

The Rise and the Fall of Indonesia's Climate Diplomacy: Case Study of the Joint Crediting Mechanism in Indonesia

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Abstrak

Perubahan iklim adalah masalah yang cukup mendesak untuk dicarikan jalan keluar. Banyak negara bekerjasama dalam upaya mitigasi dampak perubahan iklim termasuk Jepang dan Indonesia. Indonesia dan Jepang bekerjasama dalam skema baru pembangunan rendah karbon bernama Joint Crediting Mechanism. Implementasi JCM di Indonesia menjadi harapan baru bagi diplomasi iklim Indonesia dalam mempromosikan energi bersih dan terbarukan. Penelitian ini berusaha untuk mengevaluasi implementasi JCM di Indonesia melalui studi kasus pembangkit listrik tenaga surya di Jakabaring, Palembang. Peneliti memperoleh data melalui serangkaian wawancara kepada perwakilan Pemerintah Republik Indonesia, perusahaan daerah dan masyarakat sipil. Penelitian ini menunjukkan bahwa Pemerintah Indonesia masih belum mendukung secara konsisten pengembangan energi bersih. Perusahaan yang menghasilkan karbon tinggi masih mendominasi diplomasi iklim Indonesia.

Kata Kunci: perubahan iklim, diplomasi iklim Indonesia, Joint Crediting Mechanism.

Abstract

Climate change is an urgent problem. Many countries have collaborated in mitigating the impact of climate change, including Indonesia and Japan. Both countries agreed on a scheme for cooperation in a low-carbon project, namely the Joint Crediting Mechanism (JCM). The implementation of JCM in Indonesia is new hope for Indonesia's climate diplomacy in promoting clean and renewable energy. This research aims to review the application of JCM in Indonesia using the case study of the Jakabaring Solar Power Plant in Palembang. This research collected primary data through the interview with related officials, local companies, and civil society. This research showed that the Indonesian government did not consistently support clean energy development. Carbon-intensive industry players still played a dominant role in Indonesia's climate diplomacy.

Keywords: climate change, Indonesia's climate diplomacy, Joint Crediting Mechanism.

INTRODUCTION

This research aims to identify the dynamic of Indonesia's climate diplomacy. To understand the rise and the fall of Indonesia's climate diplomacy, the authors focused on the implementation of the Joint Crediting Mechanism (JCM) in Jakabaring, Palembang. The primary purpose of JCM is to reduce greenhouse gas (GHG) emissions in the context of the Paris Agreement. JCM aims to support economic growth without overriding environmental sustainability (The Republic of Indonesia, 2019). Indonesia wanted to achieve its foreign

policy on climate change by adding the JCM as a new Indonesia's climate diplomacy.

The production of greenhouse gas (GHG) contributes to climate change. Greenhouse gases include Carbon Dioxide (CO₂), Dinitroxide (N₂O), Sulfur hexafluoride (SF₆), Perfluorocarbons (PFCs), Methane (CH₄) and Hydrofluorocarbons (HFCs). Human released GHGs from their activities, especially those related to the use of fossil fuels (oil, gas, and coal), deforestation, and logging (Maslin, 2004).

Climate change is a global problem. It is a severe threat to both developed and developing countries. UNFCCC (2017) warned that climate change would erase around one-tenth of the gross domestic product (GDP) of developing countries. Group of 7 (G7) has declared that climate change contributed to increased security risk globally. World Meteorological Organizations stated that 2018 was the fourth warmest year on record (WMO, 2019). Climate change endangered the existence of low-lying countries.

Based on UNEP's data, developed countries emit emissions more than developing countries. For example, China, Brazil, and India have per capita emissions lower than average (UNEP, 2005). World Bank noted that the high-income countries emit CO₂ at 13 trillion/year/capita. Middle and low-income countries produced less than three trillion per year (Reddy & Assenza, 2009). The most significant contributors to GHGs were the United States (36.1%), the Russian Federation (17.4%), and Japan (8.5%) (Armeli, Diah & Moekti, 2004).

Developing countries have critical roles in reducing the impact of climate change. For example, Reddy & Assenza (2009) predicted that China and India would be the top emitters replacing the United States and Russia. Accelerating economic growth is the primary purpose of China and India. They will use fossil-based energy to speed up the economy. Developing countries have not focused on the expansion of clean energy. United Nations urged governments to conduct international cooperation to foster the acceleration of clean energy in developing countries. Furthermore, the United Nations established the United Nations Framework Convention on Climate Change (UNFCCC) as a global institution to initiate cooperation between developed and developing countries in fostering clean energy worldwide (Falkner, 2017).

UNFCCC was established on 12 June 1992 in conjunction with Earth Summit in Rio de Janeiro. In 1997, members of UNFCCC agreed on the Kyoto Protocol. The target of the Kyoto Protocol was to implement measures to prevent dangerous anthropogenic interference with the climate system

(UNFCCC, 1992). To strengthen the implementation of the Kyoto Protocol, UNFCCC members signed the Paris Agreement in 2015. The goal of the Paris Agreement was to "keep the increase in global average temperature to well below 2 °C above pre-industrial levels; and to pursue efforts to limit the increase to 1.5 °C" (UNFCCC, 2016).

There are many differences between the Paris Agreement and the Kyoto Protocol, including the obligation to establish and publish Nationally Determined Contribution (NDC). NDC referred to the GHGs reduction target of participants of the Paris Agreement (Cassidy, 2015). Indonesia committed to reducing GHGs emissions by 29% on its own. Indonesia would aim to reach 41% if there was international help in 2020.

In Indonesia's NDC, there are two significant areas to decrease carbon production, namely forestry and energy. As seen in figure 1, the forestry and energy sector is the most critical sector of Indonesia's emission. In the energy sector, Indonesia aimed to increase its renewable energy production by at least 23% in 2025 and at least 31% in 2050. To achieve these targets, the Government of Indonesia will promote efficiency in final energy consumption, clean coal technology, biofuel, and additional compressed-natural gas fuel station.

There is a constant debate regarding the effectiveness of the Paris Agreement. The United States stated that they would withdraw their membership in the Paris Agreement (The Washington Post, 2017). In the Paris Agreement, developed countries are obliged to assist developing countries in reaching their emission reduction targets. Under the leadership of Donald Trump, the United States wanted to focus on its national economy and reduce its assistance to developing countries (Pavone, 2018). There is a question regarding the commitment of developed countries, especially the United States, to enforce the Paris Agreement.

In the debate regarding the effectiveness of the Paris Agreement, Japan offered the Joint Crediting Mechanism as a new hope of a global climate deal. To foster the implementation of clean energy in developing countries, Japan initiated the Joint Crediting Mechanism (JCM). Japan offered JCM for developing countries bilaterally.

JCM consists of technology transfer and financial support from Japan to developing countries. Japan has provided many developing countries to implement JCM since 2011, such as Indonesia, Vietnam, Thailand, Mongolia, Cambodia, Myanmar, Bangladesh, Maldives, Costa Rica, Palau, Philippines, Saudi Arabia, Laos, Kenya, Ethiopia, Mexico, and Chile (Global Environment Center, 2015).

Indonesia and Japan agreed to implement the JCM in 2003 in various sectors, including clean energy, waste management, and energy savings. In clean energy development, Indonesia and Japan used the JCM to build a solar power plant in Jakabaring, Palembang. The output capacity of the Jakabaring solar power plant (PLTS Jakabaring) is two Mega Watt. The construction of PLTS Jakabaring started in 2017 and commenced to work in April 2018.

In the construction of PLTS Jakabaring, Japan provided 56 million USD in the form of technology transfer and feasibility studies. South Sumatra Provincial administration provided 83 million USD to purchase land area and operationalization cost (Kementerian ESDM, 2018). PLTS Jakabaring provides electricity to support the implementation of the Asian Games 2018 in Palembang. PLTS Jakabaring is a new case of Indonesia's climate diplomacy.

LITERATURE REVIEW

Climate diplomacy deals with the impact of climate change as a global problem. By considering climate change as a global problem, the government ensures that climate diplomacy is effective in providing a possible solution and mitigation strategy. Climate diplomacy emphasizes the possibility of an effective global climate agreement (Sura & Schweimler, 2013). Climate diplomacy requires a strong partnership between states and the private sector (Adelphi, 2017). There is a more significant opportunity for the private sector in climate diplomacy as the implementation of climate cooperation brings profit and prosperity to society in the form of green jobs and economic efficiency.

Developed countries such as the European Union (EU) and Japan have long used climate diplomacy to achieve results that are consistent with their domestic priorities.

The EU and Japan have decreased their carbon emission significantly. The EU has published the new Renewable Energy Directive that provided clean energy consumption targets to be achieved by the member of the countries. Almost all the EU countries have hit their target in the Renewable Energy Directive (World Economic Forum, 2019). Similar to the EU, Japan aims to increase its clean energy production to 44% in 2030 by promoting solar and hydro energy (The Japan Times, 2019).

Clean energy promises that it helps countries achieve their targets in the Nationally Determined Contributions and generate economic growth. Kochtcheeva (2016) argued that clean energy would foster economic growth and improve the environment in the long run. Kochtcheeva (2016) predicted that clean energy would rise more than twice in developing countries.

Despite these promises, climate diplomacy has a problem. The problem is that developing countries often experience obstacles to be actively involved in climate diplomacy. According to Sura & Schweimler (2013), there are two potential weaknesses with the implementation of the climate diplomacy of developing countries. Firstly, developing countries have limited resources and capacity in collecting information both technically and strategically and in developing negotiating skills that are useful in International Relations. Frequently, governments put more resources on urgent priorities in economic and social issues. Diplomats, especially from developing countries, may lack the capacity to be effectively involved in international negotiations.

Secondly, there is a lack of coordination between ministries and government bodies. This problem relates to the division of responsibilities within each division in a government. For example, in the case of climate change, the Ministry of Environment and Forestry is considered the only responsible unit. As seen in figure 1, the energy sector is the second biggest contributor to Indonesia's carbon emission. Ministry of Energy should play a more significant role in replacing fossil fuel with clean energy as the primary source of energy. However, the authors observed that the Ministry of Energy is rarely involved in the public debate regarding the issue of climate change mitigation.

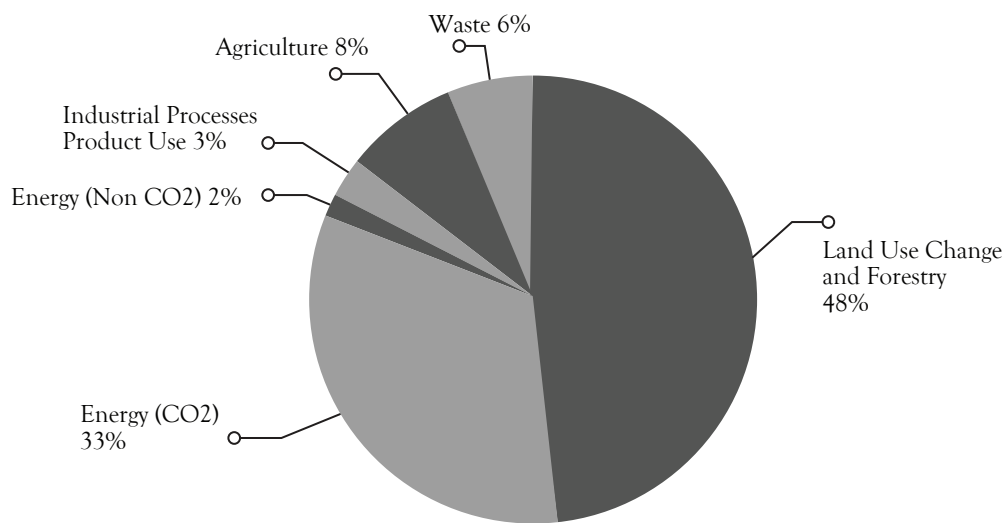


Figure 1. Sectoral Emissions Contribution to the National Emission 2000-2012 (Republic of Indonesia, 2015)

Sura & Schweimler (2013) suggested the following recommendation to improve the effectiveness of climate diplomacy. Firstly, the government needs to establish climate change as a national priority. The government who wish to undertake climate diplomacy needs to demonstrate the importance of the action both domestically and internationally.

The government also needs to communicate with all elements of society, government, and private sectors. The government delivers not only the threats and opportunities of climate change, but also the costs and benefits of holding actions related to climate change, and by creating an enabling environment for change.

To realize this, the government must involve other actors such as the media and industry, which influence the status of climate change in the political agenda. Institutional architecture also needs to be updated to integrate climate change issues across ministries. The “Whole-government” approach will help coordinate the government against action on climate change.

Secondly, the government should develop the capacity of climate diplomats. Climate diplomacy must support the development of the ability of government officials. Thus, two elements should be considered. Firstly, the government needs to ensure an effective mechanism in

appointing diplomats on climate change. The appointment of climate envoy is essential to point out that climate diplomacy is a diplomatic priority. Climate diplomats are also tasked to raise awareness, influence the debate, and stimulate national and international action. Secondly, the government must ensure that climate diplomats have detailed knowledge regarding national strategy on climate change.

The government of Indonesia has appointed DJPPI (Direktorat Jenderal Pengendalian Perubahan Iklim) to implement Indonesia’s climate diplomacy. DJPPI acts as a national focal point in addressing climate change as mandated in Minister Regulation P.18 / MENLHK-II / 2015. This unit is responsible for coordinating the formulation and implementation of policies in the field of climate change, including the functions of mitigation, adaptation, reduction of greenhouse gas emissions, resource mobilization, monitoring, reporting, and verification of climate change and control of forest and land fires (Direktorat Jenderal Pengendalian Perubahan Iklim, 2016). DJPPI must be able to synergize with other ministries in Indonesia, such as the Ministry of Foreign Affairs, the Ministry of Finance, and the Ministry of Energy and Mineral Resources.

DJPPI was a transformation of Dewan Nasional Perubahan Iklim (DNPI). DNPI was responsible for the implementation of the cooperation program between Indonesia and Norway on Reducing Emission from Deforestation and Forest Degradation (REDD+). According to McLellan (2015), REDD+ was a success story of Indonesia's climate diplomacy under the leadership of Susilo Bambang Yudhoyono. Indonesia's climate diplomacy is strengthened with Norway's commitment to providing one billion US Dollars to Indonesia in 2010, the most significant environmental aid in the history of Norway and Indonesia (Casse, et al., 2019). However, under Joko Widodo's administration, DNPI was merged into the DJPPI of Ministry of Environment and Forestry (Public Policy Indonesia, 2017).

RESEARCH METHOD

To understand the dynamic of Indonesia's climate diplomacy in the case of the Joint Crediting Mechanism, the authors conducted interviews in the Secretariat JCM Indonesia. The interviewees were Cahyadi Yudadahono as Head of the JCM Indonesia Secretariat and Mrs. Anissa Yuniashaesa as a Monitoring, Evaluation, and Dissemination Specialist at JCM Indonesia, and Dicky Edwin Hindarto as Advisor to the JCM Indonesia Secretariat.

The authors also conducted interviews with informants, namely Joko Prihatno as Director of Inventory and Monitoring, Greenhouse Gas Reporting and Verification, the Ministry of Environment and Forestry, Dida Gardera as Assistant Deputy for Multilateral Environmental Sustainability, the Coordinating Ministry for the Indonesian Economy, and Harris Yahya as Director of New and Renewable Energy, Ministry of Energy and Mineral Resources of Indonesia, Arief Kadarsyah as the Regulatory Director of Regional and Mining Companies (PDPDE), who has carried out this project in Jakabaring Sport City, Palembang. The author also conducted interviews with environmental activists, namely Yuyun Harmono from Wahana Lingkungan Hidup Indonesia and Merah Johanson from Jaringan Advokasi Tambang.

RESULT AND ANALYSIS

One of the policy instruments under the UNFCCC, which is considered useful in dealing with climate change issues both nationally and internationally, is the carbon market mechanism. The carbon market mechanism is the trade-in rights to greenhouse gas emissions in tons-CO₂ equivalent units. In the carbon market, there are two types of carbon trading systems, namely trading (emission trading system) and crediting (baseline-and-crediting). Trading, also known as cap-and-trade, is more prevalent in carbon markets (Hindarto, Samyanugraha, & Nathalia, 2018).

The trading system requires a long time in its application, but its management is relatively simple. The main focus is the emission data produced, not the activities are undertaken to produce these emissions. Each government can buy an additional quota from other governments.

Another type of trade is crediting or also known as (baseline-and-crediting). In this system, each country or organization must replace or neutralize the GHG emissions by buying carbon credits from other parties or countries. This method was implemented by conducting collaborations that focused on low carbon development, both bilaterally and multilaterally, between developed and developing countries.

In the crediting mechanism, developed countries provided subsidy in terms of environmentally friendly technology facilities in developing countries. The results of emission reductions obtained from this project were then called carbon credits. This crediting system not only focuses on the resulting emissions data but also focuses on the activities and projects undertaken to produce emission reductions. Developed countries and developing countries alike contributed to a plan to reduce emissions.

Based on this reason, the government needs to prepare a lot of methods, for example, the formula for calculating and monitoring the use of solar energy as a source of electricity, and so on. This system is popular in Indonesia, and two schemes are known as Clean Development Mechanism (CDM) and Joint Crediting Mechanism (JCM).

In 2013, Indonesia and Japan agreed to work together to reduce greenhouse gas emissions. The two countries signed the JCM bilateral cooperation scheme on August 7, 2013, in Tokyo, and on August 26, 2013, in Jakarta. JCM cooperation negotiations continued to involve other parties, namely the Ministry of Environment and Forestry, the Coordinating Ministry for Economic Affairs, the Ministry of Energy and Mineral Resources, the Ministry of Foreign Affairs, the Ministry of Industry, and Dewan Nasional Perubahan Iklim (DNPI) as the coordinator.

JCM is categorized as UNFCCC's framework aiming to invest in the low-carbon economy through incentives from developed country governments to developing countries. JCM proposed to reduce GHGs in host countries with measured and verified mitigation measures. This cooperation is not only a collaboration between government to government (G to G) but also between the private sector in Japan and Indonesia. Thus, there are four important actors in the implementation of JCM in Indonesia, namely the Japanese Government, the Government of Indonesia, the Japanese private sector, and the Indonesian private sector.

JCM, which was initiated by Japan, implemented a market-based mechanism that resembled the CDM (Cleaning Development Mechanism). However, unlike CDM, the JCM scheme only involved cooperation between the two countries or bilaterally. A fundamental difference between CDM and JCM lies in the complexity of the process and system of distributing carbon credits. In JCM, credits resulting from emission reductions are not fully transferred to developed countries but are also shared with participating host countries and can be used to achieve shared GHG reduction commitments (Hindarto, Samyanugraha, & Nathalia, 2018).

The Indonesia-Japan agreement in the JCM scheme agreed that the carbon credits generated would be divided between the two countries according to the amount of capital provided and the agreement between the two parties. Japan and Indonesia have made preparations and designed basic rules related to JCM implementation in Indonesia.

The Japanese government provided grants to Japanese companies to conduct feasibility studies of Indonesian companies that proposed low carbon projects through the JCM Secretariat. This feasibility study consisted of studies in the field of clean energy (geothermal, hydro and biomass), energy efficiency, low-carbon transportation, low-carbon industry, low-carbon agriculture, and forestry-based activities. Until the end of 2017, there were 115 feasibility studies that had been funded by JCM, and 32 of them had been approved (Global Environment Center, 2015).

According to Yuniashaesa (2019), Joint Crediting Mechanism (JCM) is a bilateral cooperation scheme launched by Japan as a form of Japan's concern on the issue of climate change by encouraging Japanese private companies to invest in low carbon development in Indonesia and also in several other developing countries. Moving on from previous experiences of market-based mechanisms under the Kyoto Protocol, many countries finally recognized new market-based mechanisms as one of the international architectures in dealing with climate change. Market-based mechanisms in the effort to reduce world greenhouse gases are considered to have great potential to mobilize resources, especially from private parties, and are also one of the ambitious steps or mitigation actions.

The JCM concept itself has been launched and began to be proposed by Japan to developing countries since 2010. Japan made an official submission to the UNFCCC by offering JCM as part of Japan's climate diplomacy.

In 2015, through Nationally Determined Contribution (NDC), Japan stated its commitment to reduce greenhouse gases by 26% in 2030 with 2013 as the base year. Japan applied the JCM scheme to the host countries through bilateral agreements that focused on low carbon development in each of its partner countries (Asian Development Bank, 2016).

The cooperation between Japan and Indonesia regarding the JCM scheme began in 2010. In 2011, for the first time, the Japanese government and the Indonesian government held a formal meeting to discuss JCM cooperation. Indonesia was represented by the

National Climate Change Council (DPNI) along with relevant ministries, and Japanese government Delegations. relevant ministries, and Japanese government Delegations.

After this meeting, in 2012, the formation of the TKPPKA (International Carbon Trade Negotiation Coordination Team) coordination team began. After going through the negotiation stage for three years, finally, JCM was officially signed by the governments of the two countries in 2013. Minister of Foreign Affairs of Japan and Coordinating Minister for Economic Affairs of the Republic of Indonesia signed the JCM agreement. Furthermore, in 2014, the JCM Indonesia Secretariat was officially formed, and for the first time, JCM issued carbon credit in 2016.

As stated by Takashi (2019), the JCM scheme has built cooperation with various other developing countries. One of the most successful collaborative implementations is in Indonesia. Indonesia is the largest recipient of the JCM. JCM's activities cover different cooperation sectors such as clean energy, energy efficiency, deforestation and forest degradation, waste handling and disposal, construction, and manufacturing industries.

In the implementation of the JCM scheme, there were various parties involved both from the government and private parties, including 8 Indonesian ministries and 3 Japanese ministries, 5 Indonesian cities and 5 Japanese cities and 39 Indonesian companies and 100 Japanese companies and 2 Indonesian State-owned Enterprises belonging to the participant, and 11 third party entities. These third-party entities were directly selected by the project participants to validate and verify the amount of carbon reduction generated from each project (Yudadahono, 2019).

In August 2013, the Coordinating Ministry for Economic Affairs of the Republic of Indonesia established the JCM secretariat. The primary purpose of the JCM secretariat is to support joint committees and related stakeholders. The JCM secretariat is also a center for JCM information and communication. The JCM secretariat worked with all relevant stakeholders to ensure cooperation and achievement of implementation objectives.

THE ADOPTION OF JCM IN JAKABARING SOLAR POWER PLANT

Jakabaring is a sports city located in Palembang, South Sumatra, Indonesia. Jakabaring is the venue for several well-known national and international sporting activities, namely PON XVI 2004, SEA Games XXVI 2011, and the most recent 2018 Asian Games.

The South Sumatra government wanted to adopt clean energy in Jakabaring, in Palembang. The Regional Mining and Energy Company (PDPDE) worked with Sharp Corporation of Japan to establish a solar power plant using the JCM. This project aimed to reduce carbon dioxide emissions by building a 1.6 MW PLTS (Solar Power Plant) in the Jakabaring complex. This solar power plant will support the 2018 Asian Games (PDPDE, 2016).

As shown in figure 2, the Japanese Government, through the Ministry of Environment, provides funding to its participants, in this case, Sharp Corporation, for 50% of the total project cost. In terms of sales and management of electricity supply, PDPDE cooperates with PLN in charge of producing electricity for Jakabaring. After the project runs, both the PDPDE and Sharp corporation must provide project reports directly to the Joint Committee. BPKAD will provide land five-hectare, and PUCK will provide infrastructures such as roads and supporting facilities.

The construction of this PLTS starts in 2017 and has been operating commercially since April 10, 2018. PLTS Jakabaring provided electricity 1,630MWh / year. The South Sumatra government sold the electricity to the PLN network based on applicable regulations that were 85% from the local Cost of Generating (BPP) through the Power Purchase Agreement (PAA). This PLTS succeeded in reducing CO₂ emissions by 779 tons of CO₂ / year. PLTS Jakabaring also provided electricity to power street light on the streets of Palembang. It is capable of providing electricity to 45,000 units of Solar Street Light with an estimated emission reduction of 21,160 tons CO₂ / year.

According to the Director of PDPDE Arief Kadarsyah, Jakabaring's Internal Rate of Return (IRR) is still quite negative. Based on the results of calculations by PDPDE,

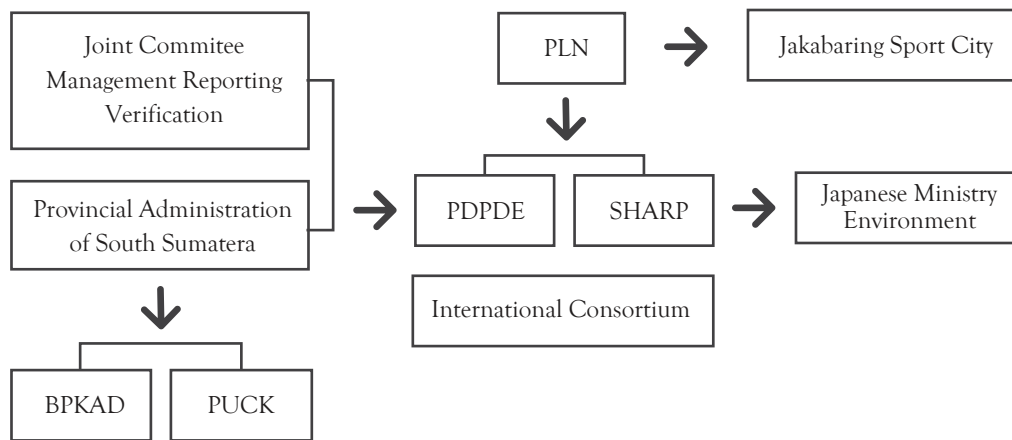


Figure 2. Working Scheme of Jakabaring Solar Power Plan (PDPDE, 2016)

the revenue obtained from the PLTS project was Rp. 2.63 billion / year. The production of solar panels will be decreased significantly during the rainy season so that an average of 40% cuts electricity production or if it is a nominal value equivalent to Rp 1.5 billion.

With a 20-year contract of the validity period, PLTS Jakabaring will generate Rp. 13.8 billion or almost half of the total investment of Rp. 26 billion. In other words, the PLTS project has not been able to break even during the contract period.

THE RISE AND THE FALL OF INDONESIA'S CLIMATE DIPLOMACY

Based on the interviews with officials in the JCM secretariat, the authors observed that the Government of Indonesia was confident the JCM would stimulate the growth of clean energy power plants in Indonesia. The government of Indonesia and Japan expected that the JCM would be a solution for the deadlock regarding the responsibility of developed countries in the implementation of the Paris Agreement. The government of Indonesia and Japan wanted to unleash the potential of clean energy to developing national economic growth. The success of JCM in Indonesia would be a role model of JCM implementation in other countries.

The government of Indonesia was committed to promoting clean energy to Indonesian business communities and society. Before the JCM was established, Indonesia had several policies to empower

clean energy companies. Energy and Mineral Resources Ministerial Regulation (Permen) 31/2009 has provided incentives for clean energy developers because PLN gave a guarantee to buy the electricity in the long-term contract without any changes in price. The regulation also gave priority to clean energy developers to be PLN vendors. The price was also profitable, with Rp 850 per kWh (around 6 US cents). It was even brighter when government-issued Energy and Mineral Resources Ministerial Regulation No. 19/2015 that the government increased the price to 12 US cents per kWh.

The Government of Indonesia also had launched Green Bond and Green Sukuk. Ministry of Finance offered Green Bond and Green Sukuk to investors as a way to finance green projects in Indonesia. There were nine eligible green projects namely renewable energy, energy efficiency, Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction, sustainable transport, waste to energy and waste management, sustainable management of natural resources, green tourism, green buildings, and lastly, sustainable agriculture (Ministry of Finance, 2019).

Indonesia is the first country in the world that issued sovereign green Sukuk (Anggraini, 2018). In 2018, the Government of Indonesia earned three Billion US dollars from the sales of green Sukuk (Kata Data, 2018). The money was used to relevant ministries that implemented green projects, including the construction of national parks, flood mitigation systems, or clean

energy expansion. In addition to the JCM, Green Bond implementation of Indonesia's climate diplomacy.

The government of Indonesia worked with Japan to accelerate clean energy development through the JCM. Japan provided funds and technology 50% of the total cost of the clean energy construction. The mechanism has been set up and implemented in the case of PLTS Jakabaring. JCM was considered as a new solution for the deadlock of clean energy development in the national and global level. It was expected that JCM could be a model for global clean energy cooperation in the context of the implementation of the Paris Agreement. JCM is a new era for the rise of Indonesia's climate diplomacy.

Permen 31/2009 and JCM faced its problem when the government changed its policy with Energy and Mineral Resources Ministerial Regulation (Permen) No. 50/2017. According to Permen No. 50/2017, PLN set the maximum price ceiling, only 85 percent of the actual cost (BPP). The government also ruled out that the clean energy developers must transfer their renewable projects to PLN at the end of their power purchase agreements (PPAs). This mechanism was called Build, Own, Operate, and Transfer (BOOT). This policy discouraged banks from providing loans to clean energy developers (The Jakarta Post, 2019).

IISD (2018) has published a report showing the roadblocks to the development of clean energy in Indonesia. IISD mentioned four reasons for explaining the slow growth of clean energy in Indonesia. The first reason was the power purchase price. PLN has set the price at 85% of the local average generation cost. For clean energy developers, the purchase price was not attractive and profitable. Secondly, the government changed the policy frequently. It added more risk to clean energy developers.

Thirdly, the government still subsidized coal and oil price. The price of clean energy was less competitive due to the government's subsidy. Lastly, PLN had many fossil fuel generators. PLN did not want to lose the revenue stream from its generators. IISD (2018) stated that "Industry stakeholders also believed that the broad remit and power of PLN present a number of conflicts of interest."

Indonesia has a massive reserve of coal. The increasing exploitation of coal makes fuel cheaper than renewable energy (Lowy Institute, 2019). Environmental activists argued that coal industry players support Joko Widodo's administration (author's interview). Coal industry players become ministers in Joko Widodo's administration, such as Luhut Binsar Panjaitan (Coordinating Minister of Maritime Affairs and Investment) (Jatam, 2019). Luhut Binsar Panjaitan owned PT Toba Bara Sejahtera, the tenth-biggest coal miner in Indonesia. The government planned that coal production in Indonesia should not exceed 400 million tonnes. However, today Indonesia has exploited coal more than 580 million tonnes (World Resources Institute, 2017).

The problem with clean energy development in Indonesia raised a question of Indonesia's responsibility in upholding its commitment to the Paris Agreement. The government of Indonesia has passed Law number 16 the year 2016 on the ratification and implementation of the Paris Agreement. To implement the Law number 16 the year 2016, the Government of Indonesia has many different policies from different ministries. Joint Crediting Mechanism is a joint effort between Coordinating Ministries of Economy and Ministry of Energy and Mineral Resources.

The case study of PLTS Jakabaring showed that Indonesia's climate diplomacy has a gap between rhetoric and reality. PLTS Jakabaring offered climate narratives that consisted of potential and solution of current climate issues. Yamanoshita, Samejima, and Scheyvens (2017) argued that JCM is seen as a new hope for the deadlock in the implementation of the Paris Agreement, especially regarding the cooperation between developing and developed countries. Japan and Indonesia showed its commitment to advance climate cooperation between developing and developed countries through the implementation of the JCM.

After constructing PLTS Jakabaring using the JCM, the Government of Indonesia did not provide tariffs and incentives to encourage the expansion of PLTS Jakabaring. Instead, the Minister of Energy and Mineral Resources issued Permen 20/2017 that discouraged clean energy investors from building more solar power plants.

Indonesia's climate diplomacy has a significant difference between rhetoric and reality. The government did not consistently support clean energy development. They failed to earnestly implement Law 16/2016 on Indonesia's ratification of climate change.

The rise and the fall of Indonesia's climate diplomacy showed the urgency of inter-sectoral coordination. Based on the case of JCM and PLTS Jakabaring, the authors developed the conceptual framework of Indonesia's climate diplomacy. The authors argued that the JCM and PLTS Jakabaring represented the joint effort to promote the clean energy industry, compliance to Paris Agreement, and Indonesia's climate domestic policies. The rise and the fall of Indonesia's climate diplomacy were based on the harmonization and synergy between

the clean energy industry, compliance to Paris Agreement, and Indonesia's climate domestic policies. Without adequate and comprehensive coordination between these sectors, Indonesia's climate diplomacy would be failed.

As seen in figure 3, the authors used the Venn Diagram to understand the complexity of Indonesia's climate diplomacy. The coordination between Indonesia's climate policies and the Paris Agreement can be shown in the implementation of Law 16/2016. Meanwhile, Indonesia's NDC can be a representation of the importance of clean energy in the implementation of the Paris Agreement. JCM is the overlapping area between the clean energy industry, the Paris Agreement, and Indonesia's domestic climate policies.

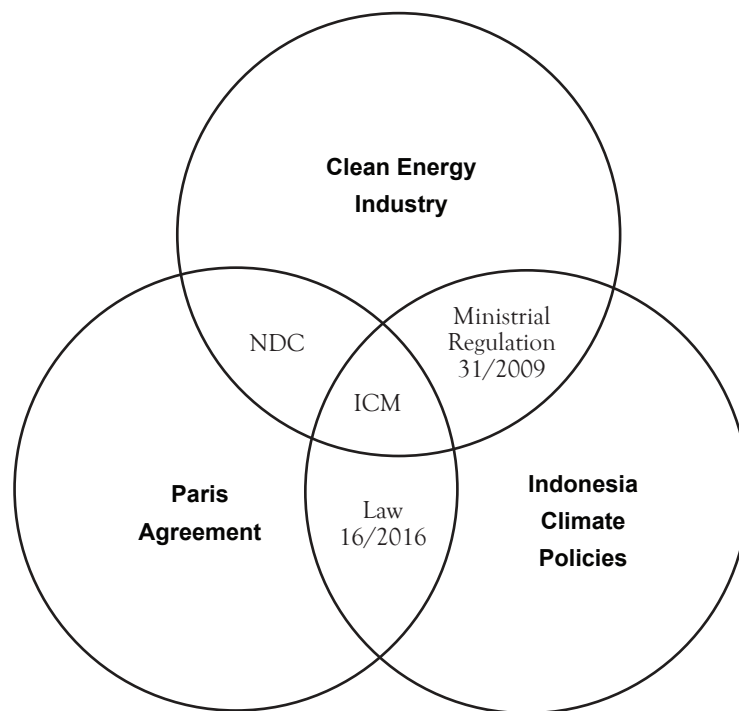


Figure 3. Working Scheme of Jakabaring Solar Power Plan (PDPDE, 2016)

CONCLUSION

The dynamic of the implementation of JCM in Indonesia indicated the rise and the fall of Indonesia's climate diplomacy. The government of Indonesia and Japan have implemented policies to promote the clean energy industry in the context of compliance with the Paris Agreement through the implementation of the Joint Crediting Mechanism in Indonesia. PLTS Jakabaring is the product of the JCM in Indonesia. PLTS Jakabaring has provided clean energy to houses and offices as well as public facilities in Palembang.

This research concluded that the Indonesian Government hardly seriously supports the implementation of the JCM. PLTS Jakabaring suffered from financial loss due to the lack of financial incentives from the government. Thus, there is a gap between rhetoric and reality in Indonesia's climate diplomacy. On one side, the Government of Indonesia has signed laws and regulations in line with the Paris Agreement. On the other hand, there is a lack of coordination between government and private entities as well as civil society.

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