



Changes
in Fishing Livelihoods and Marine Ecosystems
Caused by Projects



Table of content

ABBREVIATIONS.....	1
1. INTRODUCTION.....	1
2. OBJECTIVES OF FOCUS GROUP DISCUSSION	3
SUMMARY OF FINDINGS	4
(A)IMPACT ON THE FISHING INDUSTRY AND LIVELIHOOD ACTIVITIES	4
FISHING EXPERIENCE AND LIVELIHOOD	4
SHWE NATURAL GAS PROJECT AND DEEP-WATER PORT PROJECT	5
CHANGES IN THE FISHING ZONES AND LIMITATIONS	5
IMPACT ON THE FISHING INDUSTRY AND FISH SPECIES	6
CHALLENGES IN ENTERING FISHING GROUNDS	6
(B) IMPACT ON THE MARINE ECOSYSTEM	7
(C)SOCIAL AND ECONOMIC IMPACTS	7
(D)COMMUNICATION AND COMPENSATION	7
(E)NEEDS OF THE FISHER COMMUNITIES	8
(F)NEGATIVE IMPACT OF THE PROJECTS.....	8
4.CONCLUSION	9
5.RECOMMENDATIONS.....	10

Abbreviations

CNPC	- China Petroleum Corporation (CNPC)
EIA	- Environmental Impact Assessment
FGD	- Focus Group Discussion
GAIL	- Gas Authority of India
MOGE	- Myanmar Oil and Gas Enterprise
ONGC	- Oil and Natural Gas Operation

1. Introduction

Since Kyauk Phyu township is located on the Bay of Bengal in Myanmar's Kyauk Phyu district, the vast majority of the regions are streams, rivers, and mangrove forests. Thanzit River connects Made Island, where the Htawei Deep water port will be built, and along the Thanzit River, there are many villages governed by the Made Island, Sai Chone, Sit Taw, U Kin, and Kat Thapyay village tracts, as well as other villages Kanyin Taw, Myitnar Tan quarter, Nga/Lapyawe, and Pyin Phyu Maw villages. The fisheries areas in these communities along the Thanzit River have been restricted and damaged as a result of mangrove degradation, the designation of a waterway for oil tankers for the Shwe Gag Pipeline Project, and the development of an oil transportation port. As a result, fisheries resources are rare, and the local people are unable to engage in small-scale fishing, making their livelihoods tough. This river is also the primary fishing location for the local communities.

A Focus Group Discussion was conducted to collect and compile insightful comments and collective views from each fisherman. In this region, the fishery sector includes fishing vessel businesses, boat constructors, trawl net businesses, and other fishery activities, and it will be essential to safeguard local businesses and traditional heritage. ¹ The fishermen with at least three years of fishing experience were invited to the Focus Group Discussion (FGD), and there are a total of 21 participants. The participants shared their experiences, challenges, and perspectives on the impact of the Shwe Gas and Deep-Water Projects on their livelihood, fishing business, and marine ecosystem. Furthermore, they discussed their involvement in the fishing industry, agriculture and vegetable plantation, and other business sectors, and it was known that they would get extra income from other sectors. They also discussed the Shwe Gas and deep-water port projects, as well as the operators, the project start date, and other benefits from these project implementations.

Participants in the FGD additionally debated how the movement of oil tankers and the construction of deep-water ports can affect fishing zones and the fishing sector ². The challenges encountered by fishermen, as well as the restrictions for fishing zones and restricted fishing in designated waterways, as well as the implications of underwater rock degradation during project development, were also indicated.

In the FGD, since the restrictions started, fish species and significant changes were figured out and there were discussions including the loss of fish species due to the movement and in and out of oil tankers at the major fishing zones and designation of restricted fishing areas. Furthermore, the participants expressed their concern on the ecology impact by the oil ships and dee-water port as well as the destruction of coral reefs and aquatic animals.

Since the restrictions took place, fish species and significant changes have been noted in the FGD, and conversations have included the loss of fish species due to the movement entry and exit of oil tankers at major fishing zones, as well as defining the boundaries of limited fishing areas. Furthermore, participants shared concern about the environmental impact of oil tankers and deep-

¹ Centre for Peace Development (Challenges of the local communities at the Kyauk Phyu Economic Zone)

² Centre for Peace Development (Challenges of the local communities at the Kyauk Phyu Economic Zone)

water ports, as well as the devastation of coral reefs and aquatic animals. When the relationship between the local fishing communities and the project companies was under discussion, the participants identified the conflicts that arise from fishing and also shared their experiences with compensation from the relevant authorities and support during project implementation. They also highlighted the importance of a better communication system and coordination meetings between local fishing communities and the relevant authorities. Considerations for transparency in decision-making processes, as well as the concerns for the well-being of fishermen and the sustainability of the fishing industry, should be taken into account.

This discussion intends to investigate participants' complaints and share their experiences, and it is an important forum for providing recommendations on how to balance the needs of fishing communities and to inform participants about the current scenario of Shwe gas and deep-water port projects. The findings of this FGD will help fishermen in making wise decisions and in formulating ecologically friendly justice solutions for advocacy and society.



2. Objectives of Focus Group Discussion

- (a) To understand the experiences and scope of the participants' involvement and to know the daily routine, specific responsibilities of the fishermen, and their alternative livelihood activities.
- (b) To acquire information regarding the Shwe Gas Project, the deep-water project companies, the project date, the impact on the environment, and the livelihood of these projects, including the knowledge of the fisher communities
- (c) To investigate the notice time of the fisher communities on the changes and limitations in the fishing zones owing to the oil tankers and the construction of the deep-water port, and to assess the fish catch status and the challenges faced by the fishermen before these projects begin.
- (d) To examine the passage of oil tankers in the fishing zones of the fishermen and the impact of the deep-water ports and to realize particular implications on the permit to fish only in the designated areas and the loss due to the restrictions during the entry and exit of the oil tankers.
- (e) To investigate fish changes and declines in the population of some fishes or extinctions following the implementation of project constraints, as well as to collect information on endangered species, fish mortality scenarios, and the impact of digging the underwater stones where the fish inhabit.
- (f) To comprehend and record the difficulties encountered by fishermen owing to the limitations and lack of fishing zones, as well as the challenges of fishing near the ship's entry and exit.
- (g) To gather information on the impact of oil tanker passage, the loss of coral reefs and ecosystems in the fishing zones, and the findings and concerns of the fisher communities about the adverse effects of the deep-water port projects
- (h) To evaluate the communication and level of engagement between the local community and the relevant authorities about the establishment of fishing zones and other limitations in the project areas.
- (i) To understand the livelihood limitations of the fisher communities and their families, as well as the consequences of the economic impact, and to examine the possible earnings loss, food security challenges, potential conflicts between the fisher community and project companies, or conflicts, and to resolve those disputes and know the actions
- (j) To record the compensation or support received by the fishermen, as well as to analyze the actions taken by the relevant authorities or stakeholders in response to the concerns and sufferings of the fisher communities regarding the fishing restrictions.

- (k) To obtain suggestions from the fisher communities to achieve a balance of interests between the needs of the fisher communities and development projects, particularly the Shwe natural gas industry and the deep-water port project.

Summary of findings

(a) Impact on the fishing industry and livelihood activities



Fishing experience and livelihood

The participants in the discussion had at least three to forty years of fishing experience, with the majority being inshore fishers who rely on fishing for their livelihood. As an alternate source of income, some of them grow paddy and vegetables.

Shwe Natural Gas Project and deep-water port project

The Shwe offshore gas project in Rakhine is currently being developed by POSCO International (51%, Operator), Oil and Natural Gas Operation (ONGC) Videsh India (17%), Myanmar Oil and Gas Enterprise (15%), Gas Authority of India (GAIL: 8.5%), and Korean Gas Corporation. The project began in 2005 on Made Island, and the gas and oil produced are piped from the Made Island to Yunnan Province in China. Oil tankers from the Middle East often port at Made Island to transport oil.

Offshore project	Operator (%)	Interest Distribution (in%)
Shwe	Daewoo 51%	MOGE 15% ONGC Videsh Ltd, 17% Gail JJ India 8.5% Korea Gas Corporation 8.5%

Table 1- Participation of the joint venture in the Shwe offshore gas project ³

Changes in the fishing zones and limitations

Fishermen have experienced difficulties catching fish since the passage of the oil tankers. Furthermore, since the development of the Made Island deep-water port, the majority of the fishing nets have been destroyed by the disposal of small rocks from the mining of the rock mass, as well as the demolition of the mountains with backhoes. Regarding these losses and damages, the project companies failed to hold themselves accountable for compensation and community meetings. Since the entry of the oil tankers, fishing, the fishermen's primary source of income, has become harder. The discharge of rocks into the river makes fishing zones scarce and challenging for the fishing sector. Although the fishing sector was better before the project began, the passage of oil tankers and the implementation of deep-water port activities affected the livelihoods of fisher communities.

“Before the arrival of oil tankers, each person may feed one family by casting a fishing net. Currently, each individual has to operate three or four nets. However, since the fish was not caught, we faced a terrible circumstance regarding our living. The issue is that since the passage of the oil tankers, the conditions in the fishing industry have been heading in an adverse direction.”

A local fisherman

³ https://myanmareiti.org/sites/myanmareiti.org/files/publication_docs/spelling-checked-meiti_reconciliation_report_2015-2016updated_v2

Furthermore, before the project begins, it is preferable to manage the fishing better, and after the damage to the fishing net, there is no serious concern, but it turns into difficult to manage the livelihood owing to the casting of many nets after the project.

Impact on the fishing industry and fish species

The passage of oil tankers, as well as the deep-water port project, had a substantial impact on fishermen's normal catch. The restricted fishing in the authorized waterway for oil tankers makes fishing harder. Furthermore, several fish species have disappeared in the non-fishing zone near the project, affecting the marine ecosystem, while local fish species have been lost along the Thansit River as a result of the Chinese oil tanker movement. Following the implementation of Chinese projects, the fish catch rate declined, and native fish species such as Yuzana, Ngar Nyot (Mackerel Fish), Satphar (Blotched Tiger toothed croaker), Satphar Yoe Shae, Ngar Tan (Yellow Tail Catfish), and Nga Yan Khone Zee Toke became endangered. When the waterways were cleared to allow ships to enter and leave, the underwater rocks were mined, resulting in the deaths of Nga Taut Tu (Grouper fish) and Nga Lat Khwar (Four-finger threadfin).

The non-fishing signboard was placed in the project area of China National Petroleum Corporation (CNPC), and when a villager went fishing in this area, disputes arose because the responsible company staff warned him to stop fishing.⁴ This restricted area is where the Made Island residents used to fish for their livelihood. The restrictions on this location made it difficult for the villagers living there to catch fish.

Challenges in entering fishing grounds

The location of the water pole for ship entry and exit (a marker pole used to define international waterways) was restricted for fishing, posing significant challenges to fisher families' livelihoods. Fishermen who employed drift nets, king prawn nets, and Nga Lat Khwar (four-finger threadfins) nets for fishing faced many problems. When the ships arrived and started throwing these nets, problems such as ships passing on the nets, cutting the nets themselves, and the nets becoming damaged due to entanglement with the water poles occurred. These nets were only utilized for fishing at the ship's entry and exit sites when the river became full of water.

Since the commencement of Chinese projects, fish capture has decreased and fish species have disappeared. The designation of a non-fishing zone surrounding CNPC projects created issues for fishermen from nearby villages. The fishermen had difficulty entering the fishing areas due to a

⁴ Focus Group Discussions with the fishery men from the affected community

lack of fishing zones and restrictions imposed by the companies and they were also threatened. Fishing is prohibited in project areas, making it difficult for the villagers who fish for a living.

No prior informs to the local communities for the non-fishing limitations. When the ship arrives, the policemen came by speed boat initially and told not to fish during the ship entry and exit. Which day, date and what time for the ship's entry and exit is not known and the fisher communities had faced a lot of difficulties.

“There was no prior notice to the local communities regarding the non-fishing restrictions. When the ship came in, the police arrived by John Sein (speed boat) and warned people not to fish during the ship's entry and departure. The day, date, and hour of the ship's entry and exit are unknown, and the fishing communities were facing several challenges.”

A local fisherman

(b) Impact on the marine ecosystem

The oil tanker and deep-water port projects have had a negative impact on the marine ecosystems in the fishing zones. The passing of oil tankers created a massive vibration, which harmed the population of fish species, which can no longer live in this area. To allow ships to enter and exit, there were several instances of fishermen's nets being damaged by entangling the rock piles at the available area caused by subterranean rock mining. There were also many cases where coral reefs were damaged, aquatic species' habitats were depleted, and their reproductive systems were harmed as a result of mining underground rocks.

(c) Social and economic impacts

The Shwe Natural Gas project and the deep-water port project have been demonstrated to have an extensive social and economic impact on the local communities. Selling land and allowing migrant workers to enter changed the daily lives of the locals. The lack of employment creation and compensation for losses under the present market value makes it difficult for fishermen and their families to manage businesses, as well as posing problems, tensions, and legal actions between the local communities and project companies.

(d) Communication and compensation

There were circumstances in which fifty thousand kyats were provided as a result of stopping to toss the kyawt pite while testing the water and air for a deep-water project. All of the fishermen employed by Kyawt Pite were not compensated at the time. Kyawt Pite was entangled by ships when the air and water were measured, no compensation was received, and no action was taken to address the damage that occurred. There have also been examples of non-compensation and unsolved cases resulting from fishing net damage caused by ship passage. The fishermen

themselves are in a difficult situation where they do not know where to file complaints or who to rely on to resolve these issues.

(e) Needs of the fisher communities

The fishermen were quite concerned about diminishing the fishing business and fishing plots. Although they reported to the government authorities their losses, no action was taken, and it appears that the person who filed complaints will be punished since they fish in non-fishing zones defined by them. If the fishing grounds disappeared, fishermen's livelihoods would suffer considerably. Since the rate of entry and exit is significantly higher than it is now, the fishing sector will be unable to employ people. Thus, the government and local authorities have to engage with the fishing communities and take into account the future of the fishermen. Furthermore, according to the FGD answers provided by participants, there is a need to create alternative livelihood activities in fishing-related industries, as well as establish and explore fishing plots to ensure the sustainability of their livelihood. Participants agreed that it is critical to include the concerns of fishermen in the planning and implementation of development projects to maintain a balance between economic development and the preservation of interest for fishing communities. The fishing communities intend to have discussions with local authorities in an attempt to find solutions.

(f) Negative impact of the projects

The Shwe Natural Gas Project and deep-water port had solely negative effects on the fishing communities. These projects had a lack of transparency, few job opportunities, and provided payments that were less than the current worth, this continues to happen. The Shwe Natural Gas project resulted in land and environmental devastation, including the loss of paddy and horticulture land.

It was found that there was no beneficial impact on local fisher communities and that it only triggered challenges for the local fishing industry, resulting in the disappearance of fishing plots and fish species, as well as the destruction of coral reefs due to mining. In conclusion, the Shwe Natural Gas project and the deep-water port project have had an extensive harmful impact on fishing communities, creating conditions that lead to fishing restrictions, loss of livelihoods, and other serious effects. The fishermen are seeking compensation and support to sustain their livelihood, and it was recommended to seek for options that will balance their requirements with the development of projects.

4. Conclusion



During the FGD, the members of the fisher communities expressed their significant challenges and negative impacts since the commencement of the Shwe Gas Natural Project and the deep-water project. The fishermen, who have ten decades of experience in the fishery business, discussed how the projects had affected their livelihoods and the local marine ecosystem.

The passage of oil tankers and the restriction of fishing activities as a result of the construction of a deep-water port are major concerns for the fishing villages. The waterways designated for oil tankers hindered their ability to capture fish, making it difficult for them to maintain their economic status and earnings. Furthermore, the extraction of undersea stones and the discharge of stones into the river interfere with fishermen's fishing activities and worsen the family's living conditions.

Furthermore, the fisher communities noted a decline in fish species and the disappearance of some native fish as a result of the docking and departure of Chinese oil tankers. The deterioration of coral reefs and the extinction of aquatic animals are the most serious threats to the marine ecosystem.

Concerning restrictions on fishing and project implementation, no consultation was undertaken with the local communities, resulting in disputes and tensions between fishing communities and project companies. There were penalties and threats to fishing in restricted zones, which added to the challenges encountered by fishermen. There were adverse implications for the fishing community, and the benefits of the Shwe Natural Gas Project and deep-water port project are questionable for wider local communities. Lack of transparency, insufficient creation of job opportunities, and failure to provide compensation for losses all exacerbated the negative impact on local communities, including the destruction of land and the environment.

To address the aforementioned issues, many suggestions are proposed to find a balance between the requirements of fishing communities and project development. These suggestions include conducting Environmental Impact Assessments (EIAs) independently, providing alternative livelihood options for affected fishermen, improving transparency and communication with fishing communities, and implementing sustainable development projects.

In conclusion, while it is understandable that the actual achievement of the Shwe Natural Gas and deep-water projects will have no impact on the good benefits of the fishing communities and marine ecosystem because a lack of cooperation, meaningful engagement, and justice resolutions will have negative consequences, it will be necessary to mitigate those conditions and foster the stakeholders' long-term sustainability.

5. Recommendations

- (a) To provide adequate compensation to affected local communities who are impacted by the project.
- (b) To undertake Environmental Impact Assessment (EIA) independently and provide transparent mitigation plans.
- (c) To create alternative livelihoods for affected local fishing communities
- (d) Local authorities in the region must convene an urgent meeting and discussions with the fishing communities to find solutions.