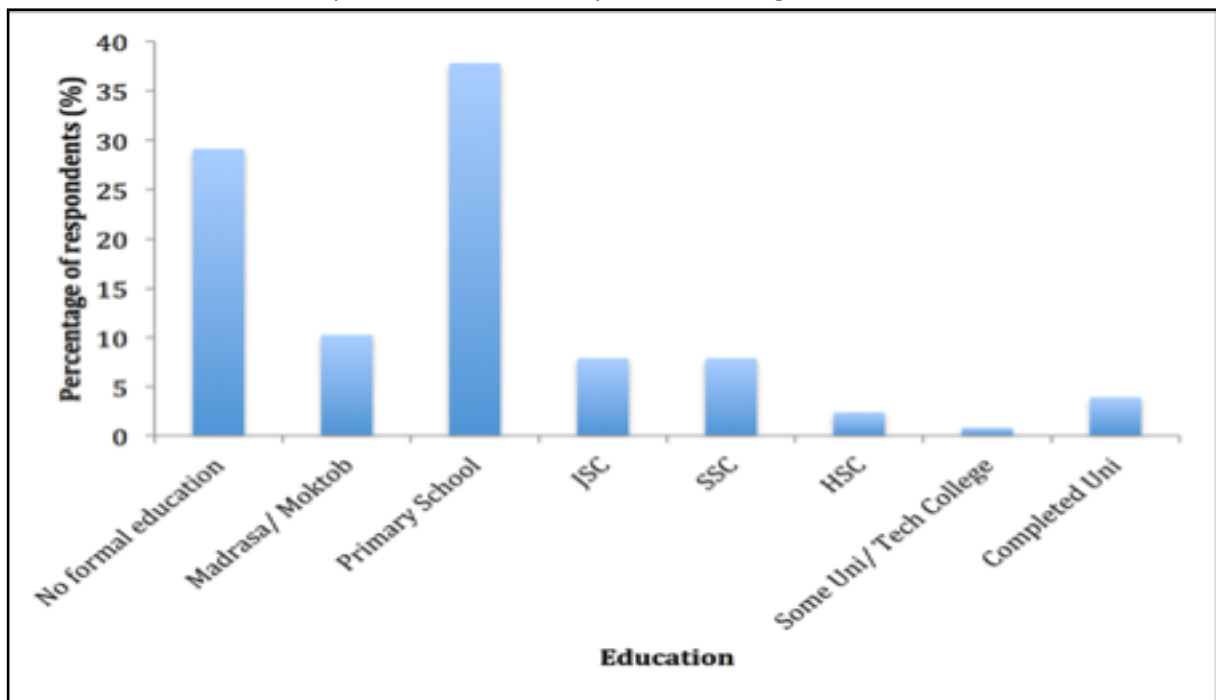


Figure 21 Educational level of respondents for the perceptions survey

Most of the respondents from the island were involved in fishing activities either as fishermen or dry fish processing. Others were involved in agricultural activities including running hotels, "resorts" and working as rickshaw drivers. There were a few mechanics as well who service mostly the engines of fishing boats operating from the island.

Most of the respondents had an annual income below BDT 100,000. This is reflected in the responses to many of the environmentally oriented questions. While they rely heavily on the natural resources to generate income they value the resources greatly and would like to conserve them. However with the high levels of poverty evident within the local communities, especially on St. Martin's Island, it is important that strategies are put in place to combat these issues.

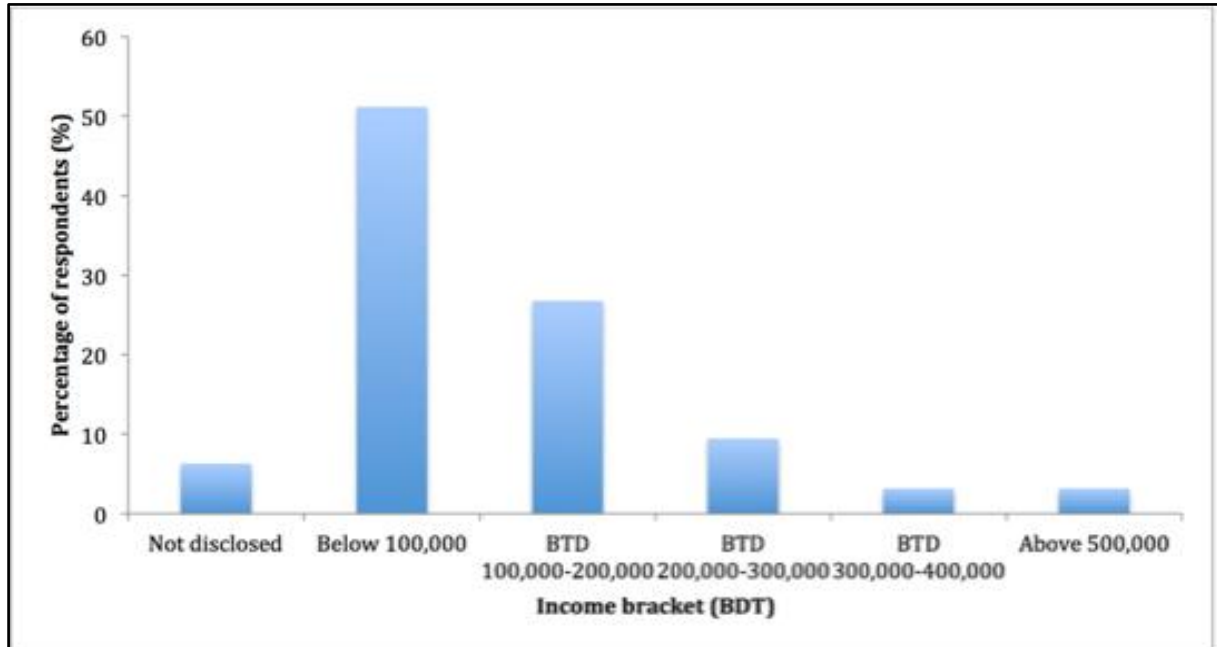


Figure 22 Annual income of respondents for the perceptions survey

The perception survey done in St. Martin's Island was a first on the island and both the surveyors and respondents were unfamiliar with the process and learnt many lessons through the activity. While the participants of the workshop (surveyors) learnt how to carry out interviews, they also learnt about the weaknesses in the process such as language barriers and lack of awareness of the respondents and found out ways to overcome them. The respondents in turn acquired more knowledge about the natural resources and environment and it started them thinking on these issues. Many of the participants said they themselves learnt a lot of new things from the process.

It was evident that there were many problems associated with the governance of the island. The fact that it is centrally governed makes it difficult for the islanders to implement much needed laws and regulations. The tourism on the island is unmanaged and much can be done to increase the benefits to both tourists and islanders from their activities.

10. Key reflections

During the course of the 3 days of field work on St. Martin's Island conducted as part of the SocMon training event, several key issues were identified and these are briefly discussed below. Clearly, these represent provisional findings and further field work will be required to adequately validate these findings and supplement them through more detailed discussion with local people.

Governance issues

A key governance issue relates to the fact that decision-making regarding land use, as well as controls and regulations, is located at some distance from the island itself and therefore is widely perceived as being beyond the control of local people.

Threats to biodiversity and the environment

The expansion of tourist resorts on the island, without adequate provision for waste disposal and sewerage, constitutes a key threat to the rich biodiversity on St. Martin's Island. Current plans to construct a new tourist resort in the only wetland area on the island are of particular concern.

Livelihoods

Fisheries and fishery-related activities remain the mainstay of livelihoods for the majority of people on St. Martin's Island. While some diversification into tourist related activities during the relatively limited tourist season has benefited some local people, fisheries is still the mainstay of the local economy.

Increasing tourism development and alienation of land from islanders

The development of tourism activities on the island has led to a steady process of alienation of land from local people to entrepreneurs and business interests from off the island. Coupled with administrative decision-making located off the island, this increases the extent to which key decisions about development processes on the island do not involve local people and are often taken with little reference to their needs and priorities. Tourism development on the island has undoubtedly created new opportunities, but there is a widespread perception that the principle benefits of these developments are captured by external interests and relatively few of the benefits accrue to the islanders themselves.

Environmental awareness on St. Martin's Island

The findings of the perceptions survey conducted as part of the field work on the island indicate that there is a relatively good level of environmental awareness among local people, although the limitations in the sampling process for this survey need to be taken into account given the time available. Respondents indicated reasonably widespread awareness of the protected status of the island although knowledge of what sort of restrictions on resource use this status imposed was less widespread.

Currently the implementation of the ECA status of the island is limited and this is reflected in people's knowledge of what that status entails.



Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand are working together through the Bay of Bengal Large Marine Ecosystem (BOBLME) Project to lay the foundations for a coordinated programme of action designed to better the lives of the coastal populations through improved regional management of the Bay of Bengal environment and its fisheries.

The Food and Agriculture Organization (FAO) is the implementing agency for the BOBLME Project.

The Project is funded principally by the Global Environment Facility (GEF), Norway, the Swedish International Development Cooperation Agency, the FAO, and the National Oceanic and Atmospheric Administration of the USA.

For more information, please visit www.boblme.org



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