Working Paper

POSING THE CHALLENGE

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PREFACE

POSING THE CHALLENGE: STUDIES OF GOVERNANCE ON EXTRACTIVE INDUSTRIES

For some time, debates on governance studies have been preoccupied with tension between those who are in favor of a state based model and those who advocate its alternative: the market-based model. As the latter model gains more popularity and even inspires the daily practice of policy-making, the debate appears have shifted to a more topical or context-specific issue. Apart from the appearance of debate on specific issues, such as environmental governance, maritime governance, border governance and the like this study focuses on extractive industries. It takes the form of a literature review and was conducted by young researchers at Gadjah Mada University, who made an investment of their time and commitment to themselves with this exciting issue.

The extractive industries raise issues of governance because they have typically been large scale, hi-tech enterprises that involve quite a few people. The industries themselves have been in operati0n for a long time, but their governance had not been examined thoroughly until the state-based governance model lost its popularity. As the states—by whom political decisions on extractive industries typically take place are currently under scrutiny—and the notion of good mining practices or good governance gained greater prominence in public discourse, transnational engagement on extractive industries also came into play. Obviously, extractive industries are an interesting focus of study on governance not only because the capacity to reveal the elitist or potentially secretive nature of its works, but also because of the capacity to uncover the link between the domestic and the global scales of governance. The economic term value chains, has been widely used to signify the dismissal of a state's boundary.

In the first chapter, Hasrul Hanif maps out the way, if not the destiny of state, which, endowed with huge amounts of natural resources, is then able to engage in extractive industries. For sure, it is theoretically elusive, but more importantly, it is practically challenging. The concentration of, and its availability at the large-scale wealth at a given time, makes normative agenda such as setting democratic governance in place, proven difficult. This brings us to the concern, which Joash Tapiheru reveals from review that, extractive industries are bound to trigger the so-called resource curse or Dutch disease. Indeed, it is ironic. Everyone wants additional wealth, but the availability of wealth, and even the availability of the wealth on a large scale, does crease severe damage to the livelihood of the people; unless a particular way of governing is in place. The review presented in here aims to increase our understanding of this matter.

Congruent with Joash Tapiheru's attempt to identify the underlying issue on governance in extractive industries, Wigke Capri Arti observes three cases, and analyzes the issue of inequality embedded in extractive industries. Interestingly, she scrutinizes the inequality at three different aspects and draws some lesson out of them. Following this train of thought, Primi Sudharmadi Putri examines the effects of extractive industries on the environment. She

adopts the corporate point of view and tries to make sense of how precisely the industries affect the environment. To ease herself into tracing down the effect, she relies on the very notion of the life-cycle ofthe gas and oil and gas industries, and eventually maps out what sort of environmental problems the industries are likely to cause.

In the chapter that follows, Poppy S. Winanti, presents her review on how to deal with the issue. She proposes solutions for making the hazardous issue of extractive industries governable. These recommendations rest on the idea of risk management; such that decision makers on this subject are expected to make themselves well-informed through standardized assessment schemes in order to make well informed decisions. At issue here is the capacity and the way to minimize risks, particularly conflicts and environmental degradation. Dian Lestariningsih concludes the review by proposing that community empowerment may be an important, but potentially missing element in the mitigation of risks arising from exractive industries.

The review of literature presented here is part of the wider activities of a small working group at PolGov, a Research unit of the Department of Politics and Government, in the Faculty of Social and Political Science at Gadjah Mada University. In collaboration with the Resource Watch Institute (RWI), the unit's activities include training for activists in Non-governmental organizations who work in this field within theAsia Pacific Region;

Engagement on the study of extractive industries, for most of the members of the working group, is relatively new. It is in fact, only the beginning of the wider attempts to advance the study, including the creation of a curriculum on the subject. This review will also contribute to the Journal run by the Department.

Last but not least, on behalf of the Department I would like to extend my appreciation to Hasrul Hanif, Poppy S. Winanti, and Joash Tapiheru who worked hard under pressure to make this review available. This achievement however would not be possible without the support and encouragement of Dian Lestariningsih.

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POSING THE CHALLENGE

Chapter I

POLITICAL REGIMES IN RESOURCE-RICH COUNTRIES:

Rentier State, Democratic Politics, and State Capacity

Hasrul Hanif

Institutionalization of democratic regimes in resource-rich countries remains one of the fire spots in the studies on political economy of resource curse. In addition to the extensive debate on the resource curse, wider debates on also include the role of abundant natural resources and economic development, the relationship between natural resource abundance and civil wars as well as political regimes (see Rosser, 2006: 8). Regime here refers to a system of government or, in broader terms, a system of rules for doing something. Within this spectrum of the studies, we can map it out into two trends and clusters for academic concern.

The first is the trend in the literature and academic debates in political sciences and political economy which attempt to identify a causal relationship between an abundance of resources and a democratic state–citizen relationship, since a state earns its revenues from resources rather than taxes (by which citizen can control and influence their government). Furthermore, some literature related to political economy of democratic transition also highlight resource-related factors contributing to challenges and opportunities in transforming authoritarian into democratic regimes in resource-rich countries. The second trend relates to political scientists' and political economists' concerns with the issues of state capacity or institutional capacity related to the problem of rent seeking and illegality in the governance of extractive industries . These trends have resulted in a series of remarkable debates on the rentier state phenomenon.

This section aims to elaborate on the correlative relationship between resources and political regimes. It examines the factors that enable some countries to promote good development or prevent others from doing the same. It also seeks to identify political breakthroughs and innovations in enhancing democratic development in natural resource rich countries (cf. Rosser, 2006)

Quality and Prospect of Democratic Politics in Petro-State

Political scientists and political economists have long been concerned with the resource curse and have been ask the fundamental question regarding the impact of abundant resources to democratic politics. They consider how state revenue from extractive industries as non-citizen based tax income negatively contributes to the quality of governance in a particular country. That is to say, in what way political relationships between the state and the society have changed. A state that gets a huge proportion of its income from natural resources tends to be more autonomous from citizens since it doesn't need direct support (revenue) from citizens as taxpayers.

Mick Moore (2007) highlighted two main channels which show how the concentration of revenue impacts governance. The first relates to the degree of dependence of governments on general taxation for their financial resources. If a government does not need to make much tax effort because it has large non-tax incomes from oil, gas and mineral exports or from foreign aid, then state elites are financially independent of citizen-taxpayers. This changes the political incentives that they face, and

the ways in which they seek to obtain, use and retain power. The long term consequence is that state elites are less responsive and accountable to citizens. However, this relationship is not automatic. The method of taxation imposed by a government is also relevant. For example, coercive strategies may contribute to the development of poor governance.

Consequently, many studies tend to conclude that a state with an abundance of natural resources is associated with low levels of democracy. Terry Lynn Karl (2004: 668) concludes that a centralised system of rule rises and goes together with resource-rich countries. Throughout the world, oil and democracy seem like "oil and water", difficult to mix with each other. Karl indicated that political scientists have repeatedly documented this relationship through case studies, and they have found a robust and statistically significant relationship between oil dependence and authoritarian governments. Oil appears to impede the development of democracy in most cases, especially in the Middle East and North Africa, though it facilitated democratization in Venezuela.

Andrew Rosser (2006: 10), using the findings of Wantchekon's study (1999) makes an even more specific assertion. Based on data from 141 countries between 950-1990, Rosser suggests that for every per cent increase in natural resource dependence (as measured by the ratio of primary exports to GDP) the probability of having authoritarian government increases by nearly 8 per cent. In line with this assertion, the richer a country is with natural resources, the more likely it is to experience failure or a slower pace of transition to democracy. Similarly, Jensen and Wantchekon (2004 in Rosser, Ibid) point out that in the case of Africa, the resource abundant countries in the region were more likely to be authoritarian and experienced breakdowns in democracy even after a democratic transition.

Rosser's study goes even further. By referring to Michael Ross's work who investigated the variation in regimes related to the types of resource economies and variety of regions. In his study entitled "Does Oil Hinder Democracy?" (2001), Ross pooled time-series cross-national data from 113 states between 1971 and 1997. He investigated three aspects of oil-related impediments to democracy by asking three questions. (1) Does oil consistently have a negative influence on democracy ?; (2) Does oil impede democracy irrespective of geographic and sectoral context; (2) Even if oil dependency does have anti democratic effects, what is the causal mechanism?

He demonstrated that a state's dependence on oil or mineral exports tends to make it less democratic. Fascinatingly, this effect of impeding democracy is not caused by other types of primary exports, nor is it limited to the Arabian Peninsula, the Middle East, sub-Saharan Africa or to small states. There are three notable findings: First, the claim that oil-impedes-democracy is both valid and statistically significant. In other words, oil dependency does hurt democracy. Secondly, the harmful influence of oil is not restricted to the Middle East. Oil wealth has probably made democratization harder in states like Indonesia, Malaysia, Mexico, and Nigeria; and it may well have the same affect on the oil-rich states of Central Asia. The third finding is that non-fuel mineral wealth also impedes democratization.

There are three possible mechanisms, which link oil and authoritarianism. They are: (1) the rentier effect, through which governments use low tax rates and high spending to dampen pressures for democracy; (2) the repression effect, by which governments build up their internal security forces to ward off democratic pressures; and (3) the modernization effect, in which the people who fail to move into industrial and service sector jobs are less likely to push for democracy. Evidently the links between mineral wealth and authoritarianism are more elusive than previously understood. Mineral exporters appear to suffer from a rentier effect but not a repression effect. There is only weak evidence to suggest that they are afflicted by a modernization effect (Ross, 2001: 356-357).

In relation to the debate of the rentier effect, Michael Ross (2012: 67-71) asks the reverse. He identifies the opportunity of democratisation in authoritarian petro-states and paints a bleak picture.

Many studies in political economy of fiscal policy imply that people tend to support the government that has a larger budget. In other words, citizens only care about keeping their taxes low, therefore a dictator who raises taxes will be forced to democratize. However, statistical analysis found evidence to support a modified contention: that citizens object to paying higher taxes if they do not receive commensurate benefits. This suggests that citizens care about both their taxes and government benefits. They do not necessarily want to minimize their tax burden, regardless of the consequences for their benefit. Nor do they wish to maximize their government benefit, regardless of what they must pay in taxes. Instead, they wish to simultaneously minimize the taxes they must pay while maximizing the benefits they receive. If taxes rise but government benefits do not, or if government benefits fall but taxes do not, citizens will protest. Perhaps people do not really care about their government's spending to taxation ratio but rather on its spending–to–revenue ratio (Cf. Herb, 2005).

Moreover, in countries with strong oil production, governments can earn more revenue from non–tax income and provide more benefits to citizens thus ensuring that the ruling elites keep their power and maintain the state's political stability by quelling all rebellion and demands for democratic reform. The liklihood of reform and transition to democracy in oil producing countries is smaller than for non–oil producing countries (cf. Philip, 1982; Abir, 2005). Using a similar argument, Syahrir also concluded that the authoritarian regime of New Order in Indonesia have the capacity to provide for the basic needs of its citizens. The state has the capacity to alter citizen's participation in the political process from a process of controlling and influencing the masses to one of providing access to economic benefits and the provision of basic needs (see Syahrir, 1986).

Finally, Andrew Rosser (2006: 20–21) summarised various explanations for causes of oil dependency hindering democracy. The first of these, which reflects a state–centered perspective (and in particular the notion of a rentier state), suggests that natural resource wealth hinders democracy because governments in resource–rich countries are able to use government spending and low taxes to reduce pressures for democratization. Lam and Wantchekon (2003), for instance, have argued that the economic benefits of resource booms are typically concentrated on political elites, in turn enabling them to maintain support and consolidate their power. In authoritarian political systems, this means more limited scope for democratic change. Similar arguments have been made by Jensen and Wantchekon (2004) in relation to resource abundant states in Africa; Beblawi (1987) and Luciani (1987) in relation to oil states in the Middle East, and Ross (2001a) in relation to oil states in general.

The second explanation, which is also broadly consistent with the state–centered perspective, suggests that natural–resource wealth hinders democracy by enabling governments in resource–rich countries to spend more on internal security. With stronger internal security forces, it is argued, governments can limit the scope for political opponents to organize and challenge them (Ross 2001a; Jensen and Wantchekon 2004).

The third explanation builds on rational actor analyses of the causes of civil war and focuses on the link between civil wars and political regimes. As Jensen and Wantchekon (2004: 822) have argued, the central idea of this explanation is that natural resource wealth can serve to consolidate particular regimes in power, in turn making it rational for opposition groups to pursue power through extra–constitutional means (i.e. war). This in turn, they argue, 'could result in a dictatorship by the opposition party or the incumbent party' depending on the outcome of the war.

The final explanation, which is generally consistent with the historico–structuralist perspective, suggests that natural resource wealth hinders democracy by preventing the social and cultural changes that facilitate democratisation such as rising education levels and occupational specialization. Ross (2001a) has labelled this the 'failed modernisation' effect. Herb (2003) and Clark (1997) have

challenged this explanation, suggesting that natural resource wealth may in fact lead to various social and cultural changes consistent with 'modernisation'. These in turn may, on balance, outweigh any negative effects of resource wealth.

Rentier State, Institution and Illegality

Academic debates on the political dimension of the resource curse also pay attention to state formation and state capacity. They start by identifying the political consequences of natural abundance into state formation and political structures in petro-states. In this discussion, the rentier state is a prominent idea but it remains debatable.

A rentier state here refers to a state that is sustained by externally generated rents rather than from the surplus production of the population. In oil-exporting states, this is measured by the percentage of natural resource rents in total government revenues. Since the revenue base of the state is the state, oil rent will affect the state capacity (Karl 2004; 2007a). Actually, rentierism and natural resource dependency are not the same things, though in practice they are very similar. Natural resource dependency is measured as the share of natural resource exports as a percentage of GDP. Rentierism, by contrast, is measured by the percentage of rents in government revenues (Herb, 2005:298; cf. Losman, 2010).

A rentier state emerges in petro-states because they have different and unique state formations and developments compared to European state buildings. State formation in petro states are not only shaped by international power asymmetries but also specified by relative state autonomy from citizen's control and influences because they get a huge "unearned income" or rely on unusually great externally generated revenues. They are also very susceptible to being captured by international and domestic private interest groups(see Karl, 2007b: 260-268).

As mentioned previously, rentierism endangers institutionalization of democratic politics in petro-states. This outcome is triggered by three causal mechanisms (Herb, Ibid: 298). First, rentier states need not tax (or need not tax much). Freedom from levying taxes "release[s] the state from the accountability ordinarily exacted by domestic appropriation of surplus. [T]he state may be virtually completely autonomous from its society, winning popular acquiescence through distribution rather than support through taxation and representation." Second, rentierism increases the capacity of the state to both buy off and to repress opposition. These two mechanisms, together, often are thought to produce a "rentier social contract" in which "the state provides goods and services to society. While society provides state officials with a degree of autonomy in decision-making. Third, oil revenues change the class structure of society. Democracy is stymied when oil revenues prevent changes in class structure that usually lead to democracy (see also Herb, 2002).

Furthermore, rentierism contributes to the absence of effective governance in public administration and service provision. Autonomous bureaucracy tends to withhold information from the masses(against transparency) and provides no incentive to endorse governance reform and innovation. State capacity to deliver public goods tends to be weak. In other words, the rentier state has an information deficit problem; the monitoring deficit and participation deficit occur because only few engage in generating wealth and the majority are only involved in distribution and realization without strong popular control. The absence of transparency and accountability strongly encourage political corruption (see Karl 2007b: 264-265; Beblawi 1987: 385).

In this vein, Mick Moore (2004) identifies some political pathologies related to a rentier state or resource dependent states. These include:

1) Autonomy from citizens. The state apparatus, and the people who control it, have a "guaranteed" source of income that makes them independent of their citizens (potential taxpayers).

2) External intervention. Oil, in particular, has generally been viewed as a strategic commodity. Concerns about security of supply have continually motivated substantial political and military intervention by the wealthiest nations in the governance of oil-producing areas

3) Coupism and countercoupism. It is very tempting for those not at the very center of power to try to take over the state by force. The rewards are potentially very high, and foreign support can sometimes be obtained, especially in the context of geopolitical rivalry over access to oil supplies. Politics in mineral states tends to coupism.

4) Absence of incentives for civic politics. Dependence on oil revenues affects the general tenor of civilian politics, and reduces, through two very different mechanisms, the likelihood that citizens will engage in politics in a "civic" (deliberative, institutionalized, and compromise-prone) fashion

5) Vulnerability to subversion. The failure to tax the bulk of the population, and thereby bring them into the ambit of a regular civilian bureaucracy, leaves the state vulnerable to the (armed) organizational challenge of competitors

6) Non-transparency in public expenditure. Where public revenues come from a small number of concentrated sources, such as a few foreign oil companies or a public mining enterprise, it is relatively easy for revenue and expenditure to be hidden from view.

7) Ineffective public bureaucracy. There is little incentive to establish an efficient public bureaucracy. The task of raising revenue from the mineral facilities requires few specialists, and these may be imported to make them more easily controllable.

Conclusion

The analyses on the effects of extractive industries on governance of a particular country reveal that they are hardly compatible. There is a stron correlation between resource abundance and democratic state–citizen relationship since a state earns its revenue from resources rather than taxes (by which citizen can control and influence their government). Furthermore, some literature related to political economy of democratic transition also highlight resource related factors as contributing to challenges and opportunities for transforming authoritarian regimes into democratic ones in resource-rich countries. The political scientists and political economists have also been concerned by the issues of state capacity or institutional capacity related to the problem of rent seeking and illegality in extractive industries governance. Several remarkable debates on the rentier state phenomenon have also been conducted.

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Chapter II

OIL EXTRACTIVE INDUSTRIES AND THEIR POTENTIAL ECONOMIC THREAT: A Review

Joash Tapiheru

Since around the 1970s, there has been a growing notion that questions the long held belief of interlinkedness between a country's natural resources (especially oil and gas) and its economic wealth. The study on this aspect have also become part of broader studies study that try to delineate the phenomenon of the resource curse. The underlying notion, that is that a country's natural wealth does not necessarily lead to the betterment of its economic welfare, has now been one of the dominant notions in the study of extractive industries governance. The natural resource curse manifests itself in many forms. This section focuses its review and discussion on its manifestation as potential economic threats.

Before we go further, it is necessary to clarify here that the socio-politico context that shapes the political economy of oil extractive industries as we know it today is something that started not so long ago, around 1960s and 1970s. During that period, major revolutionary changes took place in the oil extractive industries sector where the national government of oil-rich countries managed to wrestle the monopoly on oil industries and trade from the big petroleum multinational corporations known as "the Seven Sisters". These changes mark the new structure of governance in oil extractive industries (Ross, 2012; Bridge and Le Billon, 2013: 22, 37-38).

The shift of the authority and power over the oil extractive industries sector from big multinational corporations to the national government of the oil-rich and oil producing countries means greater revenue for the latter that was initially believed would serve as leverage to enhance its national economic performance. Therefore, it is not surprising that one of the dominant studies on the economic potential threat of oil and natural resources curse in general is related to the national revenue management issue.

There are, however, diverse perspectives and approaches to this issue of national revenue management. The trend has also been changing from over time. Initially, this issue was perceived solely or pre-dominantly from an economic lens. However, this tendency has been undergoing many transformations, as many later studies further argue that while economic factors determine the economic performance of oil or natural resources countries, those economic factors are themselves shaped by broader non-economic, especially political factors (see Rosser, 2006: 13-14).

The organization of the review presented here follows this broad categorization based on how the oil resource curse, its causes, and solutions are treated in those two groups of approaches. This is because although many studies have criticized the economic-heavy explanations on the phenomenon of the resource curse, the alternative explanations they offer rather serve to complement the existing economic explanations than totally contradict them.

Economic Explanations

The economic explanations of the oil resource curse start from the identification of the nature of the oil extractive industries as expertise and technology, thus capital–intensive (Frank, 2005: 239; Ross, 2012: 45), volatile (Ross, 2012: 27, 50), enclaved (Hirschman, 1958, Ross, 2012: 45), long chain of economic process (Frank, 2005; Bridge and Le Billon, 2013), and secretive (Ross, 2012). In certain instances in which three or more of these factors occur simultaneously, the oil curse situation we know as 'Dutch Disease' may take place. While in some literature the terms 'Dutch Disease' and Resource Curse are used interchangeably, following Ross, here the term Dutch Disease refers specifically to "the process that causes a boom in a country's natural resource sector to produce a decline in its manufacturing and agricultural sectors" (Ross, 2012: 48).

Some literature mentions that the oil resource curse takes place as a combination of the capital–intensive and enclaved nature of the oil extractive industries. The oil extractive industries require less labor force than other sectors such as agriculture and manufacturing and rely heavily on technology. Furthermore there is a tendency at the site where an oil extractive plant is located to create a self–sufficient enclave with very minor linkages to the domestic economy (Ross, 2012: 45–46). Therefore the oil resource wealth does not immediately translate into economic wealth for the country in which that oil reserve belongs.

The long road of the transformation of oil to wealth has been extensively discussed in academic and economic literature, and includes a paper by Alison Fleig Frank. Frank's work discusses the failures of transforming oil resources endowment into economic wealth in 18th – 19th century Galicia, during the early period of oil extractive industries in Europe. Apart from the non–economic factors such as interstate territorial conflict over the oil rich Galicia, Frank also explains how the less advanced extracting technology available at that time and relative ignorance of the nature of the long chain of process required to transform oil into economic wealth have contributed to the expected economic performance in the related region (Frank, 2005).

The volatility of oil prices in the international market also contribute to the complex relations between oil resources and economic wealth and performance of certain oil rich countries. As we know, since the nationalization of oil industries that took place in the 1960s and 1970s, the global oil price has become more and more volatile. The "Seven Sisters" no longer enjoy their previous monopoly privilege that once was the main instrument to maintain the stability of the oil price in the global market (Ross, 2012; Bridge and Le Billon, 2013).

The literature reviewed explain further than merely describing the great distance between oil and economic wealth of oil producing countries. It also explains how those natures of oil extractive industries also posses potential threat of economic downfall of a given oil rich country when it is not properly managed. The research conducted by Ross and Bridge and Le Billon include the dominant tendencies of revenue management among various oil rich countries and highlighted how those tendencies may cause economic stagnation or even downfall of the related oil rich countries.

Relating to the current governance structure of oil extractive industries in most countries, Ross explains how the government appropriation, the enclave nature of the oil projects in oil rich countries, and 'Dutch Disease' contribute to the absence of expected economic performance in many oil rich countries. While the non–economic aspects of tendency will be further discussed in the following sub–section, Ross included economic explanations for how these factors work to produce the outcome we are discussing.

The increase of government revenue may have positive effects on private sector growth in oil producing countries. However, the growth of this sector depends heavily on government's demand

funded by oil revenues. There is only minor capital circulation among actors in the private sector, thus it does not provide sufficient incentive for more actors to get involved in the private sector (Ross, 2012: 44).

The potential of oil extractive industries to economic growth was discussed earlier. The low demand for oil extractive industries to the domestic market of an oil producing countries provides little incentive for the growth of the private sector in that country. The Dutch Disease may further exacerbate the situation during an oil boom because many investments (in terms of financial and labor) are concentrated in the economic sector at the expense of other sectors, such as agriculture and manufacture (Ross, 2012: 47–50).

In short, Ross argues that a booming oil extractive industry does not necessarily encourage or have a spillover effect on the growth of other sectors of industry, especially the private sector as the main generator and component of national economic welfare (Ross, 2012: 44–47).

The leading recommendation offered by economic analysts on the oil resource curse is usually that of economic diversification in oil producing countries. By doing so, the oil producing countries reduce their dependency on oil revenue and thus reduce their liability to the oil resource curse. However, all of the literature reviewed here presented broader arguments that complement the existing economic explanations.

Broader Political–Economy Explanations

As stated above, while the literature consistently maintains the economic arguments on how oil resources may become an impediment for the economic performance of any given oil or natural resources producing countries, all of the literature also present broader arguments to explain why and how there are still more chances for oil producing countries to take a path that will most likely lead them to the oil resource curse. In the more recent studies on the oil resource curse, political science comes into the fray with explanations that include behavioralist perspectives, rational actor perspectives, state–centered perspectives, historico–structuralist perspectives, social capital perspectives (Rosser, 2006: 14 – 16).

To complement the existing economic explanations on the phenomenon of oil resource curse, the existing governance structure in oil extractive industries becomes a main topic of analysis among the literatures reviewed here (Ross, 2012; Bridge and Le Billon 2006). As stated above, the shift of power over oil resource from big multinational oil company to the state and, thus, the emergence of National Oil Corporations or NOCs as important actor in the governance of oil extractive industry have been considered pivotal in shaping the economic outcome of the oil extractive industry process.

Analysts concur that the shift of power from the Big Multinational Oil Company to the state in the 1960s contributed to the manifestation of the oil resource curse in oil producing countries. In much the same way that the extraction of oil implies huge revenue for the industry, the nationalization of this sector implies huge revenues for the government. This has been followed by a tendency to expand the government. In some cases, parallel to the increase of government's income from oil, the government also becomes less dependent on taxes and more dependent on oil revenues. In some of the cases that were discussed elsewhere in this review, this tendency led to the entrenchment of an authoritarian regime or contributed to the emergence of civil war in some of these oil producing countries (Rossen, 2006). However, if we focus on its economic effects in oil producing countries, these tendencies only have a minor direct impact on the growth of the national economy in oil producing countries as the governments generally feel that there are little incentives to promote it since it does not rely heavily on taxes for its revenue (Ross, 2012: 27 – 33).

The major changes to oil industries governance that occurred throughout the 1960s and 1970s also increased the volatility of oil prices and thus the government's revenue that comes from oil. The fluctuation of oil prices in global market has become more turbulent as more actors and factors are now coming into play; all of which may exert huge influence on the oil prices in the global market. The higher volatility here means that the government has to anticipate every possible scenario relevant to its revenue that is related to oil industries. Sudden increase of revenue may also be as problematic as a decrease of revenue that comes from oil when the government has no capacity to manage it, as described in the explanation of Dutch Disease.

The other feature of the changing governance structure in oil industries since 1960s and 1970s is its secretive nature. Information related to oil industries such as available reserves, production volume, and the amount of income generated from oil industries either for the government or the companies while vital, is simultaneously, easy to conceal from public scrutiny, even in some countries known as democratic countries (Ross, 2012: 59–62).

Ross' work delineates the interconnectedness between oil revenue and the wealth of oil producing countries by linking them with democracy, gender equality, and peace. Works such as Bridge and Le Billon's focus on the interconnectedness between the governance structure and economic wealth of the oil producing countries through detailed analyses of the governance structure of the up–stream; midstream; and downstream levels and how this structures the behaviors of the actors involved in each phases of oil extractive industries (Bridge and Le Billon, 2013).

Bridge and Le Billon give interesting explanations for the current governance structure of oil extractive industries. One explanation is that they are related to the dilemmatic positions of the NOCs as both regulators and operators in the national oil extractive industries. The other explanation is related to the detailed analysis of the various phases of oil extractive industries and the fact that the nationalization of oil industries only breaks down the monopoly of the Big Multinational Corporations at the upstream level, while the mid– and down–stream levels are still largely in the hands of the private sector. These facts in many ways affect how the governance structure in oil industries work and perform to produce certain economic impacts in any given nation.

As Ross does in his work, Bridge and Le Billon start their analysis by describing the current nature of the oil market with regards to demand and supply. The supply side is marked by growing uncertainty and lower quality of products, while the demand side asks for lighter and cleaner oil. As mentioned in other recent studies on oil extractive industries, Bridge and Le Billon further explain that the current oil market as an economic phenomenon is largely determined by non–economic factors such as the governance structure and the interplay it shapes in the oil extractive industries.

Bridge and Le Billon also argue that the governance structure in oil extractive industries has been undergoing changes since the 1960s and 1970s with the introduction of new discourses such as environmental impacts of oil extractive industries and its consumptions; the near depletion of global oil reserves; the shrinking boundaries that render people more closely connected to each other and so on. The emergence of these new discourses which are shaping the reality of oil extractive industries is labelled as 'Oil's New Reality' (Bridge and Le Billon, 2013: 182–183).

On a whole, the current studies on oil extractive industries and its potential curse indicate that the economic malevolence of oil and its revenue is only part of the potential curse that afflicts the oil extractive industries. There are additional socio and political problems that oil dependency presents; especially for the oil producing countries. These problems include conflicts such as civil wars and the entrenchment of authoritarian regimes.

Current studies on the impact of oil extractive industries also recognize that the economic impact presented by oil extractive industries, whether in favor or obstructing the economic performance of a given oil producing country, are largely determined by various non-economic factors. Furthermore, these non-economic factors come into play not only at the national or local level, but also simultaneously at the global level.

These changes are consistent with the latest findings of new oil reserves, starting from around the late 1990s and early 2000s up to the present time. Most of the new oil reserves findings and explorations take place in low – income countries such as Timer Leste and new states of the former Soviet Union. This trend is in contrast to the previous one where most of the oil producing countries started to produce oil when their income was above the median world income (Ross, 2012: 18-19). These low-income countries present governance challenges of their own that when not deliberately taken into account may lead to negative impacts from oil extractive industries instead of beneficial ones.

The nature of the governance structure in oil extractive industries may lead the oil producing countries to various negative outcomes such as entrenchment of authoritarian rules, rampant corruption, economic stagnation or, even, deterioration. These various potential negative impacts will be discussed in the next section of this review.

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Chapter III

SOCIAL INEQUALITY IN EXTRACTIVE INDUSTRIES

Wigke Capri Arti

Over hundreds of years, oil wells have been drilled to fuel giant expectations of resource rich nations to develop their countries and grow as oil based states. These countries gamble on oil abundance that will lead their country on a set course of development. Oil grows to represent a potent driver to fuel development (Frank, 2007) (Karl, 1997). Unfortunately, most of the giant expectations should be dismissed and only a few of them are still living in 'flares'.

It is clearly understood that the history of oil is as dark as its geological structures. Finding then drilling oil is a difficult yet complex process which requires high-technology to maximize profit. In this context, this understanding is identical with pre-condition requirements of oil or natural resource extraction that needs a set of "high-tech" strong state. Without a set of "high-tech" strong states, the impact of extracting natural resources, be it positive or negative are not well managed. This is the main reason why most of the giant expectations have fallen with no strong political instruments to support the dream.

Accumulated Wealth as an Intervening Variable

A study conducted by Frank (2007) indicates that the discovery of natural resources, in this context oil, does not set in motion a predetermined set of events or course of developments. It can be proven in Galicia, the oil-based country where lack of political instruments since oil had been discovered, the oil boom era until the wells dried up and leaving the country with no hope. While Galicia represents as a classic oil-based country who drilled in early 1900s, Venezuela (Karl, 1997), and Indonesia (Robison, 2008) represent as post oil-based country who experiencing revenues windfall in oil booms era and lacking in revenues deliverable.

Karl (1997) described that natural resource revenues have driven state policies and become, what he so called, an "intervening variable" to provoke state capacity. It clearly explained in Venezuela and Spain—as a gold exporter country—as a case to define: "Petro-State." In addition, based on research by Daniel Yergin (2008), reinventing oil in a post-World War I was the main goal of World War II in order to collect, accumulate oil deposits and revenues, and oil plays as the key to winning the war. Another interesting fact is coming from Indonesia's case (Robison, 2008) and Venezuela's case (Karl, 1997) have similarity on how oil boom effected to these countries, and how revenues windfall functioning as an establisher of a certain regime.

These studies show how oil and politics seems to be immutably conjoined. Such an intimate relationship between oil and politics, along with bad fiscal regimes, creates and sharpens rentier practices within the state. The centralized system required to prevent the volatility and to protect the existing mode of oil industry is another challenging issue. At this point, oil turns into a systemic curse.

Many scholars have been engaging in a long debate on systemic curse. The notion of resource curse has been their point of reference. They, however, pay little attention to social inequality, which is the

result of lack of fairness in revenue distribution. This article aims to fill the gap, by reviewing the existing practices and highlighting the issue. In order to do so, this review analyzes social inequality at three interrelated levels; (1) regional, (2) personal, (3) inter-generational.

This review draws on the cases of Galicia, Indonesia, and Norway. The latter serves as a success story, but each model allows us to draw important lessons.

Case 1: Galicia

Before this discussion goes any futher, it is important to understand that Galicia was divided into 4 major groups; Poles, Ruthenian, Jews, and German (Frank, 2007, p. 29). After Galicia became part of the Austrian empire, Poles became highest in social structure. Polish nobles became landowners, socially and politically ruling Galicia. They were the Austrian Empire's frontmen in the province.

Based on the work of Frank (2007) entitled "Oil Empire: Visions of Prosperity in Austrian Galicia" the government of Galicia adopted a minimalist approach to managing oil as a valuable natural resource. The central government in Vienna was very conservative and chose to interpret natural resources as being limited to mining only. This interpretation ignored the need for modernization but it was actually a political strategy to preserve the agricultural sector which was run by Polish nobles in an effort to maintain the existing social structures.

However, business interests prevailed. Working class Jewish merchants began to run oil companies on an individual basis. In Galicia, oil could usually be found easily in large fields so people who needed to lubricate their machines could easily transport the oil in wooden buckets. In this case, the Jewish merchants brought these wooden buckets and sold them on the open market. They had unlimited access to extracting, "a wildcat" exploitation. Up to 1881, there were 205 oil and wax production companies across Galicia and most of them were Jewish owned.

In 1867, Galicia was granted autonomy from Vienna after years of requesting decentralization. Vienna decentralized their power on a provincial level but not in fiscal matters. Galicia was granted fiscal decentralization only in oil production, which was considered to be economically unprofitable, while mineral exploration in Galicia remained in the hand of Viennese Empire. In this point, Galicia was unaware of the fiscal gap created by Vienna. It was also unaware of the wealth that existed on their land. This ignorance was evident in the debate over mining laws in 1874, when the president of Galicia suggested following Prussia's mining laws. The President did not take into account the fact that Prussia had no oil and he had nothing to do with revenues of mining, which already went to Vienna.

The oil demand increased and Austria began to export their crude oil outside the empire. In just a few years, Austria was forced to deal with competition from other oil exporters namely, Russia and America. Both of these nations had already implemented modern drilling techniques such as cable drilling, resulting in deeper wells and more oil acquisition, while Austria still dealt with high cost oil production and shipping. Rather than subsidizing oil production and shipping methods to Jewish domestic companies, the Austrian government regulated a series of projects which ensured that foreigners would be a part of joint-stock companies. The Austrian government got involved in remaking the social structure of Galicia by replacing Polish nobles as landowners with foreign companies. Eventually, this policy failed because of the laws at the provincial levels which gave different legal status to landowners and companies who extracted natural resources from the same location.

Two foreigners, Stanislaw Antoni Prus Szczpanowski, a Poznan, and William Henry MacGarvey, a Canadian, took advantage of these legal provisions. In 1880, Szczpanowski founded S.

Szczpanowski and Company, which became the First Galician Petroleum Industry Corporation, followed by MacGarvey with MacGarvey's Carpathian Company (Frank, 2007, p. 85). Both of these foreigners invested their money in drilling oil and the refining process. Through these companies, by 1909 Galicia had become the third largest oil exporter in the world and supplied 5% of the world's demands.

In tandem with the development of these oil companies, the development of Galicia as a prosperous province in Austrian Empire almost came true. A new middle class rose. Oil companies improved access to healthcare and education, even meeting basic needs such as housing that had formerly been provided by the state. Consequently economic dependence on oil revenues ensued. Social inequality became more complex because of two factors; first the inaction of the state, and second, dominance of the oil companies.

The state, be it central or provincial government, had no initiatives to distribute welfare for Galician citizens. Oil concessions only flowed around provincial elites. Government and Polish elites in the legislature became rent-seekers. Illiteracy and abject hunger could be found around Galicia. The dominance of the oil companies occurred because of the absence of the state. The state became reckless. Oil companies used basic needs including basic infrastructure as economic and political tools to settle their business and also because there was no intervention from the state.

Social inequality became higher than ever before. The upper class in Galicia was comprised of foreigners, primarily those who were connected to the oil-companies and provincial elites. The Polish noble men lost their standing as landowners because of modernization and the majority of the Jewish population migrated to other countries such as Palestine. The initiative came from local nobles to nationalize the foreign oil companies and request centralization of the state. They believed that this system could bring Galicia out of poverty. At that time, the ideology of nationalism was spreading across Europe.

Unfortunately, it was too late to redress the social inequality and save Galicia. Oil production rapidly declined due to overproduction and World War I, during which Galicia provided oil for Austrian-Hungarian interests. In 1918, west Galicia became an independent country, Poland. Eastern Galicia turned out to be a conflicted region, a pluralist region where Jews, Ruthenians, and Germans lived and struggled. To date, this region is listed among the poorest countries in Europe.

In this case, social inequality at all levels; regional, personal, and inter-generational prevailed. Galicia could not even spend the decentralization concessions that they had gotten from the oil companies. That resource rich region turned out to be properous only when the oil companies existed, even it environmentally abandoned. The only centralized system that was implemented was a cartel scheme such as the Galicia Petroleum Society, which worked to ensure distribution, stabilize oil price volatality and political lobbying. This system only worked in the way Vienna treated Galicia, as a buffer zone to supply oil for World Wars I and II. More than 60% of the oil demands were supplied by Galicia without development plans for future generations. This was what national oil company meant to Vienna.

In this book, Frank (2007) explained that the social and political units surrounding the oil basin are deniable. Both social and political units shaped their exploitation at local, regional, national, continental, and global levels. Frank also clearly stated that there was no set of development course in Galicia, and this resulted in social inequality and economic disaster for the country.

Case 2: Indonesia

The book written by Richard Robison, The Rise of Capital, discussed how social and economic factors were developed and shaped by political power. The book examines how this strong state built its empire to settle, strengthen and maintain power using methods including establishing a state oil company and consequently experienced an oil boom between 1973–1974. It further delineates how this strong state consolidated social, economic, and political factors but then lost its capacity because leading capitalist clients developed independent capital bases.

The book also described how social inequality was embedded into the society and maintained by the state. Robison pointed out that social inequality in personal aspects was created by policies and patron–client relations. Meanwhile, the New Order's policies had successfully created a new middle class. Unfortunately, it is not address social inequality regionally and a very few inter–generation factors were considered.

After 1965, the New Order government institutionalized broader economic policies which involved foreigners, such as Chinese capitalists, and they also created military and politico bureaucratic business groups. One of the most important policies in oil matters was the merger of Pertamin, Permina, and Permigan into one national oil company; Pertamina was established in 1968 (Robison, 2008, p. 235)., Then Indonesian President Soeharto chose Ibnu Sutowo, Minister of Mines, Oil, and Natural Gas, to be the Director of Pertamina. Pertamina was a state corporation that was responsible for managing oil resources through the allocation of drilling concessions, the administration of work–contracts and production–sharing–contracts and the coordination of the oil industry on a whole. At that moment, Pertamina represented the State Corporations as an "engine" of national industrialization and generator of an indigenous capitalist class.

In order to preserve the revenues windfall, Sutowo took the lead to diversify Pertamina's investments into a wide range of business activities such as PT. Krakatau Steel and subsidize petrochemicals, metal fabrication, engineering, telecommunications, real estate, air services and shipping. This project was fully supported by the government through the use of an incentives scheme, suspension of oil taxes, and so on.

The social inequality shaped in this book is evident for although Pertamina experienced an oil boom between 1973 and 1974 it was unable to repay short term debts in 1975. Robison also clarified that Pertamina received over ten times more in oil revenues in 1974/1975 compared to 1969/1970 when it was Rp 957.2 billion. After numerous investigations, it was confirmed that Pertamina was at the centre of massive corruption by Ibnu Sutowo. There was no line to distinguish Pertamina as a state corporation, versus a personal corporation. In 1976, Sutowo was dismissed as Director of Pertamina and he continued to run his 37 personal companies.

It should be clear here that neither Pertamina nor Sutowo are exclusively responsible for the outcome, rather the state must also be blamed. The state also became "corruptive" because it used revenues windfall to become more hegemonic and to finance the state itself and also politico–bureaucrats rather than distributing welfare.

In addition, the New Order regime spoiled the middle class with more incentives in order to develop strong economic support. Robison (2008) indicated that in 1970 there was a new middle class established as a result of the economic policies of 1966. The New Order executed minor policies by giving the middle class more incentives rather than progressive taxes to subsidize the high prices people had to deal with.

Welfare disparity between the elites and the ordinary citizens shaped massive demonstrations in 1974 which came to be known as Malary (Fifteenth of January Disaster). It was the biggest student

protest in 1970s. The students held a demonstration—which then became a riot—to protest high prices, corruption, and inequality in foreign investments. This is ironic because Indonesia was earning huge revenues from high oil prices on the market.

This case shows that the strong state did not have a strong legislation to prevent the revenues windfall. The state apparatus lost their capacity to manage the oil, like Galicia who failed to preserve the oil until it bubbled and burned out like giant volcanoes. In this context, Indonesia too had the opportunity to preserve oil revenues for future development but instead abandoned it because of corruption.

A Success Story: Norway

In the book entitled "The Norwegian Oil Experience: A Toolbox for Managing Resource?" Ryggvik described clearly how a newly founded poor, agriculture based country that had no modern technology, and no capital became a successful oil based country that owns and is listed as the second largest sovereign wealth fund in the world after United Arab Emirates.

The author emphasized that social equality was the main concern of the state even before the oil industry started. After Norway seceded from Sweden in 1905, this poor socialist country developed social and communal based strategies to strengthen their country. It is not surprising then that Norway regulated concession laws to control waterfall as a commercial energy constructed under Henry George who developed a radical interpretation of David Ricardo's theory economic rent. He argued that any surplus or rent accumulated as the result of ownership of particularly rich natural resources should belong to the public as a whole (Ryggvik, 2010, p. 10). Moreover, when oil production began, it was guided by a mantra that informed their attitudes to the development of oil policy: "National Governance and Control." In this case, the control was maintained by popular democracy in Norway.

Using this perspective, the government of Norway took several careful steps to capitalize on their only energy source, at that time, waterfalls energy. They regulated the Waterfall law, to make sure that their only energy source would be used to generate capital to fuel their national income, and also ensure the transfer of technology to the state who for 60 years had been exploited by French and also German companies. This principle is called the escheat principle.

Their principle and the experience in waterfall energy structured the way in which the Norwegian government deals with oil companies. When oil was found in 1960, Norway lacked the adequate technology, capital and also human resources needed to efficiently extract oil. The only recourse was to deal with foreign oil companies who were already experienced in the oil industry. However a problem arose because international oil companies were hesitant to deal with a socialist country like Norway. Jen Evensen; a Norwegian lawyer, judge and politician from Labour Party, became a mediator to communicate between the state and international oil companies. Consequently, international oil companies like Petronord, a French company, and Amoco, an American company, confirmed their commitment and agreed to set up a cartel like joint-committee named Esso as a single voice to the authorities.

The most important part of this dealing was making the concession between Norway and the international companies. Escheat principle contains several built in mechanisms and rules to ensure sharing blocks—a map of block areas. The extraction permits last only for six years, during the first three years a company should be given a quarter of its allocated blocks. This scheme was also implemented in the following three years. If the companies found oil in the blocks, the state would settle royalties for 10% and 2.5% for tax subsidies. In the following years, Norwegian business men eagerly joined the oil business with foreign oil companies.

The strategy of using oil blocks proved successful when Phillip—a domestic oil company—found oil in a block named Ekofisk. Through the participation of the Petronord Group, the Hydro oil and gas company had secured a share of 6.7% million sm3 which were actually small shares. In almost every deal-making process, Norwegian companies only had a small numbers of blocks. Ryggvik gave an example, if the total was 81 blocks, Norwegian companies only had 21 blocks, compared to British Petroleum who usually got 283 blocks from 346 blocks. More than once, Ryggvik tried to show that Norway was dealing from a politically weak position in the oil industry.

This situation created the impetus to build a national oil company in Norway. At that time, establishing a national oil company was a common practice in the oil industry. As a reflective strategy in order to establish a national oil company, a committee consisting of representatives from the Ministries of Industry, Finance, Foreign Affairs, Local Government, and Social Affairs convened and wrote a white paper to ensure that the natural resource extraction would be beneficial to the society. The committee listed ten points to ensure that "natural resources in the Norwegian continental shelf are exploited in a way that benefits the whole society (Ryggvik, 2010, p. 18).

The interesting fact of this white paper was its assumption that oil would soon dry up and the state should make strategic plans to save the country, to save future generations. In this sense, the Norwegian people wanted to make sure that their future generations would not be dealing with poverty as in the past generations. The country also managed to avoid the Dutch Disease.

The distribution of welfare was implemented in various ways to the Norwegian people. Before a sovereign wealth fund is collected, most Norwegians receive a personal share of the economic rent from the North Sea reserves, which is injected into the Norwegian economics policy.

In this book, Ryggvik is stressing that what happens in Norway is structured by the state, controlled by the society, and also an ideology of communal sharing. A strong state is not enough to deal with the oil industry, participation of the society would create better democratic governance within the oil industry.

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Chapter IV

ENVIRONMENTAL DEGRADATION BY THE OIL AND GAS INDUSTRIES

Primi Suharmadhi Putri

Natural resources, especially in resource rich countries, is a sensitive public issue, both in terms of the advantages they offer as well as the risks they pose. In the case of Indonesia, for example, it is clearly stated in Law No. 2 Year of 2001 on Oil and Mineral that given the advantage that nature provides to the people, its management should adopt serious environmental insights. The law clearly stipulates that the environmental conditions should still be considered in the processing of oil and gas resources. The high demand for oil and gas products in the machines and tools used in daily life, "force" the state to take the hydrocarbon out from the ground, for the sake of the nation's wealth. But at the production phase that environmental degradation such as land degradation and pollution of water, air or soil is often created by the misuse of resources, poor planning, poor infrastructure development, poor governance and monitoring (Mmom & Igwe, 2012). Once an area is declared to contain abundant oil and gas resources, then it is likely that the area will, sooner or later, experience environmental degradation due to the production processes. Environmental degradation is not a problem that can be solved within a short time and there are no easy fixes, furthermore the impact of th damage only increases over time. This effect is so severe that even environmental degradation has been included in the range of potential threats to states (Ullman, 1983).

Indeed, oil and gas, for all their promises to bring wealth to a nation, the fact remains that these resources also carry the potential of several curses on the environment as well as to the society. This study relies on the notion of life-cycle to reviewing the environmental effects of oil and gas. In doing so, it scrutinized how each phase in the cycle affects the environment. Bearing this in mind, this review looks at several companies' responses to the regulations imposed upon them. Obviously, the state and the companies exert the most influence in altering the environment within each phase of the life-cycle.

The Life-cycle

The oil and gas industries work from the so-called upstream to downstream type of activities. The upstream activities are the exploration and exploitation—production sectors, meanwhile downstream activities deal with all the processes of refining and processing, storage and distribution until marketing. In order to understand the potential environmental degradation caused by the development of oil and gas resources—which most of them are close to the upstream activities—it is important to understand the whole life-cycle of oil and gas production. It all begins when a company or state has discovered an area with high potential of oil and/or gas reserves. Joint E&P Forum/UNEP Technical Publication has summarized the whole long process of obtaining ready-to-use oil and gas products as follows:

The activities start with the review of geological maps in desk studies to identify favorable geological conditions in the targeted area, and continue with aerial photography survey then additional details are obtained by further field geological assessment using seismic surveys. Once the geological

structure has been identified, the only way to verify the presence of hydrocarbon and quantify the reserves is by exploratory drilling. Once the exploratory drilling is successful, more wells are drilled to determine if it is economically feasible to develop the reservoir, this step is called outstep or 'appraisal'. It is followed by the development and production process which will produce oil and gas from the reservoir through formation pressure, artificial lift, and possibly advanced recovery techniques, until economically feasible reserves are depleted. Each step described above cannot be realized without complex facilities and technology uses, built into the surrounding area of exploration. Furthermore, these permanent and cemented facilities will affect the decommissioning and rehabilitation process at the end of the company's operational activities. This phase will involve removal of buildings, facilities and equipment, restoration of the site to environmentally-sound condition, implementation of measures to encourage site re-vegetation, and continued monitoring of the site; this phase initially may take 20-40 years. (Brothwick, Balkau, Tony, & Jennifer, 1997). Meanwhile the life-cycle continues through the use of oil and gas products in daily activities, from highways and plastic bags to oil spills and carbon dioxide (Bridge & Le Billion, 2013, p. 129)

Environmental Effects along the Life-cycle

In some instances oil and gas reservations have been found in densely populated areas on people's land or farms, rainforests or even in some protected areas such as national parks. When these situations occur it often requires huge removal or relocation of the previous occupants such as people, plants and even animals in order to set up the facilities from exploration to extraction, transportation, refining, consumption and disposal. These extensive and often intrusive procedures can endanger the ecosystem all over the planet (Bridge & Le Billion, 2013). This construction of facilities is only the beginning; oil and gas production can also have a variety of effects on the environment as a result of the activities that occur during the different projects' phases; exploration, drilling/development, production, decommissioning/reclamation. The beginning of the oil and gas life-cycle starts either on the offshore or onshore site, each place will be damaged once there is a "decision to extract".

Potential environmental impact of exploration activities are generally temporary and of relatively small magnitude. Activities during the exploration phase (including seismic surveys, testing, and exploratory drilling) are conducted on a smaller scale than those at the drilling/development, production, and decommissioning/reclamation phases. Most effects during the exploration phase would be associated with the development of access roads to and from the site and exploratory wells. The impact on resources would be similar, but lesser in magnitude, to those for the drilling/development phase (Oil and Gas Exploration Impacts).

From the onset, the environment suffers from the exploitation of oil and gas resources. At the drilling/development phase, the impact would be similar to those addressed for exploration; but would be more extensive due to an increased number of wells, access roads, pipelines, and other ancillary facilities, e.g., compressor stations, or pumping stations that would be required (Oil and Gas Drilling/Development Impacts).

In the last two stages of the oil and gas life cycle, the activities produce another environmental impact. Environmental impacts which are observable during the production phase are typically long-term and alter the local habitat of the surrounding oil or gas field. The inevitable environmental impact also takes place during the production activities (including facility component maintenance or replacement), waste management (e.g., produced water), noise (e.g., from well operations, compressor or pump stations, and vehicles and equipment), the presence of workers, and potential spills (Oil and Gas Production Phase Impacts).

The last phase of the oil and gas project phase is decommissioning/reclamation. Typical activities during the decommissioning/reclamation phase include closure of all production and injection wells; removal of aboveground components and gravel from well pads, access roads (not maintained for other uses), and other ancillary facility sites; recontouring the surface; and revegetation (Oil and Gas Decomissioning/Reclamation Impacts)

All these activities are closely related to three main releases; air emission, produced water and drilling waste—especially in the use of the fracturing technique of lifting the natural gas by injecting water and chemicals to push the formation, which can potentially affect groundwater source ((EPA), 2008) —as the main cause for the environmental degradation in the surrounding area of oil and gas production facilities. The exploration and extraction phase can produce seismic disruptions and large amounts of solid and liquid waste, some of which have high concentrations of toxins. For example worldwide, drilling waste may amount to 300 million barrels, while oil extraction generates about 90 billion barrels of so-called produced waters—the saline water in the mixture of oil and water lifted from reservoirs—which is reinjected into oil reservoir and some end up in waste pits. Transport related impacts also have great affects, especially to the coastal/riparian or the impassable communities along tanker and pipeline routes, which are usually routed through low-income communities that have limited access to economic and political power. The deterioration is mainly caused by pipeline corrosion, poor maintenance, and operational mistakes versus oil theft and sabotage, but it won't stop there. The oil pollution of creeks and acid rain from gas flaring have had devastating impacts on the health and livelihood of local communities (Bridge & Le Billion, 2013, pp. 130-132). The Millennium Ecosystem Assessment identified several direct effects of these releases as drivers of climate change, these include: nutrient pollution, land conversion leading to habitat change, overexploitation, and invasive species and disease (Mmom & Igwe, 2012).

Company and Government Engagement:

Coming to Terms with Environmental Issues.

The impact of oil and gas production on the areas surrounding the facilities usually leads to environmental conflict among the society, company and the government. Environmental conflict is an unavoidable aspect of oil and gas development for the simple reason that the industries' activities are intrinsically linked with positive an negative effects to the human and natural environment (Gao). Additional factors include the misuse of resources, poor planning, poor infrastructure and poor governance and monitoring (Mmom & Igwe, 2012). Primary stakeholders are the companies and the government; these two actors could significantly prevent or minimize environmental damage caused by the industry, either by national and regional government regulation, or by creating company projects that specialize in environmental effect. The combination of both of those approaches would be ideal.

In order to minimize the industries' harmful effects to the environment, both nature and human environment, most of the oil majors now produce annual sustainability or CSR (Corporate Social Responsibility) reports. Several oil companies are closely associated with high profile CSR institutions, such as stock market sustainability or ethical indexes, the UN Global Compact (UNGC)[1] ,

[1]. The world's largest corporate citizenship initiative provides a framework for businesses to align strategies with its ten principles promoting labour rights, human rights, environmental protection and anti-corruption - http://csrreport.2010.coca-colahellenic.com/pages.asp?pid=73&subid=78.

the GRI[2] , Dow Jones Sustainability Index (DJSI)[3] and the FTSE4Good Global index[4] . The criteria to qualify for these indexes are set higher for 'high impact' industries, such as oil. They include the existence of environmental management systems, and a demonstrable public commitment to internationally recognized human rights treaties and stakeholder consultations in countries of concern. Other activities in relation to environmental management for the oil industry have covered a range of areas and approaches, as demonstrated by Statoil's overarching 'Zero Harm' policy, Exxon's Biodiversity Action Planning and environmental management certification, such as iso14001 (Utting & Ives, 2006)

Referring to the case of the oil industry as a whole, we all agree that Corporate Social Responsibility is one of the most used tools to assess companies' response to their production activities, especially with regards to minimizing the environmental impacts. However, companies' responses to the CSR index are likely to remain extremely diverse given the complex array of factors that shape company policy and performance (Patey, 2006). Indeed, divergence may be occurring, with the large western corporations reinforcing their CSR role and image to gain competitive advantage, and other, smaller companies or national oil corporations from non-OECD countries using the 'business-as-usual' approach also to position themselves favorably in the market (Pegg, 2006). Taking the example on how CSR is practiced by the company, Diamond shared his experience at two oil farms in Papua (Diamond, 2005) which highlighted the differences between the large western corporation and the national oil corporation in handling environmental sustainability around their company's site.

The first site was at Pertamina Indonesian National Oil Company, in Salawati Island, off the coast of the Indonesian part of New Guinea. conditions at this site conformed to common expectations that people usually have in mind about Oil Companies, that they are destructive and harmful both to human life and the natural environment. The field's location could be readily identified by a flame shooting out of a high tower, where natural gas obtained as a byproduct of oil extraction was being burned off. To construct access roads through Salawati's forest, about 100 yards wide had been cleared, and this of course affected many species of New Guinea rainforest mammals, birds, frogs and reptiles; some species also suffered from being hunted by Pertamina's employees, not only that, there were also numerous oil spills on the ground (Diamond, 2005, pp. 157-158).

In comparison, Diamond went to Chevron's Kutubu oil field at the Kikori River watershed of Papua New Guinea (PNG). Given the evidence presented by Diamond, the site is surrounded by uninterrupted expanse of rain forest, the access road was a thin line about 10 yards only, the road had been designed just wide enough for two vehicles to pass safely in opposite directions. The seismic exploration platform and exploration oil wells had been put in without construction of any access road at all, using helicopter and on foot access instead. Furthermore, Diamond explained that Chevron, with its extreme concern for the environmental issue had been provided its employees with safety and environmental protection, along with that, the company also produced monthly reports about incidents and near-incidents. Chevron realized that by spending an extra few million dollars on a project each year, they would save money in the long run by minimizing the risk of accident and have the entire company closed down (Diamond, 2005, pp. 158-159).

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2. a leading organization in the sustainability field. GRI promotes the use of sustainability reporting as a way for organizations to become more sustainable and contribute to sustainable development. - https://www.globalreporting.org/information/about-gri/what-is-GRI/Pages/default.aspx.

3 The Index was launched in 1999 to track the financial performance of the world's leading sustainability-driven companies. The Index tracks performance using economic, social and environmental criteria. Companies listed on the DJSI are revised annually. - http://www.bjball.co.nz/glossary/environment.

4 Designed to objectively measure the performance of companies that meet globally recognized corporate responsibility standards. http://www.ftse.com/Indices/FTSE4Good_Index_Series/index.jsp?utm_source=Sodexo&utm_medium=banner&utm_campaign=MyPassInfo.

Indonesia's Lapindo case might be a perfect complex example of how the company and the state with its regulations deal with the environmental disaster caused by the company's activities. It started on 29th of May 2006, when the first mudflow sprayed out from the exploration well run by the Lapindo Brantas, Incorporated. This was an Indonesian oil and gas exploration company owned by the family of Bakrie, a businessman as well as politician who had served previously as Indonesia's Coordinating Minister of Economy and leader of one of Indonesia's major political parties, Golkar. The mudflow kept spraying out from the ground until it covered more than 6 villages, people's houses, farms, the state toll road and many small factories. The disaster eventually caused the relocation of more than 12,000 people, massive unemployment and of course long-term ecological damage.

Lapindo had violated many laws and regulations regarding the environmental impacts caused by their activity. The Indonesian government had already set up a standard for oil and gas exploration through the Indonesian Agency of National Standard (SNI) 13-6910-2002 about onshore and offshore drilling operations in Indonesia. One stipulation was that the wells should be located at least 100 meters away from public roads, railroads, public works, housing, or other places where ignition sources may occur, but it was ignored by the company which chose instead to set up the wells right behind the people's housing developments, farms and the public roads. The Lapindo mudflow case is a form of violation of environmental laws as stipulated in Law No. 23 of 1997 on Environmental Management. Due to the unstoppable mudflow, the government, together with its appointed body, the provincial and regional government decided to build up dams to prevent the area covered by the mud from spreading, and to keep the mud level at the same level as the dam height, the mud also discharged into rivers nearby and devastated the coastal ecological system and the river itself.

Weak governance and a complex relationship between the company and the state have delayed the process of accountability and problem resolution. In addition, most of the solutions given only focus on land compensation and how to stop the mud flow but ignore the growing environmental and health effects of the mudflow.

Conclusion

Much of the environmental degradation caused by the oil and gas industries is well documented, but these reports rarely focus specifically on Indonesian or even Asia Pacific cases, most of the research directly address African and or American cases. The fact that is not well documented in this region, or that less scholars have written about it, doesn't mean that no or less environmental degradation occurs in the Asia Pacific region, as the examples above demonstrate. Therefore, we need to pay particular attention to political and institutional factors in Asia Pacific countries and its relationship internationally (Utting & Ives, 2006, pp. 28-29) in order to bring global awareness to some of the Asia Pacific region's environmental issues.

Indonesia and the rest of the Asia Pacific region still have a lot of work to do regarding maximizing institution and infrastructure; communities as well as the state/government are also greatly affected by the oil and gas industries. Conflict may occur among the company, communities and the government as a result of environmental degradation, but it is still necessary to find ways to conciliate industry development with environmental protection, that is, with sustainable development (Mariano & La Rovere).

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Chapter V

CONFLICT-SENSITIVE PERSPECTIVE IN MANAGING EXTRACTIVE INDUSTRIES

Poppy S. Winanti

It is widely accepted that extractive industries are being implemented in both environmentally and socially risky environments. In this regard, integrating the use of analytical tools such as the 'Environmental Impact Assessment' (EIA), 'Social Impact Assessment' (SIA), as well as 'Political Risk Analysis' (PRA) to identify and mitigate environmental, social, and political impacts is mandatory in extractive project planning (Goldwyn and Switzer, 2003). Nevertheless, considering that extractive industries, to a great extent, are operating in areas of potential or open conflict, in addition to these tools, it is also necessary to adopt conflict-sensitive approaches (CSAs) in extractive industry management. For this purpose, CSAs, which "...encompass a myriad of approaches, concepts, tools and methodologies that inculcate conflict impact awareness into development, humanitarian and peace-building work" (Goldwyn and Switzer, 2003) increasingly have been utilized to enrich the existing impact assessment tools in the extractive industry.

Assessment Scheme:
Tools of Risk Management

Within CSAs, there are at least two significant components of extractive industry management, namely conflict-risk assessment and conflict-risk management. A conflict risk assessment is intended to "... identify the severity of the risk of conflict within a given region or area" (IPIECA, 2008). Conflict risk management is also needed in extractive industries because it involves a variety of strategies and actions to prevent, to manage, and to resolve conflict (IPIECA, 2008).

There are three basic components of a risk assessment (IPIECA, 2008). First, identifying whether countries, regions, districts or communities are at risk of conflict or not, which can be done by using a traditional risk assessment system. Second, understanding the nature of conflict, which requires some form of conflict analysis. Third, identifying how investments could affect conflict and vice versa. Conducting a risk assessment required the use of specific conflict-and-impact assessment tools. Conflict analysis tools focus on understanding the wider conflict context, including its profile, dynamics, actors, and the causes and drivers of conflict (USAID, 2008). In other words, conflict analysis tools involve the assessment of conflict factors, peace factors, and stakeholder dynamics (IPIECA, 2008). According to Kapelus et.al (2011), as part of conflict assessment preparation, it is important to have a detailed understanding of the nature of historical, current, and potential conflict; an analysis of the underlying features of conflict, the potential for project activities to trigger conflict; and the potential for the prevailing conflict dynamics to impact negatively on the project and future investments. These should be accompanied by a detailed assessment of the social impacts, social risks, and key stakeholders analysis.

Conflict can be defined as a situation in which"... parties disagree about the distribution of material or symbolic resources and act on the basis of these real or perceived incompatibilities (USAID, 2008: p. 2). Conflict is not necessarily bad. In fact conflict is an inevitable element of human interaction and is

essential to social change and development. The problem occurs when conflicts are not well managed and lead to violence. With regard to natural resource conflict, Matiru (2000) defines it as "... disagreement and disputes over access to, and control and use of, natural resources." Similarly, Matthew et.al (2007: p. 7) also argue that "conflict resources are natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from, or result in the commission of serious violations of human rights, violations of international humanitarian law or violations amounting to crimes under international law". From the point of view of extractive industries, conflicts can be divided into two categories. First, conflicts related to the wider socio-political context or macro-level conflicts and not directly related to the presence of the industry such as poverty, social/political marginalization, and political power struggles. Second, conflicts that are directly related to the industry's presence and the companies may have a much greater degree of involvement in the conflicts (IPIECA, 2008).

The Drivers of the Conflict.

With reference to the drivers of conflict in extractive industries, Gryzbowski (2012) argues that there are at least six main drivers of extractive industries-related conflicts:

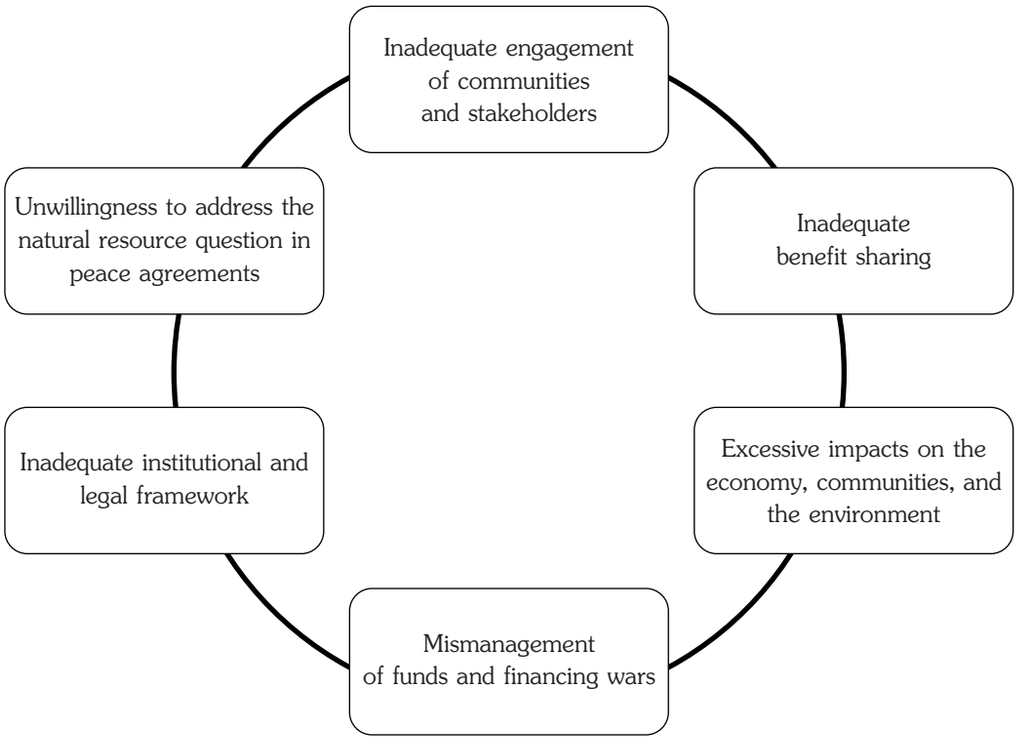


Diagram 1.

Main Drivers of Extractive Industries-related Conflicts

Source: Gryzbowski (2012)

The first main driver of extractive industries-related conflict is inadequate engagement of communities and stakeholders in the development process and subsequent activities including profit distribution process. In this regard, conflict may occur when communities and stakeholders are poorly engaged, marginalized, or excluded from natural resources management (Gryzbowski, 2012; UN, 2013). Similarly, Matiru (2000: p.7) argues, "conflicts may arise because policies are imposed without local participation ... [and because of] ...poor identification of and inadequate consultation with stakeholders".

The second main driver is inadequate benefit-sharing. According to Gryzbowski (2012), natural resource conflicts may also occur due to unfair distribution of the benefits, costs, risks, and

responsibilities associated with natural resources management. Extractive industry activities may create a situation in which some people are treated unfairly in terms of the benefits, they have to bear the risks and costs without fair compensation. These conditions will not only cause laborers to raise objections but may also lead to political grievance. Empirical studies reveal that in the long run, there is a high risk that grievance will turn into social and political insurgence.

Conflict may also occur as a result of excessive impacts on the economy, communities and the environment. One of the examples of the impact on the economy according to Gryzbowski (2012) is that "an increasing demand for local goods and services from an expanding local labor force causes local inflation, increasing local prices and reducing the purchasing power of those that are not directly benefiting from the development". In this context, when the promise of prosperity from extractive industries development is not reflected in the community and the negative environmental impacts are often augmented, this can be a powerful conflict driver (UN, 2011).

Mismanagement of funds and financing wars also contribute to extractive industries–related conflicts. Extractive industry development can vastly increase government revenues. Nevertheless, if institutional arrangements are not in place to manage this revenue in a transparent and accountable manner, there is serious potential for increased corruption, theft of funds, which would only benefit an individual or particular groups at the expense of the wider community (Gryzbowski, 2012, UN, 2011). This then may lead to the loss of opportunity to use the wealth gained from the industry to implement policies for public interests, including poverty reduction policy and development of other sectors of the economy (Gryzbowski, 2012). In this regard, Matiru (2000: p. 11) argues that conflicts may arise when governments' "lack the capacity to engage in sustainable natural resource management." Some empirical cases indicate that increasing revenues to the state stimulates or exacerbates corruption and poor governance.

Another important main driver of extractive industries–related conflict is inadequate institutional and legal framework. If the legal framework and associated institutional arrangements are not in place or capable of managing the conflicts associated with EI development, then these conflicts will manifest into serious challenges that undermine the potential benefits of the development (Gryzbowski, 2012). Inadequate institutional and legal framework can also be seen from inadequate monitoring and evaluation programs. Following Matiru's argument (2000), natural resources–related policies are often designed without integrating a systematic monitoring and evaluation component. This condition is also worsened by lack of effective mechanisms for conflict management in the policy making process (Matiru, 2000). As a result, strengthening the institutional and legal framework in order to manage development and produce sustainable benefits is a critical priority.

The last main driver is unwillingness to address the natural resource question in peace agreements. Addressing the issue related to natural resources is essential in order to secure sustainable peace. According to Gryzbowski (2012) there is a danger that extractive industries may become a potential source of the next conflict if issues of ownership, wealth–sharing, and distribution of these resources are unaddressed in the context of a peace process. In this context therefore, addressing these issues are essential to the achievement of post–conflict stability.

Managing the Risks.

In order to design an effective intervention framework, several variables need to be considered during assessment. In this respect, there are at least six aspects that need to be integrated in the assessment (Gryzbowski, 2012):

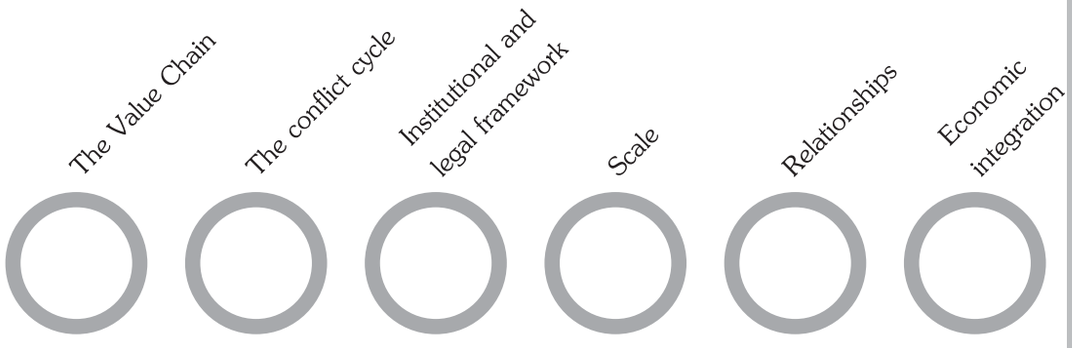


Diagram 2. Key Variables in Conflict Assessment

Source: Gryzbowski (2012)

In designing an intervention framework, it is important to understand the position of extractive industries development in the value chain. In this context, if the development is still in its early stage, it is relatively easy to prevent potential conflicts and mitigate negative impacts. In the early stage of extractive industries development, a country may be able to establish institutional and legal frameworks needed to manage the revenues and distribute the benefits, including mitigating economic, social, and environmental impacts (Gryzbowski, 2012). However, if the development is already at a more advanced level of the value chain and the conflict has already manifested itself, the ability of a country to establish institutional and legal frameworks is somehow more narrowly defined by the institutional arrangements and practices that are already in place (Gryzbowski, 2012).

The position of a country in the conflict cycle also needs to be considered when designing an intervention framework. If it is still at a pre-conflict stage, the institutional framework can be designed based on conflict prevention strategies including institutional strengthening and support for constructive engagement processes (Gryzbowski, 2012). However, if it is already at the conflict phase, Gryzbowski (2012) argues that, "the assessment needs to determine the extent to which extractives are already part of financing the war effort or one of the underlying purposes for the conflict." If the country is already in the post-conflict phase, the assessment should focus on factors that contribute to promoting sustainable peace.

Another crucial variable is the institutional and legal framework. The assessment should also take into account to what extent the existing institutional and legal framework address EI governance in accordance with international standards. It should also be able to assess the weakness of the existing framework and what should be done to improve it.

In addition, conflict assessment needs to consider the scale especially for a country with a decentralization system like Indonesia. In this regard, a conflict analysis can be conducted at various levels (national, regional, and local) and then linkages between these levels can be established (USAID, 2008). This is important because an initiative at the local government level, for example, can be undermined by conflict at the national level because each level may have to deal with different issues and respond differently to them(see table 1). In this respect, an effective conflict prevention framework, therefore, requires conflict prevention strategies at all relevant levels.

Table 1.
Scale and Nature of Potential Conflicts

Scale	Nature of the Potential Conflicts
National	Conflict may arise because laws do not require local content provisions, environmental assessments, public participation, transparent revenue collection and/or management Conflict may arise because of macroeconomic destabilization caused by resource revenues and currency fluctuations
Regional	Conflict may arise over the distribution of revenues between the region and the state from the extractive industry development Conflict may arise over the bestowal of authority to manage resources between the region and the state
Local	Conflicts can arise over environmental and socio-economic impacts ; inequitable distribution of benefits, costs, risks and responsibilities; inadequate involvement of communities and stakeholders in decision-making processes

Source: Gryzbowski (2012: p. 22)

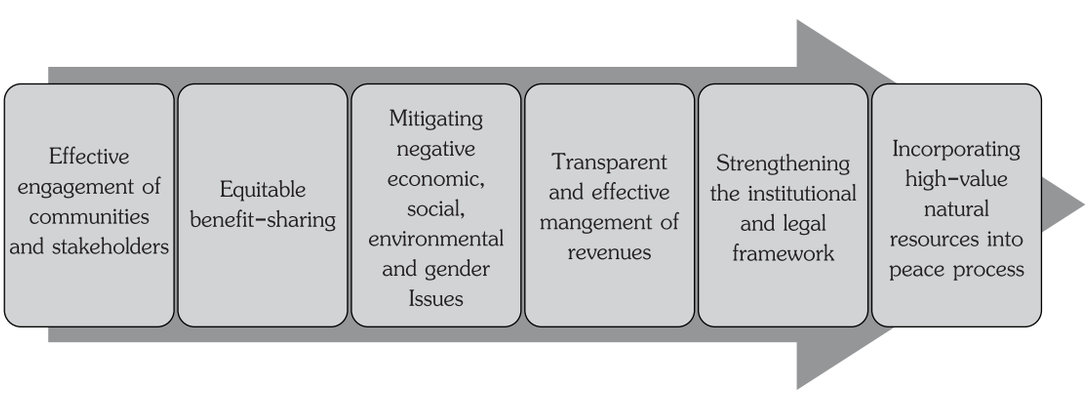
The relationship among stakeholders in the extractive industry also needs to be taken into account when designing an intervention framework. It should be assessed who are the key actors and how do they interact with each other (USAID, 2008). According to Gryzbowski (2012) "the patterns of engagement between the key actors in EI developments have a significant impact on whether conflicts are prevented and mutual benefits realized [furthermore]...where relationships are dysfunctional, constrained or conflicted, problems will either be evident or likely to manifest".

The last yet also crucial aspect is that of economic integration; which is mainly related to the relationship between EI supply chains and economic activity in local communities. The more integrated EI development is with local economic activities, the easier it will be to prevent and or resolve potential conflicts.

By considering all those crucial factors, Gryzbowski (2012) proposes the following intervention framework for extractive industries-related conflict.

Diagram 3.

Intervention Framework for Extractive Industries



Source: Gryzbowski (2012: p. 22)

The previous section argued that in addition to the existing framework which focussed on impact assessments such as EIA, SIA, and PRA, it is also important to utilize conflict sensitive approaches in extractive industries. In order to do so, the focus was on establishing an intervention framework in order to prevent conflict. Possible interventions include an effective engagement of communities and stakeholders; equitable benefit-sharing; mitigating negative impacts of social, environmental, and gender issues; transparent and effective management of revenues; strengthening the institutional and legal framework; incorporating high-value natural resources into peace processes.

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Chapter VI

ENHANCING COMMUNITY RESILINCE FOR BETTER GOVERNANCE IN EXTRACTIVE INDUSTRIES

Dian Lestariningsih

While the oil and gas industries provide significant opportunities for developing economies, they also bring substantial risks. The risks must be subject to careful management mitigation by all stakeholders including governments, investors, and communities. Given the scarcity of oil and gas as economic resources, it is particularly important to ensure that governments' economic policies regarding extractive industries not only contribute to the development of the human, social, and physical capital needed for sustainable development, but also minimize the exposure to risks. It is unfortunate that neither investments nor oil revenues have been able to guarantee economic growth or poverty reduction. In fact, the availability of major oil and gas industries has been widely associated with a variety of negative social and environmental outcomes. There is a so-called "Paradox of Plenty," where resource development fails to generate the sustainable benefits expected, is one of the most urgent challenges:

At the local level, the issue is that industry enclaves are surrounded by poor indigenous communities receiving little sustainable benefits from the development of extractive industries. At the national level, the revenues do not translate into long-term growth in human and physical capital, which form the basis for sustainable growth.

The International Energy Outlook 2013 (IEO2013) projects that the world energy consumption will grow by 56 percent between 2010 and 2040. Total world energy use is expected to rise from 524 quadrillion British thermal units (Btu) in 2010 to 630 quadrillion Btu in 2020 and to 820 quadrillion Btu in 2040; roughly 80 percent of the energy is supplied by fossil fuels. Fossil fuels exist, and they provide a valuable service. It's not so much that we use fossil fuels for energy that is problematic, but rather the attendant side effects of using them. Burning fossil fuels creates carbon dioxide, the number one greenhouse gas that contributes to global warming. Combustion of these fossil fuels is considered to be the largest contributing factor to the release of greenhouse gases into the atmosphere. In the 20th century, the average temperature of earth rose 1 degree Fahrenheit (1°F). This was a period that saw the most prolific population growth and industrial development in earth's history. (US Department of Energy).

The impact of global warming on the environment is extensive and affects many areas. In the Arctic and Antarctic regions, warmer temperatures are causing the ice to melt which will increase sea level and change the composition of the surrounding sea water. Rising sea levels alone can impede processes ranging from settlement, agriculture and fishing both commercially and recreationally. Air pollution is also a direct result of the use of fossil fuels, resulting in smog and the degradation of human health and plant growth.

Risk Management is an integral component of the business decision-making framework in the oil and gas industries. The oil and gas industries assess a range of current and future climate change-related risks to their operations, infrastructure and value chain. These risks include climate variability, flooding, rising sea level, extreme events, species migration shift, permafrost thawing and water availability (IPIECA 2013)

The Impact Of Disaster

Since the Indian Ocean Tsunami, that hit Aceh at the end of 2004, Indonesia has experienced paradigm shift in disaster management. The tsunami disaster was devastating beyond both reckoning and government capacity to prevent and respond to the disaster.

On December 26, 2005, an earthquake measuring 9.0 on the Richter scale struck Aceh. The tsunami that followed claimed the lives of over 150,000 people lost, while an estimated 700,000 people were displaced. The scale of the damage to the local economy, infrastructure and administration was unprecedented. The assessment of the total loss and damages estimated more than 4.4 million USD (Masyaraf ,2011)

Indonesia has also experienced a catastrophic mud eruption which has been blamed on drilling by an oil company. In 2006, the largest mud volcano on the planet was born when steam, water and mud began erupting on the Indonesian island of Java. At its height, it spewed 6.4 million cubic feet (180,000 cubic meters) of boiling mud per day, enough to submerge a football field under nearly 110 feet (34 m) of earth. The mud volcano still erupts with outbursts like a geyser. (Phys.org,2013)

The resulting disaster, known as the Lapindo mud eruption, buried factories and villages, causing 13,000 families to lose their homes. Scientists have suggested two potential causes for the calamity. The first possibility is that the eruption could have been triggered by drilling at a gas exploration well, Banjar-Panji-1, about 500 feet (150 m) from the mud volcano. The other possibility is that the outburst may have been set off by the magnitude-6.3 earthquake that struck about 150 miles (240 kilometers) away in Java at Yogyakarta just two days earlier, killing nearly 6,000 people.

By learning the lessons, came the realization that it took more than disaster management, both government and community realized that the factors that influenced the impact level was actually not natural. This realization marked a new era of transformation from a reactionary approach to crisis to an approach that emphasizes disaster risk reduction.

Transformation of Disaster Management in Indonesia

Indonesian transformative approach in disaster management then interpreted that although parts of hazard are natural; the impact of disaster is a complex condition as estuary of distribution and access problems of various unnatural development resources.

The Government of Indonesia conducted some initiatives in an effort to develop responsive and open disaster response management by legalization of Law. In disaster-prone countries like Indonesia, an understanding of the link between development and disaster is crucial. The development activities are made with adequate consideration of the potential impact of disaster. In this regard, the Government of Indonesia has taken significant steps to boost disaster risk reduction starting with the passing of Law Number 24 on Disaster Management in 2007 (Undang Undang Nomor 24 Tahun 2007 tentang Penanggulangan Bencana) that has been put into practice. Based on this Law, the Government of Indonesia encourages intergovernmental and public-private dialogue to prepare a National Action Plan for Disaster Risk Reduction, based on the internationally agreed upon United Nations International Strategy for Disaster Reduction Hyogo Framework. The strategy now is preparing Local Action Plans for Disaster Risk Reduction by Local Governments. Furthermore, National Development Planning Agency (Badan Perencanaan Pembangunan National) supported by UNDP and international funding agencies helps to bring international experience and expertise to these initiatives through various programmes by inter-sectoral agencies. (AMCDDRR, 2007)

In 2013 Global Assessment Report, Indonesia has further made substantial progresses in mainstreaming DRR into national and local development, at the policy and regulatory levels, as well as planning and programming levels. After passing the National Disaster Management Plan (NDMP) 2010-2014, Indonesia has made in 33 provinces formulate their Regional DM Plans. Related to regulatory aspect, more and more regulations have been enacted at the national and local levels. Currently all provinces in Indonesia have established their DM agencies. More than eighty percent (399 out of 497) of the districts and cities in the country have also set-up their Local DM Agencies (BPBDs). Mechanisms for DRR have started to be developed through Local DM Agencies (BPBDs) and DRR platforms that involve the multi-stakeholders.

The enhancing role and contribution of civil society in disaster risk management showed large concern and consideration from various parties. Experience in disaster became valuable asset in this transformative change. Increasing initiative in Disaster Risk Reduction promoted by non-state actors including NGO, faith-based organization, business sector and mass media. One of significant contributions was provided by faith-based organization. Muhammadiyah and Nahdlatul Ulama as Islamic movement axis in Indonesia then formulated specific mandate for Muhammadiyah Disaster Management Center (MDMC) and Nahdlatul Ulama Disaster Management Agency (Lembaga Peanggulangan Bencana Nahdlatul Ulama - LPB NU). Indonesian Bishop Conference formed Caritas Indonesia (Karina), Communion of Churches in Indonesia formed special unit for disaster response. Also some organizations such as Dompet Dhuafa, PKPU and YAKKUM Emergency Unit (YEU). These organisations then formed communication forum and coordination within Humanitarian Forum Indonesia (HFI) since August 11, 2008. Private Sector also raise their contribution in disaster response in Indonesia, their representative sait in National Platform Disaster Risk Reduction since mid 2008.

Terminology On Disaster Management

According to the Disaster Management Law, Article No.1; **Disaster** refers to an event or a series of events that threaten and disturb the community life and livelihood, caused by natural and/or nonnatural as well as human factors resulting in human fatalities, environmental damage, loss of material possessions, and psychological impact. (BNPB, 2010)

United Nations International Strategy for Disaster Reduction (ISDR) describe **Disaster** as a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.

Exposure is the total value of elements at-risk. It is expressed as the number of human lives, and value of the properties, that can potentially be affected by hazards. Exposure is a function of the geographic location of the elements (UNDP, 2004: Reducing Disaster Risk: a challenge for development. A global report (M. Pelling, A. Maskrey, P. Ruiz, L. Hall, eds.). John S. Swift Co., USA, 146 pp,]

Hazard is a potentially damaging physical event that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards may include latent conditions that represent future threats and can have different origins. Each hazard is characterised by its location, intensity, and probability. (ISDR, 2009)

Natural disaster; an event or a series of events caused by nature such as earthquakes, tsunamis, volcanic eruptions, floods, drought, typhoons, and landslides. (BNPB, 2010)

Natural Hazards; Natural processes or phenomena occurring in the biosphere that may constitute a damaging event. (ISDR, 2009).

Risk Probable impacts, expressed in terms of expected loss of lives, people injured, property, livelihoods, economic activity disrupted or environmental damage. (ISDR ,2009).

Nonnatural disaster; a nonnatural event or a series of nonnatural events such as technological failure, modernization failure, and epidemics. (BNPB, 2010)

Social disaster refers to an event or a series of events caused by humans, which include social conflicts between community groups, and terrorism. (BNPB, 2010)

Acceptable Risk; The level of loss a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions (ISDR, 2009)

Risk Assessment/Analysis; A methodology to determine the nature an extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend. (ISDR Terminology of disaster risk reduction, 2009).

Risk Identification; The process used to determine what can happen, why and how events arise. (http://www.preventionweb.net/english/ themes/risk-identification/)

Risk Management; The systematic management of administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards. (http://www.preventionweb.net/ english/professional/terminology/)

Risk Reduction ; The conceptual framework of elements considered with the possibility to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development. (http://www.preventionweb.net/english/ professional/terminology/)

Risk Transfer Insurance and reinsurance both for physical damage and business interruption, coverage that would provide cash compensation immediately after a disaster. (http://www.preventionweb.net/english/ themes/risk-transfer/)

Vulnerability; Physical, social, economic, and environmental factors which increase the susceptibility to be impacted by hazards. Vulnerability engages resistance and resilience. (ISDR ,2009)

Capacity A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster (ISDR, 2009)

Hazard Analysis; Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behaviour. (ISDR,2009).

Probability Likelihood of an event happening. Probability is statistically higher for low-intensity hazards. Probability reflects the future frequency of occurrence of hazard event, and cannot be drawn using historical statistics alone. For hydro-meteorological hazards, probability assessments need to reflect trends related to ongoing evolutions (i.e. climate change, deforestation, etc.) (United Nations University, p.16)

Resilence for Todays' and Future Generations

For over a decade the Government of Indonesia believed it had a strong energy system, but in recent years it has had to acknowledge the decline of the oil reserves. The government also accepts that it can't completely remove the possibility of disruption to energy supplies caused by, for example, weather-related hazards, accidents, malicious events or industrial action. However, oil is also finite. Most of the oil the world now consumes consists of biological material deposited at the bottom of ancient shallow seas between 90 million and 150 million years ago. While nature can and eventually will produce more oil, it will do so only very slowly and on a time scale that must be measured in "geologic" terms tens of millions of years. Therefore, for all practical human purposes, once a barrel of oil is consumed, it will never be replaced. Now, Indonesia is at that stage of being prone to the loss of its energy supply.

Resilience, a concept concerned fundamentally with how a system, community or individual can deal with disruption, surprise and change, is framing current thinking about sustainable futures in an enviroment of growing risk and uncertainty.

Resilience has emerged as a fusion of ideas from multiple disciplinary traditions inclucing ecosystem stability (Holling, 1973; Gunderson, 2009), engineering infrastructire (Tierney and Bruneau, 2007) psychology (Lee et al., 2009) the behavioural sciences (Norris, 2011) and disaster risk reduction (Cutter et al., 2008). Its recent appropriation by bilateral and multilateral donor organizations is one example of how resilience is evolving from theory into policy and practice (HERR, 2011; Ramalingam, 2011; Bahadur et al., 2010; Brown, 2011; Harris, 2011)

ISDR said resilience is the capacity to recover normal functioning and development after being hit by a disaster. A high resilience reduces indirect impacts of disasters, such as business and services interruptions in the aftermath of a disaster.

Acording to Meadow et al., (1992) a sustainable society is still technically and economically possible. It could be much more desireable than a society that tries to solve its problems by constant expansion.

We can also describe resilience as a transformative action, the altering of the fundamental attributes of a system (Mitchel&Harris, 2012).

Bahadur et all., (2010), identified characteristics of a resilient system which include; A high level of diversity, in terms of access to assets, voice in decision-making and the availability of economic opportunities. A level of connecivity, between institutions and organisations at different levels and the extent to which information, knowledge, evaluation and learning propagates up and down these scales; the extent to which different forms of knowledge are blended to anticipate and manage processes of change; the level of redudancy within a system, meaning some aspect can fail without leading to whole system collapse; the extent to which the system is equal and inclusive of its component parts, not distributing risks in an imbalanced way; the degree of social cohesion and capital, allowing individuals to be supported within an embedded social structure.

While resilience clearly has attractive qualities as a unifying concept and as a vision with political currency in uncertain times, achieving positive outcomes will require policy makers and practitioners to fall back on more familiar concepts with which they have practical experience. Risk and risk management provide this familiarity and similarly, allow for cross-disciplinary and cross-issue discussions.

Resilience is about ensuring that an institution is still able to achieve its core objectives in the face of adversity. This means not only reducing the size and frequency of crises (vulnerability), but also improving the ability and speed of the organization to manage crises effectively (adaptive capacity).

Awareness is a recent addition to this definition and reflects a growing appreciation of the need to manage strategic risks as a process and not an event. This means the ability of the institution to seek out new opportunities even in times of crisis.

There has been a significant shift in attitude in addressing the challenge of disasters. For too long disasters have been seen as one-off events that were addressed through humanitarian response and relief efforts. However over the past few decades there has been a clear move towards strengthening preparedness, and ensuring a more effective and efficient response.

From the 'preparedness saves lives' approach came the insight that economics has a significant role play and the recognition that a longer-term approach was required to reduce disaster risk and build resilience. Often missing in the analysis was the causal link between disaster risk and development, or more precisely, the impact of poor development that often created increased vulnerability and resulted in development losses and, for many Least Developed Countries and Small Island Developing States, increasing indebtedness.

Civil society actors, such as those faith-based humanitarian organizations, became the promoters that keenly voiced how to accommodate local wisdom and structure in developing concepts and practices of disaster risk reduction. Even though there were criticisms, painstaking care toward risky culture practices and a strong drive to accommodate local wisdom have made the portrait of disaster risk reduction more appropriate to local contexts. Larantuka Bishop, invited Catholic parishioners in Flores Timur District to plant mangrove trees and local staple foods during the pre-Easter fasting month (Lenten Campaign 2011). Mangrove planting was for disaster mitigation of abrasion along the northern coast of Flores Timur, while local staple foods planting provided the opportunity for the community to survive should there be any withered plant and harvest failure due to long drought. (Oxfam,2011)

The contributions of faith-based organizations (FBO) to monitoring and assisting governing performance increased and thus became part of development approach references as they appear in the disaster management issues such as the post disaster recovery effort, livelihood diversification access and bridging the community action plan in village development discussion/conciliation.

In the disaster relief practice, most of the times, indigineous people were considered to be part of a vulnerable group because of a lack of ability, knowledge and access to information, decision making and other resources. In accordance with World Disaster Report 2007, those already marginalized by society could become the most vulnerable in a time of crisis. The level of discrimination they face in everyday life is heightened when disaster strikes. Then, too often, these people are invisible both within their own societies and to the national, regional, and global communities that mobilize emergency aid.

Vulnerability is one distinguishing and explanatory dimension, even though facing the same threat/hazard; the impact would be determined by an individual or certain group's capacity and vulnerability that would influence their ability to deal with crisis. This statement affirmed that vulnerability increased the degree of impact of disasters on specific individuals or certain groups. Neglecting the collective voice of the community in the context of a disaster is actually a big fundamental mistake.

The 2011 World Development Report warns not to expect too much too soon of national institutions because action to transform governance requires long-term investment and sustained support. Yet less than 4% of humanitarian aid and less than 1% of development assistance is spent on disaster prevention, preparedness and risk reduction (Poole & Walmsley,2012: 2)

The resilience agenda is helping to improve links between humanitarian and development action and

fostering stronger integration of risk management. We also understand that 'Disaster is Everybody's Business'. Nevertheless, it is necessary to have support to promote initiatives and capability of communities in disaster management so there would be admission of community contribution, no matter how small.

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