



Sustainable Management of Abandonment and Site Restoration (ASR) Funds in Oil and Gas Working Areas

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Abstract— Oil and gas are natural resources that the state must manage following the provisions contained in the Constitution. Management of natural resources needs to consider aspects of benefit for the welfare of all Indonesian people who are now starting to be environmentally conscious. This change in legal awareness then gave rise to demands for changes in regulations regarding the management of profit-sharing contract funds from concessions that have been granted. Legal issues arise when the government requires an Abandonment and Site Restoration mechanism to maintain the quality of the environment in ex-mining areas. This article aims to provide a solution for managing ASR funds to optimize old mines whose output is decreasing and still need to provide reserve funds for environmental restoration. The study was carried out using doctrinal research methods. Legislative and conceptual approaches examine the effectiveness of implementing environmentally sound oil and gas mine management regulations. Friedman's theory of legal effectiveness illustrates that the Indonesian government's new policy cannot fully accommodate the financial capacity of oil and gas mines established before 2017. For this reason, there is a need for a sustainable ASR fund management mechanism that can support the operations of old mines.

Keywords— *Abandonment and Site Restoration (ASR); Post-Oil and Gas Operation Recovery; Production Sharing Contract (PSC)*

I. INTRODUCTION

Considering the enormous potential to increase prosperity for all Indonesians, O&G as part of Indonesia's natural resources must be carried out. The national oil and gas (O&G) industry started long before independence.[1] It was recorded that petroleum was first successfully explored in 1885, and the establishment of oil refineries in various regions in Indonesia followed this. As time goes by, the government continues to strive to develop national O&G management regulations. This legal development then impacted changes to regulations regarding the fiscal management of O&G mines. Indische Mijn Wet is the first legal platform in the O&G sector to use a concession scheme. In this scheme, determining domestic oil supplies' selling price and availability is no longer under the government's authority. The concession system implemented during the Dutch colonial era continued until the Soekarno era (1946-1959).

Apart from the concession system, a work agreement or work contract system first started in 1966 through the O&G Mining Law, is also used. In the New Order, the Product Contract Sharing (PSC) system was implemented

with an initial contract period for exploration to production of 30 years and subsequent extensions of 20 years. PSC was the O&G management system that lasted the longest until, in 2001, the Government and DPR RI passed a law to manage O&G management from upstream to downstream in more detail.[2] This policy was created to accommodate the O&G industry's development and demands for bureaucratic and institutional reform. This policy cannot be separated from the importance of the beneficial value of O&G in improving the welfare of the Indonesian people. O&G's business activities are essential in realizing national sovereignty, independence, and energy security to support sustainable national development.

From these arrangements, it can be seen that provisions regarding post-mining operations are mandatory in the agreement made by the contractor with the Implementing Agency (BP Migas). In subsequent developments, the Government designated this implementing agency as the Special Task Force for Upstream Oil and Gas Business Activities, abbreviated as SKK Migas, based on the decree of the President of the Republic of Indonesia (Perpres)—regulation of the Minister of Energy and Resources.[3] Provisions regarding the inclusion of post-mining operational obligations and environmental management need to receive more attention, considering that they are closely related to conditions after the end of the contract. Not only regarding how post-operation activities are carried out but also related to the party who will later be responsible for these obligations if the contractor chooses not to extend the contract period. This arrangement is the basis for imposing obligations on Contractors to ensure environmental management through prevention, control of pollution, and restoration of environmental damage as a result of mining activities as regulated in Article 40 paragraph (3), including post-operation obligations. This law is explained further in the Government Regulation (PP) Regulation of the Minister of Energy and Mineral Resources concerning Upstream O&G Businesses.

However, Law Number 21 of 2001 and PP Number 35 of 2004 do not change the current PSC. So, in positive law, the formulation of norms means that every agreement made legally applies as law for those who make it. PSCs newly formed after the enactment of Law No. 22 of 2001 and PP No. 35 of 2004 must follow special regulations regarding post-oil and gas operation recovery and ASR in particular.

Furthermore, the PSC system underwent several transformations with the issuance of the Minister of Energy and Mineral Resources Regulation regarding PSC Gross Split as a response to the end of the PSC from several PSCs in the 2017 period and beyond. The Government gets a profit share from gross revenues through this Minister of Energy and Mineral Resources Regulation. In contrast, the PSC Contractor gets a profit share, including covering O&G operational costs therein.[4] The implementation of upstream oil and gas business activities based on PSC is more profitable for the country, and the results can provide prosperity for all Indonesian people. PSC is made and signed by SKK Migas and KKS Contractor. The implementation of PSC means contractors have a time limit to manage an O&G work area.[5]

In order to maintain the sustainability of O&G production, in 2021, the Government issued an update to the Minister of Energy and Mineral Resources Regulation concerning the Management of O&G Work Areas, which will end the Cooperation Contract. This change accommodated legal developments and the dynamics of Upstream Oil and Gas Business activities. Especially in 2017-2019, most of the O&G work areas whose contracts were about to end were taken over by PT Pertamina. In the process of transferring management, several problems emerged, including.

1. The management of state property owned by former contractors by the State Asset Management Agency in work areas that were still in production became complicated,
2. Environmental management obligations resulting from O&G business activities,
3. Neglect of obligations and failure to comply with ASR provisions, and
4. Transfer of financial calculations from the old contractor to the new contractor.

Of these four problems, it is the obligation to manage the environment that problems arising from neglect of ASR must be taken seriously. This condition is caused by the PSC, which, before 2017, did not regulate provisions for reserving ASR funds. Meanwhile, in the 2020-2026 period, 18 O&G block contracts will expire.

Changes to these regulations can then show that the government is trying to include environmental insight in every O&G mining business activity. However, some conditions result in ignoring the provisions that require companies to conduct environmental restoration activities after the completion of mining activities. These problems will then be analyzed explicitly in this study so that the effectiveness of implementing the new rules regarding O&G management requires ASR. The basis of the analysis will be placed on the standards of legal effectiveness proposed by Lawrence M. Friedman. The elements in this theory will clearly show the strengths and weaknesses of implementing environmentally sound O&G management policies. Thus, this article can explain the problems and simultaneously provide solutions. Based on the description above, there are at least 2 (two) problem questions that can be asked in this paper. *First*, what is the ASR fund management pattern for O&G working areas that have not been regulated in the old PSC? *Second*, who has the authority to regulate and manage ASR funds, especially for work areas that are insufficient or have not even reserved ASR funds because PSC has not previously been regulated?

II. LITERATURE REVIEW

Legal development as an effort to deal with social change is a path that must be taken by the government so that community demands can be appropriately accommodated. In the context of this study, changes in global legal awareness have now brought with it issues regarding environmental sustainability in every aspect of life. Climate change, which threatens human survival, has changed patterns of economic activity that have been running for centuries, so that humans are now expected to be able to carry out activities that can help restore balance to the ecosystem.

The development and increasing welfare have become the main integration targets with nature conservation activities. Exploiting natural resources to support human economic activities has continued partially. The results of natural resources are still one of the main supports in daily activities. For this reason, various international agreements were then made to increase awareness among world citizens of the importance of efforts to preserve the environment.

As compensation for environmental damage arising from high economic activity, each country is asked to set a carbon reduction target and take steps to preserve the environment. These provisions also apply to Indonesia, so the government then made several legal reforms that can be used to support economic activities. Based on this idea, this article explicitly uses Lawrence M. Friedman's theory of the effectiveness of legal application. In his theory, Friedman emphasizes that changes in the substance and structure of law will influence the legal culture of society. In this case, the legal substance is the material contained in a regulation.[6] At the same time, the legal structure will be related to the authority of the agency that will implement the rules.

From this concept, Friedman emphasizes that the dynamics that live in society will influence society's acceptance of applicable regulations.[7] For this reason, the policy implementation process can give rise to resistance or deviations due to the influence of legal and cultural conditions. The legal substance's success or failure in achieving its creation's objectives is what Friedman then translates as a form of legal effectiveness.

Concerning this study, the emergence of global awareness of the importance of nature conservation has changed the substance and structure of the O & G Management Law in Indonesia. Legal reforms carried out by providing environmental insight will significantly influence the PSC mechanism that has been in effect in the O&G mine management process. This study will then show the location of these changes and the effectiveness of the changes made by the government.

III. METHOD

The research in this paper uses a statutory approach and a conceptual approach to answer the two problem questions above.[8] The statutory approach is intended to carry out studies or reviews of various statutory regulations, both those relating to the O&G sector, as well as those relating to environmental issues, for example forestry legislation.[9] A conceptual approach is carried out by comparing the O&G regulation with the ideal standard of laws according to Friedman's Theory. This is intended to obtain similarities and differences between these laws and then, these differences or similarities can be used to answer the questions above.[10]

IV. DISCUSSIONS AND RESULTS

A. The effectiveness of Post-Oil and Gas Operation Recovery Obligations in Indonesia

The 2004 Government Regulation regulates O&G management at the upstream level.[2] In this provision, the contractor should provide reserve funds, which can be used to provide funds for post-operation activities. This activity should be carried out simultaneously and continuously from the start of exploration. Then, the allocation of these funds must be agreed between the contractor and the body authorized to manage funds in the area.

In the legal regulations above, it can be seen that PSC's Contractor is obliged to allocate post-operation recovery funds (Working Program and Budget, WP&B), where these funds are an agreement between PSC's Contractor and SKK Migas for the relevant oil and gas working area to be placed in joint account (escrow account) at a state-owned bank. This has become a source of controversy because the PSC that existed before 2017 did not regulate post-operation funds in the work area concerned and as a result the obligation for post-operation recovery was borne by the new PSC's Contractor, as regulated in Article 17 of Minister of Energy and Mineral Resources Regulation No. 15 of 2018, even though the remaining oil and gas production results may not be sufficient to cover the ASR costs of the old PSC production facilities. As a case example, PSC was taken in the offshore working area of East Kalimantan and Attaka blocks.[11]

The two blocks were initially managed by Chevron since around 1998, then in 2018 they were transferred to PT Pertamina Hulu Kalimantan Timur (PHKT) as the new contractor. In the old PSC there was no regulation

regarding ASR fund obligations, but this obligation is stated in the new PSC by PHKT and SKK Migas, namely to allocate post-operation funds (Abandonment and Restoration Funds/ AARF) to a joint account (escrow account) by selecting parties of the bank in the form of a Persero through a Joint Account Agreement between SKK Migas, PSC's Contractor and the Managing Bank which is agreed and signed. AARF funds are collected as reserve funds for post-operation activities in old asset work areas and also for new development (Plan of Development/POD). In a study conducted by Pertamina, the two blocks were considered uneconomical because production was starting to decline, plus there was an ASR fund obligation to dismantle old wells and production facilities. This of course creates a dilemma, on the one hand, oil and gas working areas are needed as a source of state income, but on the other hand, post-operative recovery activities also require quite large funds.

In subsequent developments, Reforestation Guarantee Fund then underwent several changes. On June 27, 1989, President Soeharto changed its name to the Reforestation Fund (RF). RF is a mandatory contribution collected from FCR holders in US dollars for every cubic meter of wood produced from natural forests controlled by the State and is a source of national forest funding to support reforestation and rehabilitation activities of land and forests that have experienced damage due to production and ensure forest sustainability. country for the long term. Between 1990 and 1999, the Ministry of Forestry allocated cash grants and interest-free loans worth more than US\$ 1.0 billion from the RF to support the development of Industrial Plantation Forests (IPF). However, the allocation of RF is full of fraud and misappropriation, where subsidy recipients inflate costs and exaggerate the area of forest they have planted, resulting in low achievement of IPF development program targets. Apart from that, the Ministry of Forestry also disbursed funds amounting to US\$ 600 million to finance various projects of a political nature that are not at all related to reforestation and forest rehabilitation (non-forestry).

On February 2, 2021, the Government issued Regulation which regulates RF as a derivative of Job Creation Act. In this new regulation, it is stated that:

1. RF is imposed not only on the utilization of naturally growing wood forest products based on reports on production results or auctions of wood from natural wood forests, but also on wood forest products from rehabilitation.
2. The balanced distribution of RF between the central and regional governments remains in effect: the central government is 60% and the regional governments of producing provinces are 40%.
3. Forest and land rehabilitation by the central government is expanded to include social forestry activities, preventing and controlling forest and land fires, and/or restoring peat and mangrove ecosystems.
4. Forest rehabilitation by local governments is expanded to include development of private forests, environmental reforestation, development of urban forests, rehabilitation by communities, rehabilitation in community forest parks;
5. RF can be used for community empowerment and social forestry. Apart from that, RF profit sharing funds can also be used to provide direct cash assistance to communities around the forest.

Several large investments using RF to develop forest plantations and rehabilitate damaged forest land often fail to achieve their objectives. The absence of effective monitoring and accountability mechanisms means that large amounts of funds intended for plantation development are lost through fraud, diversion for other uses. Oil and gas and forest natural resources have similarities or are similar in terms of control and management. Seeing the development of the use of RF not only for environmental or land restoration purposes, but for other social purposes, it is necessary to use it as a lesson for the use of similar environmental recovery funds, especially for ASR Funds. RF's experience shows the importance of improving financial management and revenue administration capabilities at every level of government. The current administrative structure is not yet ready to manage the flow of funding sources from RF. In addition, it is important to set up a well-organized system that can clearly show how ASR fund receipts will be distributed fairly across the nation.

The agreement on the placement of Oil and Gas Post Operation Recovery funds between PSC's Contractor and SKK Migas for the relevant oil and gas working areas is placed in a joint account (escrow account) at a state-owned bank regulated in the rights and obligations article at PSC as Abandonment and Restoration Funds/ AARF. Reflecting on RF management, AARF has the same function to restore environmental conditions after resource exploitation is carried out. SKK Migas as the controller of upstream oil and gas activities representing the State based on a cooperation contract, must be given the authority to regulate the use of ASR funds not only for the relevant work areas that have reserved ASR funds, but also for all oil and gas work areas, both those that have reserved and who have not reserved ASR funds because the old PSC before 1997 had not regulated it.

V. CONCLUSION

Changes in government policy in managing O&G in Indonesia are closely related to the new legal awareness that has emerged internationally. Legal reforms carried out by the government tend to force contractors who manage O&G mines to be aware of the importance of environmental sustainability where their economic activities occur. For this reason, legal reforms carried out by the government are used explicitly as a source of funding for environmental conservation activities after the mine is completed. This funding is managed jointly, so it is expected to impact environmental sustainability significantly.

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