

# Which natural resource governance arrangements empower local communities to shape development in Arakan State?: the Case Study of Shwe Gas Project

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## Abstract

Several studies have previously explored the environmental impacts of the government's weak policies on natural resource production and the suffering experienced by the local population. A few research papers have discussed the role of local community empowerment in regional development. The government ignored the local people and the development of the region. It adopted policies that only favored the companies working on the project and the foreign companies' interests. Local people in the project area suffered negative impacts as the project progressed. Development projects affect local people negatively, including the environment and the confiscation of land. Despite several case studies of natural resource projects in Myanmar, there are not many papers that discuss the details of the projects as research papers with theoretical discussions. Therefore, we conducted a case study to evaluate the Kyaukphyu Shwe Gas Project to analyze the governance of the government on local people. A weak level of community participation was noticeable in the development of this project. Our findings suggest the need to strengthen the role of local communities in the development of their areas and empower them to participate in decision-making. Furthermore, this research emphasizes the need for a resource management framework that takes local opinions into account when developing a governance structure.

**Keywords:** natural resource governance, local community, empowerment, development

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## Introduction

Myanmar is rich in its own natural resources, and natural gas, timber logs, rubies, and jade play an important role in finding national income (Allen & Einzenberger, 2013). Of natural resources, such as natural gas, many projects are being conducted by the government in cooperation with other countries, such as the Yadana project and the Shwe Gas Project, which bring millions of dollars to the country. According to the Asian Dignity Initiative, Mineral Inheritors Rights Association, and Publish What You Pay Australia (2021), offshore gas sales were expected to proceed for USD 1.54 billion, or about 10 percent of the country's revenue. 80 percent of gas is exported to China, and approximately 20 percent is used domestically (Extractive Industries Transparency Initiative, 2020). According to EarthRights International (2013), the pipeline is designed to transport Myanmar's gas from Kyauk Phyu, Arakan state, to Yunnan state in China, crossing through Magway division, Mandalay division, and the northeast of northern Shan state. The Shwe gas project was implemented with the Daewoo company and MOGE, the Myanmar Oil and Gas Enterprise.

Alongside the history of Myanmar, the distinct characteristics of the governance structure are only related to centralization, in which power is concentrated in the hands of a few leaders or responsible people. The central government controls all the projects related to natural resources without allocating its power to the lower level (The Asia Foundation, 2018). As there is much centralization, most projects of natural resources, such as the Yadana Project and the Shwe gas project, are criticized for not having transparency with the local people. Moreover, the government prohibits the local CSOs and NGOs from having a voice for decentralization publicly (Asian Development Bank, 2015). In contrast with Myanmar, in many countries such as India and the Philippines, they practice local peoples' participation in the project, which is conducted in that community. Although the central government performs natural resource governance in Myanmar, in other countries, natural resource governance allocates some extent of power to manage natural resources. Natural resource governance means the norms, structures, and institutions that determine what is the power of natural resource governance, how decisions will be processed in order to bring benefits for the local community, including all kinds of gender, indigenous people (Springer, Campese, & Nakangu, 2021). In most international projects, they mostly use public-private partnership [PPP], to elaborate the benefits of the local people.

In the Shwe gas project, there are many criticisms, such as a lack of transparency in land confiscation (EarthRights International, 2013) and a lack of distinct support for local people. It can be

claimed that the disadvantages are more than the advantages; local communities are suffering environmental impacts and social impacts, such as destroyed farmland and polluted fishing areas (EarthRights International, 2022). Moreover, there is little support for local community development in education and transportation by using the revenue of natural resources, as we can see there is no academic education, such as a university, and an inadequate electric supply in Kyauk Phyu.

Although many research projects point out the government function and the suffering of the local people, there is little research on strategies to empower local communities and natural resource governance. Therefore, our research group tried to fill the gap that emphasizes resource governance to bring community development with a case study of the Shwe Gas project. In our research paper, we will present theories of natural resource governance, the role of local communities in natural resource governance and relation to development, an overview of the problems that local communities face in the Shwe gas project, discuss the importance of community-based agreement, and provide recommendations related to natural resource governance. Despite the current conflicts in Myanmar, this research presents the natural resource governance between 2015 and 2020, the lives of local people, and theoretical viewpoints with a focus on example case in Arakan state.

## Theoretical Background

### What is Natural Resource Governance?

Natural resources are those that are present on the earth but are not influenced by human activity. These are the resources that are created naturally from materials found in the environment. Natural resources can be a significant source of wealth for a country, providing livelihoods, food security, and contributing to the green economy, as well as generating trade and enterprise locally, nationally, and internationally (Chêne, 2017). But with large volumes of revenue at stake, the extractives sector is also often associated with poor governance and corruption. Therefore, deciding whether natural resources can be beneficial or harmful to a country depends on its governance of the extractive industries.

Ideas about how to govern natural resources have evolved significantly over the last 30 years (Andersson, Gibson, & Lehoucq, 2004). Natural resource governance is a concept that refers to a combination of norms, institutions, and processes that determine how people exercise their authority over and responsibility for natural resources, how decisions are made, and how citizens, including

women, men, youth, indigenous peoples, and local communities, are impacted by the management of natural resources (Graham, Amos, & Plumptre, 2003).

The decentralization of natural resource governance has become increasingly popular since the mid-1980s, in combination with two important trends (Larson & Soto, 2008). First, political shifts, such as the end of colonial structures in Africa and of authoritarian governments in Latin America, led to the establishment of newly elected and autonomous local authorities, which have gained increasing power and responsibility over the past two decades. Second, there has been a growing tendency to see people less as a problem and more as a solution concerning land and natural resource degradation (Lambin, Geist, & Lepers 2003; Larson, 2001) and to recognize that management and controls are more effective when local populations play a role in making the rules (Gibson, McKean, & Ostrom, 2000).

### **Local Communities and Development**

It is a community that plays a strong role in shaping its own future, on its own terms. Powerful communities are a route towards more resilient and sustainable systems in multiple domains across society and the economy (Local Trust, 2021). A powerful community is not simply one that is consulted, engaged or involved in decision-making processes on other people's terms (Local Trust, 2021).

It is becoming more and more crucial for local residents to band together and participate locally in order to address the difficulties affecting their communities (Brennan & Berardi, 2023). Creating programs in environments with varying stakeholder needs, values, and policy preferences can be challenging for extension professionals and policymakers (Brennan & Berardi, 2023). In many communities, these conflicts are often rooted in differences between groups that seek to protect community quality and those that seek to exploit local resources (especially the local workforce and natural resource base) as a means of achieving economic development. The importance of organizing diverse local residents to help shape local development cannot be overstated.

Fabricius and Collins (2007) state that community-based natural resource management focuses on the collective management of ecosystems to improve human well-being. It aims to devolve authority for ecosystem management to the local (community) level, thereby empowering communities to manage their own resources without permanently damaging, depleting or degrading them (Fabricius & Collins, 2007). Community-based natural resource management promotes conservation through the sustainable use of natural resources, enables communities to generate income that can be used for

rural development, and promotes democracy and good governance in local institutions (Pact, n.d.). It is therefore important that natural resource extraction projects include local communities in managing and governing the projects so that they can be empowered for the development of the project's area.

### **Resource Governance and the Role of Local Communities**

Natural resource governance refers to the standards, institutions, frameworks, and procedures that establish how authority and responsibility over natural resources are exercised, how decisions are made, and how citizens—including indigenous peoples, local groups, people of all genders, and others—participate in and gain from the management of natural resources (Springer et al., 2021). A local community is any community of people living or having rights or interests in a distinct geographical area.

The process through which individuals, families, or communities assume responsibility for their own welfare and gain the capacity to contribute to their own and the community development is defined as community engagement in development efforts, and it brings beneficiaries and efficiencies to the project (Wiyaboon, 2019). According to Brager, Specht, and Torczyner (1987), participation is a strategy for empowering and educating citizens. It is a means of influencing choices that have an impact on citizens' lives and a channel for the transfer of political power.

According to the Sahla, Bauer, and Kirk (2018), in Mongolia, national laws give district governors the right to apply penalties for environmental violations. In a unitary state like the Philippines, mineral licenses are granted by the national ministry and approved by local governance (Sahla et al., 2018). In some cases, indigenous communities are allowed to participate in policy implementation. Artisanal and small-scale licenses are managed by local-level boards. In many countries, national and state levels have shared power in granting licenses for exploration or production.

In India, which is a semi-federal state, national laws govern mineral licensing and environmental approvals; however, states are responsible for implementation. States collect royalties from onshore petroleum but do so at rates set by the national government. In offshore petroleum, the national government collects royalties. In Australia, which is termed a federal state, national ministers and state or territory counterparts grant offshore petroleum licenses by joint decision (Sahla et al., 2018).

Moreover, there is subnational responsibility to manage the sector's negative impacts for safety, artisanal mining, and health, even in a unitary country. Nevertheless, there are common national responsibilities such as setting taxes, royalty taxes, collecting major revenue streams, and negotiating

large-scale contracts in offshore oil and gas. In Malaysia, offshore petroleum royalties are in the hands of the national government. In these countries, they allocate power to local governance, and some countries even allow local indigenous people to participate in the project to bring benefits to the local community.

### **Resource Governance and the Role of Local Communities in Myanmar**

In Myanmar, the sharing and management of natural resources is dominated by centralization because it has been ruled by military dictatorships since independence (Lynn & Oye, 2014). According to the 2008 Constitution, its provisions mention that states and regions are in charge of their legislation and administration of several areas, such as natural resource governance responsibilities, licensing, and collection powers. Under Schedule 2 of the 2008 Constitution, states and regions have responsibilities for legislating on and administering natural resource governance, including small and medium-sized power production and distribution of the cutting and polishing of gemstones, village firewood plantation, and salt products. Though chief ministers are selected from states and regions, they are accountable to the President. Therefore, the administration and legislation of states and regions are limited in practice.

With the assignment of the responsibilities according to the resource type, Union Ministers of the central government govern and manage the natural resources. Myanmar oil and gas enterprise is under the Ministry of Electricity and Energy. Mining, which is the other high-earning enterprise in Myanmar, is under the Ministry of Natural Resources and Environmental Conservation. As a result of these facts, the government monopolizes projects related to the extraction of natural resources. And Article 37 of Myanmar's 2008 Constitution states that the Union:

(a) is the ultimate owner of all lands and all-natural resources above and below the ground, above and beneath the water, and in the atmosphere in the Union;

(b) shall enact the necessary law to supervise the extraction and utilization of state-owned natural resources by economic forces. Article 37 of the Myanmar constitution disregards the rights of indigenous people to ownership of natural resources. This results in a lack of local participation in the project management process. The lack of participation by the local population results in the local people suffering from the project's disadvantages and hindering their development (State and Peace Development Council, 2008).

In some instances, the local people suffer the consequences and degrade local development due to the extraction of natural resources without their participation. Although the rural livelihoods lean on natural resources, the impacts of resource extraction are suffered by them. Of the four offshore projects, in the Yadana project, the issues such as creating dependency, lack of sustainability and accountability for negative impacts, and failing to engage with the affected local community are found (Teacircleoxford, 2022). In Hpakant township, environmental impacts and losses of life are suffered due to the height of heaps of mining waste, which are discarded earth and stones. Companies often exceed government limits on tailing heap height (Fishbein & Lamung, 2020). In Myanmar, natural resource revenue sharing and decision making on how to collect and disburse revenue within the Union budget is especially centralized, and any state has generated with small amount from natural resources.

### **Shwe Gas Project in Myanmar**

A unique landscape and traditional rural lifestyle are all incorporated within Kyaukpyu Township, a place filled with enchanting sea beaches and picturesque islands. The Shwe Gas Project location, Kyaukphyu, is formed by several islands and is the smallest of the towns. In all rivers and creeks, there is a tide all year long, and they are all salinized. As a result, the majority of villages in the township are accessible only by water transportation. The village of Rambree is accessible by road on Rambree's main island, where Kyauk Phyu is located. Started in 2000, the Shwe project is led by a consortium of companies carrying out natural gas operations in the Shwe, Shwe Phyu, and Mya gas fields situated in blocks A-1 and A-3 off the coast of Rakhine State. With 51 percent ownership of the shares for both blocks, Daewoo International Corporation of Korea is the operator of the project. ONGC Videsh Limited and Gail Limited from India hold 17 percent and 8.5 percent of the shares, respectively, and Korea Gas Corporation has another 8.5 percent. Myanmar Oil and Gas Enterprise [MOGE], as the national partner in the Shwe consortium, holds a 15 percent share. The natural gas produced under the Shwe project will be sold to the affiliate of China National Petroleum Corporation and sent to China via a pipeline that will run across Myanmar territory, as agreed in 2008. The project was started in 2009. The Onshore Gas Terminal [OGT] is being constructed near Kyauk Phyu. Construction of the OGT was started in 2009 and will be completed in 2013 (Shwe Gas Movement, 2009).

Myanmar began exporting natural gas to China in 2014, after the completion of the export pipeline from the northern offshore Shwe gas field to the Chinese border. In 2017, 3.8 bcm,

approximately 80 percent of the Shwe gas field production, was exported to China (Kobayashi & Han, 2018). The Shwe Gas Project is the largest extractive project in Myanmar, with a possible earning of 54 billion USD for the government (Environmental Justice Atlas, 2019).

### **Problems in the Shwe Gas Project**

Several impacts have been seen on the livelihood of local people as a result of the Shwe gas project. Loss of existing ecosystem service provided by primary remnant forest and secondary woodland, and other habitats to local communities. Loss of agricultural lands and loss of yield of stable rice and other crops. Land acquisition, compensation, and resettlement issues. Change of entire lifestyles, professions, and livelihoods of communities. The price of commodities is expected to increase. Navigational issues and loss of fishing ground due to the increased movement of vessels and restrictions for oil and gas exploration. Interruption to local businesses such as artisanal oil dug wells (Myanmar Environment Institute, 2017). The project has damaged coastal ecosystems, polluted fishing areas, and destroyed farmland. In Kyaukpyu Township, industrial waste has washed into farmlands during monsoon seasons (EarthRights International, 2022). Increased sedimentation from construction runoff in the local water course and marine water pollution. Potential impact on the sensitive coral reef and marine turtle due to the accidental discharge of solid waste and other hazardous water from operation and construction work to local water bodies (Myanmar Environment Institute, 2017). Many other environmental impacts may be caused by the Shwe gas project. Locals are suffering from these problems.

## Conceptual Framework

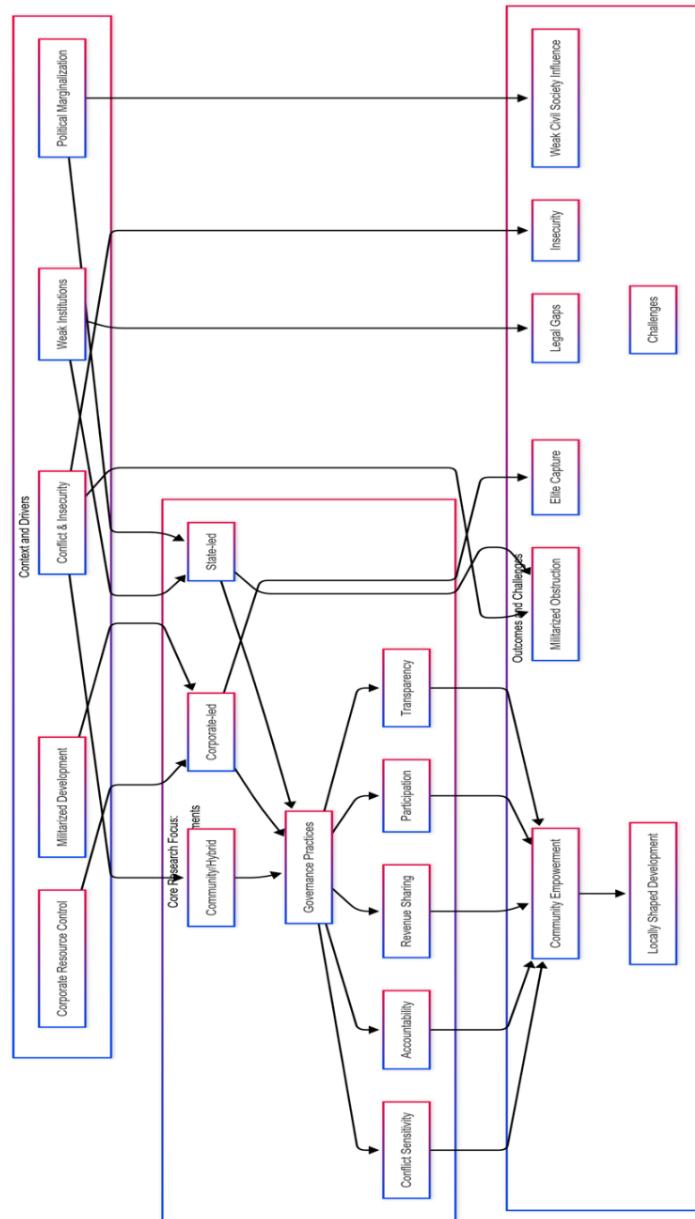


Figure 1. Diagram for Conceptual Framework

### I. Context and Drivers

This framework is based on the realization of what is behind the governance of natural resources in Arakan State as a structural intervention to realize proper governance. The literature emphasizes long-standing political marginalization of the Rakhine people, where central government control has limited regional autonomy and excluded local voices from meaningful participation in development decisions.

This is compounded by militarized development models, where the armed forces oversee extractive projects such as the Shwe Gas Project, often prioritizing national energy needs and elite interests over community welfare.

In parallel, corporate resource control, especially by transnational actors involved in the gas consortium, reflects a profit-driven orientation with limited local accountability. Such arrangements occur in a weak institutional setting, which is characterized by a lack of strong legal protection of local land and other resources. Moreover, the area is characterized by insecurity and conflict, such as the armed conflict between ethnic groups, such as the Arakan Army, further complicating governance and diminishing civil space. Such drivers precondition the processes of negotiating and contesting governance structures in practice.

## II. Core Research Focus: Governance Arrangements

The study of the impact of various governing arrangements on the empowerment of the local communities is at the core of this framework. The research differentiates three of them:

- 1. State-led Governance:** This model is centralized, opaque, and top-down, with little consideration given to the input of the locals, and it tends to use security mechanisms to exercise control.
- 2. Corporate-led Governance:** Driven by external investors and energy companies, this model is often framed by corporate social responsibility [CSR] but lacks mechanisms for genuine accountability.
- 3. Community/Hybrid Governance:** This set-off is an outcome of grass-roots mobilization, traditional customs, and the presence of ethnic administrative systems. It introduces more open and context-related options.

These arrangements manifest through specific governance practices identified in the literature, such as transparency, participation, revenue sharing, accountability, and conflict sensitivity. The presence or absence of these practices mediates the impact of governance models on community agency. For instance, when transparency and participation are weak—as seen in state and corporate models—communities remain disempowered. In contrast, hybrid models with strong local leadership and ethnic institutions tend to foster greater inclusion.

### III. Outcomes and Challenges

The last section of the framework focuses on the results of these interactions of governance and the enduring issues communities continue to encounter. A participatory and inclusive form of governance results in the empowerment of communities, which is gauged by the greater freedom in the decision-making process, the acknowledgement of land ownership, and greater weight in the distribution of resources. Reinforced groups are in a more favourable position to influence the development process, such as local infrastructure, service delivery, and sustainable livelihood projects.

However, the literature also outlines significant challenges. Even in the presence of community initiatives, militarized obstruction often undermines local governance processes. Additionally, elite capture—where powerful actors monopolize benefits—limits equitable outcomes. Legal and institutional weaknesses mean that community rights are not adequately protected, while ongoing insecurity deters investment in community-led development. Lastly, civil society influence remains limited, especially under authoritarian or post-conflict conditions.

This conceptual framework offers a layered understanding of how governance arrangements—shaped by context—translate into varied outcomes for local communities. It helps explain why certain models fail to empower while others, under the right conditions, offer pathways to more equitable and sustainable development in resource-rich but politically complex areas like Arakan State

## Methodology

### Research Strategy

Many previous academic studies show that local communities can play an important role in planning and managing natural resources, not only in Myanmar but worldwide as well. Hence, the proposed research was a new study based on an already existing topic. The focus is based on the natural resource project in Arakan state, an ethnic state in Myanmar, with an inclusive discussion on local participation and governance.

### Research Methodology

It was necessary to conduct qualitative research to meet the research's objectives, as it explores the real situation of local people in the Shwe Gas project and the opinions of experts who are somehow related to it. This research was conducted using an inductive research approach. In this approach,

research begins with specific observations, such as the negative impacts of the Shwe Gas project on the local people, and then it leads to research theories and conclusions.

This approach is most appropriate for small samples that produce qualitative data and takes into account the context where the research is taking place. A major weakness of the inductive approach lies in the fact that it develops generalized theories and conclusions only based on a small number of observations, thus reducing the reliability of the research (Denzin & Lincoln, 2005). It also makes it less reliable for a larger audience, applicable primarily to the smaller targeted research group. However, based on the information availability and accessibility during the conflicts, this research was designed to include the voices and discussions by stakeholders locally and professionally.

### **Data Collection Method and Tools**

In-depth interviews were used in this study. Participants who participate in in-depth interviews express their opinions, emotions, and feelings about the research subject in an unstructured manner. Interviews are preferred because they involve direct and personal contact with interviewees, as well as reducing non-response rates. To conduct an interview successfully, interviewers need to develop the necessary skills. Additionally, unstructured interviews are flexible in terms of their flow, allowing conclusions to be derived regarding a research subject that weren't originally intended. Although there is a risk that the interview may deviate from the pre-specified goals and objectives of the study.

As for data collection tools, a semi-structured questionnaire was used as an interview guide by the researcher during the conduct of this study. The researcher prepared certain questions to guide the interview to fulfil the research objectives, but additional questions were added during the interview. There were the following sample questions were included in the semi-structured questionnaire:

- How could the role of local communities in the projects be related to natural resources?
- What are the impacts of policy governance on local communities?
- How can the local community participate in natural resource management or the projects?
- How important would you think fostering local communities is in projects related to natural resources?

We gathered secondary data from the internet, governmental and non-governmental organizations, and electronic libraries, which greatly aided us in gathering the necessary information. Our ability to acquire data from primary sources is constrained by the current circumstances in Myanmar. Therefore, secondary data fills in the information gaps left by primary sources.

### **Sample Selection**

The sample for the research under discussion was developed using purposive sampling. The sample members for this method, which is part of non-probability sampling techniques, are selected based on their knowledge, relationships, and expertise regarding the research subject. The sample members selected in the current study had a special relationship to the phenomena under investigation, had sufficient and relevant experience in managing natural resources, participated actively in local development initiatives, as well as had a solid research background and an understanding of destination raw data.

### **Research Process**

During October and November of 2022, we began contacting the selected individuals mentioned above to gain their consent for participation. Following a detailed explanation of the study's scope and nature, the researchers approached them and asked them to participate. In general, the respondents were willing to participate in the research, and the interviews took place from October to November of 2022. We interviewed via Zoom, and it took about 40 to 60 minutes each. For analysis of the collected data, notes were kept during the interview, and the Zoom was recorded. Respondents were free to express their views even on topics not included in the discussions that were referenced in the interview questions during the interview process. In conclusion, the conversations were pleasant and smoothly paced.

### **Data analysis**

Using content analysis, the data collected from personal interviews was analyzed. Moore & McCabe (2005) define this type of research as that which categorizes the data gathered into themes and sub-themes to make it comparable. Content analysis has the advantage of reducing and simplifying collected data while also producing quantitatively measurable results. Furthermore, content analysis enables researchers to structure qualitative data in a way that fulfils their research objectives. In content

analysis, human error is extremely common, since researchers can misinterpret the data collected, thereby generating false and unreliable conclusions (Krippendorff, 2004).

### **Ethical Considerations**

There were certain ethical issues associated with the current study. All participants signed a Consent and Briefing Letter indicating their written acceptance regarding their participation in the research. In addition, sample members were asked to sign a letter of debriefing and withdrawal. As a result of both letters, participants were reassured that their participation was voluntary and that they could withdraw from the study at any time. We won't mention the participants' identities because Rakhine State is a conflict zone for our research. We are extremely concerned about the security of participant research.

Additionally, participants were informed of the study's objectives and assured that their answers would be treated confidentially and that their answers would only be used for academic purposes and only for this particular study. A comfortable climate was created and maintained by the researchers.

### **Research Limitations**

In this research, there were the following limitations, as in every study:

- There were six participants in the study, which was relatively small. There is probably a greater likelihood of the research being more reliable if the sample size were larger.
- There are limitations in finding policies because of government transparency in the past and the present.
- Some participants refuse to speak out against their organizations.
- We didn't get enough information because of the current situation and security concerns in Myanmar.

In addition, the current power dynamics in Arakan state is challenging to distinguish; however, we anticipate that the natural resource governance will apply to the benefit of the communities regardless of the authority holders.

## Finding and Discussion

### Supply and Demand/ Reality and Expectation

Regional development is a broad term regarded as a general effort to enhance well-being and living standards in all regional types, from cities to rural areas, and improve their contribution to national performance and more inclusive, resilient societies (Organization for Economic Co-operation and Development, 2018). As the local people are the ones who primarily desire to bring regional development, the local people near the Kyauk Phyu region welcomed the Shwe Gas Project. They think that the project would bring development that guarantees their food security and protects their livelihoods. One of our interviewees, a resident of Kyauk Phyu, also said that *“From 2010 through 2015, the people of the region were interested in development, and they didn’t know anything about the project.”* Moreover, on 2 May 2013, the local people from 3 organizations, 4 Quarters, and 13 villages of Kyauk Phyu Township published a statement respecting environmental and social impacts (“Statement by local residents at Ramree Island regarding Shwe gas project, deep sea port, and oil and gas pipeline”, 2013). In that statement, they requested DAEWOO International, China National Petroleum Corporation [CNPC], and MOGE to be responsible for the impacts affected by the project.

### Electricity Supply

Although Rakhine State can earn foreign income due to the abundance of natural gas, the region is the least developed among the states and still needs to develop basic infrastructure such as good transportation, electricity supply, education, and so on. Truth be told, the Corporate Socially Responsible Activities of the Shwe Gas Project regarding electricity and transportation are slightly lower than average. Industrial development, social welfare, and improved healthcare have all been enabled by electricity. While a solar station in Manaung island has been installed by POSCO International as a part of CSR activities in the project, there is still a chronic shortage of electricity supply in rural areas in Rakhine State (Min-hee, 2019). In the Kyauk Phyu region, where the Shwe Gas Project is located, 42,634 out of 101,776 households have access to electricity, and only 41 percent of households in Kyauk Phyu have access to electricity (Ministry of Electricity and Energy, 2022).

Concerning the issue of electricity, one of our interviewees, a resident of Kyauk Phyu, said, *“The electricity supply is in a very bad situation. This means that only the villages on Kyauk Phyu*

**Main Road, which is called Asia Road, can access electricity.**" In comparison with other countries, Myanmar's production of gas is striking, but Myanmar consumes less than 5 percent of the electricity consumed by Thailand or China (BankTrack, 2016). Moreover, although Kyauk Phyu has available energy sources for producing electricity, such as natural gas, the amount of electrification for this region remains low. Insufficient electricity also has negative effects on the development of the region.

### Transportation

Regions can develop following their transportation systems. For business and social needs, the people in Kyauk Phyu Township rely primarily on waterways and landways. When the Shwe Gas pipeline starts, local development works will be carried out by both the government and the companies involved, but in reality, local roads were damaged due to the Shwe Gas Pipeline. One of our interviewees, a resident of Kyauk Phyu, also said, *"The transportation to the small villages around the industrial zone is not good. Thus, it takes about 3 hours to travel ten miles by motorcycle. There are no bridges to cross the streams. Regional development is completely ignored."* There was no accountability by the government or the company. The roads are damaged by the construction vehicles, and haphazard burial of pipelines under roads, and accidents have occurred on those roads (Thar, 2011). Impacts on transit areas can impose a financial burden on citizens, increasing transportation times (EarthRights International, 2013). Local roads have traditionally connected Mala Kyun, Gone Schwein, and Eu Toe villages. However, construction vehicles have created such extensive damage that roads have become impassable after it rains (Slack, 2022). Daewoo International has contracted Myanmar Golden Crown [MGC] to repair this damage, but MGC has not adequately corrected all major problems back to their previous condition (EarthRights International, 2013).

### Environmental Impacts

The Shwe project caused damage to coastal ecosystems, polluted fishing areas, and destroyed farmland. In Kyaukphyu Township, during monsoon seasons, farmlands have been washed with industrial refuse. The most striking fact about environmental effects is that several farmers' lands were damaged as mud from the pipeline trench washed onto and destroyed their fields. These farmers complained to the Kyauk Phyu Township Peace and Development Council, but got no response (EarthRights International, 2013). One of our interviewees, a resident of Kyauk Phyu, also said, *"To prepare the land for the project, the mountains had to be demolished, and sometimes, the tributaries had to be*

*closed.*" The project created multiple adverse impacts on the lives and livelihoods of local communities.

Another environmental impact is that contaminated water was discovered in Kyauk Phyu's Thanzit River in July 2018 and September 2019 (Min, 2019). One participant of the Centre for Peace and Development [CPD] also said that "*In 2019, billions of clams died in the Ann township of Kyauk Phyu District because contaminated water was released from the project area and flooded the river.*" One of the respondents from MOGE also said that "*Although Environmental Impact Assessment and Social Impact Assessment were done according to the company's standard before operating the project, MOGE didn't do a review on that.*" Without proper preparation and environmental management, environmental impacts from the project can destroy marine life and endanger the livelihoods of local people near the project.

### Land and Confiscation

For the Shwe Gas Project, the government has confiscated the farmlands that the local people have been working on for generations. Daewoo International published its land acquisition policy in English (EarthRights International, 2013). Relating to land abuses caused by the oil and gas projects, some of these farmers have been forced to sign documents transferring their land to the project without receiving any compensation. Due to the Shwe Gas Project, over 1000 acres of land have been confiscated in Kyauk Phyu Township (BankTrack, 2016).

Some farmers don't know anything about compensation for land that has been confiscated, and there are only a few people who get full compensation. Daewoo International published its land acquisition policy in English and did not release a Myanmar language version (EarthRights International, 2013). Although the compensation amount reached 300 Lakhs per acre in some villages, in others it was as low as 30 Lakhs, or no compensation at all. The farmer's land has been confiscated by some government officials and village leaders to insist on compensation payments for themselves (Spectrum, 2015). Because of these land abuses, the ability of local communities is impacted severely to maintain their lifestyle and affected families are endangered to their food security. Full assessments by the Government are vital for affected communities encountering abuses committed against them.

In respect of damages, MOGE policy is to provide maximum compensation to the affected local people by reviewing international formulas. Mediation between companies and local communities is one of MOGE's main tasks. The MOGE officer, one of the respondents from MOGE, pointed out that *"There were two types of compensation for land and crops. Land compensation was used according to the methodology used in the TOTAL pipeline. The land compensation was 5 times the current value. The township authorities didn't agree with the price because they worried that the current price of the other land in that area would also be higher."* Providing compensation for all damages is not the answer for the development of the affected local community. In addition, compensation for confiscated land cannot sustain their main source of livelihood, which is farming.

### Unemployment

In promoting local development and reducing poverty, creating more and better-quality job opportunities for local communities is also a key factor. Many people from Kyauk Phyu Township go abroad to work because the local economy is bankrupt, and the government cannot create job opportunities for its people. Although many people expect the Shwe oil and gas project to bring a lot of opportunities, only a few locals get jobs. One of our interviewees, a resident of Kyauk Phyu, also pointed out, *"Only 5 percent of the job requirements have been hired for the locals. The government and those who are handling the project get 95 percent."*

From the Government side, one of the respondents from MOGE, pointed out that *"Daewoo company hires subcontractors to appoint the employees for the operation of the project, and local people are mostly appointed. The company directly appoints only high-level positions such as finance director, manager, and safety officer. Sub-contract companies appoint the workers from other regions only if there are no local skilled workers due to higher cost."* Since employment is a key component of economic growth in the region, the government should also develop a strategic and coherent approach to the management of local people in the project.

### Corporate Social Responsibility

Local communities welcome the Shwe gas project as the project will help them to develop their region further than the current situation. Although it can be claimed that the local communities accumulated a benefit through the Shwe gas project, the disadvantages are much greater than the

benefits for the local people. Since 2006, Daewoo International has supported Corporate Social Responsibility around its project area. Similarly, CNPC has donated money for health clinics and schools (EarthRights International, 2013). One participant of the Centre for Peace and Development [CPD] also said that *"In 2008 and 2009, the Chinese CNPC built schools and rural clinics along the area where the pipeline passes through Ann Township and Kyauk Phyu Township."*

In the Government Sector, there is a policy concerning Corporate Social Responsibility in which CSR shall be incorporated to minimize less impact on environmental issues and to inform the local community about the implementation of CSR activities. One of the respondents from MOGE also mentioned that *"CSR activities such as Electricity Supply for Kyauk Phyu Township and construction of a road for Made Island were implemented by Myanma Oil and Gas Enterprise. Moreover, according to MOGE's practice, the necessary education, health, and building dams in arid areas are carried out."* As the EU definition states that CSR means the responsibility of business for its impacts on society and effective contribution towards social, economic and environmental progress that would pave the way for positive transformation, it is questionable whether these corporate philanthropy programs can cure all the impacts that have been encountered by affected local people around the project area.

### Policy Weaknesses by the Government

In Myanmar, the sharing and management of natural resources is dominated by centralization because it has been ruled by military dictatorships since independence (Lynn & Oye, 2014). After democratic reforms in 2010, the government under President Thein Sein pledged to increase transparency in natural resource extraction and to decentralize fiscal policy as part of Myanmar's economic and political transition. There is, however, a lack of clarity about both the extent and distribution of natural resources in Myanmar, as well as the role of subnational governments in managing and generating revenue (Lynn & Oye, 2014).

Almost all-natural resource-related projects, including Shwe Gas, are monopolized by the government and characterized by many biases. Particularly, the Tatmadaw was heavily involved, and its involvement remained high after the National League for Democracy [NLD] government took office in 2016 (Barany, 2016). According to one of the respondents from the Ethnic Nationalities Affairs Centre, *"It is not only in the Shwe gas project. Most of the rest of the projects are manipulated by the*

*central government. Not only is it in the hands of the central government, but I don't think there is much control in the hands of the Tatmadaw,"* she said.

In establishing policies for the distribution of natural resources, the government ignored the local people and the development of the region. It adopted policies that only favored the companies working on the project and the foreign company's interests. Thilawa Special Economic Zone shows some distinct weaknesses in its policy towards local indigenous people. The Thilawa Special Economic Zone project testifies that the Myanmar government has ignored the local people in other projects without a specific policy for the local communities. *"Thilawa special economic zone, uh, where many people were displaced from the land, particularly where they had land-based livelihoods. And that's fundamentally because there was a failure to consult with the communities that are affected by the project. Um, I think it's something like the Shwe gas pipeline"*. In light of this fact, Myanmar's government didn't recognize the residents and ignored their voices.

As part of the implementation of any project, 50 percent of the profit is supposed to be used for the development of the region, but the Myanmar government failed to do it, in addition, the government are not accountable and responsible to the local negative effects and damages caused by the Shwe Gas project and enforcing their lawsuits and imprisonment of those who criticize the project. One of our interviewees, a resident of Kyauk Phyu, commented on this, saying, *"The government needs to change its approach to project management for regional development. Regardless of what project is undertaken, at least 50% of the profit must be used for local development. It was ignored by the Myanmar government, so nothing happened."* And then one respondent from MOEE noted that the government accepts foreign investments, particularly Shwe Gas, with the foreign investment policy, even though the Myanmar governments consistently disregard the benefits of the local population.

Therefore, analyzing the government actions from the term of U Thein Sein to the NLD, both governments gave priority to the interests of the foreign country, and the Myanmar governments were left indifferent. The local people are still suffering the disadvantages of the project, and there is no large development to be distinctly pointed out during and after the governments of U Thein Sein and NLD.

## Influence of Politics

A major goal of the Shwe Gas Project is to improve relations between the Chinese and Myanmar governments (Hong, 2011). The Chinese government has strengthened its central control over Myanmar policy in the past decade, strengthening its control of the diplomatic, military, and economic aspects of its relationship with the country. Belt and Road Initiative [BRI], a plan to develop trade routes between China and the rest of the world, which plays an important role in the conflict in Myanmar, will also affect the people of the Rakhine State. Driven by security concerns, economic interests, and a desire for political influence in a country with which it shares a 1,500-mile border, China is playing a key role in Myanmar's internal security and peace process (USIP China Myanmar Senior Study Group, 2018).

The current power struggle between the Myanmar Military and the Arakan Army [AA] in the Rakhine region may affect this project. The Arakan Army's "*Arakan Dream*" has been partially implemented through the establishment of a new local administration, including a judicial sector, across the state. The situation in Rakhine State has implications that could shape Myanmar's national politics, the allocation of resources and revenues, migration, and the elections that may be held in 2023 (Tun, 2022). One of our respondents from Earth Rights International said, "Now I think talking about Myanmar law is not always relevant given the fact that there is a military hunter that doesn't respect the rule of law in any way and isn't a legitimate government. The Arakan army is somewhat supportive of." There is considerable potential for greater autonomy in Rakhine State, which holds Myanmar's offshore oil and gas reserves. Taking advantage of its resources can lead to substantial revenues for the state.

The local people are hoping that if a government representing the local indigenous peoples of Rakhine can be formed to control the project, the benefits will also change. Concerning this, one of our interviewees, a resident of Kyauk Phyu, said, "*In our region, there are many power struggles between the government and the Arakan Army. It also depends on who controls the region. We have to decide based on the political situation of this region. Currently, there is no benefit for the public. But if there is a government that can take control of those projects, this could change a lot.*" There is a positive economic outlook for Rakhine State, at least over the short term, compared to most other parts of Myanmar. The political situation of Rakhine may continue to be a power struggle, even though the people of this region deserve better lives.

### The role of local communities in the development of the area

The local communities can understand the actual conditions and the needs of the local people. Therefore, local communities shall be responsible for determining land compensation, ensuring environmental protection, and developing their area. They should be important supporters of the governance sector.

To point out the side effects of the project and to check and balance the government's policies, the local communities should play an important role. One of our respondents from Earth Rights International said, "*communities should always be involved in decision making*" and "*without proper consultation with communities, there's never going to be actual compensation, and any development or growth that does happen is unlikely to benefit the communities that suffer the largest impact*". By participating in the project, the local people will be able to know the benefits and results of the project properly. It is also important for the government to consider the advice of local communities. Without broad participation, without more human and social capital, development is unlikely to be fast and sustainable-because excluding large segments of society wastes potentially productive resources (World Bank, 2015). There should be a detailed explanation and awareness campaign by the government regarding oil and natural gas production. Development can be sustainable when unrestricted participatory communication and collective responsibility are used.

Concerning employment opportunities within the project for the local community, one of the respondents from MOGE said, "*Local people the employee is recruited through the labor office of the township, trained for the project, and then appointed. Shwe's project engineers were invited and trained in China by the Chinese state-owned company CNPC.*" The employers also strongly agreed that the foreign labor brought negative impacts such as contamination to local culture, increased social problems, and increased job competition for local people (Hamid, Singh, & Jamadi, 2013). One participant of the CPD also said that "*Providing the local community with the necessary skills and capacities for the Shwe Gas Project is essential for their participation. As a result, local job opportunities are disappearing because local people are unable to meet the requirements.*" Creating employment opportunities and facilitating training opportunities for the local people is essential to ensure the local communities' benefit.

### Role of Local Organizations in Myanmar

In Myanmar, local organizations were not allowed to speak out during the military regime in the 2000s. After the democratic transition, they got a chance to cooperate and conduct activities such as the peace process. However, they are still shut down from speaking about decentralization and criticism towards the 2008 constitution. (Asian Development Bank, 2015). Again, one of our interviewees, a resident of Kyauk Phyu, said, *"There are some groups who ask for local people's benefits; however, the government ignored it and some are even arrested."* Although there are criticisms towards the Shwe Gas Project related to the benefits of local people, one of the respondents from MOGE said, *"Despite having criticisms of local organizations, some people from Kyaukphyu moved to Yangon or foreign countries, and I think this will be the case. Moreover, some protests from local organizations have a sense of being influenced by other dominant characters."* We observed that the role of local organizations will be a controversial issue when combining the data from both perspectives. However, it can be clarified that most of the statements from local organizations are looking forward to the goodness of the local people.

### Recommendation

#### What the Government should do and what the Local People Deserve

Taking Kyauk Phyu Shwe gas as an example, the government's first responsibility in future project plans is to take a consideration whether it is beneficial to the people and have a systematic discussion with foreign investors. In the country, policy frameworks designed for the benefit of the people must be included in the constitution. In connection with this matter, one of respondents from Ethnic Nationalities Affairs Center said, *"If we draw up policies to prevent such a thing from happening, if we draft state constitutions, and if we can draft and enforce the basic rights of the people, it would be better if they were written in writing than not."* Moreover, one participant of the CPD mentioned that the government should have a framework of development which creates job opportunities for local people and ways to include local communities in the projects.

In the USA, there is a community benefit agreement to guarantee the benefits that the local community will get. In the community-based agreement, first, the developer negotiates and describes the benefits that they can offer to local people. After a coalition of local people agreed with them,

local government officials participated in the agreement as witnesses (Been, 2010). Relating to this, one of our respondents from EarthRights International also said, *“the idea that when a company is effectively trying to get a social license to operate, it signs a community benefit agreement. And to me, there's a really interesting comparison between how companies treat companies and how they treat communities, companies.”* He claimed that in a country like Myanmar, which does not have an accountable judiciary system, community-based agreements will play a crucial role in ensuring the benefits of the local community. The power of the community is important to bring advantages to the community.

In addition, instead of projects led by the government, the private sector should be emphasized more. Since the financial crisis in 2008, countries have been utilizing public-private partnerships [PPPs] as a way of developing local private sector capabilities through joint ventures with large international firms, as well as subcontracting opportunities for local firms in areas such as civil works, electrical works, facilities management, security services, cleaning services, maintenance services (World Bank, 2022).

Public-private partnership is being used as a way of gradually exposing state owned enterprises and government to the increasing private sector participation (especially foreign) and structuring PPPs in a way to ensure transfer of skills leading to national champions that can run their own operations professionally and eventually export their competencies by bidding for projects/ joint ventures (World Bank, 2022). With that, one of the respondents from the Ethnic Nationalities Affairs Center said the following. *“In other countries, they encourage the development of the private sector. The government only takes care of the framework, and the rest is up to them; they have to support what they need. I think the role of the people is in the private sector.”* According to the World Bank Report (2022), most countries are thriving on PPPs since the financial crisis in 2008 as an additional source of funding to meet the funding gap.

Moreover, one of our respondents from EarthRights International emphasizes the importance of the role of the local community in the project. He said, *“It's a really interesting example for some of the proposed dams on the Tanintharyi River, where communities are documenting all of the biodiversity in the river, in incredible detail, showing, you know, which fish had, which breeding grounds, where and when, and it was. It was the kind of thing that probably your average company would think you'd need a scientist with a PhD from the university. But the reality was*

*that communities had all of this knowledge, and if you don't consult with them, then you don't get that knowledge, and you can't make proper informed decisions as a company.*" The best way to use local social-ecological knowledge is to combine it with scientific understanding at higher levels of decision-making, beyond the community and into governance at the national and even worldwide levels. (Folke, 2004; Díaz-Reviriego, Turnhout, & Beck, 2019). Regarding the local participation, ownership of the projects should be concerned with the local people in order not to cause a lack of commitment to the programs and at times hostile reactions from communities (Wiyaboon, 2019).

Additionally, the government must also support the educational development of the local people in carrying out the project under the theme of regional development. Although there are employment opportunities in the Kyauk Phyu Shwe gas project, the jobs that earn a lot of income are not jobs that the local people can perform, so the benefits of the local people have been greatly reduced. One participant of the CPD, who participated in the Rakhine State issue, said, "*The government needs to have universities that mainly focus on educational development. We need to create more conditions that can provide the necessary skills for the human resources that will be used in these projects, and the locals themselves to work in the projects.*" As Myanmar gets a large amount of profit from the project, it needs to take into consideration supporting the local community through education.

### CSO, NGO Participation in the Project

Local organizations play an important role in the development projects of a region. In the Shwe Gas project, the Myanmar-China Pipeline Watch Committee, which is an alliance of 12 civil society groups, called for the suspension of the Shwe Gas pipelines because there is inaccurate land compensation, human rights violations, and environmental degradation (Nyein, 2012). One of the respondents from the Ethnic Nationalities Affairs Center said, "*In terms of development, for the development of a region, the opinions of the people in this region and the participation of the people in this region are important. It can help a lot to raise the awareness of local people. It can support a lot of regional development,*" she said.

Since the government does not make the policies clear, NGOs and CSOs should be included as advisors to check and balance the government's policies. They can help the local people understand and know about the project. One of our interviewees, a resident of Kyauk Phyu, said, "*There are many*

*NGOs and CSOs. It is important that the organisation that represents and works for the public interest can shake hands. It can help a lot to raise the awareness of local people. I want them to be involved in advising on the side effects of the entire project. Because if they participate in those sectors, we need to be able to carefully determine the benefits and results of this project,"* he said.

In addition, one of our respondents from EarthRights International figured out how civil society organizations can participate in the project. His answers are related to community-based natural resource management. He said, "*It's particularly effective and any kind of participatory research. So, the community natural resource mapping is a form of participatory research,*" and "*That is community-led led where CSOs can facilitate. But it's the community doing the work, doing research.*" Community-based natural resource management [CBNRM] focuses on having local people as the primary implementers to manage the natural resources (CBNRM Net, n.d). It addresses the issues of both human and natural resources for the long-term benefit of the present and future generations to bring equity and empowerment of marginalized user communities and also CBNRM operates mostly in a middle sector of organizations such as user groups, community management committees, local councils, producer co-operatives and similar, though it works best when there are complementary, supportive public and private sector activities.

## Conclusion

The purpose of the current study was to determine the inclusiveness of local people in the operation of resource extraction in their region. Importantly, our results provide evidence that taking the local community's opinions into account can make negative social and environmental impacts controlled and prevented effectively. The results of this research support the idea that the perspectives from the government and the local community are different. The empirical findings in this study provide a new understanding of governance structure that should be recognized and support sustainable practices at the local and regional levels. Therefore, this study found additional factors that the government should implement more sustainable patterns of resource use and management, and account for the needs, rights, and knowledge of local people in decision-making. The scope of this study was limited in terms of the current situation of the affected local people by the project, according to our security. We hope that in the future, there will be further studies to have much development related to our research paper.

### Recommendations for Future Research

This study was limited by a small sample size and challenges due to Myanmar's current political instability. Although this study was able to gather valuable insights from local participants in Kyauk Phy, further research should aim to include a broader and more diverse range of stakeholders. In particular, the opinions of those who are first-hand targets of the process of land confiscation should be examined in more detail since their personal experience has the value of essential insights into the socio-economic consequences of resource extraction. While local organizations were consulted, future studies should engage more systematically with a wider array of civil society actors to capture their roles in advocating for community rights and accountability. Due to limitations in accessing formal government representatives, their perspectives were not directly included in this research; future efforts should attempt to incorporate voices from both current and former officials involved in natural resource governance to allow for a more balanced analysis. It is not only that extending the data to these groups shall reinforce the empirical base of any future studies, but the data shall help serve more comprehensive analysis-based and evidence-based evaluation of local governance in the Arakan State. Further research is needed to deepen and broaden the understanding of natural resource governance and community empowerment in Arakan State. Incorporating quantitative or mixed-methods approaches with larger participant groups and local surveys would strengthen empirical validity.

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