

# **SCOPING STUDY TO UNDERSTAND THE HEALTH & ENVIRONMENTAL ISSUES OF FISHING COMMUNITIES IN SOUTH ANDAMAN**

**JUNE 2020**

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## Executive Summary

This report is the result of a scoping study undertaken between October and November 2019 in two fishing communities of South Andaman – Wandoor and Junglighat – for the planning and initiation of the Health and Environment programme. The objective of the scoping study was to understand the demographics of the community, local governance, community institutions and the health and environmental issues concerning the community. This exercise was also undertaken to meet different stakeholders and ideate about the interventions which could be planned for improving the health and environmental conditions in these communities.

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# 1. Health & Environment Programme Objectives

Our broad **goals** for this programme are to:

- a) Understand various community health-related challenges and concerns that the fisher communities face.
- b) Build capacity within the community to address some of the basic community health issues, particularly improving water, sanitation and hygiene (WASH) practices.
- c) Create an understanding of the links between environmental health and community wellbeing, while also strengthening local institutions.
- d) Identify intersection points between health issues and local environments to develop integrated interventions with both community and environmental benefits.

**The specific objectives of the project are:**

- 1. To improve community health through:
  - a. Addressing basic community health issues, and improving WASH practices.
  - b. Engaging with community health workers and initiating health outreach.
  - c. Creating collaborations with government bodies, community-based organizations and health service providers to design appropriate health interventions.
- 2. To improve the health of coastal, marine and/or estuarine ecosystems by:
  - a. Initiating environmental monitoring and coastal ecosystem restoration activities.
  - b. Engaging in fisheries management.
- 3. To strengthen the community institutions through:
  - a. Engagement with local governance institutions.
  - b. Empowering the community to engage with officials and claim their rights.
  - c. Collaborations with local governance institutions, fisheries department and local NGOs to ensure the sustainability of health and environmental programmes.

## 2.Methods

The scoping study was undertaken in October and November of 2019 with two fishing communities of South Andaman district – Wandoor and Junglighat. The main aim of the scoping study was to get an understanding of the sites and the communities as well as to meet the stakeholders. Apart from studying the community profile and understanding the local institutions, this study also focused on understanding the health and developmental needs and environmental issues of these fishing communities (See Table 1 and 2 for a list of study participants and the methods of data collection used in Wandoor and Junglighat sites, respectively).

Participants	Type of Interaction
Fishermen	Semi-structured interviews
Tour guides and operator	Group Discussion, Semi-structured interviews
Panchayati Raj Institution members	Semi-structured interview, Ward sabha, Gram sabha meetings, secondary data collection
Anganwadi, ASHA Workers and Helpers	Semi-structured interviews
ANMs and Medical Staff (Wandoor subcentre and Manglutan PHC)	Semi-structured interviews, secondary data collection
Forest officials	General meeting and discussion
Other community members, women, youth	Casual Discussions about health & environmental issues
Visits to landing sites, Wandoor and New wandoor jetties, Jollybouy with tour guides	Participant observation, Discussions

Table 1. Methods of data collection in Wandoor site



Participants	Type of Interaction
Fish Traders and Key Informants (Middlemen, exporters)	Semi-structured interviews
Fisher Men	Group Discussion
Fish selling women (Junglighat market)	Participant observation, semi-structured interview
Fish sellers around Portblair	Semi-structured interview
Anganwadi Workers and Helpers	Semi-structured interview
ANMs, ASHA and Medical Staff (Junglighat UHC and Dairfarm UHC)	Semi-structured interviews, secondary data collection
ICDS Supervisor, CDPO ICDS, HOD Community medicine ANIIMS	General meeting
Village council head (Donkuluru)	Semi-structured interview
Ward Councilor	Casual Discussion
Fisheries officials Junglighat Landing site & Fisheries Officials Main office	Semi-structured interview, secondary data collection
Other community members	Casual Discussions
Sanitary Inspector Fisheries Colony, Sanitary Officer	Semi-structured interview
Landing site visit	Participant Observation, Casual Discussion
Abhyudaya Committee member	Casual Discussion, secondary data collection

Table 2. Methods of data collection used in Junglighat Site

## 3. Wandoor

### 3.1 Community Profile

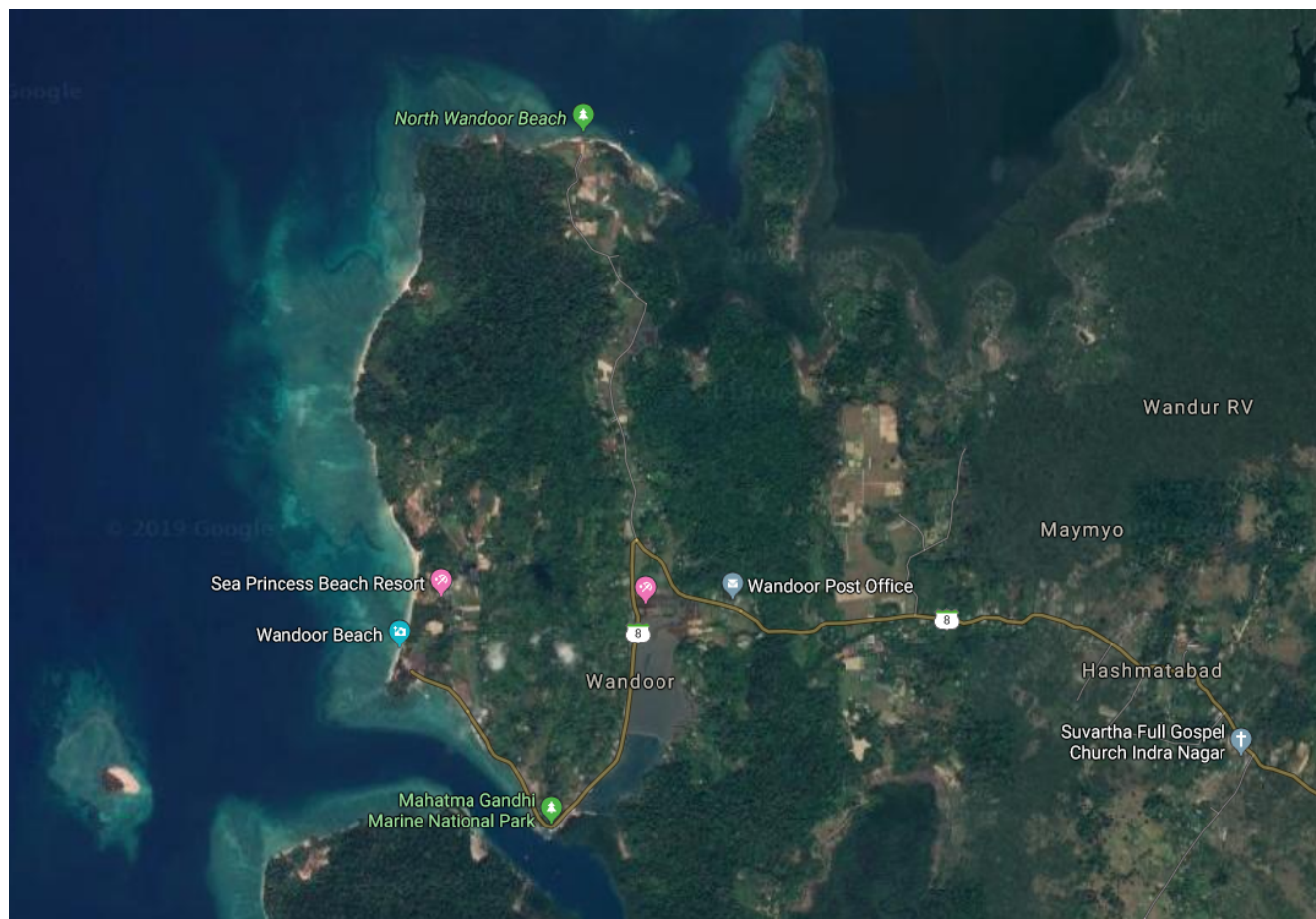


Fig 1: Wandoor Village

Wandoor village is located in the west of South Andaman District. It falls under Ferrargunj Tehsil, Wandoor Gram Panchayat and is divided into 4 separate wards. These 4 wards are North Wandoor, New Wandoor, Wandoor Jetty and Wandoor Panchayat. The village is situated close to the Mahatma Gandhi Marine National Park (MGMNP). The Lohabarrack crocodile sanctuary is situated in the northern side, close to the New Wandoor beach. As per a Panchayat survey conducted in 2017, Wandoor village consists of 654 households with a population of 1505. It has a total area of 217.84 hectares. It is primarily a fishing village occupied by the Bengali settler community.

The people of Wandoor are originally migrants from erstwhile East Bengal and were provided settlement here by the Government of India, starting from 1949. Their main occupation was farming and fishing. A majority of the people from the community in Wandoor own land, where they have raised arecanut

and coconut plantations. Agriculture has reduced over years due to factors like a decrease in soil fertility and change of landscape after the Tsunami in 2004. The land in South Andaman has drifted down and many farm lands have permanently submerged in water which has reduced the agricultural opportunities in this area. Fisheries is a major source of livelihood; however, the younger generation is more engaged in tourism activities operating within MGMNP and in Port Blair.

### 3.2 Local Institutions

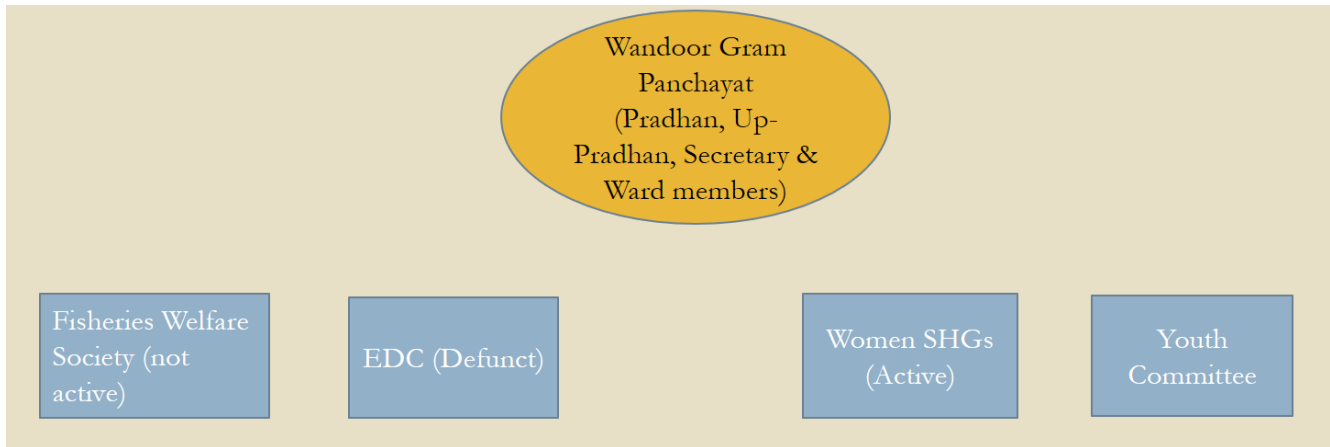


Fig 2: Institutional Arrangement in Wandoor

Wandoor being a revenue village falls under Wandoor Panchayat of Ferrargunj tehsil (block). Hence, gram panchayat (GP) is the most important institution there. Wandoor gram panchayat consists of Wandoor, Hashmatabad, Maymyo and Lohabarrack villages. The gram panchayat is headed by the Pradhan. The Panchayat secretary is an executive position and is entrusted with the sanctioning and utilization of Panchayat funds. There is an ‘Up-Pradhan’ and elected ward members from each of the 7 wards. The Panchayat conducts ward sabha and gram sabha meetings annually where people raise their issues. The issues generally discussed in these meetings are about infrastructure (roads, street lights, meeting halls, toilets), water and electricity. Special gram sabha meetings are conducted on days of national importance like 15<sup>th</sup> August and for announcements of new schemes. A minimum of 250 members of the panchayat should be present to commence a gram sabha. For a special gram sabha, there is no such requirement. The Wandoor GP has also been chosen as a village to be converted into a model village ‘Adarsh gram’ under the ‘Sansad Adarsh Gram Yojana’ (SAGY). As per this scheme a survey and PRA exercise has been undertaken and a village development plan has been made. Funds have been allocated under this scheme for various developmental activities.

Apart from the Panchayat, there are a few women self-help groups present in Wandoor who are involved in microfinancing, such as the Laxmi Group with 10 members and Sanskar group with 8 members. These groups have monthly meetings. There are no existing committees formed by the tourist guides or operators. There is one committee of the tourist shops of New Wandoor beach. There is a youth committee in Wandoor.

The Wandoor fisheries welfare society is an institution formed by fishermen which has been inactive for many years. This is a serious issue as the absence of local fisheries institution not only reduces their negotiating power with the fisheries department and other officials but also reduces the chances of local management of fisheries resources. There had been many talks for creation of an EDC (Eco Development Committee) by the Forest department and the community members involved in tourism. However, the EDC formation was not successful as the plan to open some islands for tourism did not materialize. Thus, apart from the gram panchayat, there are no local governance institutions. A few tour guides informed us that they are discouraged from forming any committees by the boat owners. There is a strong need for village level fisheries or tourism committees that could help them negotiate with officials like the forest department and regulate their operations.

### 3.3 Fisheries & Tourism Profile

#### 3.3.1 Fisheries

There are around 150 motorized-non mechanized fishing boats in Wandoor. Most of them are owned by Wandoor community members and few owners are from Maymyo & Hashmatabad. The fish landing centre is at the Wandoor jetty. Hook and line is the main gear used along with handlines and gill-nets. Fishing trips generally consist of 3 days and they travel a minimum of 4-6 hours to reach the fishing grounds. Fishing season starts in October and is active till May. Around 25 boats operate in the off season. They get approximately 10-15 kg catch per boat in a fishing trip but the expense is generally less as they do not go far. Post monsoon, the initial catch is usually high as they catch around 100-150 kgs per boat in a fishing trip. Each fishing craft has a crew of 3 members. The crew consists of community members as well as migrant fishers from West Bengal and other parts of Andamans who come here for 6-8 months in the fishing season.



Fig 3: Fish trade in Wandoor jetty



Fig 4: Coral trout or Dolar fish



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The resource extraction pattern by the Wandoor community has changed over the years from shell fisheries, to sea cucumbers to shark fin fishing and finally to groupers. Previously, when there was a huge market for shells, people used to skin dive to collect *Trochus* and *Turbo* shells. Currently, the main focus is on grouper fisheries as they see high demand internationally. The shift in resource harvesting pattern has been influenced by market price, enforcement of laws and resource availability. Apart from the Bengali community, there is a small Telugu fishing community residing near the Wandoor jetty, comprising of about 10-15 families. Their fishing pattern is entirely different from that of the Bengali community. They mainly catch bait fish using gill-nets.

Most of the youth from the community do not want to continue fishing as their profession as there is a lot of hard work involved but the returns are low. They wish to get absorbed into government jobs. However, most of them are not qualified enough to compete in the job market and thus end up with low paying jobs. A few of them are working as forest guards, peons, primary school teachers, etc. Many youth are employed in the tourism sector.

### **3.3.2 Issues faced by Fishers**

- Fishers of Wandoor complained about unavailability of boat parts with the Fisheries department or the Federation. So they have to buy it from outside which is generally costlier.
- The new jetty made for fishers in Wandoor is still non-operational due to faulty design.
- The complained of reduction in fish catch.
- There was frequent conflict with the forest department.

### **3.3.3 Tourism**

Wandoor is a scenic village situated near the MGMNP on the one side and the Lohabarrack Crocodile Sanctuary at the other side. The MGMNP has many beautiful islands and coral reefs. The National Park is managed by the Forest Department, and tourism is allowed in only two islands Jollybuoy and Redskin alternatively. Jollybuoy is open in the fair season which is mid-November to mid-April and Redskin is open for the rest of the year. There are seven tourist boats in total which operate from the Wandoor jetty to these islands. Three to five operate in season Nov-Apr for Jollybouy and two in the offseason.

Around 40-45 people from Wandoor village work in the tourist boats that ply in the MGMNP. They offer glass bottom rides & guide the tourists in snorkeling. The tourist boats operating from the Water Sports complex in Marina Park, Port Blair employ around 30 youth from the community. These tour operators are snorkel guides and a few are scuba instructors.

Apart from the tour operators and tour guides, there are community members, especially from New Wandoor and Wandoor jetty who have souvenir shops and food stalls operating for tourists. Wandoor also has four resorts. Only one of them is owned by a person from the community.



Fig 5: Tourists and tourist guides in Jollybouy island, MGMNP

### 3.3.4 Issues with tourism

- As per the tourist guides, tourist numbers are low in Andamans and especially in Wandoor this year. Hence, their income has also come down.
- Forest department permits for tourists to go to Jollybuoy or Redskin in MGMNP are issued from tourism department office in Portblair and not from the Wandoor jetty. This is also a reason for reduction in tourist numbers as per the tour guides.
- Crocodiles sighted at times in New Wandoor and Wandoor jetty, which poses safety issues to the tourism industry.

## 3.4 Community Health

### 3.4.1 Access to Healthcare

Access to healthcare is generally good in Wandoor village. There is a subcentre beside the Wandoor Panchayat where an Auxiliary nursing midwife (ANM) is available to provide basic care. In the sub-centre, an ANM is available three days a week on Monday, Wednesday and Friday and rest of the days, she goes on field visits and conducts meetings with pregnant women and nursing mothers. A functional primary health centre (PHC) is present in Manglutan with three doctors. It is around six kms from Wandoor. Secondary and tertiary care is available in GB Pant Hospital in Port Blair. Health camps are conducted by AYUSH (Ayurvedic, Yoga and Naturopathy, Unani, Siddha and Homeopathy) doctors regularly. Yoga and awareness talks are done. There is also a Community Health Centre (CHC) in Garacharma which is around 14 kms from Wandoor.



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### 3.4.2 Community Health Workers

There are four Anganwadi centres in different wards with 4 Anganwadi workers and helpers in each of them. The Anganwadi centres have good infrastructure. Anganwadi rooms serve as meeting points for conducting awareness on women and child health. A village health and nutrition day (VHND) is conducted monthly or once in two months for pregnant women and lactating mothers. Around 15 to 25 women attend these meetings. Apart from Angawadi workers, ANMs, Lady health visitors (LHV) and accredited social health activist (ASHA) workers help in conducting the meetings. There are 4 ASHAs in the four wards of Wandoor. There is one ANM for Wandoor GP. Most of the community health workers are knowledgeable and active. Regular training sessions are conducted for them by the respective departments. They are also given the task of conducting census surveys during elections. The community health workers interviewed as part of this study complained of being overworked due to census and regular trainings.

### 3.4.3 Health Issues

Hypertension and diabetes are two health issues that are prevalent in the community. Previously, Wandoor was an agricultural community. Since the 2004 tsunami, agriculture is no longer practiced as the farms were submerged in sea water. Though the lifestyle has become sedentary now with the fading of agricultural activities, the dietary habits have remained the same. Alcoholism is prevalent among men. These could be the main reasons for many people suffering from hypertension and diabetes in the community. There are a few cases of paralysis as well in the community which they attribute to cardiac arrest.

Skin diseases are common throughout Andaman and Nicobar Islands due to tropical climate. Fishermen suffer from occupational hazards like injuries while fishing and bad weather. The suicide rate is also high in the community, just as it is in other parts of the islands. The ward member of North Wandoor mentioned that there were 3 incidents of suicides from North Wandoor in recent years.

## 3.5 Environmental Issues

Wandoor village is a coastal village surrounded by coral reefs, mangroves, wetlands and tropical rainforest, with a high richness of biodiversity. The community is dependent on the sea for their livelihoods through fisheries and tourism. The hook and line method of fishing used by the community is sustainable, however targeted grouper and previously shark fisheries have may have resulted in trophic cascades. Below are some of the major environmental issues present in the community:

- Decline in fish catch and catch of groupers, due to the practice of targeted grouper fisheries.
- Gear regulations not implemented
- Illegal fishing inside the park and poaching of protected species
- Feeding of fishes in tourism activities

- Lack of holistic knowledge among tour guides
- Hunting of birds using air guns
- Depleting health of coral reefs
- Accumulation of non-biodegradable waste on uninhabited islands, and sea turtle nesting beaches
- Improper waste management by businesses and households – burning of waste or dumping in creeks



Fig 6: Waste dumped in front of shops in Wandoor

### 3.6 Tentative Plan for Intervention

#### a) Capacity building of youth in tourism activities

- Training can be conducted on marine systems, reef ecology, species identification, and intertidal walks as requested by the tourist guides. Most of them said the earlier training conducted by ANET has helped them and they need more such training.
- Training for conducting birdwatching trails and nature walks could open eco-alternative tourism options for community members who do not have training to work as snorkel or scuba guides. This could also bring awareness amongst community about their rich biodiversity and avifauna.
- Training and guidance for starting home stays for interested families will help bringing in additional income to the community through tourism. This village is ideal for setting up homestays; however, the families need capacity building and training to begin.
- Soft skills training for youth involved in tourism has been requested by the tour guides and the Forest Ranger.

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### **b) Tourism committee formation**

There is a need to form a local committee for governing and improving tourism activities in the community. Setting up of an Eco-Development committee involving forest department and the community did not material due to many reasons. Slowly, through our trainings and capacity building of the community, we need to help them to form a committee. Bye-laws needs to be created for governing the tourism operations.

### **c) Improving health outcomes, food and livelihood security by reconnecting with nature:**

Workshops could be conducted with women on wild edibles and their nutritional benefits. Local recipes could be created and shared by community women. A café could be started and run by women of Wandoor for tourists serving local cuisine. This could be done in collaboration with the local Self-Help Groups (SHGs). Other trainings could be provided on making souvenirs by either upcycling waste or using local raw materials. In addition to these, capacity building on financial management could be done.

### **d) Waste management process implementation with Panchayat**

As per the village development plan under SAGY, Wandoor GP has to implement Solid Waste Management. There are Rural solid waste management Bye-laws notified by the Andaman and Nicobar administration in July 2019. Hence, the Panchayat has started planning to implement waste management but has not received the funds yet to make a segregation centre or initiate door to door garbage collection. Land has been allocated to make the segregation centre. Without any intervention and planning, there is a chance that the tertiary segregation centre becomes a landfill. Also, creating awareness amongst the community and shopkeepers is an important activity which needs to be undertaken. The following interventions need to be taken up:

- Assisting panchayat in waste management implementation – talking to businesses, stakeholders, solving local waste management issues
- Household cluster wise workshops on waste segregation, composting.
- Upcycling waste to create products/souvenirs.

### **e) Health outreach**

Health outreach programmes on prevention of cardiovascular diseases, diabetes and skin diseases could be undertaken.

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### 3.7 Steps towards Implementation

In Wandoor, we have already started engaging with the Panchayat and ward members. Ward Sabha meetings and gram sabha meetings have been attended, as well as a meeting which was conducted to create awareness amongst shopkeepers for waste segregation.



Fig 7: Awareness meeting with shopkeepers for waste segregation

## 4. Junglighat

### 4.1 Community Profile

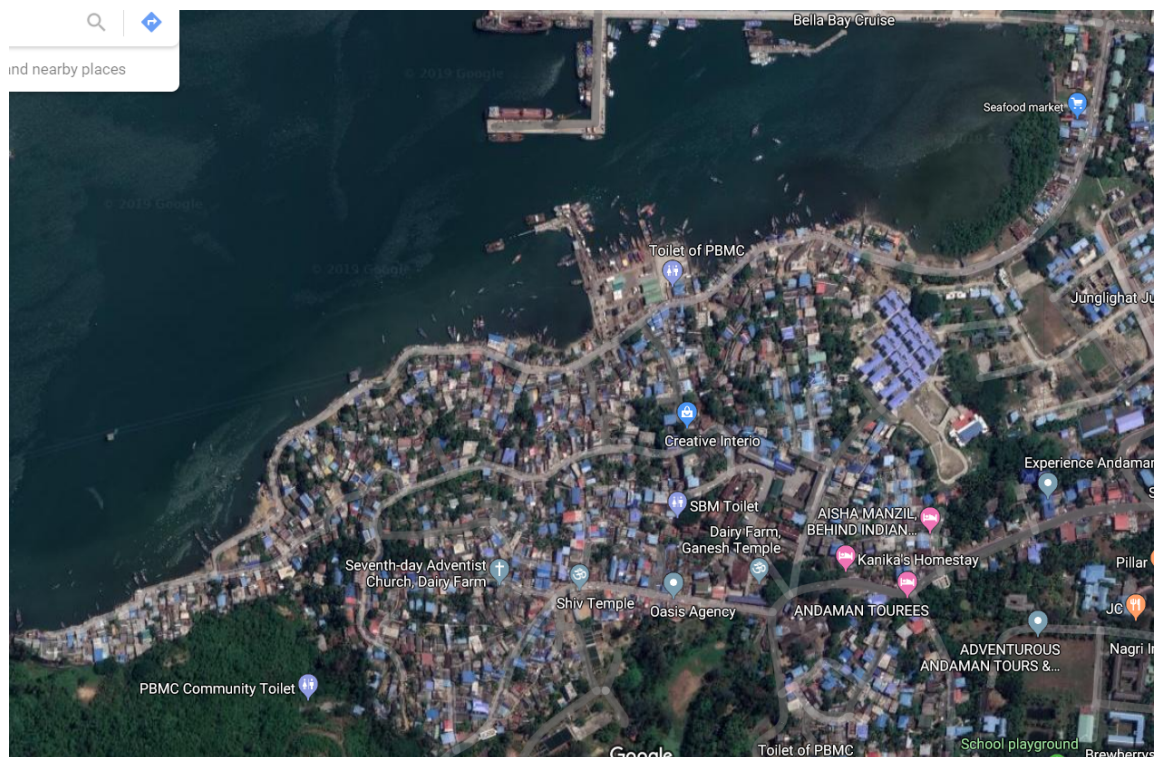


Fig 8: Junglighat and Dairy Farm Fisheries Colony

In 1955, the local administration of Andaman & Nicobar Islands started a fishermen settlement scheme to settle fishing families from mainland India to various parts of the islands. Under this scheme, in 1968-69, nine families from Andhra Pradesh were settled in South Andaman. Between the years 1976-88, 112 families were settled from Andhra Pradesh in Junglighat, Panighat and other parts of South Andaman (Department of Fisheries 2016). They were provided with financial assistance for resettlement, house construction, for fishing expenses and subsistence allowance (Singh and Andrews 2003). Subsequently, many families from Andhra's Srikakulam district migrated to Andaman and settled mostly on the Junglighat shore. Slowly, it became one of the most densely populated areas of Andaman Islands.

Administratively, part of the area where Junglighat fishing community lives falls under Ward No. 14 of Port Blair Municipal Corporation (PBMC) and some part of it comes under Ward No. 9. The area where the community lives is locally referred as Junglighat Machchi Basti. It is approximately 0.4 sq kms. The basti is subdivided and recognized by different temples situated along the shore. The four major temples located in this area are Ram Mandir, Shiv Mandir, Hanuman Mandir, Tirupathi mandir and there are a few smaller ones too. It is a very diverse community in terms of the time



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period when the families migrated here from their native villages, the place from where they migrated from and the caste they belong to.

Ward No. 14 also extends to the entire Dairyfarm locality, which is also occupied by the Telugu community. The older residents of this area are from non-fishing communities or have shifted to non-fishing professions now. However, they rent portions of their houses to recently migrated fishing families.

The approximate number of fishing households and few non-fishing households in Junglighat Machchi Basti is 1411 and the population is around 5805 (Anganwadi data). 98% of people in this area are from fishing families who have migrated from Andhra coast. The non-fishing households have migrated here for different reasons from the East Godavari region.

## **4.1 Lifestyle of the fishing community**

The members of Junglighat fishing community have busy mornings. Fishing boats reach the harbour and start unloading the catch around 2 am. Fish vendors and middlemen gather at the Junglighat fishing jetty by 2-3 am. Fish vending women buy fish from middlemen or ‘collection’ men as called locally and head to different parts of Port Blair to sell them. Some women sell from Junglighat fish market itself, which has been constructed about a year ago. Vehicles of fish traders and exporters are loaded with fish and they leave for processing centres or cold storages from where they are sent to the airport for export. Other boats which are ready to leave for a fishing trip stock up ice and fuel. Some fishers also mend their nets and prepare to leave for a fishing trip. At times, forest department officials show up to check the catch. By 7-8 am the jetty becomes empty. Fisher women sell their fish and come back home by 10:30 to 12:30 depending on how quickly they sell their stock. Women vendors who sell by foot, buy around 10 kg, and women who sit and sell from markets such as Garacharma buy around 20 kg of fish daily. Fish vendors of Junglighat fish market have to pay Rs. 1000 per month for using the premises.

## **4.2 Migration from Andhra Pradesh to Andamans**

The fishing families migrating to the Andamans from Andhra Pradesh (AP) are mostly from the Srikakulam district. It is situated at the north-eastern corner of AP bordering the Bay of Bengal in the east and Odisha in the north. Although it is richly endowed with natural resources, there is a serious lack of development in irrigation, infrastructure and transport sectors. It is also frequently affected by natural disasters. It is considered as highly neglected and least developed of all the districts of AP (Salagrama and Sarma, 2004). Due to widespread poverty, large scale-unemployment and lack of alternative livelihoods locally, resource-poor communities like fishers choose to migrate. Salagrama and Sarma (2004) divided the reasons for migration into ‘push’ and ‘pull’ factors. Fishing communities of Srikakulam district were marginalized socially, physically and financially (Salagrama and Sarma, 2004). They belong to the Vadabaliya caste, a low caste in Hindu society and are primarily seafarers and landless. They consider their primary asset as the sea. Fishers from



Srikakulam district of Andhra Pradesh started migrating for work to different places within and outside the country from the latter half of 19th century (Salagrama and Sarma, 2004). There are seasonal migrants and long-term migrants. They have classified the streams of migration into first, second and third waves. These waves of migration were to regions like Burma and Malaysia in the early 20th century, to other parts of India, including the Andamans, between 1947 and 1970s, and to Gujarat, Maharashtra and Goa from the 1980s onwards (Salagrama and Sarma, 2004). A fourth wave of migration seems to be underway since the early 2000s. The migration to Andamans started from the early 1970s and was encouraged by the government. Mainly, fishers from Sompeta, Kaviti and Mandasa mandals utilized this opportunity and settled in the islands with their families. Out of the different migratory routes taken by the fishers of Srikakulam, Andaman is considered to be the best because they remained in the same occupation, could own their fleet and were provided with different incentives by the government (Salagrama and Sarma, 2004).

According to the respondents of this study, after the Tsunami, the migration to Andamans from Srikakulam has increased manifold. According to them, prior to Tsunami, there were only about 600 families living in Junglighat Machchi Basti but now every month around 10 families have been immigrating. Out of these 10 families, 9 settle down in Junglighat and one might return to the native village eventually. Though they do not come here to settle down, better opportunities and high returns seem too lucrative to leave behind. Most of the families in Junglighat fishing community are from Battigalluru village of Uppalam Panchayat of Sompeta Mandal. From Uppalam panchayat, fishing families from 7 different villages have moved to Junglighat. The rest of the families are from different parts and districts of the Andhra coast. As per the respondents, fish catch in Srikakulam has declined significantly and the aquaculture industry is expanding.

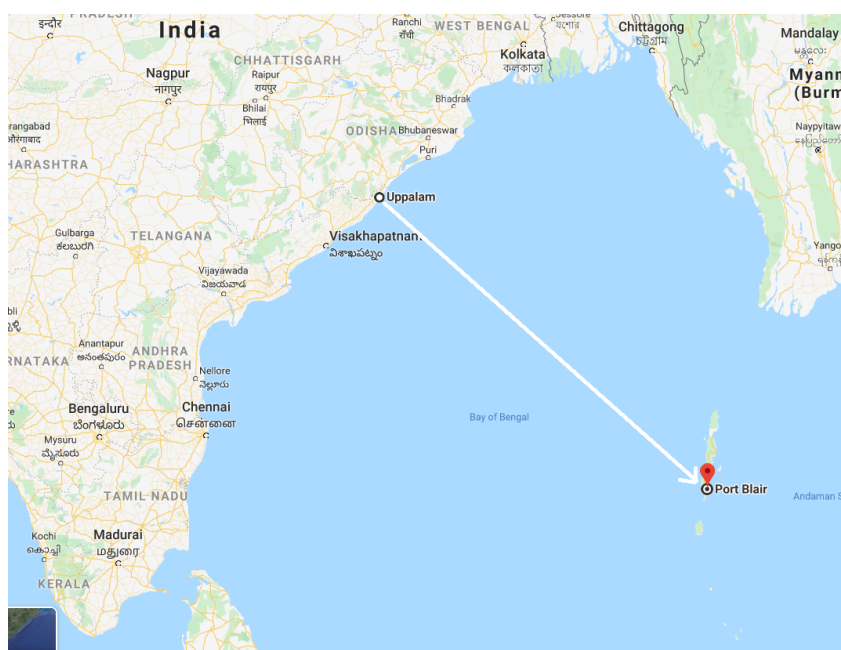


Fig 9: Migration from Sompeta Mandal to South Andaman

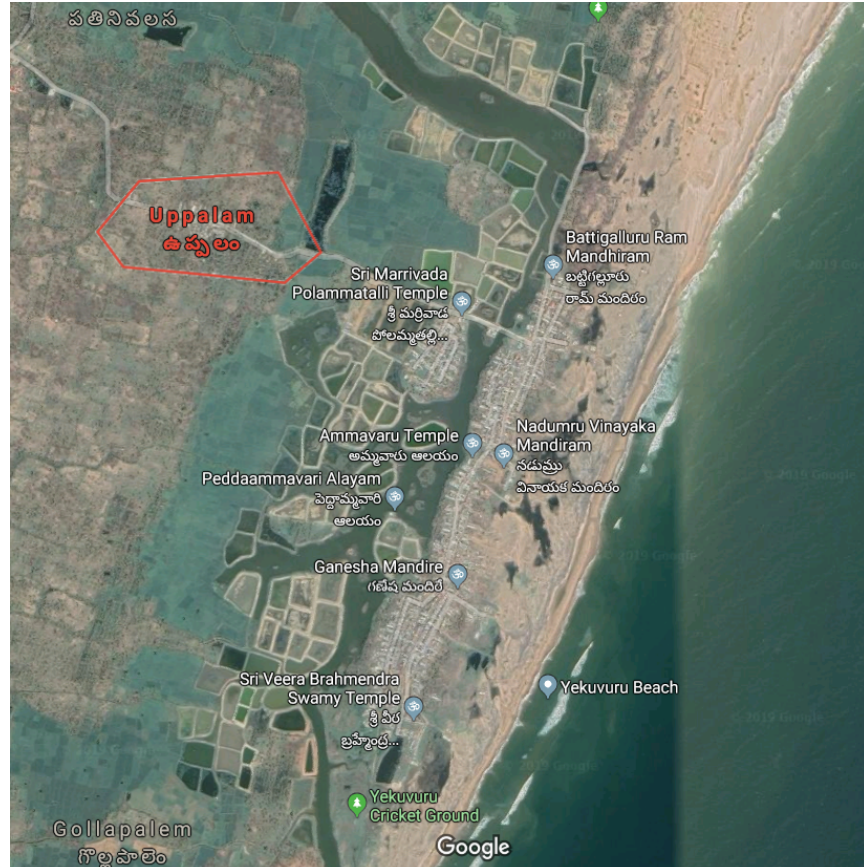


Fig 10: Few villages in Uppalam Panchayat from where families migrated

### 4.3 Local Governance

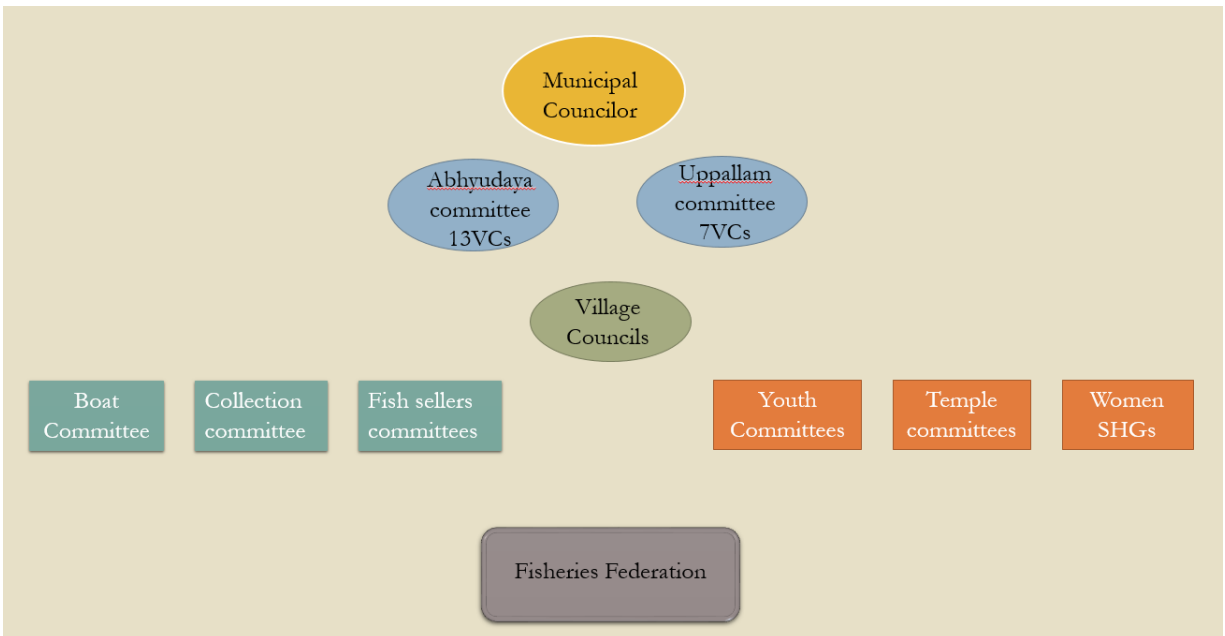


Fig 11: Local institutions in Junglighat

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As Junglighat Machchi Basti mainly falls under Municipal Ward no. 14, administratively it is governed by the Municipal Counsellor of Ward No. 14. Currently, Mr. Eshwar Rao is the Ward Counsellor. So, PBMC is the main administrative institution which is responsible for resolving the issues of Junglighat fishing communities. Apart from the government body, there are several local institutions in the Junglighat community. The families that migrated to Junglighat have formed a multi-tiered local governance system to solve family disputes and to celebrate cultural activities as they have close kinship and cultural ties. The families which migrated from the same villages on the mainland have formed village councils named after their native village. The 7 villages which were under Uppalam Panchayat have formed another umbrella committee with the 7 village councils known as Uppallam committee. 13 other village councils from different fishing villages of Andhra coast, currently living in Junglighat, have formed another umbrella structure called Abhyudaya committee. Some of the families which are members of these committees also live in other parts of Port Blair like Haddo which also has Telugu fishing and non-fishing families.

The village councils conduct meetings every month. A village council has a president, secretary and a treasurer. Change of the president, secretary and treasurer takes place if required and there is no fixed term or hereditary selection. They are elected by voting of members during the general body meeting which is usually conducted in December every year. All executive members need to be present in this meeting. A Few study participants said that most of the disputes of the community are solved through the village council meetings and hence they do not take these issues to the court. Issues affecting more than one village are addressed through meetings of all village councils. In these cases, all the villages councils are called and a 'Sabha Adhyaksh' is selected to preside over the particular meeting. These kind of multi-village meetings are usually held in Shaheed park of Prem Nagar.

For village council membership, each family has to pay Rs 1000. After becoming a member, a family is eligible to take loans upto Rs 30000 with a minimum monthly interest. The interest has to be returned every month during the monthly meeting and the principal amount plus remaining interest needs to be returned in the general body meeting. Upon the death of any person, the family is given a sum of Rs 5000 by the committee which need not be returned. There are several penalties fixed in case of non-payment of loans and interests. The village committee meetings are attended generally by young and middle-aged men who are in need of loans. Women and elderly attend these meetings only if they want to raise any issue. The executive committee members comprises mostly of men. Some women from the community mentioned that the decisions made by the executive committee can be biased and at times they take money from one party to decide in their favor.

There are no discussions and decisions made regarding fisheries management. A few respondents said that they discuss about fisheries management in their villages in Andhra Pradesh but not in the Andamans. There are a few other committees related to fisheries. There is a collection committee which consists of the middlemen and traders. There is a boat committee, whose members are fishing vessel owners. This committee solves disputes while fishing and also helps other members while on the sea in case of vessel breakdown. There is a committee of fish sellers of Junglighat fish market. There are also several youth committees, and different temple committees which organize festivals and cultural



activities. There are some women self-help groups too. Apart from these community institutions, there is a Fisheries Federation. It is a registered society which mediates between the fishing community and the fisheries department. Some of the benefits and schemes from the fisheries department are disbursed through the federation like the issuing of subsidized engine parts. According to most of the respondents, the federation favors only those who have ties with them and otherwise sells the materials to non-beneficiaries in full amount instead of selling to beneficiaries at subsidized rates. The federation members are mostly from the Junglighat community.

### 4.3.1 Importance of temples and festivals

As in other fishing communities of the Andhra and Odisha, temples and festivals play a big role in the lives of fishing community in Junglighat too. There are several temples built along the shoreline in Junglighat. The streets are identified by the temple names. In a place like Andamans, where there are very few recreation sources, festival and cultural events hold an important place in the society. Many families also visit their native villages to attend festivals and weddings.

## 4.4 Fisheries Profile of Junglighat



Fig 12: Fishing vessels in Junglighat Jetty

Junglighat fishing jetty is the largest fishing harbor in the Andaman and Nicobar Islands based on the number of boats and fishers operating from there. As per the data from the Junglighat fisheries office the

number of fishermen identity cards issued from Junglighat are 684. In addition, a few fishers fish without an identity card.

There are 27 non-motorised crafts, 181 motorised (non-mechanised) and 21 motorised mechanised crafts operating from Junglighat. Fishing crafts of fishers from Premnagar, Panighat and Haddo are also harbored in the Junglighat jetty. The types of gear used by the fishers are ring nets, longlines and hook & lines, gillnets (monofilament & multifilament) and trawl nets. Among the 21 motorised mechanised, 10 use trawl nets and rest use longlines. The fishing grounds are located around Jarawa Tribal reserve forest near Middle Andaman, Little Andaman, North Andaman extending almost till the Myanmar border. The fisheries department also provides them satellite images with potential fishing grounds. The fishing trip usually consists of 4 to 5 days for trawlers, 7 to 10 days for the motorised (non-mechanised) crafts. The non-motorised crafts which catch bait fish go on single day trips. The crew generally consists of 6 to 10 members. There is no particular fishing season or seasonal bans for fishing from Junglighat. If the weather is favorable, the fishers embark on fishing trips. The reason for year-long fishing is also because the Junglighat fishers generally do not have any secondary occupation.

Fishing is not targeted, different species are caught based on the gear type. Trawlers mainly catch rays and sharks. As per the fish exporters, the cost of groupers has declined due to the import ban in Saudi Arabia which was a major importer.

## 4.5 Community Health

There are many health issues faced by the Junglighat fishing community. The following table shows the issues mentioned by the community and health workers.

Stakeholders	Health related issues	Other issues reported
Fishermen	Dehydration, Described symptoms like fever, stomach ache, head ache, diarrhea	Do not receive compensation for injuries and death on sea Problem in communicating with doctors in in GB Pant hospital
Fishvending women(headloads)	Heat stroke, fatigue and body ache due to walking and climbing steps with load	Don't prefer to go to GB Pant Hospital due to long queues, complained about insufficient care in GB pant hospital
General community	Alcoholism, untimely death, TB, drug abuse, Hypertension, Diabetes, AIDs, suicides	Poor hygiene and sanitation, early marriage, do not use contraception, less birth gap, domestic violence, skin diseases in children, sexual harassment

Table 3: Health issues reported in Junglighat

Some of the above health issues faced by the fishermen or fish vending women are largely related to their occupation. The reasons behind other issues seem to be the following:

- Alcoholism
- Poor sanitation and hygiene
- Poor health seeking behavior

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- Lack of awareness about prevention of many diseases
  - Poor diet
  - Occupational hazards

### **4.5.1 Health Infrastructure and Access to Healthcare**

There are two Urban Health Centres (UHC) near Junglighat Machchi Basti, one is situated near Dairy farm school and the other near the Junglighat school. Both of these are around 1 km away from the basti. Dairyfarm is the nearest UHC and the ANMs from this UHC supervise Junglighat Machchi Basti's community health activities and conduct health surveys. The UHCs provide primary care to the patients. They generally have two general physicians and the Outpatient department is open from 9 am to 1 pm Monday to Saturday. At least one doctor is available daily and there are other staff available at the UHC including the ANMs, a Community Health Officer (CHO), a Lady health visitor (LHV) etc. For secondary and tertiary healthcare, the community needs to visit GB Pant Hospital which is around 4 kms away. Some wealthier families prefer going to private clinics. Some families also go to Chennai for treatment of major ailments.

### **4.5.2 Health Seeking Behavior**

As the community members are quite busy with their activities, healthcare takes a back seat. Men are out on week-long fishing trips where they carry medicines and first aid along but do not have any doctor onboard. So, either they take self-medication or have to wait to come back and visit a doctor. In case of emergencies they reach out to coast guard vessels or land in a nearby island to visit the PHC there. If the women fish vendors need to visit a doctor, they have to forego their day's earnings. Hence, if the ailment is not serious, they do not pay heed. There are two ex-GB Pant hospital staff from the Junglighat community who charge and provide medicines to the community. The fishers who are new to Andamans prefer going there as they cannot speak Hindi well and it is difficult to explain their problem to the doctors in GB Pant hospital. Older residents also go there for minor ailments. Others go to the Dairyfarm UHC. If the problem needs a specialist checkup or tests, they then go to GB Pant hospital.

### **4.5.3 Community Health Workers**

There are 11 Anganwadis in the Junglighat Machchi Basti along the shore and a few in the area between Dairyfarm and Junglighat Machchi Basti. Each Anganwadi has two staff, an Anganwadi worker and a helper. Apart from a few Anganwadi workers, most of these staff are from Junglighat community and mostly from the non-fishing families. Anganwadis are run under Integrated Child Development Services (ICDS) scheme by the Social Welfare Department. The Anganwadi workers are supervised by an ICDS Supervisor who in turn reports to a Child Development Program Officer (CDPO) South Andaman. In Junglighat most of the Anganwadis do not have separate infrastructure. They are run from the houses of Anganwadi workers or helpers who live in that area. There is lack of space to build any infrastructure in Junglighat fishing colony.

As the women are busy vending fish in the mornings, Anganwadis play a very important role in childcare and providing food for children below 6 years. They also provide one cooked meal to pregnant women



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and nursing mothers and play important role in neonatal care. They engage in spreading awareness about diet, nutrition, hygiene and sanitation. The Anganwadi workers conduct annual household surveys and periodically update the data registers with household details. The entire area is divided into clusters and each Anganwadi caters to a cluster of around 100-150 households. Anganwadi workers are called for trainings or meetings regularly to the ICDS office. They are also assigned election census work. They have been given mobile phones to report daily attendance and activities. During the scoping study, I interacted with four Anganwadi workers and three Anganwadi helpers from Junglighat. All of them complained about the hassle of attending meetings and trainings frequently and election census work. They mentioned how fishing families live in unhygienic conditions, throw their garbage right into open drains and get into frequent arguments.

There are two ANMs who are in charge of the Junglighat and Dairyfarm communities. They conduct awareness meetings at Anganwadis weekly on different health related topics. They also go on post-natal visits to houses. On an average 15 women attend meetings conducted at the Anganwadis. They come for field visits once or twice a week and conduct the rest of the activities at the Dairyfarm UHC. Their schedule is as follows:

- Monday - Anti natal clinic
- Tuesday - Field Visit
- Wednesday - Immunization
- Thursday- NPCDCS (National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke) Clinic
- Friday - Anti natal clinic
- Saturday - Office work or Field visit

Apart from these, in the UHCs, blood pressure, diabetes, blood tests could be done. Most deliveries take place in the hospitals and very few cases of maternal mortality are reported. In the last few years, there were two incidents maternal mortality. Infant Mortality was zero last year. Only one or two children below 5 years are severely underweight. Unlike rural areas, in urban areas ASHAs do not play a major role in providing healthcare as there is one ASHA per 10,000 people. They conduct surveys and conduct household visits to talk about hypertension, diabetes and cancer.

## 4.6 Environmental Issues

### 4.6.1 Solid & Liquid Waste Management

Waste management and proper sanitation seems to be one of the biggest challenges in the Junglighat community. A lot of organic and inorganic waste is directly dumped into the sea. The drainage is open and often clogged with garbage. There are sewer rats in the drains and also inside the toilets of the houses. The sewage directly flows into sea. Open defecation is also prevalent in a few parts of the community.

This poor condition is mainly because of the following reasons:

- High density of population
- Open drainage

- Insufficient waste collection mechanism by Port Blair municipal corporation (PBMC)
- Busy schedule of fishing community and recent migrants
- Community are habituated to living poor hygiene and sanitation and do not prioritize the issue
- Insufficient community toilets
- Tidal action brings marine debris



Fig 13: Solid and liquid waste at Junglighat fishing jetty

Environmental health and community well-being are interlinked and these linkages are quite obvious in the Junglighat community. The impact of poor sanitation and waste management could be seen in various ways especially through the prevalence of vector borne and infectious diseases. As seen in Fig. 12, the area along the shore and the fishing jetty is laden with organic and inorganic waste. Fish are dried along the highly polluted Junglighat jetty, which are later consumed or sold. The waste accumulated there emanates stench and is quite unpleasant. It creates a rift in the community between older and newer residents and fishing and non-fishing families as non-fishing families attribute this deplorable condition to the behavior of recent migrant families. Non-fishing families do not consider this area suitable for living now and prefer to shift to other parts of South Andaman. Government officials from different departments also complained of poor sanitation of this area. The fisheries department higher officials expressed their concern regarding the poor waste management. They stated that if import authorities check the site they might stop trading fish from this area due to poor sanitation. They mentioned that the fisheries department has funds to build more infrastructure in this area but it is difficult under the prevailing conditions because maintenance of the structures is difficult post construction. Fisheries and other departments and politically active members of community have conducted cleanup drives to clean

the area but any one-time activity will not be successful in sanitizing the area unless there is behavioral change and improvement in waste collection mechanism.

Not only the health of the community but coastal and marine ecosystems have also degraded rapidly due to poor waste management practices. This is evident by the amount of marine debris and the colour of water near the shore. Fishers said that previously even near shore waters harbored good fish stocks. Now, they have to go far to find fishing sites. The coral reefs around this area are severely degraded and may not be able to support any reef fish.



Fig 14: Solid and liquid waste in Junglighat shore

#### **4.6.2 Challenges in Waste Management in Junglighat by PBMC**

There are a lot of challenges faced by the PBMC and sanitary workers to manage the waste generated by the Junglighat community. Currently, waste collection happens in 3 stages:

- Every morning door to door collection is done by sanitary workers which is called primary collection.
- Then they are dumped into collection points beside the road. This is called the secondary collection point.
- From the secondary points, a truck collects garbage and takes to Brookshabad dumping ground where further processing happens or it is dumped in the landfill. This is the tertiary collection point.



Discussion with the Sanitary Inspector of Ward No. 14 revealed some of the following practical issues in waste collection in Junglighat:

- Collection has to be done manually from door to door as the streets are extremely narrow, steep and with steps where collection vehicles or trolleys ca not go. So the waste collected which is approximately 20 kg wet waste and 30 kgs dry needs to be carried in bags on this route.
- Sanitary workers who go for door to door collection are usually women as men are given collection duty from secondary points.
- Post the collection in the morning, whatever waste is generated by the household is dumped directly into the drains. Drains cannot be covered according to the sanitary inspector because there is a possibility of flooding and also because the terrain is steep.
- The availability of tools and vehicles is an issue. Only one auto and one truck are available for available Ward no. 14 with a population of 7300 people. Vehicles breakdown frequently.
- Monitoring the collection process in the entire area is not possible as there is only one supervisor for this area.

Though the sanitary inspector reported that 100% door to door collection happens, community members said that they do not come for collection and hence waste is dumped in the sea.

### 4.6.3 Fisheries Management



Fig 15: Rays and sharks caught by bottom trawlers

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Junglighat is the biggest fishing jetty in Andaman where most of the fish trade and export happens. As mentioned earlier, most of the fishers have migrated to Junglighat post 2000s. So, the sense of belonging to the islands and local ecological knowledge seems non-existent in the fishers here. According to different stakeholders, it was evident that their main purpose for living in Andamans is to earn money and they do not think of the long-term sustainability of the fisheries in the islands. They still consider their villages in Andhra as their home as most of them do not own physical assets in the islands. These perceptions among the fishing community make it difficult for any local governance of fisheries. The main issues with fisheries management here stems from these facts along with the general lack of vision of fisheries department to manage fisheries sustainably in the islands.

The following issues could be seen in the fisheries management here:

- Though there are restrictions on gear type like the ban on monofilament nets, no regulations are implemented on ground.
- Open-access nature of fishing and no local management efforts by the community.
- Bottom trawling and huge catch of vulnerable species of elasmobranchs.
- Large scale export of groupers, elasmobranchs, crabs and lobsters to mainland India and other countries.

## 4.7 Other Developmental Issues and Challenges

Apart from the issues mentioned above, there are many other social and institutional issues in the community. In general, families have decent monthly earnings (minimum Rs 40,000 per month) but very poor standard of living in terms of health, sanitation & education. Below are the main issues in the community:

- **Alcoholism:** Alcoholism is one of the biggest issues in the community. Fishermen and young boys are addicted to alcohol and a significant amount of their earnings are spent on alcohol. There are many liquor shops in the area, in addition to which many houses sell liquor. It creates an unsafe space for women in the community. Respondents talked about cases of domestic violence.
- **Misguided youth and lack of proper education:** Youth in the community lack guidance and ambition in life. They get addicted to alcohol and substance abuse. According to a few respondents, young boys blackmail their parents for money. Though many schools are present around Junglighat and some parents send their children in private schools too, they do not have time or expertise to guide them. Some youth discontinue studies and start going to fishing trips for money. However, going on fishing trips is also not consistent. They go on fishing trips only when they require money. There is a lack of recreational spaces for playing sports other than the landing centre which is used for gambling by fishermen and young men.
- **Politically charged space:** There are many politically driven and influential people in the community which has divided the community. There is also a subtle conflict between fishing and non-fishing castes or older and newer residents. Information about schemes and benefits for fishers do not reach them properly and instead the local elites take advantage of them. The fisheries federation has nepotism. Most of the respondents talked about the apathy of the

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municipal councilor and a few also opined that the local governance bodies at times accept bribes to take biased decisions.

Other challenges in engaging with the community:

- There was respondent fatigue due to multiple researchers collecting fisheries data from the jetty.
- As it is a very busy community, it is difficult to hold the attention of community members. Different officials are in a view that they could be only engaged if they get direct benefits.

## 4.8 Tentative Plan for Intervention

As described in the above sections, it is a big community which is constantly in flux and it is a challenging task to engage with them. We need to conduct a detailed assessment to understand more about the community and the institutions in order to have an effective engagement. The following topics need to be assessed and understood well:

Undertaking Assessments:

- Find out the details of below poverty line (BPL) families and marginalized sections.
- Understand how the newly migrated families settle here
- Study the village councils and umbrella committees' governance mechanisms

As per the knowledge gained through the scoping study the following interventions could be planned:

### a) Health & Sanitation

- WASH and waste segregation awareness with Anganwadi workers directed towards women and children
- Regular awareness on WASH, waste management, alcoholism and drug abuse through street plays in Telugu and Hindi (involving local college students, youth and temple clubs)
- Weekly or bi-monthly clinics in the Junglighat basti by doctors as Dairyfarm OPD timing is unsuitable for fishing community & GB Pant hospital has long queues
- Help the Sanitary department in solid waste management. Plan certification or incentives for households for cleanliness and segregation of waste
- Sea-water quality monitoring through pollution control board

### b) Education

- Check for the possibility of education programmes for children (primary education) and career guidance for youth
- Financial management for youth and women

### c) Fisheries

- Smoothen out the process of application for schemes with fishermen and fish landing site staff
- Catch data collection from fish processing centres and middlemen



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## 5. Conclusion

The scoping study helped in understanding various aspects of these fishing communities. This understanding is crucial before planning and undertaking any interventions in these sites. The study enabled us to generate a community profile, understand the local institutions and their hierarchy, identify the important actors in these communities, and understand the health and environmental issues in the community and local ecosystems. The study also helped in chalking out a tentative plan of intervention for the two sites.

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