

Rostya Septiana Putri

# Renegotiating Access to Oil: Local Resistance and the Power Dynamics in Musi Banyuasin, South Sumatra Indonesia

Master's thesis in Globalisation and Sustainable Development  
Supervisor: Ståle Angen Rye

May 2023

NTNU  
Norwegian University of Science and Technology  
Faculty of Social and Educational Sciences  
Department of Geography





Rostya Septiana Putri

# **Renegotiating Access to Oil: Local Resistance and the Power Dynamics in Musi Banyuasin, South Sumatra Indonesia**

Master's thesis in Globalisation and Sustainable Development  
Supervisor: Ståle Angen Rye  
May 2023

Norwegian University of Science and Technology  
Faculty of Social and Educational Sciences  
Department of Geography





## **ABSTRACT**

This paper explores the dynamics of small-scale artisanal mining (ASM) and its influence on oil resource governance in Musi Banyuasin Regency, Indonesia. The study analyses how the renegotiation of access to resources by ASM communities affects their capability to gain, maintain, and control economic benefits from oil resources. This research draws a qualitative study that includes interviews, observations, and the examination of documents. According to the study, in Musi Banyuasin Regency, ASM practices have arisen as an alternative means of subsistence for local communities. Despite legal obstacles and difficulties, the ASM community persists in its endeavors due to the potential economic benefits of nearby oil resources. The research reveals the complex relationships between ASM communities, government entities, state-owned enterprises, and other stakeholders engaged in oil economy through an exhaustive mapping of actors and analysis of power dynamics. By shedding light on these dynamics, this study contributes to the existing literature on ASM and oil resource governance, providing policymakers, practitioners, and researchers with valuable insights. It emphasizes the need for inclusive and participatory approaches that recognize the autonomy of ASM communities and encourages equitable benefit distribution. The research calls for developing policies and strategies that promote responsible and sustainable ASM activities, balancing the socioeconomic requirements of local communities with environmental stewardship and good governance.

**Keywords:** Artisanal and small-scale mining (ASM), oil resource, access, renegotiation, power dynamics, economic benefits.



## **ACKNOWLEDGMENT**

This paper marks the culmination of my two-year academic journey in the Master of Science (MSc) in Globalisation and Sustainable Development program at the Norwegian University of Sciences and Technology (NTNU). After months of working on my master's thesis, I am glad this journey finally reaching the finish line. I feel like it was yesterday when I cluelessly entered my very first class at Dragvoll campus, and soon I will no longer be an NTNU student.

First and foremost, I thank Almighty Allah for bestowing me with knowledge, patience, and perseverance to navigate this journey successfully. I am also profoundly grateful to CitRes for granting me a full scholarship, which provided me with the necessary resources, support, and opportunities to embark on this study journey. I want to extend my appreciation to Ståle and Mas Nanang. Their unwavering support and belief in my abilities have been instrumental in my academic journey. Their guidance and mentorship in academic writing have been helping me to sharpen my critical thinking skills and instill a sense of self-confidence.

I also acknowledge the cross-cultural experience I have received from my classmates and the knowledge I have gained from all the geography lecturers. Among the well-wishers, I also want to thank the Indonesian student association in Trondheim (PPI Trondheim) for the hiking, barbecue, and countless random talks. Finally, my heartfelt appreciation to my fiancé (soon to be my husband), Muhammad Irham Taufik Nasution, for his invaluable patience, sacrifice, and caring during my study in Norway. Irham has been a great partner and helped me get through this challenging period in the most positive way.

As I conclude this final assignment, it has been a transformative journey that has shaped my knowledge, skills, and personal growth. I am excited to embark on the next chapter of my life, armed with the experience and insight I gained at NTNU.

**Until next time, Trondheim!**

Moholt Studentby, May 2023

Rostya Septiana Putri





# TABLE OF CONTENTS

<i>ABSTRACT</i> .....	<i>i</i>
<i>ACKNOWLEDGMENT</i> .....	<i>iii</i>
<i>LIST OF FIGURES</i> .....	<i>vii</i>
<i>LIST OF TABLES</i> .....	<i>viii</i>
<i>LIST OF ABBREVIATIONS</i> .....	<i>ix</i>
<b>1. INTRODUCTION</b> .....	<b>1</b>
BACKGROUND .....	1
AIM OF STUDY AND RESEARCH QUESTION .....	3
THESIS OUTLINE.....	3
<b>2. A GLIMPSE OF SOUTH SUMATRA PROVINCE</b> .....	<b>4</b>
MUSI BANYUASIN REGENCY.....	4
POLICY AND LEGAL FRAMEWORK OF OIL AND NATURAL GAS .....	5
<b>3. THEORETICAL FRAMEWORK</b> .....	<b>7</b>
THEORY OF ACCESS.....	7
OPERATING THE THEORY OF ACCESS .....	9
<b>4. METHODOLOGICAL FRAMEWORK</b> .....	<b>11</b>
INTRODUCTION .....	11
RESEARCH DESIGN .....	11
SELECTING INFORMANTS AND OBTAINING GATEKEEPER .....	11
FIELDWORK AND DATA COLLECTION .....	12
RESEARCH LIMITATIONS .....	16
DATA ANALYSIS .....	16
METHODOLOGICAL REFLECTIONS.....	17
<b>5. FINDINGS AND ANALYSIS</b> .....	<b>19</b>
INTRODUCTION .....	19
MAPPING THE FLOW OF BENEFITS FROM OIL RESOURCES.....	19
ACCESS TO OIL RESOURCES IN SUNGAI ANGIT AND BAYAT ILIR .....	24
POWER RELATIONS IN THE PROCESS OF INCLUSION-EXCLUSION .....	30
RENT SEEKING SOCIETY.....	32
THE POVERTY TRAP AND FUTURE RENEGOTIATION .....	34
<b>6. CONCLUDING REMARKS</b> .....	<b>37</b>
<b>REFERENCES</b> .....	<b>39</b>



## **LIST OF FIGURES**

Figure 1. Map of Research Location. Source: Author (2023) .....	4
Figure 3. Artisanal and oil mining in Sungai Angit Village. Source: Author (2023) .....	20
Figure 4: Interim scheme of old wells operation. Source: Author (2023).....	20
Figure 5. Police's banner and the hidden refinery sites. Source: Author (2023) .....	22
Figure 6. Refinery sites inside the rubber plantation.....	23
Figure 7. Overview of 'Oil economy' in Sungai Angit and Bayat Ilir Village.....	30

## **LIST OF TABLES**

Table 1. Structural and Relational Access Mechanism by Ribot and Peluso (2003) .....	8
Table 2. Steps to Analysing 'access' (Adapted from Ribot and Peluso 2003) .....	9
Table 3. List of informants.....	13
Table 4. ASM access to technology. Source: Author (2023) .....	26
Table 5. List of products by refinery sites: Author (2023).....	26
Table 6. ASM labor division Source: Author (2023) .....	28

## **LIST OF ABBREVIATIONS**

ASM	Artisanal and Small Scale Mining
BUMD	Badan Usaha Milik Daerah (Regionally Owned Enterprise)
CITRES	Citizen Engagement, Transparency, and Transnational Resource Governance
CSMS	Contractor Safety Management System
DBH	Dana Bagi Hasil (revenue-sharing funds)
LSM	Large Scale Mining
MUBA	Musi Banyuasin Regency
NGO	Non-Governmental Organisation
PSC	Production Sharing Contract
SKK	Satuan Kerja Khusus (Special Task Force for Upstream Oil and Gas Business Activities)



# 1. INTRODUCTION

## BACKGROUND

Oil—known as “black gold” or petroleum, is a versatile resource that plays a crucial role in daily life. Historically, oil has played various roles, from providing light through lamps and torches in ancient civilizations (Devold, 2015) to fueling vehicles and driving modern industrial society (Bridge & Billon, 2013, p.11). Its versatility has made it a crucial commodity globally. However, the journey of oil resources from its natural reservoirs to its utilization involves a complex extraction process. These stages include exploration, drilling, production, refining, and distribution.

Two primary actors in extracting oil are large-scale industrial mining (LSM) and Artisanal and small-scale mining (ASM). While both methods provide access to oil, they differ in scale, organization, and technology. Bainton and Owen (2019) stated these extraction arenas as 'zones of entanglement' to describe the social relations of resource extraction, and it helps to map the multiplicity of actors, relations, interests, and interfaces that can emerge within these extraction enclaves. As Libassi (2022) argues, resource extraction shapes the economic, social, and power dynamics, and it can exacerbate disparities and potential conflict.

This high complex dynamic can be found in ASM activities. There is a wealth of evidence that ASM has long been an integral and embedded component of local livelihood structures and economic systems in a country such as Indonesia, Ghana, and Nigeria (Tuzyaroha et al., 2020; Warra & Prasad, 2018; Singh, 2020; Hilson & Maconachie, 2017). Even though ASM occurs in most remote areas in the world, the final product of ASM often reaches non-local or even foreign markets (Dutt, 2018). ASM employs around 45 million people worldwide, mainly among the impoverished population and through the informal economy (Beneties, 2022). Most of its activities, however, are informal and linked to low technology-based, low wages, and minimum protection for the worker (Verick, 2008). The informal economy can be defined as an economic activity that is not governed by, taxed by, or subject to official oversight, and it is typically linked to adverse development outcomes like tax evasion, unregulated businesses, environmental degradation, and involvement of illicit activities (Schneider, 2002; Benson et al., 2014).

Defining the informal economy is problematic and current definitions must converge around a common construct (Yankson & Gough, 2019). Somehow, the formalization is viewed as the 'magic bullet' to reduce the negative impacts and maximize the developmental impact of the sector; countries such as Ghana, Mali, DRC, Liberia, and Tanzania have implemented comprehensive plans to formalize the sector in recent decades to gain better control of it (Sauerwein, 2017).

In Indonesia, in general, oil extraction is carried out based on contracts. This means there are contractual agreements between parties, such as government or private companies, to gain access to access natural resources. When parties under the agreement extract resources, there are situations where the parties 'outside' the contract cannot access the resources even though they live nearby the resources. Despite the availability of natural resources, most citizens are detached from the decision-making process regarding how these

resources are managed and used (Kurniawan et al., 2022). The exclusion references as a condition to denote situations in which large numbers of people are prevented from benefiting from things, according to Hall et al. (2011) this can be attributed to various things, such as restricted information availability, opaque decision-making, and insufficient possibilities for citizen engagement.

In Indonesia, the oil sector can be found in several regions; ASM is frequently pressured by vulnerability and serves as an (often short-term) coping mechanism for destitution (IIED, 2013). Ulfah Tuzyahroya & Sariffuddin (2020) stated that ASM contributes significant income to the local community in Wonocolo district, East Java Province. The local community, through the agreement with regional government enterprises (BUMD), has re-operate the old wells from a former Dutch company (Dordsche Petroleum Maatschaappijj) since 2017 and produced 40-60 drums<sup>1</sup> oil per day (Brata et al., 2017; Yurista, 2015).

Similar artisanal and small-scale mining (ASM) operations are also found in South Sumatra Province, which adds context to the previously presented data. The region's enormous oil deposits and rising oil consumption have resulted in a surge in ASM practices. In Musi Banyuasin, crude oil extraction in South Sumatra Province is commonly known as "molot" among the local community. Local communities have undertaken oil drilling and processing in the Babat Toman sub-district (Jelajah Musi, 2010).

In the Bayung Lencir District, the South Sumatra Police recently detained six suspected laborers and found 1,000 drilling points (IDN Times, 2021). Pertamina, estimated daily loss of up to 1,500 barrels of crude oil. These accidents have also brought up environmental issues since improperly conducted oil drilling causes the discharge of toxins into the air and water. According to a case in April 2021 at an illegal oil refinery in Sukajaya Village, Bayung Lencir District, as reported by JPNN.com (2021), the incidence of fires at these facilities frequently happens.

Despite the difficulties and dangers of oil drilling and refinery, the number of ASM continues to increase. It makes the government entities, the police, and the state-owned company (Pertamina) struggle to criminalize the ASM. According to reports, over 7,000 oil wells are managed by locals in the region (Mubakab, 2022). This rise in ASM operations demonstrates that local communities use strategies and tactics to renegotiate the structural barriers to engaging in resource management. The practice of ASM in Babat Toman and Bayung Lencir has created a social and economic network involving various actors such as political elites, police, and investor.

Although ASM provides a vital livelihood in the Musi Banyuasin region, the government believes this 'unregistered' drilling and refining practice started in 2013 and led to significant environmental, economic, and social concerns in South Sumatra (Putera, 2022). The justification is common in countries where ASM practice is associated with social conflict, environmental problems, and adverse health impacts (Yelpaala & Ali, 2005). In addition, the explosion of wells in several villages validates the government's attempt to shut down oil wells, which are illegal and destructive from the state's perspective.

---

<sup>1</sup> 1 drum equals 200 liters.



In conclusion, this paper tries to use case studies from South Sumatra, Indonesia, where the state-owned company, a private company, the Large-Scale Mining (LSM) and Artisanal and Small-Scale Mining (ASM) in Musi Banyuasin operate in neighboring—and sometimes on the same concessions, resulting in clashes over claims and significant power imbalances (Huggins, 2022). Furthermore, understanding the present and the dynamics of ASM in the Musi Banyuasin is important to build suitable policies and management strategies in the region

## AIM OF STUDY AND RESEARCH QUESTION

Building upon the contextual background, the research questions that guide this study are:

*“How does the renegotiation of legal barriers by artisanal small-scale mining community in Musi Banyuasin Regency influence their ability to derive economic benefit from oil resources?”*

The research objective is as follows:

- 1) Identify the advantages that the players are generating from their access to oil resources.
- 2) Map out the actors obtaining access to oil resources and analyze their roles and interactions.
- 3) Analyze the mechanisms that ASM Community possess to gain, maintain, and control their access to the oil resources

## THESIS OUTLINE

This thesis is organized into five chapters. Chapter 1 has introduced the research's context, problem statement, and the aim of conducting the study. This lays the groundwork for subsequent chapters that delve more deeply into the related theoretical framework and literature review of natural resource management. It provides an overview of the research and describes its purpose and scope.

Chapter 2 comprehensively reviews the Musi Banyuasin Regency's physical and socioeconomic background. This information is critical for understanding the study's background and the region's challenges and opportunities.

Chapter 3 provides a comprehensive overview of the theoretical concepts and prior research contributing to our understanding of natural resource management. The literature review also contributes to establishing the context and background of the investigation, which is crucial for interpreting the study's findings.

Chapter 4 describes the methodological framework, including research design, data collection, data analysis technique, ethical consideration, and personal reflection. This section also discusses.

In Chapter 5, the research findings are presented and discussed. This section analyzes the gathered data and provides insight into the research concerns. It also contains a thorough analysis of the implications of the findings and their potential applications to natural resource management.

The concluding chapter, chapter 6, summarizes the study's conclusions. It expands on the findings and analysis, relates them to the research questions and theoretical framework, and makes recommendations for future research.

## 2. A GLIMPSE OF SOUTH SUMATRA PROVINCE

### MUSI BANYUASIN REGENCY

This chapter describes the study location, an essential component of the field study setting. The selection of the study location is crucial to shaping the understanding of the analysis of the research findings. In this chapter, I explore the chosen study location, Musi Banyu Asin Regency (MUBA), discussing its distinctive attributes and significance for my research.

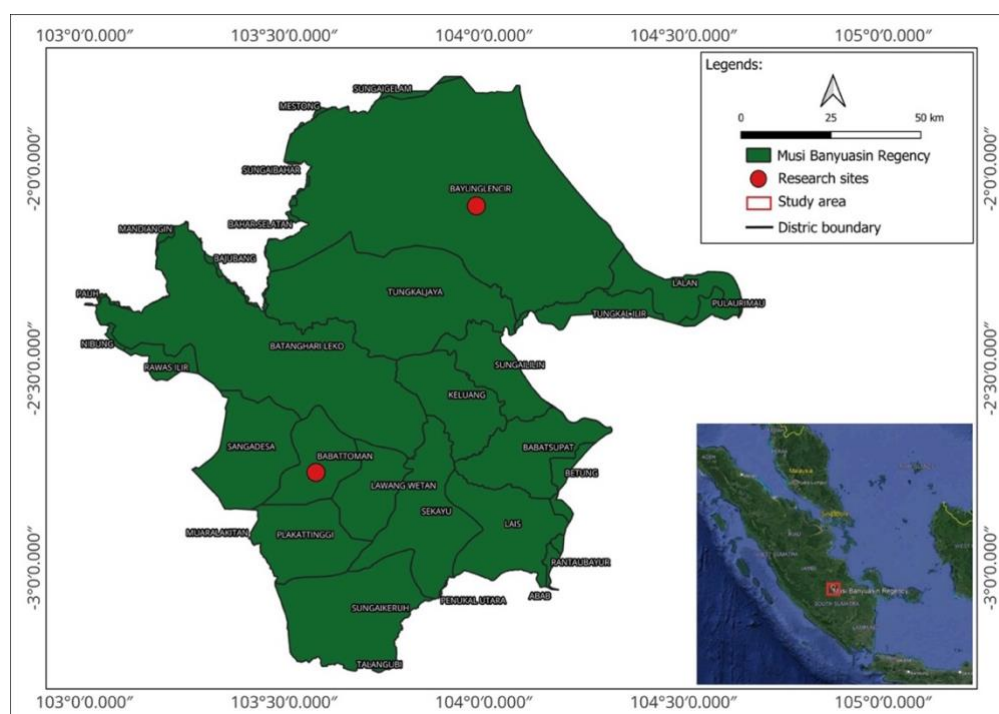


Figure 1. Map of Research Location. Source: Author (2023)

The study area is located in Musi Banyuasin Regency, one of the regencies in South Sumatra Province, with Sekayu Town as an administrative center. This regency has an area of  $\pm 14,265.96$  km<sup>2</sup> or about 15% of the area of South Sumatra province, which lies between 1.3° to 4° South latitude and 103° to 105°40' East longitude. Musi Banyuasin Regency is a wetlands region with huge rivers, including the Musi River, the Banyuasin River, and several smaller rivers. It is bordered by Jambi Province in the north, Penukal Abab Lematang Ilir Regency in the south, to the west by Musi Rawas Regency, and to the east by Banyuasin Regency.

The Musi Banyuasin Regency is one of Indonesia's largest oil-producing region's homes in South Sumatra Province. The region has the most significant number of oil wells compared to another regency. According to data from the Ministry of Finance, in 2019, Musi Banyuasin Regency received Revenue Sharing Funds from oil and gas natural resources worth 1.43 trillion rupiahs. It became the largest recipient district of oil and gas revenue-sharing funds (DBH) after Bojonegoro Regency, East Java Province (Sanyoto et al., 2019).

The existence of oil resources in the South Sumatra rooted in the historical context of the colonial era. Petroleum management activities in Indonesia are intrinsically linked to Dutch colonialism, which played a crucial role in shaping the industry's trajectory.

The unexpected discovery of petroleum in Sumatra occurred in 1883 when the Dutch tobacco planter Aeilko Jans Zijlker surveying his tobacco fields in the Langkat region of North Sumatra, stumbled upon black mud, which was later identified as oil (Basundoro, 2017). Consequently, Zijlker secured a concession for drilling in North Sumatra, paving the way for commercial oil production. Zijlker established a company with financial backing from the Netherlands to capitalize on this newfound resource. With assistance from influential associates in The Hague, a corporation was formed to oversee production, refining, and marketing operations. On June 16, 1890, Koninklijke Nederlandsche Maatschappij tot Exploitatie van Petroleum-bronnen in Nederland-Indië (Royal Dutch Company for the Working of Petroleum Wells in the Dutch Indies) was inaugurated under the directorship of J.A Gelder (Barlett, 1986 in Basundoro, 2017).

The discovery of oil in East Sumatra stimulated exploration and drilling in South Sumatra around 1896-1897 (Bee, 2013). In 1907, The Royal Dutch Company merged with the Shell Transport and Trading Company, leading to over three decades of Royal Dutch Shell's dominance in Indonesia's colonial oil exploration. By 1911, the company had secured concessions in Sumatra, Java, and Kalimantan, as reported by the (USA, 2021).

Following the initial discovery, the growth of oil drilling activities in the Sumatra region has persisted, thereby contributing to the development of the oil and gas industry. After the Dutch left, the first drilling site came under the management of Pertamina, a state-owned enterprise, and was designated as a vital state-owned object area. However, the depletion of reserves (natural flow) or decreased oil output led to Pertamina's eventual closure of conventional or traditional oil wells (Basundoro, 2017).

## POLICY AND LEGAL FRAMEWORK OF OIL AND NATURAL GAS

Article 33 of the 1945 Constitution of the Republic of Indonesia states the principles and guidelines for managing natural resources in the country. It emphasizes that land, water, and natural resources within the Indonesian territory are under state authority and should be used for the maximum benefit of the people. The article recognizes the importance of natural resources as a national asset and the responsibility of the state to manage these resources in a way that promotes the welfare of Indonesian citizens.

The oil and gas sector in Indonesia is governed by the Oil and Gas Law, which is comprised of Law No. 22 of 2001 regarding Oil and Natural Gas, as well as Government Regulation in Lieu No. 2 of 2022 (Job Creation Perppu), which amended the law. By this law, the state retains mineral rights over the entire Indonesian territory, and the government holds mining authority. Upstream and downstream activities in the oil and gas industry are regulated differently. Exploration and exploitation are examples of upstream activities governed by Government Regulation No. 35 of 2004 on Upstream Oil and Natural Gas Business Activities. Government Regulation No. 55 of 2009 was the most recent amendment to this regulation. The Special Task Force for Upstream Oil and Gas Business Activities, or SKK Migas, oversees effectively managing and supervising the upstream sector.

SKK Migas was formed to ensure the efficient management of upstream oil and gas activities, as well as to oversee cooperation contracts with energy and gas companies and maximize the state's profits and revenues (Conventus Law, 2023). To meet government-mandated production targets, PT Pertamina EP, a subsidiary of PT Pertamina (Persero), operates under the supervision of SKK Migas. It is a major participant in the industry and plays an important role in Indonesia's oil and gas sector.

Downstream operations fall under the auspices of the MEMR and BPH MIGAS. The downstream activities include processing, transporting, storing, and trading are regulated under Government Regulation No 36 of 2004 regarding Downstream Oil and Natural Gas Business activities, as amended by the Government Regulation No.30 of 2009.

In 2008, the Indonesian government recognized the potential benefits of reopening the old wells, which the Dutch originally dug during colonial times. These old wells ("sumur tua") were found to contain significant oil deposits still to increase their national oil production up to 2000 barrel per day. The country can boost its energy output and foster national economic growth by leveraging the untapped resources in these old wells. The opportunity resulted in the Energy and Mineral Resources Ministry Decree No. 1/2008. According to this regulation, "old wells" refer to oil wells drilled before 1970, which have previously produced oil within a particular working area bound by a cooperation contract. According to this regulation, any exploration and exploitation activities conducted without an agreement are considered unlawful.

According to a report by Naumi (2015), there are about 13,824 old oil wells in Indonesia, 745 of which are still operational. The Musi Banyuasin region oversees 565 of these historic wells. This region depends on numerous other extraction points that are independently maintained by local communities and the mines run by BUMD. However, the presence of an estimated 7,000 unregistered wells dispersed throughout the Musi Banyuasin Regency complicates resource management. Eight sub-districts, including Babat Toman, Sanga Desa, Batanghari Leko, Lawang Wetan, Tungkal Jaya, Plakat Tinggi, Keluang, and Bayung Lencir, have these wells scattered throughout them (Efrizal, 2023).

### **3. THEORETICAL FRAMEWORK**

#### **THEORY OF ACCESS**

In this study, I use Ribot and Peluso's (2003) "theory of access" as a conceptual tool to unpack complex relations on how actors access the benefits from resources. "access" is defined as "the ability to derive benefit from things." The theory is rooted in Ashraf Ghani's (1995) concept of a "bundle of power." The idea of theory access is to bring a "bundle of powers" from earlier property theorist concept "bundle of rights" (Ribot & Peluso, 2003).

Property and access have been used interchangeably in studying natural resources management (Bose, 2011). From Sikor and Lund (2009), property in this context refers to recognized ownership of something, such as land, a house, or an intangible asset. When discussing property, the discussion is about the legal claim to control something based on the history, agreement, or legal statutes. As consequences, researchers such as Ribot and Peluso (2003); Sikor and Lund (2009) have begun to distinguish access from the property for a broader social-relationship perspective on how people can benefit from resources.

The notion of access as bundles and webs of powers that enable actors to gain, control, and maintain access (p.155) is align with a "constellation of means, processes, and relations," which Ribot and Peluso refer to as "mechanisms," by which actors are enabled to gain, maintain, and control access to resources (Corbera & Brown, p. 1745). Access theory shows that "rights" may be guaranteed, but they are not always accessible (Peluso & Ribot, 2020). It examines and maps the various continued social actions, or 'mechanisms,' to facilitate analysis of who benefits from things and through what process they can do so (Cornea et al., 2016). Sikor and Lund (2009) refer to this area between access and property as "the grey zone," i.e., the zone "between what people have right to and what they merely have access to." As Ribot and Peluso (2003) mentioned, this ambiguity also plays a vital role in overlapping systems of legitimacy where different claims, i.e., legal, customary, or conventional rights, are used simultaneously (p.163).

Since its appearance, the access theory has been widely used among scholars in natural resources management and land governance, mainly regarding property and control over resources (Hansen et al., 2020). Access theory and analysis have demonstrated their versatility in comprehending some of the most challenging barriers to achieving effective natural resources governance, such as the dominance of elites over resources, exploitative market relations, and policies that eschew rights (Hansen et al., 2020). Political ecologists, for example, have been interested in how power differences translate into inequalities of resource access and thus study the strategies people employ to contest systems that undermine their rights and livelihoods (Scholtens, 2016). This theory allows for a clearer understanding of the mechanism that shapes the distribution of benefits; it is helpful to focus on a single resource with various mechanisms (Myers, 2019), which I elaborate on in the following section.

#### **Right-Based Access**

The first mechanism, known as right-based access, derives from legal provisions established by statutes, customary laws, conventions, or agreements that result from the decisions of relevant actors. This form of access is defined as regulation by Hall et al. (2011, p.15), which includes both formal and informal rules that govern the process of accessing and including individuals and communities. Legal access operates within a framework of explicit

instructions and guidelines, providing access to resources with transparency and predictability. Those with authority frequently determine the distribution of benefits within this mechanism to grant access and make allocation decisions (Sjostrand, 2016).

In the context of right-based access, it is crucial to recognize the existence of "illegal" access, which refers to using resources in ways not sanctioned by the government or society (Ribot & Peluso, 2003, p.164). Illegal access operates outside of the established legal frameworks and frequently preys on vulnerable individuals and groups. This system is characterized by power imbalances and the use of force, which have negative social and environmental effects. Examining how rights are defined within the legal framework and how different actors navigate and govern resource access by existing laws is necessary to comprehend the dynamics of right-based access.

Understanding the dynamics between legal and illegal access is essential for grasping the complexities of resource access. We can identify gaps and loopholes in existing systems and structures by analyzing the interaction between these mechanisms. This analysis highlights the need for robust regulatory frameworks that safeguard the rights and interests of all stakeholders, especially those who are marginalized or at risk. In addition, it highlights the significance of promoting transparency, accountability, and inclusive decision-making processes in resource management (Ribot & Peluso, 2003; Hall et al, 2011)

### **Structural And Relational Mechanisms of Access**

The second mechanism, referred to as structural and relational access, covers a wide range of activities such as access to information, capital, markets, labor and employment possibilities, access to knowledge, access to authority, and social identity, as well as the negotiation of other social relationships. It recognizes that various elements, including rights and resources like land, labor, and skills, as well as the presence of existing institutions, affect people's capacity to access and profit from natural resources (Corbera & Brown, 2010). In addition to considering historical and geographical settings, this mechanism provides insightful analysis of simplification, exclusion, and evolving power relations (Pichler et al., 2022).

Mechanism of access	Examples
Access to technology	Fence, weapon, electricity
Access to capital	Access to wealth in the form of finance and equipment that can be utilized to extraction, production, conversion, labor mobilization, and other process to derive benefit
Access to market	Ability to commercially benefit from things includes commodifying resources
Access to labor and labor opportunities	Ability to control labor opportunities (job) and maintain access to employment with others
Access to knowledge	Information, belief, ideology
Access to authority	Legal and illegal access to individual or institution with the authority
Access to social identity	Gender, age, religion, status, profession
Access via negotiation of other social relations	Friendship, trust, patronage, reciprocity

*Table 1. Structural and Relational Access Mechanism by Ribot and Peluso (2003)*

The table shows how the political, economic, and cultural circumstances in which access is sought impact resource users' capacity to benefit from the resources. Deconstructing the structural and social processes outlined within these settings is crucial to gaining a thorough knowledge of resource access. By closely investigating these systems, we can identify the elements contributing to why particular individuals or groups successfully gain access to resources. Through this deconstruction approach, we may examine the complex dynamics and discover the fundamental causes of disparate access patterns.

By exploring the bundle of power and rights, the research strategy involves a systematic analysis that includes identifying and differentiating different types of access, such as those based on rights or structures, to comprehend these access mechanisms fully. (Andriamahefazafy, Kull, 2019, and Ribot, Peluso, 2003, p.161)

## OPERATING THE THEORY OF ACCESS

Having only one mechanism of access to oil resources is not enough to get benefit from it. Instead, other abilities are supporting how the benefit will be derived. Propose the following three stages for this sort of analysis:

<b>The flow of benefit</b>	Identifying and mapping the flow of particular benefit
<b>Access mechanism</b>	Identifying and situating the mechanisms actors use (individuals, groups, or institutions) to gain, control, and maintain access within particular and cultural circumstances.
<b>Access interactions</b>	analyzing the power relations underlying the mechanism of access involves instances where benefits are derived

*Table 2. Steps to Analysing 'access' (Adapted from Ribot and Peluso 2003)*

Adapted from the table, my thesis will concentrate on those three primary steps. First, it seeks to determine the flow of benefits derived from access to oil, given the importance of this resource to the socioeconomic practices of Musi Banyuasin Regency. The second objective of this research is to comprehend the mechanisms that enable individuals and communities to acquire, maintain, and control access to these benefits. The analysis will conclude by examining the power dynamics between those who obtain the benefits, casting light on the dynamics of resource access.

To summarize the theoretical framework, the selection of Ribot and Peluso's access theory is highly pertinent to this research topic. It acknowledges that access to oil resources is not determined solely by legal rights but rather by a complex interplay of multiple mechanisms. This framework offers valuable insight into the multidimensional nature of resource access and the various ways access mechanisms operate. The research will be able to analyze the challenges and opportunities associated with resource access, particularly in rural communities and artisanal and small-scale mining contexts, by employing this theory.





## **4. METHODOLOGICAL FRAMEWORK**

### **INTRODUCTION**

This chapter presents and discusses the methodological framework of how the thesis was conducted. The chapter outlines the research process, describes the method adopted, examines the data collection techniques, and addresses ethical considerations and personal reflection. Using a qualitative methodology, the objective was to obtain an illustrative rather than representative selection. Instead of striving for objectivity, subjectivity was emphasized as a "resource for deeper understanding" (Crang & Cook, 2007, p.13). To obtain insight into the complex dynamics of the actors, this methodology allows for a more in-depth examination of the complexities and nuances of individual experiences, resulting in a deeper and more comprehensive understanding of the challenges and strategies in renegotiating their access to resources. The study utilizes a qualitative research methodology to understand and interpret social interactions within groups of people, communities, and broader society by observing and interacting with people in a natural setting.

### **RESEARCH DESIGN**

Due to my interest in writing a master's thesis about natural resources topic, I choose the field study in Indonesia. Choosing one topic according to Hyett et al. (2014), can be utilized as a comprehensive qualitative methodology that effectively depicts the complexity of a particular research topic. I was interested in the topic because I have visited a similar site and read papers on small-scale oil drilling in the Wonocolo District in East Java Province. Later, I found a few articles discussing South Sumatra's oil even it has potential fossil energy resources such as petroleum, natural gas, and coal (Sanyoto et al., 2019).

This paper draws on extensive field research conducted in two oil-producing sub-districts—Babat Toman and Bayung Lencir districts in Musi Banyuasin Regency, South Sumatra, Indonesia, where ASM is increasing. The community in the two areas are highly dependent on mining. However, the two places operate their ASM practices using distinct mechanisms. I commute in both sub-districts, but I was ended up with focusing into smaller level on each research area (villages level), to understand how local community approach ASM activities differently while at the same time reflecting the unique social, cultural, and economic factors that influence their practices.

### **SELECTING INFORMANTS AND OBTAINING GATEKEEPER**

Roger (2014) explains that identifying the most suitable person to be a gatekeeper within a formal organization is relatively simple; it could be someone in a position of authority, such as a manager. In contrast, gaining access to the people in the area is complex in an informal setting. This was the challenge I faced in the research, where I am a total outsider and needed to make the initial network to this area from scratch.

Since the ASM activities are considered an "illicit business" according to the law, most of the operations are conducted in an "underground" way—hidden and carried out secretly to avoid detection or legal consequences. In my initial research stage, I experienced difficulties in finding detailed information about the research area. After analyzing the online newspapers, articles, and social media, I finally connected to the gatekeeper (Creswell, 2007), who helped me establish networks and contact informants in the mining area.

During my fieldwork, my gatekeeper is one of the members of a local NGO and the villager from the study area. This gatekeeper was my initial contact and connected me with another participant (Creswell, 2007). Approaching this gatekeeper is the best way for me to enter the research area (Creswell, 2007). He gave many insights and advice on interacting and communicating with miners.

Together with me, they were decided on the targeted area, key informants, and locals surrounding the oil wells. The first interview targeted the key informant, while the others used the snowballing method, and I maintaining contacts them after the first interview with the key informant. Once contacts have been cultivated, I ask who else might be worth talking to about the topic and start my snowball from there (Crang & Cook, 2007).

This gatekeeper also suggested that I should speak Javanese language because the oil sites are located near the "immigrant" village, which also has the same language as I am from. A gatekeeper showed me the neighborhood on my first research day in Musi Banyuasin Regency, and we went for a stroll in the late afternoon. The primary goal of the gatekeeper was to introduce me to the locals and assist me in becoming acquainted with my new surroundings. The point of this introduction was to comfort the villagers' distrust of my staying in their community.

## FIELDWORK AND DATA COLLECTION

I spent three (3) weeks in January 2023 conducting fieldwork to gain access to the data in South Sumatra Province, especially Palembang City and Musi Banyuasin Regency. The data collection goal was to gain a deeper understanding of the region's social and cultural dynamics in the negotiation and renegotiation processes that shape these ASM dynamics by utilizing this methodology's comprehensive data. However, while doing my field study, I thoroughly applied various data collection techniques to comprehend the social and cultural dynamics of ASM practices.

For data collection, I have used interviews (structured and semi-structured), walk-along interviews, and participant observation to capture nonverbal communication aspects, such as facial expressions and emotions, as participants express their opinions (Dunn, 2000). To ensure the accuracy and dependability of the gathered data, I kept a detailed research diary and transcribed interviews daily. This allowed for simple data organization and retrieval (Valentine, 2005). It also served as a backup in case of any recording difficulties. In addition, I documented potential data connections in memos, which aided in formulating additional research questions and the preliminary analysis of empirical data (Cope, 2016).

During my fieldwork, I used photographs and videos to complement and enrich the data collected. These visual methods provided a more nuanced comprehension of the ASM activities' physical environment and social context of ASM activities. Interviews were conducted with ten informants representing different perspectives, including miners, government, environmental activists, and local land users.

The overview of the research informant during the field study:

<b>Role</b>	<b>Number</b>	<b>Scope of questions</b>
Head of Petromuba	1	Formalisation process of old wells in MUBA
Field Coordinator in Pertamina's site	2	Technical field operation (drilling, transporting)
Local coordinator of old licensed wells	2	Dynamic from informal to formal ASM
Miner	3	Daily lives as an informal ASM miners
Activist	3	ASM dynamics in Musi Banyuasin
Boss (Refinery owner)	2	Information on ASM business chain

*Table 3. List of informants*

## **Interview**

According to Denscombe (2007), the interview is essential to gain insight into people's opinions, feelings, emotions, and experiences. Before starting the interview, I casually introduced myself and my project, had a conversation during their break time, and asked for their interview schedule later. This acted as an icebreaker, so they did not shock by my presence. I conducted interviews with different techniques, depending on who the participant was. (1) I used a structured interview for the state-owned company or government official, as they requested me to send the pre-determined questions before the interview—a planned, strict procedure to be followed (Crang & Cook, 2007). Even though this interview type followed the list of questions, I asked for some information beyond the pre-determined questions to extend the information. Beyond my expectation, after finishing my interview with the President Director of Petro Muba, I had the privilege of directly interviewing officers in the field. (2) For a group of miners, landowners, NGOs, and local authorities, I used semi-structured interviews, in which I have a list of questions, but I am not restricted to deploying the questions (Dunn, 2000, p. 110). One benefit of this approach is that it balances structure and flexibility, allowing the interviewer to maintain control over the discussion while being open to unexpected responses and insights from the interviewee (Dunn, 2000). Since the interview is conversational, the researcher may redirect the conversation back to the original topics if it has moved too far off course (author, year, p. 110).

Research in this area faces a unique set of challenges due to the varied characteristics of ASM. First, the seasonality and informality of the sector make it difficult to obtain an accurate overview of its size and revenue, since the participant only provides estimates; the interview with miners should be modified to accommodate their working activities. Several times, the interview was interrupted so they could work on the wells or converse with other employees. Occasionally, unstructured interviews occur when I meet potential participants by chance, and recording or taking notes during the conversation is impossible. Due to Dunn's (2000) emphasis on the uniqueness of each unstructured interview, I participated in interviews during the motorcycle trip, lunch, and dinner. (Dunn, 2000, p.111) These interviews were casual conversations in which the informant could steer the conversation.

## **Walking Interviews**

As part of my research, I used the walking interview mostly with ASM workers since the interview mainly occurred in oil sites. Researchers have increasingly used the walking interview to explore the link between self and place (Evans & Jones, 2011). Walking interviews or "go-along" entail researchers and participants talking while walking together (King & Woodroffe, 2019). People walk daily, yet we reflect little upon it—as an experience,

source of embodied knowledge, and their connection or alienation to the social network within it (O'Neill & Roberts, 2019; Kinney, 2018; Iphofen & Tolich, 2018). During the walking interview, I walk alongside the participant during the discussion around a specific location; in this technique, the participant makes all the decisions, including the route to be followed and the walking duration (Emmel&Clark, 2009). The purpose of this format is to provide insight into the sense of attachment a participant has to their neighborhood (Kinney, 2017). Talking while walking allows the participant to recollect and articulate their experiences naturally since they are familiar with the location (Anderson, 2004; Trell & Van Hoven, 2010).

The go-along walking interview combines discussion and participant observation (Kinney, 2017). During the walking interview, I asked questions, listened, and observed the participant while they completed their usual routines. Since most of the oil sites were slippery and dirty, I was not bringing any notes or phones to avoid the risk of falling. Nevertheless, I can still carry the recorder in some areas, and the walking interview is recorded and transcribed as soon as the walking interview is finished.

Furthermore, the walking interview technique allowed the participant to conduct various activities along the route and often stop for a chat to explain some details. As Anderson (2004) said, *bumbling* is a casual walking style to create a more comfortable atmosphere, especially in highly politicized environments where participants may be concerned about being judged or criticized for their opinions. This technique helped me build a stronger relationship with the participants since they were more open and honest about their thoughts and feelings. Unlike another interview, carrying documents or a pen and paper may not be appropriate, so I must remember to cover the questions I want to focus on (Kinney, 2017). Since the village is well known as a "migrant village" and I come from the same island, the walk-along interview was conducted by researchers in 'Javanese' to be more natural and comfortable.

### **Participatory Observation**

By fully immersing myself in the study setting, I can learn more about the social phenomena I am researching through the valuable research method of participant observation. To better understand the workings of the oil wells and refinery stations, I used participatory observation techniques in my research. I got a more nuanced picture of the miners' ASM activities by going to the sites and watching them in action. This method provided me with first-hand experience in oil drilling and refining, processes that can be difficult to grasp from written or oral descriptions alone. Crang and Cook's (2007) concept of "deep hanging out" inspired my efforts to integrate myself fully into the lives of people in the mining communities. The only way to truly understand the miners' perspective, experiences, and difficulties was to spend time with them, living and working side by side.

Nevertheless, it is crucial to recognize the intrinsic constraints of the selected participant observation approach. My limited time in the village may have prevented me from becoming a part of the community and getting an accurate portrayal of their daily lives. It takes time to develop reliable sources, and my presence may have influenced the informants' actions in ways that were not anticipated. Despite these limitations, my "participatory observation" allowed me to see and record important parts of the mining process, from preparing the tools to drilling and oil extraction. These details illuminated the miners' methods, procedures, and difficulties on the job. In general, participatory observation was a useful methodological tool for my research because it allowed me to see ASM at work in the oil wells for myself. It added depth to the research's analysis and complemented the other data collection methods.

## **Secondary Data**

This research also obtained data from secondary data since the desk research was done before, during, and after the fieldwork in South Sumatra by collecting secondary data like newspapers, documentary movies, articles, and policy reports. These sources provide context and necessary data about the Musi Banyuasin case. Also, a documentary video made by an ASUMSI journalist in 2020 called "UNFOLD: Illegal Oil Mines in Indonesia" helped me know the area's visual context before I finally conducted my fieldwork. Before completing my fieldwork in Musi Banyuasin Regency, I had the opportunity to view "UNFOLD: Illegal Oil Mines in Indonesia," a documentary video produced by ASUMSI journalists in 2020. The video gave me a visual context for the region and the issues surrounding illicit oil mining in Indonesia. The documentary benefited me in comprehending the perspectives of local communities involved in the extraction of oils and their interactions with the authorities. This information helped me prepare for my fieldwork and gain a more nuanced comprehension of the situation. The documentary provided valuable insights into the issue's complexities, which informed my research and served as a helpful launching point for my investigation into access to natural resources in Musi Banyuasin Regency. Documentation and agreement from the government also became necessary secondary resources for a better understanding of the case.

## **Ethical Consideration and Informed Consent**

My research topic was sensitive since issues regarding oil extraction are highly debated in South Sumatra Province. Therefore, I have already prepared a consent form for my field study; even though I have already prepared it, the gatekeeper accompanying me in the fieldwork suggested I was against bringing any tangible documentation because many people in rural areas needed to familiarize themselves with such papers. I followed the advice of my gatekeeper and modified the consent approach to an oral explanation, and all data collection started by explaining the interview's goal and obtaining their permission (to record the interviews and take photos).

It was to ensure that my research methods were appropriate and effective within the local environment since I understood how important it was to respect cultural and educational differences. Ensured that my research was carried out ethically and courteously; this entailed using alternative methods of getting consent or documentation, such as verbal agreements or digital forms. I conducted my research in a way that was considerate of the needs and viewpoints of the community I was working with by adjusting to the local context and paying attention to the gatekeeper's recommendations.

The basic principle of ethical, social study is to: avoid harming participants, ensure the informed consent of a participant, respect the participants' privacy, and avoid the use of deception (Skilbrei, 2019 in Rymme, 2021). These principles are designed to ensure that the research is conducted respectfully, responsibly, and ethically, to protect the rights and welfare of research participants. This allows participants to feel comfortable and confident during the data collection. As Crang and Cook (p.39) research, participants feel nervous or vulnerable in the presence of strangers in private spaces such as their homes, so a place of work or public space is more comfortable for conducting the interview. In terms of my appearance, I rarely wear something formal. Instead, I wear a T-shirt, casual pants, and slippers daily and try to blend with the locals, as most work in the forest and wear casual clothing daily.

I provide participants in choosing a convenient location and time for the interview. Crang and Cook (2007) mentioned that when participants are interviewed at their preferred location and time, they feel more comfortable and have more time to answer questions comprehensively. I would give the most suitable environment for the participants and protect their confidential information. As a result, I will favor unstructured interviews where participants take the lead, which is more appropriate, especially in vulnerable positions.

Furthermore, I emphasize neutrality in conversations with these informants, likely to avoid taking sides or showing bias. This is to ensure that the researcher is taking great care to ensure that the interactions with the informants are fair and impartial, despite the charged nature of the situation. Interview questions and conversations with people only focus on issues surrounding business operations and their challenges in accessing natural resources. Since my commitment to my position, I never asked miners directly about the legal and illegality of their business, and my neutrality was thus preserved. To respect my informant, I give the option of whether the informant wants to present as pseudonyms or explicitly.

## RESEARCH LIMITATIONS

Before I arrived at Musi Banyuasin Regency, I thoughtfully planned my itinerary. In addition to the Babat Toman and Bayung Lencir districts, I also intended to explore the Sanga Desa district. Sangan Desa village has attracted considerable media coverage owing to its oil-related disputes and frequent occurrences of explosions and fires. The primary objective of my endeavor was to acquire direct experiential knowledge regarding the occurrences above through physical visitation to the site.

However, when I arrived in Palembang, the capital of South Sumatra, I talked with an activist who was one of my informants. He provided me with information regarding the difficulties associated with gaining entry to specific regions located within South Sumatra. Due to the extensive expanse of the area and the insufficiency of infrastructure, this person recommended that I concentrate exclusively on the two designated sites. Endeavoring to encompass a broader spectrum of territories would be unfeasible owing to logistical limitations. In light of this advice, I revised my research strategy. I chose to concentrate my efforts on the Sungai Angit Village in the Babat Toman sub-district and the Bayat Ilir village in the Bayung Lencir sub-districts, where I felt I could learn important things about the dynamics of oil-related activities and the difficulties they face in the Musi Banyuasin Regency.

## DATA ANALYSIS

Qualitative research methods offer a valuable opportunity to explore the complexities and subtleties of the research topic. The data obtained during the fieldwork comprised interview transcripts, documentation in the form of photographs and videos, and a research diary that contained comprehensive synopses of conversations, discussions, and interactions with the research participants. Upon completion of data collection in the field, it is imperative to ensure proper storage, preservation, and backup.

The interviews were transcribed verbatim, accurately capturing the precise words and expressions used by the participants. Furthermore, a comprehensive cleaning process was carried out, and meticulous documentation of field notes was undertaken to guarantee lucidity and comprehensibility. Cope (2016) highlights the importance of consistently classifying all data, minimizing irrelevant information, and recognizing the role of coding as an important stage in the process. The initial coding process gave me preliminary data

comprehension and allowed me to construct initial categories based on the informants' diverse perspectives and experiences.

The study employed a stepwise-deductive-inductive (SDI) method to analyze the empirical data. This approach facilitated the identification of themes by utilizing both deductive reasoning based on established theories and inductive reasoning derived from empirical material (Tjora, 2012). The utilization of a systematic approach enabled a meticulous and all-encompassing examination, revealing significant revelations and recurring trends within the collected data. This deductive method entailed categorizing the data according to pre-existing concepts or theoretical frameworks. The process of categorizing and coding data was conducted manually with Microsoft Word and Excel. It was done by color-coding the data to thematic categorization. This method enables a systematic examination of the data, making recognizing patterns, trends, and relationships within the information simpler. In addition, the use of color-coding and thematic analysis makes it easier to comprehend the complexities of the research topic. Emerging themes and patterns can be continuously refined and reevaluated as the investigation progresses to ensure that the results accurately reflect the realities experienced by the research participants. Ultimately, this rigorous and iterative approach to data analysis will contribute to a deeper and more nuanced understanding of the research topic, allowing for the development of well-informed and empirically supported conclusions.

## METHODOLOGICAL REFLECTIONS

In the initial step of my research, I realized the available literature on the ASM small-scale oil mining is scarce, especially in South Sumatra. This is partly because the dynamic in Sumatra is not under the spotlight as another national issue. Furthermore, they are severe issues with issues to remote regions, as they lack proper infrastructure and limited public transportation. At the time of my visit to Musi Banyuasin, the issue of resources is very sensitive in general. I was present amid the conflict of interest between the state and the miners; the fires at several oil well sites made this location the media spotlight. Since it was the first time I had ever researched on my own, beginning my research project in the Musi Banyuasin Regency was an experience that was both novel and demanding for me. In addition, going to Sumatra for the first time was a massive challenge for me because I had to adapt to new circumstances and familiarize myself with the local culture and traditions. The fact that I had picked a sensitive subject that was also mired in controversy contributed to the overall difficulty of the project I was working on.

During my research, qualitative research findings could impact my ideology, data interpretation, and personal beliefs concerning the subject matter. This understanding reaffirmed how critical it was to do my study objectively and analyze the data without bias. It also served as a reminder to consider often my own beliefs and how those ideas might impact the results of my research. In general, the experience of conducting research in the Musi Banyuasin Regency was challenging but gratifying. It was an opportunity to learn essential lessons about independent research, cultural awareness, and the significance of objectivity in qualitative research.

My fear of being in the research area was short-lived. After I realized that most of the residents are immigrants from Java Island, where I came from. At that point, I feel myself in a 'homecoming' situation, familiar with a new place. Since I have similarities, I have no difficulties adjusting to the language and food. That village presented a common Javanese community like I grew up in central Java. When I started using Javanese to communicate, I

could feel that people were more enthusiastic about telling me stories about their lives and did not hesitate to invite me to eat together and hang out with residents. However, since they have moved to Sumatra and adapted to the local language, at some point, I do not understand some phrases they are talking about and need more clarification.

I have read many articles on the ASM in Musi Banyuasin and reflected a lot during my field research on how people deal with their daily lives as not simple as the title "theft" of natural resources. Despite my limited time in Bayung Lencir, my field research has become essential for my degree and personal life experience that I cannot experience twice.



## 5. FINDINGS AND ANALYSIS

### INTRODUCTION

This chapter focuses on findings and analysis derived from the case of two villages (Sungai Angit and Bayat Ilir). The analysis employed Ribot and Peluso's framework (2003) to understand the resource access mechanisms. First, the chapter begins by examining the flow of benefits derived from resources, aiming to understand "who gets what" regarding resource distribution. Next, I identify what mechanisms actors possess to gain, maintain, and control their access to oil resources. By identifying the mechanisms, it becomes possible to grasp the strategies employed by different actors to secure their involvement and stake in resource extraction and management. Lastly, the chapter concludes by analyzing power dynamics, the implications for resource access, and the overall outcomes by different actors within the studied village.

### MAPPING THE FLOW OF BENEFITS FROM OIL RESOURCES

Mapping the flow of benefits among various stakeholder groups and actors is important for understanding how the benefits of oil resources are distributed in Sungai Angit and Bayat Ilir Village. It is possible to identify the pathways through which benefits are delivered and to analyze the amount to which different stakeholders enjoy a proportion of these advantages by assessing the benefits flow. This analysis aids in identifying any differences, imbalances, or distributions of benefits among various groups or actors in the oil business.

#### **Case I: Sungai Angit Village – Understanding the Formalisation**

One of the major artisanal and small-scale mining (ASM) sites in Musi Banyuasin Regency is located in the Babat Toman subdistrict, about 172 kilometers from Palembang, the capital city of South Sumatra. This ASM location was reached via shuttle bus, which required approximately five hours of travel time. Upon arrival in Sekayu City, a meeting with the secretary of Petro Muba, the state-owned oil company, was arranged to obtain pertinent information and insights. Following the meeting, a trip was planned to the village of Sungai Angit Village, known for its operation of old oil wells.

During my visit to the village of Sungai Angit, I encountered numerous oil-carrying trucks with Petro Muba logo. The presence of this situation indicating the area's extensive oil extraction operations. As I neared the village's entrance gate, the landscape unveiled an array of old oil wells. Their presence along the road illustrates the region's enduring and historical relationship with the oil industry.

These old wells consist of rigs made of wood and powered by engines to facilitate the movement of the pipes. Close observations were conducted at the drilling sites, showing that a team of 2-3 workers is responsible for each oil well daily. The drilling tool involves a pulley system attached to a wooden with 5 meters height. At the end of the pulley, a cylindrical metal bucket with a diameter of 25 centimeters and a length of 3 meters is connected. The bucket pipe is lowered into the oil well and pulled up using a rope rotated by a diesel. The illustration of how ASM in Sungai Angit operates can be seen below.



Figure 2. Artisanal and oil mining in Sungai Angit Village. Source: Author (2023)

The drilling operation in Sungai Angit village is a form of implementation of Energy and Mineral Resources Ministry Decree No. 1/2008 which start from 2018-2020 (interim agreement) and is extended until 2025. In this agreement, Petro Muba will produce oil from old oil wells and then deliver it to PT Pertamina EP at the delivery point by the quality and specifications that have been determined.

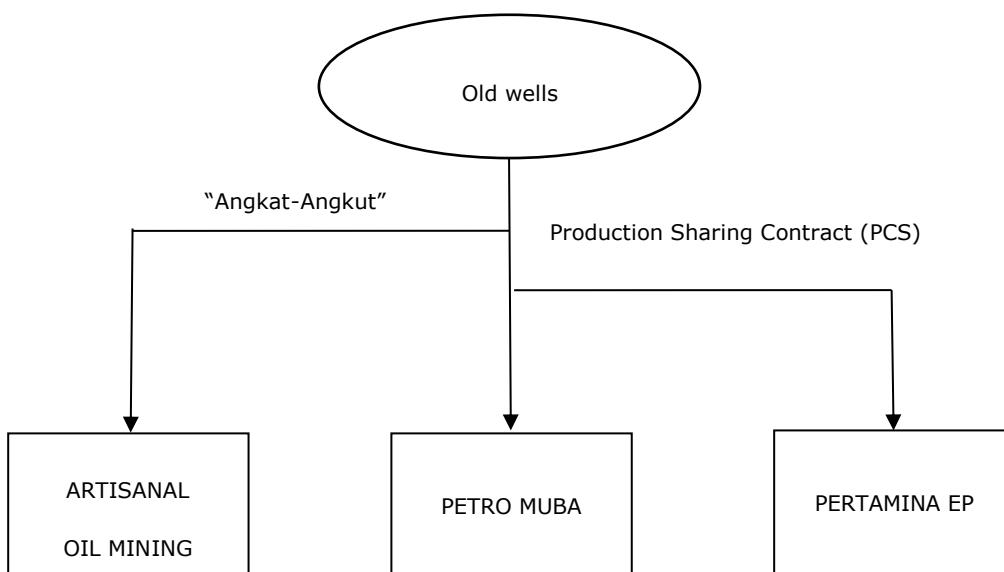


Figure 3: Interim scheme of old wells operation. Source: Author (2023)

Under the Oil and Gas Law, the production sharing contracts (PSC) contractors—Pertamina EP Ramba is licensed to operate and produce oil in the area. Due to declining production, PSC contractors allow established a cooperative agreement with Petro Muba to enhance the output from the old wells and improve the well-being of the local community associated with the old wells. Here, the government mediates the access for the local community in Sungai Angit to engage in natural resource extraction (Hall et al., 2011). Under a PSC, the participating parties agree to share their production output and associated cost and risks according to predetermined terms and conditions.

Petromuba and Pertamina oversee the operations at 565 older wells in the Sungai Angit area, and the maximum depth of any of these wells is 650 meters. In general, the oil production in Sungai Angit could range between a thousand and two thousand barrels per day. The primary line of business operated by Petro Muba is referred to as "Angkat angkut," which is an Indonesian term that can be translated to mean either trucking or transportation by truck. In this context, Petro Muba, through collaboration with ASM, is engaged in *Angkat*, which refers to the process of lifting oils from old wells, and *Angkut*, which refers to the process of transporting crude oil to the Pertamina Oil Collection Station for further treatment and distribution.

One of the strict rules is that crude oil collected from old oil wells must be delivered to Pertamina with a Basic Sediment and Water (BS&W)<sup>2</sup> content of <0.50%. In the interview, the field coordinator added, "Community mining results generally have a BS&W of 2-3%; of course, Petro Muba will Petro Muba has a storage that is used to accommodate this oil product by filtering and precipitation, which can later be accepted by Pertamina." Once it meets the standard, Petromuba's manager said that crude oil from Sungai Angit is sold to Pertamina EP Ramba at 70% of the Indonesian Crude Price (ICP): "The proceeds from these old wells are remitted to Pertamina at 70% of the ICP (Indonesian Crude Price) price, also because we follow government regulations, which not experienced by illegal drillers".

Besides the crude oil quality, Pertamina EP also requires the BUMD PT Petro Muba to comply with and implement the Health Safety and Environment (HSE) provisions outlined in Pertamina EP's Contractor Safety Management System (CSMS) in managing the old well. However, based on observation, it was evident that crude oil spilled around the drilling sites leading to the darkening of the grass and plants. The drilling activities had a noticeable impact on the surrounding vegetation, causing damage and disruption. In the interview, the field coordinator acknowledges the environmental issues that are hard to handle: "Even though we have addressed environmental concerns, it is still difficult to implement measures because the local communities predominantly conduct operations in the field; Petro Muba is just responsible for transferring the oil to Pertamina."

---

<sup>2</sup> BS&W is usually made of dirt (sediment) and water; lowes BS&W shows better quality. Acceptable BS&W is usually 1% or lower.

## Case 2—Bayat Idir Village– Mushrooming<sup>3</sup> uncontrol oil and refinery sites

After the data collection of Sungai Angit village, the study continues to the second village, Bayat Idir, 164 km from Palembang. Throughout my stay in Bayat Idir, it was notable contrast in the frequency of ASM activities compared to Sungai Angit. While ASM operation in Sungai Angit was more visible, accessing ASM sites in Bayat Idir was only possible with the assistance of a local guide. Most people hide the ASM operation since they are considered illegal due to the lack of legal standing. From the state's perspective, these activities are considered illegal. Due to unregistered activity, it is difficult to access information on the number of wells and refinery sites in the area. Based on the observation and walking interviews with various informants, the primary activities in Bayat Idir village are mostly refinery rather than oil drilling, mainly inside rubber or palm oil plantations.



Figure 4. Police's banner and the hidden refinery sites. Source: Author (2023)

The billboard stated that based on Article 55 of Law Number 22 of 2001 concerning Oil and Gas as amended by Article 40 number 9 of Law Number 11 of 2020 concerning Job Creation, any person who misuses the transportation and trading of fuel oil, fuel gas, and Liquefied Petroleum Gas subsidized by the Government, shall be punished with a maximum imprisonment of 6 years and a maximum fine of Rp60 billion. Most workers in oil well and refinery sites acknowledged the government's billboard on restricting oil extraction. They understand that these restrictions aim to discourage, impede, and prohibit individuals from engaging in oil drilling. However, the workers stated: "The announcement board has limited effectiveness as its more as a reminder rather than providing comprehensive approaches or educational approach to us. They fail to change our behavior and practices." On the banner above, it says, "Ayo Kito Bekebun dan Betani Bae." This sentence means, "Let us do farming and gardening instead." The message encourages involvement with agriculture-related activities by highlighting the advantages and worth of growing plants and crops. It calls to embrace farming and gardening as a viable and long-lasting alternative. However, that encouragement was not successful in attracting the local community because they were already enticed and bound by ASM.

---

<sup>3</sup> Refers to very and unregulated growth of oil extraction without proper control.

Based on the interview and observation, the persistence of ASM practices in Bayat Ilir village is because most of the ASM practice here is mainly backed up by an individual known as *tauke*<sup>4</sup>. The tauke facilitates and sustains the ASM practice, contributing to their persistence despite legal restrictions. One of the workers in refinery sites stated that the revenue from rubber and palm oil is nothing compared to the income he earned from oil extraction. The long periods they must wait before the crops are harvested are not appealing anymore. Engaging in ASM gives him the feeling of getting 'quick money.' One of his workers stated:

*"I used to work rubber plantation, then I started to join oil drilling, but oil drilling has many failures since not every spot we drill produces crude oil, so I joined the Tauke. Especially in 2022-2023, there was much oil 'meluing' — oil gushes out, my approximate salary can increase up 13 million rupiahs per month. This income is certainly high, because the minimum wage in Muba is only around 3 million rupiah per month."*



*Figure 5. Refinery sites inside the rubber plantation*

The images depict the oil refineries receiving crude oil from diverse oil well locations in the Musi Banyuasin Regency. These pieces of machinery were all created by the workers, who used their self-taught assembly techniques and the help of other locals. The distillation

---

<sup>4</sup> In South Sumatra, Tauke is an employer or boss who owns a business and has workers.

process involves heating crude oil in a metallic container, typically with fire as the heat source. This procedure typically takes about 12 hours. During this time, the 2-3 workers closely monitor the fire to maintain a consistent temperature and protect the oil's quality. The distillation process converts crude oil into refined products such as kerosene, petrol (gasoline), and diesel. These refined fuels are then distributed to cities throughout Sumatra, including Jambi and Lampung, as well as neighboring countries such as Malaysia and Singapore. The experienced challenging situation after the ASM activities were shut down during 2012-2014 due to police operations. The desperation caused by the loss of income and livelihood compelled some individuals to commit criminal behavior such as robbery. This disruption has a lasting impact on society's economic and social aspects but now the situation is already better.

Even though the local community produces its oil, one worker stated that Bayat Ilir villagers hesitate to use the oil they have produced for fueling their vehicles. They realized that the oil they were producing did not meet Pertamina's standards, resulting in the engines' rapid heating when the oil was used. *Gadi said: "We can directly use it for vehicles, but it will be damaged quickly because it does not use technology like Pertamina, so if we fill up with gasoline, I still choose to fill it up at Pertamina station instead of this oil."*

In addition to exploring refinery activities, the walking interview was conducted with an oil palm businessman who made an unexpected discovery on his land. He shares the experience, stating that a few meters away from his palm oil plantation, there was a Dutch well, and people were trying to drill it, but no oil was found.

*"A few meters from my palm oil plantation, there is a former Dutch well, but when some tried drilling it, no oil was left. One day, I noticed that one of the palms in the field was growing stunted among the others; I wondered what the cause was, and when a test drilling was done, it turned out that there was oil in my oil palm field." (Interview with oil well's owner, interview with Jajak, 2023)*

Subsequently, he starts establishing drilling sites and leasing the land to the miner's group, thereby facilitating oil extraction in the area. In addition, when the question about formal ASM in Sungai Angit villages is mentioned, he mentioned that he knows about the 'legal' ASM operations. However, he expressed that the prices offered through the formal were lower than selling the crude oil to Tauke or another black market.

In conclusion, the complex web of actors and power relationships in both villages demonstrates the existence of a variety of entry points. These strategies cover a variety of access methods that are essential in determining access to oil. The following sections describe the access mechanisms in more detail to provide a more comprehensive understanding of how they affect the dynamics of accessing the resource benefit.

## ACCESS TO OIL RESOURCES IN SUNGAI ANGIT AND BAYAT ILIR

How oil resources are accessed is very important in determining the pattern of oil production covered in the previous section. The framework put forth by Ribot and Peluso (2003), which explores various access mechanisms, such as access to capital, labor, technology, and negotiation, is the foundation for this section, in where here I examine two villages as a case study to see how these mechanisms shape and affect the communities' capacity to benefit from oil resources. The dynamics of resource access and benefit distribution can be better understood by looking at how these access mechanisms interact and how their effects affect

the economic outcomes of the villages. The difficulties and opportunities that the communities must overcome to make the most of their access to oil resources will be clarified by this analysis, which will also offer insights into the broader implications for resource governance and sustainable development.

### **Access to Capital (Financial)**

Capital is an essential component of any economic activity. It represents the resources individuals, businesses, and governments can use to invest in new projects, expand existing operations, or support consumption. Capital can take various forms, including financial resources like money and physical assets such as machinery and equipment. The willingness to invest capital and take on risks in the oil business serves as a starting point for commodifying resources. It represents the recognition of the potential economic value of the oil resources and the willingness to allocate capital with the expectation of deriving profits. The capital flow in Sungai Angit and Bayat Ilir village comes from the MUBA regency and investors from various regions in Indonesia.

In an interview with Tauke in the village of Bayat Ilir, the group must have a collective sense of confidence and trust in each other to initiate opening a new well. This small group of investors, typically comprised of up to ten individuals, would pool substantial capital to open new oil wells. They would need 30 million rupiahs for the oil well's exploration as this nominal is the average across MUBA. Typically, the total cost is divided equally between all investors. However, lesser investors will receive a smaller share if the hole contains large amounts of crude oil. However, oil well exploration in most Musi Banyuasin areas has been likened to gambling. The discovery of oil in a well is a stroke of luck for the investors. At some points, the investors end up with a "dry hole"<sup>5</sup>, causing them to lose their investment and leave the debt. On the other hand, the investors or owner of refinery sites relies heavily on the supply of crude oil from drilling sites. Regardless of their invested capital, they have no raw material to process without a steady supply.

This story may differ from the experience of the ASM community in Wonocolo. The ASM community's access to financial capital is not an obstacle to gaining access to oil resources. Usually, the ownership status of the well is hereditary. The old wells in Wonocolo were inherited by their ancestors and continued by their grandchildren, although the production was less than before (Sekarsoca, 2022).

### **Access to Technology**

According to Ribot and Peluso (2003), extracting certain resources often requires using tools or technology as part of the capital. Furthermore, the availability of advanced technology tends to bring advantages to those who own it. These different technologies and their corresponding institutional and relational affiliations are commonly called "modes of extraction." Technology is vital in accessing resources in the oil extraction in Sungai Angit and Bayat Ilir villages. The role of technology in shaping access is important because extraction rates depend on the technology used. In the past, During the Japanese colonial era, the people in MUBA began to learn how to produce fuel simply because the Japanese immediately cooked crude oil for war purposes at that time. The skill of managing the oil

---

<sup>5</sup> Dry hole is the term used to describe non-producing oil and gas well.

refinery was transferred to the Japanese forcibly employed residents (Jelajah Musi, 2010) and producing oil for personal use, such as lighting and cooking. However, with technological advancements, the local community now has access to drilling equipment specifically designed for bigger oil extraction.

The availability of these tools empowers the ASM to effectively access and extract oil and make the process more efficient and manageable. By having access to the proper tools, the local community enhances its capacity to engage in oil-related activities and maximize its opportunities for better economic gains. Below are the types of activities along with the tools used by ASM in both villages:

Type of activities	Equipment	Operation method
Molot (oil drilling)	<ul style="list-style-type: none"> <li>• 5m high three-legged tower</li> <li>• 3m pipe with 25 cm diameters</li> <li>• Pulley</li> <li>• Diesel</li> <li>• Separator tub</li> </ul>	The steel pipes are lowered into the oil well, and once it is filled with crude oil, it is then pulled up using a pulley that is rotated by a diesel engine power and then oil will flow to separator tub.
Refinery	<ul style="list-style-type: none"> <li>• Furnace</li> <li>• Cooling water basins</li> <li>• 10 meters small pipe</li> <li>• Diesel</li> <li>• Blower</li> </ul>	The crude oil (90 drums=210 liters per drum) is poured into a furnace tank and then heated. The oil vapor is then directed into a pipe with a cooler, causing it to produce kerosene, diesel, and gasoline.

Table 4. ASM access to technology. Source: Author (2023)

Based on the activities observed during my fieldwork, it was clear that the team of 2-3 workers at the oil wells in Sungai Angit possessed efficient distillation skills and knowledge. Even though their work was manual and labor-intensive, they were able to maintain a productive workflow. During each distillation round, the workers successfully cooked many drums. They were able to process approximately 90 drums of crude oil per round on average. This impressive output can be attributed to their collaborative efforts and effective task division. Each employee had a specific role in the process, from monitoring the fire and keeping the temperature stable to handling the drums and ensuring proper distillation.

To efficiently manage such many drums, the workers relied heavily on their prior experience and knowledge of the distillation process. Years of practice and hands-on experience have given them a thorough understanding of distillation techniques and the ideal conditions for producing high-quality oil. In the end, they are producing the following products:

Time Range	Fuel Type	Output Quantity (Drums)
4 AM - 12 PM	Gasoline	20 drums
12 PM- 3PM	Kerosene	20 drums
3 PM- Nightfall	Diesel	37 drums

Table 5. List of products by refinery sites: Author (2023)



There are some interesting trends that emerge from the price fluctuations of oil on the regional market in the Musi Banyuasin Regency. When purchasing oil from the ASM wells, the price per drum can range anywhere from 700,000 to 800,000 Indonesian rupiah. This preliminary price is reflective of the crude and unprocessed nature of the oil, which was obtained directly from the oil wells that are strewn about in a variety of locations throughout the region.

As a result of this processing, the price of the oil rises, and it is then sold at a higher market price. The processed oil is typically sold for 1,000,000 to 1,300,000 Indonesian rupiahs per drum. The rising market value of oil during the heating season attests to Musi Banyuasin Regency's ASM activities' economic viability. The value-added process is performed, which requires human labor, specialized knowledge, and various pieces of machinery. It emphasizes the economic significance of ASM activities in the region and the potential for long-term economic development through the effective use of local oil resources.

### ***Access to Labor and Labor Opportunities***

It is discussed in the previous section that ASM requires a significant workforce to carry out tasks from drilling to transporting the resources. After analyzing the overall distribution of benefits in the two villages, the following table showcases the allocation of tasks within the ASM in both locations. The table below illustrates the division of labor within ASM in two villages:

Activity	Title	Roles
Drilling (Sungai Angit and Bayat Ilir Village)	Landowner	Renting the land for oil drilling activities
	Tauke (patrons) Investors	The one who has capital, recruits the worker. Collaborating with Tauke for investment
	Well driller	Temporary workers responsible for preparing the opening of the new wells.
	Oil drillers	Daily laborers involved in oil drilling operations.
	Trader	Transporting the crude oil to refinery sites
Refinery (Bayat Ilir village)	Landowner	Renting the land for refinery activities
	Refinery owner	Managing and overseeing the refinery process, findings market for selling refined product.
	Oil refiners	Worker involved in refining the crude oil.

Wood supplier	Supplying wood for the crude oil distillation
Cleaning Service	Cleaning the tank after distillation process is finished.
Trader	Transporting refined oil to the customer

*Table 6. ASM labor division Source: Author (2023)*

Overall, the various actors and their specific responsibilities demonstrate the process's interconnection and interdependence. The study of Sungai Angit and Bayat Ilir village reveals that individuals may lack access to property rights. They can, however, gain access by establishing a working relationship with a resource controller or permit holder. The worker when engaged in nonstop drilling activities (24 hours) stated that 'night' is the best time for the Tauke and the trader to conduct their transaction. The client can obtain some of the benefits of resource exploitation through labor in the form of either cash payment for their labor or a percentage of the income (Ribot&Peluso, 2003).

### **Access via negotiation to the 'power broker'**

In the preceding section, the "agreement" chart depicted the dynamics of ASM activities in Sungai Angit village. However, the ASM in Bayat Ilir is lack of government recognition and authorization. This mean that they operate outside the bounds of the law. Given its illegal status, the question then arises as to how ASM operates in Bayat Ilir still survives in years while police operation conducted regularly?

This question led me into an interesting insight shared in my walking interview with the worker at the refinery sites. He explained that they have a backup from the "police":

*Once every two months, there must be a police operation from the province level, but we are not worried since we get the information a day before, so we can prepare to clean and cover our equipment temporarily. Moreover, the police feel that they check our place only for formality; in the end, they ask for money and cigarettes. Since then, we have negotiated with them to secure our business. So, we agree to pay "protection fees," and they promise back up our illegal business." (Gadi, 2023)*

Access through negotiation frequently necessitates interaction with influential individuals or organizations known as power brokers. These power brokers, which may include government officials, law enforcement officers, police personnel, and wealthy capitalists, play a crucial role in supporting and facilitating the operations of illegal businesses like ASM. They provide protection and assistance to ASM activities through negotiation, informal agreements, and deals. To confirm the role of power brokers in ASM operations, additional research was conducted by contacting numerous ASM sites. The findings confirmed that the ASM community knows the police assistance and is no longer a secret. It was revealed in Bayat Ilir that district-level local police play a significant role by imposing unofficial "protection fees." This involvement of the police in ASM operations establishes a web of trust, patronage, reciprocity, and dependence, which creates a complex dynamic.

The relationship of trust between ASM actors and the police mitigates the risks posed by their illegal status. As patrons, the police offer assistance and resources to ensure the smooth

operation of ASM activities. Reciprocity is crucial in fostering relationships that benefit ASM actors and power brokers. In order to maintain their access to resources and navigate the complexities of the illicit business, ASM actors become dependent on external factors, such as the police. Although it has become common knowledge, I cannot investigate the identities of the power brokers further because doing so would threaten the informant's work.

This complex network of trust, patronage, reciprocity, and dependence influences the dynamics of ASM in Bayat Ilir. It influences the interactions and relationships between ASM actors and power brokers, highlighting the sector's intricate social and economic dynamics.

### ***Access to Market***

Access to the market affects the ability to benefit from resources in many ways. It refers to the ability of the ASM community to connect their products or commodities to potential buyers to market their product. When in the past, the villagers in MUBA already produced oil for lightning purposes and sell to the neighboring village, they created property as a new resource because of their emergent commodity status. From the process of production, resource values are increasing.

During the year 2013, there was a significant increase in global oil prices, and it was observed that artisanal and small-scale miners (ASM) also intensified their oil extraction activities. Unfortunately, the increase in artisanal and small-scale mining (ASM) operations co-occurred with oil theft from Pertamina's pipeline, resulting in significant economic losses to the government. As a result, the professional governing bodies implemented rigorous actions to suppress such illegal activity, ultimately leading to the total discontinuation of all Artisanal and Small-scale Mining (ASM) activities.

Despite the challenge and disruptions, the ASM's actors have shown resilience in maintaining their operation. This is mainly to the backing provided by investors from Jakarta and Singapore (Tempo, 2020). These investors play a crucial role by providing financial backing and access to the black market. Access to the black-market (illegal market) means engaging in unlicensed and illegal oil trade outside established legal channels. This black market, which operates outside established legal frameworks, frequently involves theft, smuggling, and other illicit activities. Criminal networks frequently make it easier for people to access the oil black market by taking advantage of flaws in the legitimate oil sector, such as lax regulation, corruption, and oversight.

The illicit trade of oil occurs through hidden networks within the black market, circumventing official production, distribution, and trade channels. The black market for oil may involve various actors, including organized crime organizations, rogue traders, and individuals seeking to profit from illicit trade. The observed behavior displays a dearth of transparency, characterized by a tendency towards secrecy and concealed transactions. The rationales behind illicit oil trading are diverse but often revolve around pursuing economic profit. Actors within certain industries may attempt to circumvent tax obligations and regulatory compliance or exploit disparities in pricing between lawful and unlawful markets.

The Tempo investigation team (2020) discovered a set of documents from a 2013 investigation conducted by the State Intelligence Agency (BIN) under the secret codename called "Belida Hitam," which disclosed the existence of a marketing route. The head of BIN Sutiyoso, the head of BIN, validated that the smuggling was not limited to Indonesia (Batam and Tangerang) but extended to international black markets such as China, India, and

Singapore.

By integrating the analysis of the flow of benefits and the various access mechanisms, it is possible to understand the patterns that shape the oil economy in Sungai Angit and Bayat Iilir. The following chart illustrates these patterns by depicting the interconnections between various actors, the flow of benefits, and the processes of accessing and managing resources. The chart is a visual representation of the intricate dynamics and relationships that support the oil economies in these regions. It emphasizes the interdependencies and interactions among key stakeholders, illustrating how access to resources affects the distribution of benefits and the overall operation of the oil economy in Sungai Angit and Bayat Iilir. By examining this chart, one can gain a deeper understanding of the multifaceted dynamics and complexities that shape the oil economy in both areas.

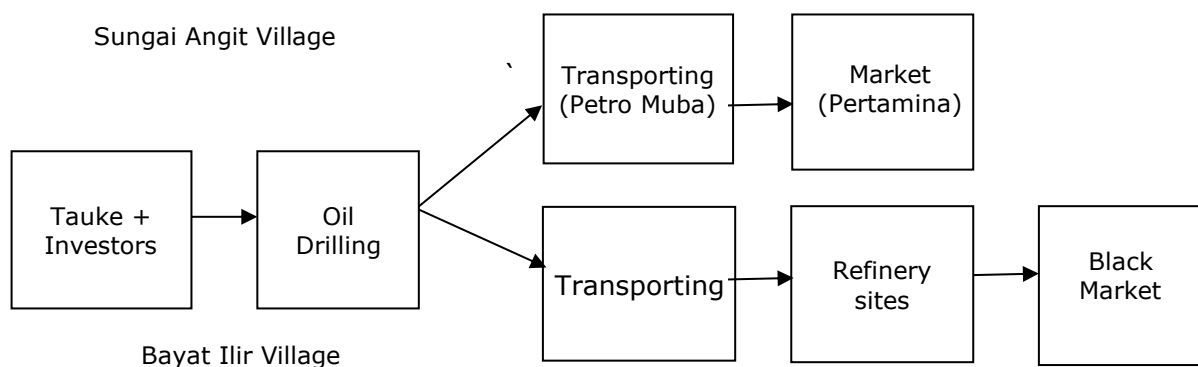


Figure 6. Overview of 'Oil economy' in Sungai Angit and Bayat Iilir Village

Following mapping the benefits flow and access mechanism, the next phase will explain the relationship among the oil production actors. The analysis will provide a more in-depth understanding of the dynamic of interactions between the various actors.

## POWER RELATIONS IN THE PROCESS OF INCLUSION-EXCLUSION

Access to oil resources is dynamic and can change over time. It is essential to realize that the discussion about access involves two sides of the coin: access versus exclusion. While some individuals or groups are granted access to resources and able to derive benefits from 'things,' others are experience exclusion and prevented from enjoying the same benefit. The following part builds on a previous analysis that unfolded how benefits are distributed among various stakeholders, including the regional government, the mining community, and other actors. By comprehending the mechanism through which access to oil is obtained, we gain a deeper understanding of the political and economic dynamics within the local context. The theory of access has been used to comprehend the localized factors that impact the ability to derive advantages from resources.

After building the theoretical element of the access mechanism, this section examines the dynamic of interaction and power relations among diverse actors involved in Artisanal and Small-scale mining (ASM) activities, focusing on inclusion and exclusion. Understanding these dynamics and conflicting interests is important for comprehending the complexities of resource access and each actor's challenge to secure their access to oil resources through

the bundle of powers.

Power is a multifaceted concept extensively discussed and examined in the social sciences (Giddens, 1984 in Ribot&Peluso 2003). It describes the capability or potential to direct others, influence events, or manage resources to bring about particular results. Therefore, the power dynamics inherent in any social system significantly affect how resources are distributed, decisions are made, and how society functions. Contrarily, control refers to the power to plan or influence how resources are used. This could involve who has access to the resources, how they are used, and the controls in place to control their distribution and use. Control thus plays a crucial role in power dynamics because those with more control can influence outcomes more.

Understanding power dynamics of ASM in MUBA is important because it illuminates the factors that influence authority and control over the context of resource management. Resource management in this context refers to the effective and efficient use of resources, whether they be natural, financial, or human. We can better understand who is in charge in these situations by studying power dynamics. In this context, authority refers to the acknowledged legitimacy or right of a person, group, or institution to make and carry out decisions. Knowing who is in charge can make it more transparent and who ultimately can make decisions regarding the management of resources. Examining formal structures like laws and regulations, informal mechanisms like social norms and networks, and additional influencing factors like economic and political leverage are all possible parts of this investigation.

The state through the ministry and SKK Migas have power and authority to control oil resource in Indonesia, as enshrined in the constitution. This legal mandate gives the state the authority to make decisions about resource access and utilization of small portion of resource, such as the policy in Sungai Angit has been implemented. However, not all individuals or groups in the Musi Banyuasin regency have equal access to oil resources. That is why negotiation and the implementation of various mechanisms. Some actors wield more decision-making power and influence, allowing them to shape resource access and control. Certain individuals or communities, on the other hand, may have limited or no decision-making authority, preventing them from accessing and benefiting from oil resources.

According to Borrini-Feyerabend et al. (2007), the exclusion is a complex and multifaceted phenomenon that is not arbitrary or random. Power dynamics and social structures shape it. Power imbalances and disparities in resource access can contribute to certain groups' exclusion, limiting their participation and benefits in the oil economy. In addition, the importance of negotiation and renegotiation could overcome the situation because these procedures frequently relieve social tension and resolve political impasses. Kolstad and Søreide (2009) argue that actors in the natural resource industry know there is a chance for renegotiation. Shaxson (2007, p. 152) stated that the actors involved in the oil business chain knew that renegotiation was very likely from day one. A lobbyist said that renegotiation was always expected from the beginning of a very advantageous arrangement. This remark implies that renegotiations are frequently expected in the natural resource sector and that businesses and stakeholders are typically willing to participate in these negotiations to safeguard their interests. Renegotiations are a chance to re-evaluate the terms of a contract and make more advantageous changes to everyone concerned. Actors in the natural resource industry should therefore be aware of the prospect of renegotiation and handle their business transactions with this possibility in mind. In the case of ASM in both villages, the local communities try to make the best of constraining and enabling opportunities, accessing

knowledge, resources, and asserting their rights to access the oilscape (Schöneich, 2022).

The 'oilscape' is considered as a new term, and it refers to the particular locations where oil is discovered, extracted, and refined in geographically restricted areas of various categories, including extraction sites, factories, boomtowns, and cities where the asset and its profits are produced and distributed. In this way, the extraction and processing of oil and many other natural resources create enclaves. These are spaces where wealth and power associated with the concept of modernity are concentrated. At the same time, its frontier-style setting engenders cultural encounters reinforcing inequalities — for instance, between oil-sector employees and residents (Schöneich (2022, p.31). Oil and its extraction are linked to specific spatial dimensions regarding geographically bound location (Rogers, 2015, p.371). The Musi Banyuasin represents an ample space where oil extraction is interlinked with particularities and negotiated constantly by its human actors. Brata (2018) captured a similar phenomenon in Wonocolo using the terminology of public oil mining (PMO) terminology to discuss the internal and external conflict in ASM activities in Bojonegoro, East Java, Indonesia.

Anthropology and political ecology studies have revealed that participation in the extraction sector has frequently not resulted in effective participation but has been used to expand extractive frontiers (Schilling et al., 2021). Peluso (2018) introduces the idea of "frontier," as a way to understand the dynamic of small-scale related to various dimensions, including capitalist frontiers, settlement frontiers, informal sector frontiers, and resource or commodity frontiers. Peluso (2018) argues that making these frontiers need the combination of practices, claims, and secrets on their social and biophysical environments—where territorial governing shapes the mining territory subjects that are coming into being. Differently, Bainton and Owen (2019) conceptualized mining arenas as 'zones of entanglement' to describe the social relations of resource extraction, and the settings where these activities occur can be understood. The term helps map the multiplicity of actors, concerns, interests, and interfaces that can emerge within these extraction enclaves. For this research, it is also essential to move forward: thinking of legalization and illegalization as a process (as social-political projects) beyond the state and non-state dichotomy and recognizing the diversity and processualism of state activities and agents. By focusing on processes over time, we can better understand power and history and challenge the status quo (Heyman, 2013)

## RENT SEEKING SOCIETY

In the theoretical framework chapter, the theory of access highlighted eight categories of structural-relational access mechanisms. However, the categories are unique. Depending on the specific circumstances and context, these mechanisms operate differently, driven by the nature of power dynamics (Ribot&Peluso, 2003, p.162). As the miners, they know they did something wrong, so they are looking for more extensive power to back up the business by utilizing the different channels of the access mechanism.

One of the access mechanisms is access to authority, which in the Indonesian context is called 'kong kali kong' —an agreement to cheat the system for financial gain. This concept is related to rent seeking behaviour, which also refers to an agreement to cheat the system for the financial gain. Rent seeking and "kong kali kong" both involve taking advantage of and manipulating systems and authorities for personal financial gain. They reflect a shift away from fair and productive economic activities and can have negative consequences such as undermining economic growth, exacerbating inequality, and undermining public trust in institutions.

From the experience of ASM activities in Musi Banyuasin, the sustainability of the illegal business can happen because it is maintained by the authority figures (police) and national and international investors who collaborate with local actors such as Tauke (local leaders) and other investors. These individuals take the advantage by using their legitimation to seek rent from the oil resources. This renegotiation does benefit mine workers to fulfill their daily needs, but on a larger scale, this business is related to the mafia involving powerful authorities. Moreover, this depends on the individual; if the power has integrity, the illegal wells will not expand that big. According to an exclusive interview with a senior environmental activist in Palembang, there is a rumor in South Sumatra there is Jakarta police official owns a port in Tanjung Api-Api, Banyuasin regency. This port serves as a hub for the loading and unloading stolen oil, and access is strictly controlled.

This revelation highlights the involvement of powerful individuals in the illegal oil trade, including former law enforcement personnel. It suggests a network of collusion and corruption that allows illicit activities to continue. The presence of a well-secured access point indicates a sophisticated operation with safeguards in place to prevent the detection and disruption of illegal activities.

Former police officers' involvement raises questions about the integrity and effectiveness of law enforcement agencies in combating the oil black market. It suggests possible collusion between people in positions of power and those involved in illegal trade. This type of collaboration undermines efforts to uphold the rule of law, protect legitimate businesses, and protect the environment.

The study of two different livelihoods found inequality in the actors' access to natural resources. I found an essential difference between the ASM's activities in Sungai Angit and Bayat Ilir villages. As previously mentioned in the research findings, rent seeking in Sungai Angit is less because the business runs under the government contract. The condescending nature of 'top-down' participation protects the legitimacy of the extractive practice (Perreault, 2015). The ASM in Sungai Angit could maintain access through right-based access. They feel more secure when doing business under a government partnership, in a pattern place where access of resource-limited by agreement, or more right-based access. This implies that the local community has a proper flow to access while the government can control it. They also get monitoring in safety, risk, and the quality of crude oil also have the standard set by Pertamina.

At the same time, illegal Artisanal and Small-Scale Mining is struggled to secure their position because they have been excluded because of the absence of formal recognition regarding their position in natural resource management. In managing natural resources, renegotiation and entitlement are two concepts intimately connected. Renegotiation is the process of renegotiating contracts or agreements linked to the use or management of a resource. In contrast, entitlement refers to the legal rights or customary claims of individuals or organizations over a particular resource. Renegotiation is necessary in many situations, including when there is a disagreement about who is entitled to what or when the original contract or agreement does not accurately reflect the current interests or requirements of the parties involved. For instance, a community may renegotiate a contract with a mining corporation if they believe their entitlements to the land or resources have yet to be effectively acknowledged or rewarded. Such a community may have this belief if they think that their entitlements need to be adequately recognized or reimbursed. A government may also renegotiate contracts with foreign investors if it believes that the terms of the deal do not effectively protect residents' rights or do not reflect the national interest.

Therefore, renegotiation can be seen as a mechanism for addressing entitlement issues and ensuring all stakeholders' interests are considered. This is because renegotiation provides that all stakeholders' interests are considered. Through the process of renegotiation of contracts or agreements, it is possible to construct natural resource management arrangements that are more equitable and sustainable, and which better reflect the interests and entitlements of all stakeholders.

## THE POVERTY TRAP AND FUTURE RENEGOTIATION

The establishment of the dichotomy between legal and illegal ASM through formalization led to tensions within the ASM community in MUBA. With thousands of oil wells in MUBA, selecting only 565 wells in Sungai Angit led to the exclusion of ASM activities outside the Petro Muba agreement. This raised issues in Bayat Ilir, as both Sungai Angit and Bayat Ilir were previously in a similar "illegal" position.

Starting with the experience of formalizing old wells in Sungai Angit village, the mechanism used to maintain access can be categorized as a more rights-based approach. The ASM has chosen to participate in the agreement established by the government, which allows them to access the oil under the specific scheme. By complying with the established rules and regulations, the local community aims to secure its access to resources and minimize potential legal problems. By joining the agreement, the local community can access benefits if the agreement is valid. However, the terms and conditions outlined in the agreement allowed the local community to gain and maintain their access and not complete control over the resources.

Mr. Toha, the Tauke in Sungai Angit village, played a crucial role in transforming illegal ASM to be licensed. He acted as a bridge between the government and the local community in formalizing oil wells; he dedicated two years to convincing the villagers of the benefits of formalization, emphasizing that it would enhance transparency and security in the ASM activities. Throughout the negotiation process, Mr. Toha highlighted several vital aspects to the local community, including: (1) assuring the safety of the use of old wells since their recognition by the government, (2) providing clarity regarding rights and obligations within the agreement, and (3) facilitating workshops conducted by Pertamina on safety and measurement and environmental risk to promote ASM practices.

The presence of illegal actors operating in Bayat ilir areas feel like they have no state enemy. From the observations and interviews in Bayat Ilir, most daily workers engaged in oil drilling to "get rich quick," most do so because they are experiencing poverty. A poverty trap is a "critical minimum asset threshold, below which families cannot successfully educate their children, build upon their productive asset, and move ahead economically over time" (Carter et al., 2006). However, there is growing concern that ASM may contribute to the poverty trap, where local communities become stuck in a cycle of low productivity, low income, and environmental degradation. There are many articles against the illegal wells in Musi Banyuasin Regency—mainly from the regulation and environmental degradation perspectives. Also, it can be possible because of the stereotype that the informal economy is not subject to government regulation, taxation, or supervision (Schneider, 2002; Benson *et al.*, 2014).

The local community is renegotiating its position to be involved in resource extraction as the local community is not recognized within the legal framework, rather via renegotiation through various structural and relational access mechanisms. Their efforts to maintain



thousands of illegal wells show that the government's approach to continue to eradicate these illicit mines will be in vain if there are government authorities collaborate with miners to help them to survive. This means there is a misstep in the effort to build better oil governance in MUBA.

There are only few artisanal and small-scale miners in Bayat Ilir who organized into cooperatives, associations, or similar democratically run structures. In order to address the miners into better natural resource governance, these types of organizations need to be formed as tools for their renegotiation process. Government elites even depend on or benefit from illicit mining revenues. The expansion of formal and informal ASM in Musi Banyuasin has far-reaching consequences for various socio-cultural domains in the region.

Ultimately, it is still essential to the local community in Bayat Ilir to note that their current ability to gain, maintain, and control their access to oil does not provide the same level of security and protection as formal recognition, and in the worst case, they may loss the access. However, the government still allow the local community to actively engage in resource management and advocate their interest, particularly in situations where the government has not implemented new policies to accommodate the voice of ASM.

Based on the discussion in the previous chapter of this section, this part presents overall conclusions for the dynamic of ASM in Musi Banyuasin Regency. This work contributes to what has been discussed in the theory of access. The findings from this study reinforce several aspects they identify as mechanisms of access "access through authority," "access through the market," "access to labor and labor opportunity," and "Access via negotiation of other social relations" are the main successor for the ASM existence.

From the research findings, there are analysis to highlight that effective enforcement which can be improve the situation, such as 1) clarifying laws regarding informal and illegal practices in ASM to avoid ambiguities and loophole, 2) addressing conflict that impede inter-agency collaboration, 3) The discussion has mapped the varied strategies, means, and processes by which the resources of the resources can be gained. Concreting the changing access arrangement of two villages allows us to see how individuals, groups, or institutions shared interests align, combine, separate, and clash. We need to avoid the ambiguity of existing old wells as a 'grey zone' on which ideas of property and access, authority and power, are problematic and this grey zone results vary in a temporal setting (days, weeks, months, years) depending on the dynamics and the broader political and economic context.



## 6. CONCLUDING REMARKS

The discourse surrounding the oil value chain in Indonesia often centered around prominent corporations such as Pertamina, ExxonMobil, Schlumberger, and PetroChina. However, in oil-rich regions like Musi Banyuasin Regency, artisanal and small-scale mining (ASM) has emerged as a significant contributor to the local economy and shaped its production value chain. While large corporations dominate the national and global oil industry, ASM in Musi Banyuasin, particularly Sungai Angit and Bayat Ilir, presents a distinct perspective on how oil offers a different opportunity for economic livelihood improvement. The stories from the two study areas show how the government tries to incorporate the local community into the official scheme by formalizing the operation of old wells by incorporating ASM through an inclusion approach. However, this decision has resulted in access gaps within the ASM community.

Using the theory of access by Ribot and Peluso (2003), it becomes evident that the discussion of access to oil resources could go beyond the notion of legality versus illegality. This theory clarified that the community's ability to benefit from oil has changed occasionally. For example, we can see that the dynamic of ASM in Sungai Angit village is more stable (financial, security environment) since they gained access through right based mechanism (legal access) where they can access without crossing the legal barrier. In contrast, the miners in Bayat Ilir put more effort into trying different structural access mechanisms to derive benefits from oil. The prioritization of old wells by the MUBA government and the subsequent neglect of the Bayat Ilir community has exacerbated their challenges in accessing resources and maintaining their livelihoods.

The government's inability to address the community's concerns and showing the slow process of policymaking on oil governance in MUBA to tackle uncontrolled ASMs, resulted in repeated environmental problems (well blowouts) and rent-seeking schemes. To address these problems, it is urgent to develop comprehensive and practical solutions that prioritize and facilitate citizen participation in natural resource extraction. By recognizing and resolving these limitations, policy interventions can be devised to empower and engage the ASM community, ensuring their meaningful participation in decision-making and promoting sustainable resource governance.

In conclusion, I hope there will be future research on developing extractive policies and practices in Musi Banyuasin. By embracing a bottom-up policy approach, stakeholders can strive for equitable resources, benefit sharing and promote the well-being of all involved.



## REFERENCES

Amuzu, D., Neimark, B., & Kull, C. A. (2022). Bittersweet cocoa: Certification programs in Ghana as battlegrounds for power, authority, and legitimacy. *Geoforum*, *136*, 54–67. <https://doi.org/10.1016/j.geoforum.2022.08.002>

Andriamahefazafy, M., & Kull, C. A. (2019). Materializing the blue economy: tuna fisheries and the theory of access in the Western Indian Ocean. *Journal of Political Ecology*, *26*(1). <https://doi.org/10.2458/v26i1.23040>

Bainton, N., Owen, J., Kenema, S., & Burton, J. (2020). Land, labor, and capital: Small and large-scale miners in Papua New Guinea. *Resources Policy*, *68*, 101805. <https://doi.org/10.1016/j.resourpol.2020.101805>

Bee, O. J. (2013). *The Petroleum Resources of Indonesia*. Springer Science & Business Media.

Benites, G. V. (2022). Natures of concern: The criminalization of artisanal and small-scale mining in Colombia and Peru. *The Extractive Industries and Society*, *13*, 101105. <https://doi.org/10.1016/j.exis.2022.101105>

Borrini-Feyerabend, G., Farvar, M. T., Renard, Y., Pimbert, M., & Kothari, A. M. (2007). *Sharing Power: A Global Guide to Collaborative Management of Natural Resources*.

Bose, P. K. (2011). Forest tenure reform excludes tribal women's rights in semi-arid Rajasthan, India. *International Forestry Review*, *13*(2), 220–232. <https://doi.org/10.1505/146554811797406615>

Botfield, J. R., Zwi, A. B., Lenette, C., & Newman, C. E. (2019). *Ethical Considerations of Using Walking Interviews to Engage Migrant and Refugee Young People in Health Service Research*.

Bridge, G., & Billon, P. L. (2013). *Oil*. John Wiley & Sons.

Brown, O. and Keating, M. (2015). Addressing Natural Resource Conflicts: Working Towards More Effective Resolution of National and Sub-National Resource Disputes. *Energy, Environment, and Resources*.

Chukwurah, F. (2022, August 3). Nigeria's illegal oil refineries thriving. *dw.com*. Retrieved May 1, 2023, from <https://www.dw.com/en/nigeria-illegal-oil-refineries-thrive-despite-government-crackdown/a-62696018>

Corbera, E., & Brown, K. (2010). Offsetting Benefits? Analyzing Access to Forest Carbon. *Environment and Planning A*, *42*(7), 1739–1761. <https://doi.org/10.1068/a42437>

Cornea, N., Zimmer, A., & Véron, R. (2016). Ponds, Power and Institutions: The Everyday Governance of Accessing Urban Water Bodies in a Small Bengali City. *International Journal of Urban and Regional Research*, *40*(2), 395–409. <https://doi.org/10.1111/1468-2427.12377>

Crang, M. A., & et al., C. I. (2007). *Doing Ethnographies* (1st New edition). SAGE Publications Ltd.

Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE.

Devold, H. (2015). *Oil and Gas Production Handbook: An Introduction to Oil and Gas Production, Transport, Refining and Petrochemical*

*Industry*. <http://dspace.bhos.edu.az/xmlui/handle/123456789/1152>

Erfizal, R. (2023, March 16). Bukannya Hilang, Aktivitas Tambang Minyak Ilegal Makin Marak. *IDN Times*. Retrieved April 20, 2023, from <https://sumsel.idntimes.com/news/sumsel/muhammad-rangga-erfizal/bukannya-hilang-aktivitas-tambang-minyak-ilegal-makin-marak-di-muba>

Hall, D., Hirsch, P., & Li, T. (2011). *Powers of Exclusion: Land Dilemmas in Southeast Asia*. Challenges of the Agrarian Tra.

Hamre, H. M. (2019). *Negotiating Legitimacy of a global palm oil Standard by local affected groups in Central Kalimantan, Indonesia*. (Master's Thesis), Norwegian University of Science and Technology (NTNU), Norway.

Hansen, C., Myers, R., & Chhotray, V. (2020). Access Revisited: An Introduction to the Special Issue. *Society & Natural Resources*, 33(2), 139–145. <https://doi.org/10.1080/08941920.2019.1664683>

Hanum, W. N. (2020). The setting of Earth Oil Management in Old Wells Based on the Principle of Social Justice. *Bestuur*, 8(2), 70-83.

Hay, I., & Cope, M. (2021). *Qualitative Research Methods in Human Geography* (5th ed.).

Heyman, J. McC. (2013). The Study of Illegality and Legality: Which Way Forward? *Political and Legal Anthropology Review*, 36(2), 304–307. <http://www.jstor.org/stable/24497403> Oxford University Press."

Hilson, G., Hilson, A., Maconachie, R., McQuilken, J., & Goumandakoye, H. (2017). Artisanal and small-scale mining (ASM) in sub-Saharan Africa: Re-conceptualizing formalization and 'illegal' activity. *Geoforum*, 83, 80–90. <https://doi.org/10.1016/j.geoforum.2017.05.004>

Hilson, G., & Maconachie, R. (2017). Formalising artisanal and small-scale mining: insights, contestations and clarifications. *Area*, 49(4), 443–451. <https://doi.org/10.1111/area.12328>

Hilson, G., & Maconachie, R. (2020). Artisanal and small-scale mining and the Sustainable Development Goals: Opportunities and new directions for sub-Saharan Africa. *Geoforum*, 111, 125–141. <https://doi.org/10.1016/j.geoforum.2019.09.006>

Investment, B. G. (2016). *Indonesia Mineral, Mining Sector Investment and Business Guide Volume 1 Strategic Information and Regulations*. Lulu Press, Inc.

Iphofen, R., & Tolich, M. (2018). *The SAGE Handbook of Qualitative Research Ethics*. SAGE.

Jati, R. P. (2022, September 12). Regulasi Belum Jelas, Tambang Minyak Ilegal di Musi Banyuasin Terus Bertambah. *kompas.id*. <https://www.kompas.id/baca/nusantara/2022/09/12/regulasi-belum-jelas-tambang-minyak-ilegal-di-musi-banyuasin-terus-bertambah>

*Jelajah Musi: eksotika sungai di ujung senja : laporan jurnalistik Kompas*. (2010). Penerbit Buku Kompas.

JPNN.com. (2021, April 21). Duarr, Tempat Penyulingan Minyak Ilegal di Bayung Lencir Meledak. [www.jpnn.com](https://www.jpnn.com). <https://www.jpnn.com/news/duarr-tempat-penyulingan-minyak-ilegal-di-bayung-lencir-meledak> (Accessed November 7, 2021)

Kasimba, S. A., & Lujala, P. (2019). There is no one amongst us with them! Transparency and participation in local natural resource revenue management. *The Extractive Industries*

*and Society*, 6(1), 198–205. <https://doi.org/10.1016/j.exis.2018.10.011>

Kinney, P. (2017). Walking interviews. *Social research update*, 67(1-4).

Muli, R., Irsan, C., & Suheryanto, S. (2016). Komunitas Arthropoda Tanah Di Kawasan Sumur Minyak Bumi Di Desa Mangunjaya, Kecamatan Babat Toman, Kabupaten Musi Banyuasin, Provinsi Sumatera Selatan. *Jurnal Ilmu Lingkungan*, 13(1), 1-64. <https://doi.org/10.14710/jil.13.1.1-64>

*Menteri ESDM: Cadangan Minyak Indonesia Tersedia untuk 9,5 Tahun dan Cadangan Gas 19,9Tahun*. (2021, January 19). ESDM (Accessed November 7, 2021)

Kurniawan, N. I., Lujala, P., Rye, S. A., & Vela-Almeida, D. (2021). The role of local participation in the governance of natural resource extraction. *The Extractive Industries and Society*, 101029. <https://doi.org/10.1016/j.exis.2021.101029>

Narh, J. (2017, May). *Conflict Over Odugblase Limestone Revenue: Causes, Consequences, and the Way Forward*. Norwegian University of Science and Technology Faculty of Natural Sciences Department of Geography. <https://ntnuopen.ntnu.no/ntnu-xmlui/bitstream/handle/11250/2449666/John%20Narh%20-%20MSNARMgeo%20-%20vår%202017.pdf?sequence=1&isAllowed=y>

Pichler, M., Schmid, M., & Gingrich, S. (2022a). Mechanisms to exclude local people from forests: Shifting power relations in forest transitions. *AMBIO: A Journal of the Human Environment*, 51(4), 849–862. <https://doi.org/10.1007/s13280-021-01613-y>

Ribot, J.C. and Peluso, N.L. (2003) A Theory of Access. *Rural Sociology*, 68, 153-181. <https://doi.org/10.1111/j.1549-0831.2003.tb00133.x>  
Rodríguez-VanGort, F., & Novelo-Casanova, D. A. (2014). Volcanic risk perception in northern Chiapas, Mexico. *Natural Hazards*, 76(2), 1281–1295. <https://doi.org/10.1007/s11069-014-1549-x>

Sanyoto, R., Rahman, M. S. A., Novianto, E., & Fahmi, A. A. (2019). *Lanskap Sembilang-Dangu: Kontestasi Kepentingan dan Kolaborasi Tindakan*. Penabulu Foundation.

Sekarsoca, A. A., & Sekarsoca, A. A. (2022). Cerita Pembuat Solar Tradisional di Bojonegoro Setelah Tak Lagi Kucing-kucingan dengan Pertamina. *Mojok.co*. <https://mojok.co/liputan/geliatwarga/cerita-pembuat-solar-tradisional-di-bojonegoro-setelah-tak-lagi-kucing-kucingan-dengan-pertamina/> (Access 28 May 2023).

Scholtens, J. (2016). The elusive quest for access and collective action: North Sri Lankan fishers' thwarted struggles against a foreign trawler fleet. *The International Journal of the Commons*, 10(2), 929. <https://doi.org/10.18352/ijc.627>

Schöneich, S. (2023). *Living on a Time Bomb: Local Negotiations of Oil Extraction in a Mexican Community*.

Sjöstrand, A. E. (2016). *Fuelwood on the Fringes: an analysis of conflict surrounding fuelwood access on the southern boundary of Borjomi-Kharagauli Protected Areas, Georgia* [MA Thesis]. Stockholm University.

Sultana, F. (2011). Suffering for water, suffering from water: Emotional geographies of resource access, control, and conflict. *Geoforum*, 42(2), 163–172. <https://doi.org/10.1016/j.geoforum.2010.12.002>

Szaboova, L., Brown, K., & Fisher, J. (2020). Access to Ecosystem Benefits: More than Proximity. *Society & Natural Resources*, 33(2), 244

260. <https://doi.org/10.1080/08941920.2018.1556759>

Tempo. (2020). *Investigasi - Pencoleng minyak Pertamina*. Tempo Publishing.

Terminski, B. (2012). Mining-Induced Displacement and Resettlement: Social Problem and Human Rights Issue (a Global Perspective). *SSRN Electronic Journal*. Published. <https://doi.org/10.2139/ssrn.2028490>

Times, I. (2021, October 25). Polda Sumsel Tutup 1.000 Sumur Bor Ilegal di Musi Banyuasin. *IDN Times*. <https://sumsel.idntimes.com/news/sumsel/muhammad-rangga-erfizal/polda-sumsel-tutup-1000-sumur-bor-ilegal-di-musi-banyuasin/1>(Accessed November 7, 2021)

The Diplomat. (2022, September 20). *Why The Price of Petrol Increased in Indonesia But Not in Malaysia*. Retrieved May 2, 2023, from <https://thediplomat.com/2022/09/why-the-price-of-petrol-increased-in-indonesia-but-not-in-malaysia/>(Accessed January 11, 2023)

Tjora, A. (2018). *Qualitative Research as Stepwise-Deductive Induction* (1st ed.). Routledge. <https://doi.org/10.4324/9780203730072>

Ulfah Tuzyahroya, Y., & Sariffuddin, S. (2020). Traditional oil miners reach their prosperity: an assessment of social welfare in Wonocolo, Indonesia. *Journal of Degraded and Mining Lands Management*, 7(4), 2337–2344. <https://doi.org/10.15243/jdmlm.2020.074.2337>

*UNFOLD: Illegal Oil Mines In Sumatra Indonesia*. (2020, October 13). [Video]. YouTube. <https://www.youtube.com/watch?v=LuUKxThCuuU>

Usa, I. (2009). *Indonesia Mining, Oil & Gas Industry Export-Import and Business Opportunities Handbook* (6th ed.). International Business Publications, USA.

Valentine, G. (2005). 'tell me about . . . using interviews as a research methodology, in R. Flowerdew and D. Martin (eds) *Methods in Human Geography: A Guide for Students Doing a Research Project* (2nd edn). Edinburgh Gate: Addison Wesley Longman, pp. 110–127.

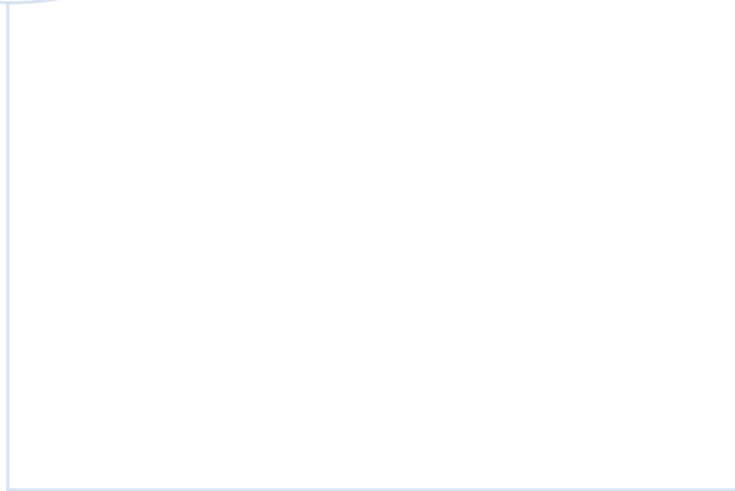
Warra, A. A., & Prasad, M. N. (2018). Artisanal and Small-Scale Gold Mining Waste Rehabilitation With Energy Crops and Native Flora—A Case Study From Nigeria. *Bio-Geotechnologies for Mine Site Rehabilitation*, pp. 473–491. <https://doi.org/10.1016/b978-0-12-812986-9.00026-9>

*World Bank Overview of Extractive Industry*. (2021). World Bank. <https://www.worldbank.org/en/topic/extractiveindustries/overview#1>

Yuliani. (2023, March 18). Sumur Minyak di Muba Kembali Terbakar, 1 Orang Tewas. *IDN Times*. <https://sumsel.idntimes.com/news/sumsel/yuliani-10/sumur-minyak-di-muba-kembali-terbakar-1-orang-dikabarkan-tewas>

Yurista, A. (2015). Politik Hukum Pertambangan Minyak Bumi Pada Sumur Tua Sebagai Strategi Menuju Ketahanan Energi Di Indonesia. *Jurnal Rechts Vinding:Media Pembinaan Hukum Nasional*, 4(2), 311-325. doi:<http://dx.doi.org/10.33331/rechtsvinding.v4i2.26>





 **NTNU**

Norwegian University of  
Science and Technology