VOICES FROM THE GRASSROOTS

Impact of COVID-19 on fishing communities of southern Odisha and South Andaman

BISWASWAROOP DAS, ANAND RAO, MADHURI MONDAL
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Executive Summary

The COVID-19 pandemic and associated measures to curb it have impacted the health, livelihoods, and food security of millions across the world. In India, COVID-19 and the associated lockdown severely impacted the poorer sections of the society, especially the migrant workers. Small-scale fishing (SSF) communities are one of the marginalized sections of society severely affected by COVID-19 and associated restrictions. The pandemic has brought out the systemic gaps and vulnerabilities in these communities.

Through this study, we explore the impacts of COVID-19 on four SSF communities in southern Odisha and South Andaman Islands focusing on livelihoods, health, social wellbeing and especially the challenges faced by the migrant fishworkers.

Through the assessment, we found that though the impact of the pandemic was felt differently by different communities based on their existing socio-economic conditions. However, the lockdown restrictions impacted all the communities severely. The impacts were worst for the most vulnerable households and especially for the elderly and children. Many fisher families lost their sources of income due to loss of access to markets and disruptions in fisheries supply chains due to the lockdown restrictions. Families dependent on tourism and daily wages also lost their livelihoods. Access to healthcare facilities and education were badly impacted. A rise in anxiety and mental health issues were reported from all the sites. Migrant fishworkers were left stranded in the worst living conditions without basic essentials for many months and could only return to their native states after the lockdown restrictions were lifted. Within the community, those with good social capital and alternatives sources of income were able to withstand the effects of the pandemic better than the rest.

The assessment highlighted that communities with strong leadership and solidarity, better networks and capacity for advocacy, and families with good social capital, had better coping mechanisms to deal with a crisis like the COVID-19 associated lockdown in India.
# Table of Contents

1. Introduction .................................................. 3
2. Methods ...................................................... 5
3. Results ........................................................ 6
   3.1 Odisha Case Study ......................................... 6
      3.1.1 Impact on livelihoods ............................... 7
      3.1.2 Impact on food security ............................. 8
      3.1.3 Impact on Health .................................... 9
      3.1.4 Impact on Education ................................. 11
      3.1.5 Impact on Migrant workers ......................... 11
      3.1.6 Other Social Impacts and Community Action .... 13
   3.2 South Andaman Case Studies ......................... 14
      3.2.1 Wandoor .............................................. 14
         3.2.1.1 Impact on livelihoods .......................... 15
         3.2.1.2 Impact on Health ............................... 16
         3.2.1.3 Impact on Education ............................ 18
         3.2.1.4 Impact on Migrant workers .................... 18
         3.2.1.5 Other Social Impacts and Community Action 19
      3.2.2 Junglighat ............................................ 20
         3.2.2.1 Impact on livelihoods .......................... 20
         3.2.2.2 Impact on Health ............................... 22
         3.2.2.3 Impact on Education ............................ 23
         3.2.2.4 Impact on Migrant workers .................... 23
         3.2.2.5 Other Social Impacts and Community Action 24
4. Conclusion .................................................. 26
5. References .................................................. 28
1. Introduction

The COVID-19 pandemic has impacted the lives and livelihoods of people around the world drastically in many ways. There was a huge loss of human life worldwide along with an unprecedented challenge to public health, food systems and livelihoods. The economic and social disruption caused by the pandemic has been devastating with tens of millions of people at risk of falling into extreme poverty and an expected increase in the number of undernourished people (WHO, 2020). Almost half of the world’s 3.3 billion global workforce are at risk of losing their livelihoods. Informal economy workers are more vulnerable because the majority of them lack social protection and access to quality health care and have lost access to productive assets due to the pandemic. Without the means to earn an income during lockdowns, many were unable to feed themselves and their families. For most people living on margins, no income means no food, or, at best, less food and less nutritious food (WHO, 2020).

The pandemic has affected the entire food system and has laid bare its fragility. Trade restrictions, border closures, and confinement measures have prevented farmers and fishers from accessing markets, thus disrupting domestic and international food supply chains and reducing access to healthy, and diverse diets. The pandemic has decimated jobs and placed millions of livelihoods at risk. As breadwinners lose jobs, fall sick and die, the food security and nutrition of millions of people are under threat, especially in low-income countries, with the most marginalized populations, which include small-scale farmers, fishers and indigenous peoples, being hardest hit (WHO, 2020).

The pandemic had devastating impacts on several marginalized communities across India. The government of India announced a complete lockdown from 25 March 2020 owing to the surging COVID-19 cases in the country. Lockdown restrictions and the eventual closing down of markets disrupted the livelihoods of fishers, exporters, women fish vendors and migrant fish workers. Small-scale fishing communities were impacted heavily. It impacted not only their sources of income but indicators like socio-economic conditions, health, education, access and usage of coastal commons.

A complete lockdown was initially announced by the Government of India for 21 days from 25th March 2020 to 14th April 2020. Later it was extended to 3rd May and further extended till 17th May 2020. On 17th May the lockdown was extended further till 31st May 2020 by the National Disaster Management Authority. The central government declared that the ‘unlock’ phase would start from 8th June 2020 in an order dated 30th May 2020. It also said that phased reopening would be implemented with the opening to malls, restaurants and places of worship while extending the lockdown in containment zones. Night curfews were continued. While intra-state and inter-state movement of goods and persons were allowed (following the standard operating protocol (SOPs) where proper screening was done before travel), in

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an order dated 17th May 2020, state governments were left to decide restrictions on mobility depending on the local situation. Large gatherings were still prohibited. In the second ‘unlock’ phase that started on 1st July 2020, the central government extended the lockdown in containment zones and allowed more trains for stranded workers and domestic flights. Following the second phase of unlocking, migrants returned home even as the state governments continued restrictions in districts under zone 1, i.e. the districts which had the greatest number of COVID positive cases. Ganjam was one of the districts in the state under zone 1 where lockdown measures were enforced till 31st July 2020. Subsequently, the lockdown was relaxed in the district barring the containment zones and weekend curfews were enforced from 1st August 2020.

To explore the impact of the first wave of the COVID-19 pandemic and associated restrictions on the small-scale fishing communities in India, we studied the impact on four fishing communities across Odisha and Andaman and the Nicobar Islands. In Odisha, our sites were Purnabandha, a riverine fishing hamlet and Nuagaon, a marine fishing hamlet in the coastal district of Ganjam. In South Andaman, we studied the impacts on the Wandoor and Junglighat fishing communities.

Fig 1: Timeline of lockdown and unlock phases in India. Source: De, 2020

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4Executive Order no. 4263/R&DM(DM), Revenue and Disaster Management, (2020a, July 16th), Government of Odisha, [http://srcodisha.nic.in/4263%20DM.pdf](http://srcodisha.nic.in/4263%20DM.pdf)

5Executive Order 4582/R&DM(DM), Revenue and Disaster Management, (2020b, July 31st), Government of Odisha, [http://srcodisha.nic.in/Order%20No.%204582.pdf](http://srcodisha.nic.in/Order%20No.%204582.pdf)
2. Methods

We took a case study approach for the four villages, which are also pilot sites for Dakshin Foundation’s Community Wellbeing and Environment Programme. These case studies were undertaken using mixed methods through multiple discussions over telephonic calls and semi-structured interviews with representatives from different stakeholder groups covering actors in fisheries, tourism, health and governance in these sites. The data collection was carried out through discussions with key stakeholders from the community during and after the lockdown and once the first wave of the pandemic had passed.

In addition to health and livelihoods, we also explored the impacts of the pandemic on food security, education, governance and migration-related aspects of the communities. The initial interviews were conducted over telephone in October and November 2020. Later, when it was possible to travel to the sites, in-person interviews were conducted in January and February 2021. For the purpose of this report, we have clubbed the insights from the two sites of Odisha as the communities and the impacts are similar. The results in the report are based on our interviews with key stakeholders and members of the community along with secondary resources. Some insights have also been drawn from working on COVID relief and response for fishing communities and fishworkers from April to June 2020.
3. Results

3.1 Odisha Case Study

Purnabandha and Nuagaon are two fishing hamlets situated on the opposite sides of the Rushikulya estuary off the coast in Ganjam. While Purnabandha is an estuarine fishing hamlet, Nuagaon is a marine fishing hamlet. Purnabandha has a population of ~1500 with around 400 households. On the other hand, Nuagaon is a comparatively larger fishing community comprising 700 households and a population of around 3000 people. The fishing community in Nuagaon is mostly homogeneous, comprising Telugu speaking fishers, compared to Purnabandha which has both Odia speaking and Telugu speaking communities. These sites are also famous as they are mass nesting rookeries for olive ridley turtles. Due to the nesting of the sea turtles, there are regulations on fishing in these sites. There are two periods of extended fishing bans around the Rushikulya estuary. Motorized and mechanized boats are banned from fishing from 1st November till 31st May of the following year, on account of the offshore aggregations and mass nesting of turtles (OMFRA, 2005). Additionally, on account of the coast-wide fishing ban from April 15th to June 15th towards regulating sustainable fish stocks, there is further loss of workdays for motorized marine fishers in Ganjam during the peak fishing season (The Hindu, 2015).

![Fig 2: Study sites in Odisha](image)

Though there were very few people affected by the COVID-19 disease in these communities during the first wave of the pandemic, the fishers were dealt severe blows both on account of the enforcement of the lockdown as well as the eventual collapse of the fishing markets and trade. It was difficult for fishers to even manage their basic necessities due to the drying up of income sources. Apart from livelihood
and economy, there was an impact on the communities’ social, educational, and health aspects. As we progress through the report, we will discuss in detail the major impacts these communities faced.

Fig 3: Timeline of local COVID-19 restrictions in Ganjam district Odisha
Source: Bauza et. al, 2021

3.1.1 Impact on livelihoods

Most of the fishers in Ganjam are small-scale, artisanal fishers who mainly use traditional crafts and gears. Women of these communities sell fresh and dry fish in the nearby markets, towns and cities. With the lockdown being imposed on March 24th 2020, many fishers were unable to catch fish or even sell their catch. Fishing activities and fish markets collapsed along with the disruption in their day to day social and cultural activities. In both Purnabandha and Nuagaon, fishers used to fish in groups of four to six fishers. They also used to mend nets together, repair boats and spend their spare time communally. After the enforcement of the nationwide lockdown in the initial phase, they were forced to remain isolated at their homes. During this period, participants reported that their primary livelihood related activities, including fishing, incurred heavy fines as well as harassment and assault from the local police.

Fishing was exempted from the list of restricted activities by an order of the Ministry of Home Affairs (MHA) dated 10th April 2020⁶. The state government also issued a similar order followed by the MHA order on 13th April 2020⁷. However, there is a uniform fishing ban on the east coast for 61 days starting from 15th April to 14th June every year due to the fish breeding season. This ban restricts fishing

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⁶Executive Order No.40-3/2020-DM-I(A), Ministry of Home Affairs, (2020d, April 10th). Government of India,

⁷Executive Order No.2149/R&DM(DM), Revenue and Disaster Management Department, (2020d, April 13th), Government of Odisha,https://srcodisha.nic.in/2149Stipulation_Extend_Lockdown.pdf
by motorized and mechanized boats and only non-motorized crafts are allowed to fish. Due to the pandemic, the annual fishing ban was reduced to 47 days from the earlier 61 days by an order from the fisheries ministry and thus the ban period ended on 31st May 2020 (Jamwal, 2020). Given these conditions, the number of fishing days was drastically reduced and the fishers were unable to fish for almost three months from March onwards. Additionally, a cyclone named Amphan hit the east coast around 16th May 2020 and caused a lot of havoc in West Bengal and the northern districts of Odisha (Barik & Singh, 2020), the Ganjam coast was not badly affected by this cyclone but the fishers were advised not to venture into the sea for a few days. Even when fishing was allowed, the village committee in Nuagaon decided to restrict fishing operations to reduce contact with outsiders due to the threat of the pandemic.

Even after the fishing operations resumed from June 2020, fishers, local fish vendors and traders were unable to sell their catch as market operations were still restricted and transport facilities negligible. Even local markets like Humma, which is one of the biggest dry-fish markets in Ganjam, continued to be shut. Since the sale of fish was confined to within the state and there was lesser demand at the local level, the price of fish had dropped. Women fish vendors who used to sell fish and dry fish to the nearby markets were worst affected as they found it difficult to manage households with their meagre incomes. Though their livelihoods were severely impacted, no special welfare package was announced for fishers by the state or central governments (Mahapatra, 2020). Construction workers registered under Odisha Building and Other Construction Workers’ Welfare (OB & OCWW) Board received special financial assistance of Rs 1500.

In Nuagaon, women who used to work in nearby construction sites and industries were affected as these additional sources of income also dwindled. Many people ended up in debt with no income sources and had to borrow from moneylenders to manage their households. Women Self-Help Groups (SHGs) were dependent on loans from private microfinancing groups before the pandemic. After the lockdown, many microfinancing groups withheld the sanctioning of loans to the SHGs forcing them to become reliant on private moneylenders, borrowing money at higher interest rates. Many were unable to repay their emergency loans. In Purnabandha, women fish vendors reported having no income for nearly five months as local markets were shut. Out of 300 households, around 240 households were still in debt till December 2020. Many fishers, especially from Nuagaon, started looking for daily wage jobs near their villages to support their families during this period. Many people resorted to selling vegetables and worked in grocery shops to have a source of income during this period.

### 3.1.2 Impact on food security

With no steady source of income during the lockdown, many people had difficulty procuring food and rations. Of 700 families, around 10 to 20 percent faced difficulties in procuring food and groceries post the lockdown. The government provided rations for an initial period of three months to the ration cardholders under the Public Distribution Scheme. The rations included five kgs of rice per person per month in a household along with a few kgs of pulses and peas. Many households in Purnabandha and Nuagaon did not have ration cards. Of about 700 households in Nuagaon, around 130 families did not have ration cards and suffered the most during this period as neither the government nor the district administration provided them with any help. The poorer households within these communities either borrowed money or depended on NGOs providing relief supplies. With
no tangible help coming from the authorities at the block level, community leaders and better-off families helped them by providing rations. Local NGOs like United Artists Association (UAA) along with Dakshin Foundation also distributed emergency rations and sanitation kits.

Image 1: Relief Distribution to the needy in Ganjam in association with UAA

3.1.3 Impact on Health

At both of our field sites in Ganjam, very few people contracted COVID-19 during the first wave of the pandemic. Though there were not many cases, many misconceptions had been prevalent regarding the fatality of the virus in the communities. For instance, people believed that the ones who were infected with the virus succumbed to the disease and had no chance of survival. Regular awareness drives were conducted by the Community Health Workers (CHWs) at the village as well as the Panchayat level to educate the community on symptoms and various norms to prevent the disease.

There were isolation facilities called Temporary Medical Centres (TMCs) built at the Panchayat level where migrant workers were kept under quarantine. Schools and cyclone shelters were converted to TMCs. A register was maintained with the details of the returning migrants who were quarantined in these centres. There were dedicated COVID treatment centres in the nearby town where people who had contracted the virus were treated and quarantined.

Access to healthcare is generally poor in Ganjam. During the pandemic, people did not have access to doctors in Primary Health Centres although medicines for common ailments such as cough, cold and fever were available. People had difficulty in getting medicines for ailments like diabetes and hypertension and they depended on private medicine shops in the nearby town of Chatrapur to get medicines.

Transportation to nearby hospitals in case of medical emergencies like child deliveries was difficult due to the lockdown restrictions during the pandemic. Also, newborn care was impacted due to the pandemic as CHWs were visiting every household and thus the fear of contracting the virus was greater. Community members also reported significant stress on account of the uncertainties associated with the pandemic. A rise in cases of alcoholism during this period was also reported.
CHWs all over the country were overburdened with work during the pandemic (Bharadwaj, 2020). An ASHA worker from Nuagaon informed us that, apart from their usual responsibilities, they had to regularly carry out door to door surveys to monitor the health of people in the community. If they showed any symptoms, they convinced them to visit the COVID centres to get themselves tested. They also monitored the situation of COVID-19 affected patients under home quarantine. They monitored oxygen levels, blood pressure, and diabetes of people with co-morbidities. They also monitored the health of the migrant workers who were kept in isolation centres. They had to collect data on various parameters and track information on returning and stranded migrants. The health workers were given
PPE kits and masks in TMCs but did not have PPE kits while they were carrying out door to door monitoring. She also mentioned that though there are no significant behavioural changes with regards to hygiene post the pandemic, but there has been some improvement. People carry sanitisers and use soaps to wash hands whenever they go outside.

During the lockdown, in place of cooked food in Anganwadi centres and mid-school meals in schools, uncooked rations were being delivered to households with children below five years old, school-going children, pregnant women and lactating mothers by ASHA and Anganwadi workers.

Image 4: Community Health Workers spreading awareness on COVID-19 in Ganjam

3.1.4 Impact on Education

With schools and colleges remaining shut since March 2020, formal education in these communities has also been severely affected. Educational institutions were shut from 16th March 2020 and were not reopened as of the writing of this report.

Though the state government made provisions for online classes, many couldn't access it on account of poor internet infrastructure, and not having smart phones or other required devices. Additionally, the concept of online classes was very new to most students. Those who could afford it went to private tuitions. As colleges were shut, many youngsters chose to migrate during the period when more interstate trains were run during ‘unlock’ phase 2 in July, in order to support their families. School closures and remote educational programs have increased learning inequalities and there is an increased risk among poorer households that children may not return to formal education.

3.1.5 Impact on Migrant workers

Many individuals from the fishing communities in Ganjam migrate to other states to work during the lean season of fishing (Mondal, 2020). Though mainly men, women migrate for work too. In Nuagaon, which has an approximate population of 3000 people, around 400 people migrate to other
states for work seasonally. Most of the migrant fishers from Nuagaon migrate to work as crew members in the mechanized fishing industry of Goa, Maharashtra, Karnataka etc. A few of them also go to work in construction sites and factories in Andhra Pradesh, Telangana, Kerala and Tamil Nadu. In Purnabandha, around 150 people migrate every year to work in construction sites in Telangana, Tamil Nadu and Kerala.

After the lockdown was announced, India witnessed a large migrant crisis. Many migrant workers were stuck in other states with no wages, food and means of transportation since work at these sites was shut down. They had difficulty in accessing essentials like rations, healthcare and were stranded in different parts of the country. Migrant fish workers were left stranded in harbours or in their fishing boats as most of them spent their time on fishing trips without provisions for accommodation on land. They faced a shortage of food and fresh water. Many reported becoming ill as living conditions on harbours and fishing boats were harsh with no access to water and healthcare facilities. Since their means of transportation back home were shut, they lived in anxiety regarding their future and the security of their dependents.

Despite the government running special trains for migrants to return, there was a lack of clarity regarding the registration process for inter-state travel. The process of registration required them to register at an online portal both in their home state and the state from which they wanted to travel. This further led to confusion and stress among the fishers who were desperate to get back given the worsening conditions at the places they were stranded. They also feared that they would not receive adequate medical attention if they contracted the virus. Amidst all this, many tried to return by hiring private vehicles and ended up spending most of their savings. There were 38 migrants who returned to Purnabandha and were quarantined in TMCs. Most of the migrants who returned to their villages after completing their quarantine were also ostracised in their villages due to misconceptions surrounding the spread and fatality of the virus. Later with more awareness about the disease, the situation improved.

In Purnabandha, many fishers and migrant workers who had returned from outside got employment under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) during the lockdown. They were involved in the construction work of roads, bunds, ponds and bridges. Compared to Purnabandha, in Nuagaon there was a dearth of job cards (an identity card provided under the MGNREGA act to the beneficiaries) provided by the block administration. As the lockdown came into effect, most of the migrants from Nuagaon had returned and had very few income sources. Though there was a provision of providing new job cards to the migrants at the panchayat level, most of it remained on paper. Many were unemployed for more than three months after returning. Unable to find other alternative sources of income, most of the migrants from Nuagaon and around 50 people from Purnabandha went back to other states when the interstate travel restrictions were eased in June. Some employers facing an acute shortage of labour sponsored their return tickets as well.
3.1.6 Other Social Impacts and Community Action

The village committees organized meetings in the village to educate people about the virus, social-distancing norms, and to dissuade the spreading of rumours. Community health workers (CHWs), ward members, and Panchayat and community leaders were present in these meetings. In these meetings, discussions were held on how to quarantine migrant workers who had returned. They turned the village schools and cyclone shelters into isolation centers. They also discussed arranging necessities for the migrants. At the Panchayat level, there were meetings held by the Gram Panchayat head, village leaders and community health workers to regularly assess and monitor the COVID situation and the migrant workers who had returned.

Throughout the state of Odisha, the Panchayati Raj Institutions (PRIs) were given power by the state administration to implement lockdown depending on the situation. Thus, the head of the Gram Panchayat had the powers of a district collector in terms of managing the COVID situation within their Panchayat.

Older community members who depended primarily on their children for support also suffered as there were a significant number of younger people working in other states with no means to travel back. Community members also reported that enforcing lockdown with the use of force was harsh and could have been avoided. Additionally, more awareness drives should have been organized well before the number of cases rose and the lockdown was implemented. Some respondents stressed the need of providing compensation and relief during the lockdown for the affected fishing families.

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8 Executive Order 2232/R&DM(DM), Revenue and Disaster Management.(2020c, April 19th), Government of Odisha, retrieved from https://srcodisha.nic.in/2232%20(1).pdf
3.2 South Andaman Case Studies

As the pandemic broke out in other parts of the world and the country, the Andaman and Nicobar Islands reported a low number of cases initially on account of its geographic isolation from the mainland. Though the islands were isolated, eventually COVID-19 spread through the islands on account of regular flight connectivity with the mainland. Cases were reported from several isolated islands that were initially safe from the virus and as the pandemic spread, its impact was seen on every aspect of society including people’s livelihoods, health, and social life.

3.2.1 Wandoor

Wandoor is one of the project sites of Dakshin’s Community Wellbeing and Environment programme in South Andaman. In the last two decades, fishing and tourism have been the primary livelihood activities in Wandoor. As per a Gram Panchayat survey conducted in 2017, Wandoor village consists of 654 households with a population of 1505.

COVID-19 and the associated lockdown impacted both the key occupational sectors in Wandoor – fishing and tourism – in a major way. Given the limited social infrastructure, along with livelihoods, impacts were felt on education and health, and especially the mental health of elderly community members. While there were not many COVID-19 cases in the village during the first wave, community members reported facing more difficulties due to the lockdown with the worst impacts of the situation unravelling once the lockdown was over.
3.2.1.1 Impact on Livelihoods

As Wandoor is primarily a community dependent on fishing and tourism for their livelihoods, households dependent on these livelihood activities, along with daily wage workers, were severely impacted by the lockdown restrictions. Respondents from Wandoor estimated that the livelihoods of around 75% of households were affected due to COVID and the associated lockdown. The main reasons cited were the closure of transport, travel restrictions, closure of tourism operations, restrictions on fishing and disruption of supply chain and export of fishes.

Impact on livelihoods dependent on Fisheries

Initially, when the lockdown was announced, all fishing related activities were halted abruptly. Fishers had to resort to distress selling with many unable to sell their catch and several fishers reporting that they were forced to throw catch back to the sea on account of the collapse of market links. On 10th April 2020, the Ministry of Home Affairs issued an order that fishing operations will be allowed with some regulations ensuring social distancing and proper hygiene. Based on this order, the fisheries department of Andaman and Nicobar Islands issued an order on 11th April 2020 permitting fishing and allied activities with terms and conditions. One of the main issues with this order was that the motorized and mechanized boats were to be operated with 50% capacity, so if the number of crew members for a motorized vessel was four, then only two members were to be allowed which made it difficult for the fishers to operate. Secondly, owners had to arrange protective gear and sanitising of boats after every trip had with no support from the fisheries department. Due to these issues, carrying out fishing operations was not feasible. Slowly, the fishers procured all the materials to resume fishing but there was hardly any way to sell the fish as the supply chain was disrupted for many months.

Another long-standing issue has been the lack of cold storage facilities in Wandoor. This makes it impossible to tide over interruptions in the supply and value chains without considerable wastage of caught fish as well as loss of income. Traditionally, Wandoor fishers do not dry fish like the Telugu fishing community. Post lockdown, selling fish was

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10 Executive Order No. 251, Directorate of Fisheries, Port Blair (2020, April 11), Andaman and Nicobar Administration, https://drive.google.com/file/d/1YUKK81l-AWnCUrJfo-mrhCAVs9ThcnK/view?usp=sharing
also difficult as people’s buying capacity had reduced due to the loss of their livelihoods. The hotel industry, among the key links in the local fisheries, had stopped procuring fish as tourism had been suspended till September 2020. Even in November 2020, the fish trade did not resume completely. This had further downstream effects for seafood processing centres who had also stopped purchasing fish. As the export to the mainland had stopped, local prices fell, making it difficult to recover even fuel cost. Some boats were also reportedly destroyed or washed away during the lockdown due to lack of maintenance. Additionally, one fisherman reported that weekly permits were required to be obtained for fishing trips.

It also became difficult to get loans from the bank or repay them during or post the pandemic. The interest for loans from local money lenders was also significantly higher. During this period, fishermen were eligible to apply for loans under the Kisan credit card (KCC) scheme. According to the fisheries society secretary of Wandoor, of around 217 fishermen in Wandoor, 13 fishermen have taken this card and the loan. Most fishermen were averse to such loans as the clauses for repayment are risky and their income from fishing remains uncertain. Properties, primarily fishing boats, attached to the loans as collateral can be seized if the loan is not paid on time. Moreover, the Distance Transmitter System (DAT) device was also made mandatory by the Fisheries Department for all fishing boats during this period which costs ~Rs 19000. There is a subsidy of Rs. 5000 from the Andaman Nicobar Fisheries Federation but fishers had to pay the entire amount and get it reimbursed later. According to the department, the licenses of fishermen would not be renewed unless they installed DATs in their boats, Wandoor fisheries society members said that the department has not trained them in using the device yet. All these were additional pressures on the fishermen during the pandemic.

**Impact on livelihoods dependent on Tourism**

The tourism sector in Wandoor was also severely impacted due to the pandemic and lockdown. Since March 2020, tourist boats in the Mahatma Gandhi Marine National Park (MGMNP) were not in operation, firstly due to the lockdown and later due to other administrative regulations. Once tourism reopened in ANI in February, only two tourist boats resumed their operations. They operated for a month employing ten staff. However, they too were stalled as the wooden boats needed to be replaced by fibre boats as per a government directive.

The president of the North Wandoor youth club mentioned that around 70% of the youth of Wandoor depended on tourism for their livelihood. As the tourism sector in the islands took a huge hit, post the lockdown, tour guides and boat captains sought daily wage labour and took up locally available temporary work of clearing weeds in areca nut plantations. Hotels and restaurants were also closed due to the lack of tourism activities. Post lockdown, around 150 youth involved in tourism were reported to have taken up fishing again.

**3.2.1.2 Impact on Health**

Only seven COVID-19 cases were officially registered in Wandoor in the first wave. Health workers confirmed that not many people were infected by the virus in Wandoor in the first wave. In North Wandoor, only two people contracted the disease. Others with COVID-related symptoms were quarantined. Initially, those who were quarantined were treated in Port Blair. When hospital beds were full, home quarantining and treatment were also undertaken. The district collector’s office was responsible for the treatment of COVID patients. Medications were home
delivered with the help of community health workers.

More than physical aspects of health, the mental health of most of the community members was impacted due to the restrictions in movement and inability to carry out their livelihoods. Elderly people with hypertension & diabetes and people with comorbidities who required regular hospital visits faced a lot of difficulties initially. According to the respondents, in the early days of the lockdown and the first wave of the pandemic, there were no testing kits available in the hospitals. If any person visited the hospital for any other ailment, they were suspected to be Covid patients and were not treated with proper care. Along with the poor health care infrastructure, there were also grievances regarding hospital authorities who were unsure about the procedures for handling COVID patients.

Given the poor formal health care facilities, ASHA and Anganwadi workers and the Auxiliary Nurse Midwife (ANM) played a phenomenal role in checking on the health of the community, providing support and supplying medicines. During the lockdown, the CHWs collected information on people who needed medicines and got them delivered through the male health workers. They used mobile phones for information gathering and rendering medical advice. On account of poor internet connectivity on the island, mobile phones came to be the most important communication tool during the lockdown. Ambulances were available on call during COVID-related emergencies. A few social workers from the village also came forward to help during emergencies. Later, ASHA workers made lists of people with co-morbidities and provided them medicines regularly. Other weekly or monthly meetings and services conducted by the Anganwadi were discontinued during the lockdown but Anganwadi workers continued providing on-call support.

ASHA and Anganwadi workers made household visits to monitor the affected patients and took health updates. They conducted household level awareness on COVID-19. They were overworked during the pandemic and post the lockdown as well. Along with their fieldwork, they were tasked with preparing reports for the ANI health administration in a short duration. During the lockdown, for their additional COVID related responsibilities, ASHA workers were paid an incentive of Rs 2000 in addition to their salary for the initial two months and then Rs 1000 for another two months. They had to
perform duties at the sub-centre in addition to two days of fieldwork. They did not get any off days in April 2020. In May and June 2020, they had to do fieldwork three days a week. From July 2020, onwards it was reduced to two days a week but the COVID incentive was stopped. They were also not provided with proper safety gear like masks and sanitizers for their fieldwork to protect them from exposure to the COVID-19 virus.

ASHA workers get a meagre salary of Rs 2000 per month and during a period of increased workload and health-risks, there continued to be considerable delays and non-payment of salaries during the lockdown. Along with ASHA workers, the salaries of Anganwadi workers were also not paid on time due to a reported shortage of funds. Additionally, no transport facilities were made available to ASHA workers for doing their fieldwork, which occasionally involved walking from 5 km or more from the Primary healthcare centre. To voice their issues, Anganwadi workers staged a mass demonstration in front of the Directorate of Social Welfare Port Blair in March 2021 as their salaries had not been paid for over seven months. Similar protests were organized in the other parts of the islands (Giles, 2021).

Health workers also informed us that only a few people had Ayushman Bharat cards (a card that makes them beneficiaries of the Ayushman Bharath insurance scheme) in Wandoor. In North Wandoor, only 19 people have the Ayushman Bharat card. According to an ASHA worker from Wandoor, households actually in need of the scheme were not beneficiaries and the scheme was mainly subscribed to by households that were already well off.

3.2.1.3 Impact on Education

One of the worst impacts of the pandemic and the lockdown was on the education of children. While online classes are on-going, the children and parents are finding it difficult to get used to this mode of teaching. It is unrealistic to expect online education to be successful in a place where the connectivity is so poor. In Andamans, WhatsApp is the main medium for forwarding videos created by teachers or for assigning homework. There are many problems associated with this mode of teaching. Firstly, many families lack an android phone, some do not have an internet connection, there are also frequent power cuts, and finally, even if the students manage to download the videos and the content, they are unable to understand the content through these videos. As the literacy levels of parents are not high, they also cannot help their children. Some of the families do not have the means to buy an android phone. Even if they managed to gather money for the same, most of the shops remained closed during the lockdown. Some who had phones did not have internet connectivity and had to go far where there is a better network to download the videos. Female students in particular reported having faced greater difficulties at home as more time was allocated towards household chores and less towards their education. Some families also found it difficult to pay for the education of children as their livelihoods were impacted.

3.2.1.4 Impact on Migrant workers

Wandoor majorly consists of settler families who were relocated here in 1949. However, there are families which have migrated from West Bengal and settled there more recently to work in the fishing sector or as construction workers. The newly settled families were more impacted than the older settlers from the community as their savings were less, and they had to pay rent as they do not own land. After
losing their livelihoods during the lockdown, they were among the worst affected. Young men also migrate from the other parts of the islands to work in the tourism or fisheries sectors. As the lockdown was announced, there was little information or support for stranded migrant workers from other districts and they found it difficult to travel back to their islands.

3.2.1.5 Other Social Impacts and Community Action

The national lockdown was announced on 24 March 2020 and strictly enforced by the local authorities, and community members were not allowed to step out of their homes. The feeling of isolation which already looms large in these remote communities was at its worst during the time of the lockdown. It has increased the sense of isolation and helplessness in people’s minds. Lack of transport for carrying out livelihoods like fishing or getting access to medicines was a major problem. During the initial period of the lockdown, the community also faced persistent water shortages, a problem faced every summer. They had to go far to fetch water as ponds had dried up. Due to the lockdown restrictions, walking to the footpath or the main road was also not allowed. Hence, fetching water was difficult for many families who faced water scarcity. Many two-wheelers were confiscated during the first phase of the lockdown.

The livelihoods of most of the community members were impacted except for government employees. Even though their livelihoods were impacted, many families were doing reasonably as they have their land and areca nut plantations to fall back to. A few families who were in trouble were helped either by their neighbours or the Panchayat. The Gram Panchayat head and some other politically and socially active members helped the poorer households by distributing rations or looking after immediate needs like medicines. A few non-governmental organizations also helped with the relief work. No conflicts with the local governing bodies were reported by the community during this period.

There were no ‘Gram Sabha’ meetings arranged by the village panchayat during the lockdown. In April, the ward members were called for a meeting and provided with masks and sanitizers. No meetings were conducted later. As the Panchayat office is not very big, ward members were not called for meetings to maintain physical distancing protocols. The Panchayat head and Secretary would take the necessary decisions. If information was required from the Ward members, the Gram Panchayat head would discuss the matter telephonically.

After the lockdown, the panchayat carried out work such as the creation of ponds, cleaning of the road and other works under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which provided livelihood opportunities for some of the affected community members. From October 2020, the governing panchayat was dissolved in Wandoor as their term ended. The Panchayat is not active until the next election which has not been conducted so far and no dates have been announced as the second wave of COVID had begun. Presently, the Panchayat Secretary and the Tehsildar are in charge of the village governance. Other social gatherings and community festivals like the Durga Puja were not conducted in the year 2020.
### 3.2.2 Junglighat

Junglighat’s fishing colony is one of the most densely populated areas in ANI. Families from Andhra’s Srikakulam district migrated to ANI and settled in various parts of the islands but mainly at the Junglighat shore. As per the scoping study conducted by Dakshin in November 2020, the approximate number of fishing and non-fishing households in Junglighat Machchi Basti is 1400 and the population is around 5800. The primary occupation of families here is fishing. According to the latest Fisheries Department data, Junglighat has 27 licensed non-motorized crafts, 181 motorized, non-mechanized boats and 24 motorized mechanized boats. However, there are older families who are employed in jobs in other sectors like driving or as government employees and there are some migrant families who work as daily wage laborer.

#### 3.2.2.1 Impact on livelihoods

The sudden announcement of lockdown severely affected fisher livelihoods. Many respondents mentioned that they lost around 6-8 months of work. A day after the announcement of the lockdown, fish markets, cold storage, and ice plants were shut down immediately. Similar to Wandoor, due to the unavailability of adequate cold storage facilities, most of the fishermen had to throw their catch into the sea. Fishing activities, fish drying and processing, local fish trade and export collapsed which badly affected the entire community. They were not allowed to dry the catch in open spaces due to COVID restrictions. During the initial lockdown period when fish selling and trade was completely stalled, several fishers resorted to subsistence fishing.
**Impact on Fishing Activities**

After a few days of the lockdown, fishers and political leaders demanded that fishing should be allowed. Letters were sent to the Lieutenant Governor of Andaman and Nicobar Islands (ANI) and Govt of India to allow fishing as the livelihood of around 5000 fishing families in ANI had been affected (Giles, 2020a). As mentioned above in the report, fishing was allowed from 11th April 2020 by an order from the Department of Fisheries for all the boats except mechanized vessels due to the annual fishing ban on the east coast.

Fishers were not allowed to venture out for fishing at all between 25th March and 11th April 2020. Normally, Junglighat fishers with motorized boats go for fishing trips for around seven days with ten crew members. With the restrictions being imposed on the number of crew members of the fishing vessel, the fishers had to shorten their fishing trips as using heavy fishing equipment like ring nets required at least seven to eight crew members. Fishing trips with fewer crew members and within a short distance yielded less profit. When only five crew members were on a fishing trip out of ten, the remaining crew had to stay home and were forced to take turns on the fishing trips. The returns from the fishing trip were only shared between the crew members who went on the particular fishing trip and the remaining crew could not earn money in the period when they had to stay at home. Marine police monitored the fishing vessels and issued warnings to fishermen to restrict the crew members to five. During this period, demand for fish and local sales were reported to be good as fewer boats were operating and less catch was procured. One of the respondents mentioned the catch was good post-lockdown; however, it had declined by the time interviews were conducted in February 2021.

![Image 7: Fishing crafts at Junglighat Fishing Jetty](image7.jpg)

**Impact on Local Markets**

When the lockdown was initiated, the fish vendors could not sell fish. Local markets were closed for a month. After fish was declared as an essential commodity, timings for selling fish were allocated by the police as 6-8 am and 5-7 pm. Due to the lack of transport facilities during this period, women fish vendors faced difficulties in carrying fish to the local markets. They had to walk with head loads of fish as no transport was available. In the meantime, some fish vendors started to take orders and sell fish through phone calls and messaging platforms like Whatsapp. However, customers were reluctant to
pay extra for home delivery. The weekly Sunday market at Junglighat was closed for an even longer period as it attracted crowds. It resumed in February 2021 but was closed again on account of the second wave. Dry fish was also sold during this time locally to tide over the disruptions in the sale of fresh fish.

*Impact on Export*

Those who caught export value fish, lobsters, and crabs faced huge losses due to the shutdown of ice plants, cold storage and restrictions on export. Fish workers who were engaged in fish processing, transport and maintenance which was a part of the fish export business lost their sources of income. They found it difficult to provide for their families. A few of them had to borrow money from moneylenders and could not repay their loans on time due to the pandemic. As the ‘unlock’ period in the country started, a few private airlines raised the transportation costs for fish export. Before lockdown, the charges were Rs.32 per kg. from Port Blair to Chennai, which was increased to > Rs. 100 after the lockdown. The prices of export fish declined as prices in mainland India were low. Overall, the fish workers and owners associated with fish export faced losses.

![Fishers loading fish into ice boxes for export in Junglighat Jetty](Image:Fishers loading fish into ice boxes for export in Junglighat Jetty)

*3.2.2.2 Impact on Health*

Junglighat fishing colony is a densely populated region. Hence, people were at a high risk of COVID-19 transmission. After the lockdown was announced, the health department and the police department conducted regular awareness camps in the community. Apart from that, awareness of the virus, symptoms and required precautions were communicated largely through TV and social media. Testing for COVID-19 remained low, even among those who showed COVID related symptoms. People in the community had knowledge of the symptoms of the disease and whom to contact in case of symptoms but there was also a fear of being quarantined. There was also a stigma associated with COVID positive patients. Some of the community members obtained information from elderly people about various homemade remedies and ayurvedic medicine to build immunity.
Officially, seven to eight people in the community tested COVID positive. They were shifted to COVID centres which were set up by the local administration and volunteers. The Industrial Training Institute (ITI) at Dollygunj, Port Blair was one such COVID centre where patients were treated. Community Health Workers (CHWs) worked round the clock during the pandemic. In case anyone showed any symptoms of the virus, they reported to the concerned officials. Many youths from the community also volunteered with the Community Health Workers (CHWs) to distribute medicines and other essentials. In addition to COVID related health issues, participants reported that the pandemic had increased stress and mental health issues in the community.

3.2.2.3 Impact on Education

The lockdown affected children's education. Lack of electricity, devices and lack of internet connectivity were the main problems along with difficulty in understanding online educational content. In ANI, internet connectivity has always been an issue. Internet connectivity was especially poor during the lockdown. Though some private schools like Carmel and Kamraj schools in ANI conducted proper online classes, most children from the community were enrolled in government schools, where online classes meant reading materials or videos over WhatsApp. Even accessing educational resources over WhatsApp was not possible for a few families as they could not afford smartphones. Somehow, even if they managed to buy one, younger children were unable to use it effectively. Even if they were able to download the videos, they found it difficult to understand them.

Students missed more than a year of schooling because of the lockdown and the pandemic. On paper, online education linked all students, but the on-ground situation was quite inadequate. A community leader said, “School teachers sent videos and notes through WhatsApp according to their timetables, but students were unable to comprehend because of the passive method of instruction. College students, on the other hand, managed to keep up with their studies despite the lockdown, but they are dissatisfied as well”.

3.2.2.4 Impacts on Migrant workers

There were around 90 migrant fishers who were stuck in Junglighat during the lockdown. A few of the migrant fish workers became sick as they did not get proper food and medical facilities. Most of them were from Tamil Nadu and Andhra Pradesh while a few of them were from other parts of the Andaman Islands. Migrant fishers from Tamil Nadu were stuck in their boats (approximately 16 boats) for a couple of months and were unable to return to their homes as there was no transportation to the mainland. Migrant fishers faced a shortage of rations and drinking water during this period. A few migrant fishermen dried fish on their boats and sold them. From 30th April 2020, the state government permitted the movement of stranded migrant workers11. From May-June 2020, the

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administration made necessary arrangements to repatriate the stranded migrants (Giles, 2020b). Migrants from Andhra Pradesh usually stay in rented rooms in Junglighat. Migrant fishermen tried to return to Andhra Pradesh but were unable to go back due to the high cost of flight tickets, the only operational mode of transport to the mainland. As most of the migrant fishers are small-scale fishers, they chose to stay in Junglighat village.

A few migrant fishermen who came to Junglighat a month before the lockdown did not get enough time to acquire a fishing licence. When they went fishing in April 2020, they were apprehended by the Marine police. The Department of Fisheries as an alternative asked migrant fisher without fishing licenses to carry other identity proof like Aadhaar cards or voter identity cards.

3.2.2.5 Other Social Impacts and Community Action

Most respondents from Junglighat mentioned that there was a lot of uncertainty in their daily lives due to lockdown related restrictions. Initially, as the national lockdown was announced, the administration banned all activities like the movement of people, transport facilities, fishing, fish export and shops. Only health establishments and pharmacies were allowed to stay open during this period. The sudden shutting down of fish markets, hotels, restaurants and tourism businesses disrupted their sources of income and day-to-day life. The Junglighat Machchi Basti was turned into a containment zone from 31st July 2020 for around two months. In the containment zone, only two ration shops were allowed to run during the lockdown which was not sufficient for the entire Junglighat community. Even essential items were not available in the containment zone. Initially, the entire fishing colony was a containment zone, later however the administration created micro containment zones, improving access to essential goods and services. Police and Coast Guard personnel patrolled the area to ensure adherence to lockdown measures. A few respondents mentioned that when people ventured out of their homes during emergencies, they were harassed by local authorities.

Image 9: Women fishers of Junglighat community drying fish
In Junglighat, like Wandoor, more recent migrant families faced more problems as they had less social capital and networks. These families borrowed ration from ration shops. Families who were living in rented houses were unable to pay rent for three months due to the lack of income. They used their savings to buy groceries and other necessities. They could pay the rent only after the lockdown was completely lifted.

There was a shortage of rations in the grocery shops of the Junglighat fishing community. A few respondents blamed the local administration for irregularities in distributing essential items. While the government provided rations for three months to the Below Poverty Line (BPL) ration cardholders, the Above Poverty Line (APL) ration cardholders did not receive any government assistance. Most of the fishers in the Junglighat fishing community have APL ration cards while very few have BPL cards. During the lockdown, community members helped each other by sharing basic daily essentials such as grocery items and dry fish. Most of the respondents mentioned Joga Rao, an active social worker from the community, who helped the community during the lockdown by providing essentials and medicines to the poorer households.

Some residents who had sufficient stocks of grocery items also came forward and shared with others and a few fishermen distributed fish to other families who could not fish. Dakshin Foundation, with the help of WWF-India, distributed ration kits to 225 families in Junglighat with the assistance of the Junglighat Boat Committee (Giles, 2020c). YBS Seva charitable trust, a community based charitable organization also helped poorer households by providing ration kits and medicines.

During the lockdown, the police department called off all public events such as meetings, functions and religious gatherings. All movement was banned. However, one positive aspect of the lockdown was that since alcohol stores were closed during this period, there were fewer cases of domestic violence according to the respondents. Village committee members held a few meetings at the Junglighat jetty to plan the distribution groceries to poorer families, but they were unable to do so because they could not gather the required funds. Instead, they distributed masks. One village committee (Gadduru) distributed money to its members during the lockdown. Most of the respondents mentioned that the government and fisheries department did not provide any compensation or support to the affected fishing families during or after the lockdown period.
4. Conclusion

Through this study, there is a clear indication that, during the first wave of COVID-19 in India, the nationwide lockdown impacted the fishing communities more severely than the virus. There were no income sources for especially vulnerable communities due to the lockdown being enforced. Hence, people had difficulty in getting necessities like food and emergency health facilities. The education of children was badly impacted and online education was inaccessible to the majority. A rise in feelings of anxiousness and mental health issues were reported from all the sites.

Livelihoods suffered severely due to the regulations and lack of access to transport and markets. Many families had to borrow money to manage their households. Community health workers were overburdened with more responsibilities and their salaries were not paid in a timely manner. Migrant workers had to face the worst conditions during the lockdown. Initially, they were living in horrible conditions with no work, wages, food or healthcare facilities and had difficulty returning to their villages. Even after returning, they had minimal employment opportunities. Many were left out of the social benefit schemes like the MGNREGS and thus had no other option than to migrate back in search of income opportunities.

The assessment highlighted that the communities with strong leadership and solidarity, better networks and capacity for advocacy, and families with good social capital had better coping mechanisms to deal with a crisis like the lockdown and the pandemic. Apart from conducting this assessment, Dakshin’s staff worked relentlessly for three months during the first wave of the pandemic and the lockdown on relief and response. Based on our experience from the relief work and the results of the study, we share the following insights to improve the strengthen the capacities of the small-scale fishing communities to deal with external shocks such as the lockdown and the pandemic.

The pandemic showed that there is a need to strengthen public health systems, staff and facilities in the healthcare centres. In order that the community health workers are able to perform their responsibilities efficiently, they should receive their salaries, safety gear and training on a regular basis. ASHA worker jobs should be formalized and they should be provided with benefits such as pension and insurance. The pandemic had exacerbated mental health issues and highlighted the need to pay equal attention to mental health issues in the discussions around health.

Food security had dwindled in the fishing communities during the lockdown due to restrictions on transport and losing livelihoods. During the initial lockdown announcement, catch had to be thrown as they couldn’t sell or dry it and even later, due to disruptions in supply chains, selling and trading fresh catch was difficult. Cold storage facilities and post-harvest infrastructure must be improved to ensure minimal loss of landed fish and facilities to dry fish must be provided. To improve the availability of food resources, fishers should have rights over their coastal commons which is a huge source of food resources. Local non-fishing food systems such as home gardens could be promoted in order to mitigate import and value chain dependent food shocks and volatilities.

The pandemic exposed the vulnerabilities around over-dependence on external markets, supply chains and exports. There is a need to reduce this dependence to some extent and improve local markets. Small scale fishers and migrant fish workers need to be included as target sectors in COVID-19 responses to compensate the unexpected income loss and increased livelihood vulnerabilities. A database of migrant workers
should be maintained by the native district for effective tracking during crisis and effectively distributing social protection schemes. Individuals looking for local jobs like MGNREGA work should have adequate support.

On the whole, there is a need to strengthen local community institutions and build the capacities of youth and community leaders and to raise their concerns on appropriate platforms.

Our assessment showed that online education remains only on paper while on the ground, it is difficult for these communities or teachers to adapt to an online mode of education. There is a need to build capacities of teachers and develop support systems in delivering digital learning and media resources to households without internet access. As education systems become more reliant on remote learning during emergencies, internet and related infrastructure has to be expanded.
5. References


Bharadwaj, S. (2020, August 5) India’s Community Health Workers were overworked. Then came a pandemic, The Vice, retrieved from: https://www.vice.com/en/article/v7gx79/india-community-health-workers-overwhelmed-COVID19


Executive Order No. 251, Directorate of Fisheries, Port Blair (2020, April 11) Andaman and Nicobar Administration, retrieved from: https://drive.google.com/file/d/1YUKK8i1-AWnCurJfo-mrhCAVk89ThcnK/view?ts=6089566d


Executive Order No. 2149/R&D(MDM), Revenue and Disaster Management Department (2020d, April 13th) Government of Odisha, retrieved from: https://srcodisha.nic.in/2149Stipulation_Extend_Lockdown.pdf


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