Indonesia-Norway cooperation in reducing emission from deforestation and degradation framework: a case study of Central Kalimantan forest

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Abstract. This study aims to describe and explain how Indonesia's cooperation with Norway in the conservation of Indonesia's forests through the REDD+ Framework is related to the interests of both countries in carrying out this environmental cooperation as well as how the implementation of the REDD+ program that both countries have formed for Central Kalimantan's forests. The method used by the writer is a descriptive method of analysis, and data collection techniques used by the author is a literature review. The authors analyzed the data using qualitative analysis techniques supported by quantitative data. The results of this research indicate that the cooperation between Indonesia and Norway certainly has different interests between the two countries. Indonesia itself has the interest to create a good image in the eyes of the international world. It is why Indonesia has a large forest but has various problems. Therefore, it takes a great commitment to maintaining its forests, while on the other hand, Norway has a moral obligation to developing countries that have a large forest. The implementation of the REDD+ program is activities conducted by various stakeholders that developed into the Letter of Intent signed by Indonesia and Norway.

1. Introduction
Deforestation and forest degradation, according to the Intergovernmental Panel on Climate Change (IPCC), make a global contribution that reaches 17% of all greenhouse gas emissions. In Indonesia, more than 60% of carbon emissions has resulted from deforestation and peatlands. The magnitude of forest degradation and deforestation's contribution to the level of greenhouse gas emissions is detrimental to all humankind in the world. Countries with a high level of forest canopy have the potential to play an active role in preventing greenhouse gas emissions through forest conservation programs and carbon-rich peatland areas[1].

Indonesia is one of the countries that has an extensive and diverse forest area with a fairly high level of damage due to forest fires and illegal logging for instances. In addition to that, the amount of carbon release in Indonesia is already in an alarming category. The main factor causing a large amount of carbon release in Indonesia is the destruction of peatland forests. Countries that have large tropical forests in the world, including Indonesia, proposed a scheme to reduce the rate of deforestation by reducing emissions from deforestation and forest degradation (Reducing Emissions from Deforestation and Degradation / REDD). This scheme began to be rolled out at the Conference of the Parties (COP) Climate Change in Montreal, Canada, in 2005. The proposers are developing countries that have tropical forests in the world. These include Indonesia, Papua New Guinea, Gabon, Columbia, Republic
of the Congo, Brazil, Cameroon, the Democratic Republic of the Congo, Costa Rica, Mexico, and Peru as these eleven countries own 50% of the world's tropical forests[2].

REDD+ has the potential to reduce GHG emissions at a low cost and a short time, while at the same time helping to reduce poverty and enable sustainable development. REDD+ is an emission reduction scheme that can accommodate various types of forest and land management in the context of Indonesian forestry legislation that can include protected and conservation forests, forests, production forests, or conversion forests. REDD+ is considered the most tangible, cheap, fast, and mutually beneficial way to reduce greenhouse gas (GHG) emissions. It is because one-fifth of GHG emissions come from deforestation and forest degradation (DD). Moreover, it is also inexpensive since most DDs are only marginally profitable, so the reduction of GHG emissions from forests will be cheaper than other mitigation tools or instruments. Furthermore, it is fast due to large reductions in GHG emissions can be achieved by reforming policies and other actions that are not dependent on technological innovation. Even further, it has a mutual benefit because of the potential to generate large amounts of income, and improved governance can benefit the poor in developing countries and provide other environmental benefits other than those related to climate[3].

Norway is one of the developed countries that fully supports efforts to reduce greenhouse gas (GHG) emissions through forest rescue as planned in the REDD+ scheme. Norway's commitment to reduce emissions is done with a plan to reduce emissions by 30% by 2020, calculated from the level of emissions in 1990. This step began when in 2007, Norway pledged the assistance of 500 million USD, which would be paid in stages to support REDD programs in developing countries. In 2008, Norway fulfilled this promise by activating Norway's International Climate and Forest Initiative (NICFI), which is tasked with handling the monitoring, assessment, reporting, and verification of deforestation and forest degradation in developing countries assisted by funding of its REDD program by Norway.

The establishment of the NICFI was carried out by the Norwegian Agency for Development Cooperation (NORAD), which is part of the Norwegian Ministry of Foreign Affairs. It is responsible for maintaining the efficiency of Norwegian foreign aid. Norway channels funding through several multilateral institutions such as the UN-REDD, the Forest Carbon Partnership Facility managed by the World Bank, and environmental Non-Governmental Organizations (NGOs) around the world. Norway also establishes bilateral relations with the countries that have the largest rainforest in the world such as Brazil, Indonesia, Mexico, Congo, Tanzania, Nepal, Mozambique and Guyana to contribute in accelerating the reduction of GHG emissions through the deforestation sector[4].

Indonesia and Norway have established bilateral relations for more than 60 years. However, they formed a cooperative relationship in the environmental field later in 2007. In December 2010, Central Kalimantan was chosen as a pilot province for REDD+ as part of the implementation of the Letter of Intent which was signed jointly by the Government of Indonesia and the Government of Norway, which included a commitment to pay 1 billion USD to Indonesia if it succeeded in reducing emissions in the forestry sector. The agreement states that the government must develop a national strategy and a provincial strategy for the selected province as a pilot. Central Kalimantan is the focus of attention in the context of REDD+, related to its' high carbon stocks on peatlands, but at the same time, Central Kalimantan is the biggest emitter due to forest fires and land from these high reserves[5]. The existence of the Central Kalimantan forests that were used as a pilot has a significant impact on Indonesia and Norway in launching this REDD+ program.

2. Methodology

This research is descriptive-analytic research, which is a study that uses a pattern of describing the state of empirical facts with descriptive arguments that are relevant. Then, the results of the description are followed by analysis to draw analytic conclusions.

The data collection technique used by the authors to acquire the necessary data for this research is a literature review. The method of collecting data is undertaken through the examination of various kinds of literature related to the problems studied. The data analysis technique used by the authors is qualitative analysis method. The period of study is set between 2010 to 2014.
3. Results and discussion

3.1. Indonesia's interest in the REDD+ Program

The case of deforestation that occurred in Indonesia has contributed significantly to the occurrence of global warming. Forest destruction caused by peatlands and forest fires is considered as the main cause of Indonesia into the top three greenhouse gas emitters after the United States and China. In 2000, Indonesia's annual emissions from the forestry sector and land-use change were estimated to be equivalent to 2563 MtCO2e, far exceeding the number of emissions in the energy, agriculture and waste sectors which amounted to 451 MtCO2e. As a comparison, Indonesia's total emissions are at 3,014 MtCO2e, while China at 5,017 MtCO2e and the United States at 6,005 MtCO2e [6].

Indonesia showed a great commitment to saving the world by establishing cooperation with other countries that also have a focus on the environment. In May 2010, the Indonesian and Norwegian governments agreed on a three-stage plan to protect Indonesia's forests. This Letter of Intent is being implemented in Indonesia. The Letter of Intent from Indonesia on reducing carbon dioxide emissions is a step taken by Indonesia on the sidelines of a high-level conference on climate change and forestry held in Oslo, Norway, in 2010. At the Oslo Conference on Climate Change and Forestry in 2010, the Indonesian President was present as Co-chairs with the then Norwegian Prime Minister[7]. The two countries agreed to cooperate in order to reduce greenhouse gas emissions from deforestation and forest degradation activities that have been happening, especially peatlands. This collaboration between Indonesia and Norway is carried out by the Reducing Emission from Deforestation and Forest Degradation scheme or commonly referred to as REDD+.

The cooperation carried out by Indonesia and Norway is inseparable from the interests of Indonesia to cooperate with Norway. One of Indonesia's interests is to construct a positive image of Indonesia. The construction of Indonesian's image is not determined by normative slogans or ideologies, such as foreign policy, but by the attitudes and concrete actions of the government and people of Indonesia that are known to the international public through the media[8]. By supporting REDD, Indonesia can enhance its role and improve its image as a country with a great concern with the existing environmental problems, especially on climate change. Indonesia's decision to support a REDD+ scheme is based more on self-image motives in international relations.

Several arguments were raised to support the statement regarding Indonesia's construction of a positive image. The first argument is the general view of the Indonesian government on climate change issues. When ratifying the UNFCCC in 1994, the Indonesian government emphasized that Indonesia must be able to show the international world that Indonesia is a country that cares and is responsible for environmental issues, especially regarding climate change. UU No. 6 Tahun 1994 regarding the ratification of the UNFCCC shows that Indonesia is also responsible for global environmental problems, particularly in the case of climate change whose impacts will cause concern for humanity[9]. The second argument is based on the statements of Indonesian delegation in CoP-13 held in Bali at the end of 2007. One delegate from the Regional Representative Council of the Republic of Indonesia issued a call from Bali towards a new world order which contained an appeal to the parties that encourages consistency of the Indonesian government in policy and implementation as well as negotiating according to the agenda, and rigidly paying attention to the harmony of the human environment with the interests of the physical environment[10]. The Indonesian Minister of Environment hoped that what happened in Bali could produce the awaited breakthrough by the international community. He promised to facilitate the negotiations and build bridges towards consensus so that Bali can deliver the breakthrough the world is waiting for[11]. The third argument can be traced to Indonesia's persistent efforts in preparing for REDD in passing it in the Convention, as well as in leadership in Forest-11. Indeed, the REDD scheme was not pioneered by Indonesia, but Indonesia took over the effort to realize this scheme through its leadership in Forest-11. The Indonesian Ministry of Foreign Affairs emphasized that as one of the owners of the largest tropical rainforest in the world, Indonesia was challenged diplomatically to mobilize the role of other countries that also had extensive tropical rain forests[11].
However, Indonesia cannot do this by itself. Therefore, Indonesia cooperates with Norway. Also, the interest that Indonesia wants to achieve is to meet the economic needs of its citizens while still considering its impact on the environment. The REDD+ program was formed to re-manage degraded forests or preserve forests through conservation. REDD+ still prioritizes the goals of forest sustainability, but it also has economic value for Indonesia, as the REDD+ mechanism is in the form of grant funds from developed countries, which certainly can enhance the Indonesian economy.

3.2. Norway's interest in the REDD+ Program

The foreign policy of Norway per se cannot be separated from environmental issues. In 1972, Norway was the first country in the world to have ministries at the cabinet-level with special responsibility for any environmental problems. Therefore, every policy, including Norwegian economic policy, is also influenced by the environment. It makes Norway one of the countries that care the most about the environment[12]. As a country that values freedom and prosperity, Norway has established itself to play a stronger role in the field of international politics. The Norwegian government promises to allocate 1% of the country's revenue to assist development in developing countries. Meanwhile, the Official Development Assistance (ODA) requires every wealthy country that becomes a UN development project to allocate a maximum of 0.70% of each national income[12]. In 2005, Norway allocated funds of 0.93%. This signified that Norway is indeed a country that is generous to the international community. The things done by Norway are not without reason. This is because Norway is a developed country that consciously believes that the absence of forests is one of the major disasters for the country. Norway has long since lost forests due to longstanding industrial activities. Based on interviews with Forestry and Climate Change Adviser in Jakarta, it can be concluded that one of the interests of Norway to cooperate with Indonesia is because Norway is one of the Annex 1 Countries in the UNFCCC. Thus, it is a moral obligation for Norway to participate in helping countries that are willing to commit to improving forests in their countries.

3.3. Implementation of the REDD+ Program in Central Kalimantan

Based on the Letter of Intent agreed by Indonesia and Norway, the implementation of REDD+ covers three phases at the end of 2010. This first phase is the readiness phase or preparation phase. It was carried out by the establishment of a REDD+ institution, preparation of a REDD+ implementation strategy, and the selection of a Pilot Province. In this first phase, various kinds of environment-based activities have been implemented by the parties involved and directly involved in REDD+. Based on the results of a joint commitment between Indonesia and Norway, the activities carried out were not separated from the supervision of the Indonesian government and the Norwegian government. They were proven when the Norwegian Ambassador came to visit Central Kalimantan directly to witness the preparation of Reference Emission Level (REL) and Measurement, Reporting, and Verification (MRV) documents[13]. These are several important policies and programs developed by the local government in Central Kalimantan:

a. Tuntang Mahaga Lewu Program (PM2L)

PM2L is a program established by the Government of Central Kalimantan Province in order to alleviate poverty in villages that are still lagging, through integrated workshops involving various Regional Work Units of Central Kalimantan province. This program aims to advance villages that are left behind without putting pressure on forest resources.

b. Joint Movement to Utilize Neglected Land (GEBER MLT)

GEBER MLT is a program directed at optimizing the use of abandoned lands (or idle land), which are generally found on the left and right sides of roads, rivers, lakes, throughout the Central Kalimantan region. The optimization is carried out based on agriculture and forestry or commodities that are considered feasible, such as planting forest plants, fruits, and even food crops. If it can be implemented correctly, there will be an increase in the productivity of the lands that concurrently increase the income and welfare of the community. It is due to the results of plants that can be used for consumption as well as community income.
c. Tree Planting Month
Since the launching of tree planting in 2010, Kotawaringin Barat Regency in Central Kalimantan has planted as many as 12.3 million trees, such as jabon and sengon[14]. Furthermore, planting a million sengon trees was also carried out in Palangkaraya. It cannot be separated from the commitment of the Ministry of Forestry of Central Kalimantan, which is committed proactively in the One Billion Trees (OBIT) Planting Movement[15].

d. Green Government Policy (GGP)
GGP is an environmentally sound development policy established in the first period (2005-2010) of the Teras-Diran leadership. The GGP combines social, cultural, economic, and environmental aspects.

c. Plantation Forest Development
The existence of vast forest areas in Central Kalimantan Province is an asset that must be optimized to support development in Central Kalimantan, without having to reduce the ecological functions of the forest. Through the development of plantation forests directed at degraded forest areas, it is hoped that there will be an increase in the productivity of forest areas.

In addition to those five main programs, various training were also held to support the REDD+ program in the Province of Central Kalimantan that leads to community empowerment, such as: (a) Training of Trainer for teachers regarding "Education for Sustainable Development"; (b) Training of "Indigenous Peoples and Climate Change, Basic Introduction to IT, Financial Literacy, and Gender Mainstreaming"; (c) Community Based Forest and Peatland Fire Management Training; (d) Training of Citizen Journalism; and (e) Development of REDD-based ecotourism[16].

3.3.1. The Impact of REDD+ Program Implementation in Central Kalimantan. The presence of the REDD+ program in Central Kalimantan has a significant impact in the province of Central Kalimantan itself. With the existence of the REDD+ program, it certainly opens up the broadest opportunities for the community to channel their aspirations, indigenous people, stakeholders, and traditional communities. Hence the rights of local communities living near protected forest areas are guaranteed. REDD+ program also made the people of Central Kalimantan aware of the importance of environmental issues and climate change, which are now increasingly discussed. The community will become increasingly aware of the importance of protecting the natural environment. A better form of interaction and support for forest conservation also occurred not only from the community but also from other stakeholders such as NGOs, local communities, indigenous peoples, businesses, and companies. Community involvement in forest conservation efforts will also support the implementation of sustainable green economic development programs that benefit the community and local government[1,2].

3.3.2. Constraints on the Implementation of the REDD+ Program in Central Kalimantan. Behind all the positive impacts, there are several obstacles and problems related to the implementation of the REDD+ program in this Central Kalimantan forest area. First, information about REDD+ in Indonesia is still monopolized by the Central Forestry Department. As a result, local governments in particular and Indonesian people, in general, do not get enough information about REDD+. Secondly, there is still a low level of commitment from the parties involved in the REDD+ program, which in this case, are companies and plantation forest permit holders. In 2012, there were 24 units of IUPHHK-Plantation forest area of approximately 626,554 ha, but only 11 units had a definitive decree from the Minister of Forestry, while the remaining 13 units still used temporary decree which had lasted for decades. Furthermore, there is horizontal conflict in the community, especially the community in one village in Central Kalimantan, namely the village of Henda. This horizontal conflict is caused because the management of REDD+ funds at the village level is not transparent and tends to be discriminatory. Not all village communities were involved in the implementation of this program[3,13,16].
The most constraining problem is the case of embezzlement of funds or corruption in the forestry sector that existed even before the REDD+ program was carried out. This obstacle can also be a crime in the field of forestry, and one that continues to occur today is the problem of corruption in the implementation of the REDD+ program. The corruption that occurs in the REDD+ program, if left alone, will certainly make the community, especially local people, even more miserable, since the REDD+ program makes local people lose access to use the forest directly, although there are still many local people who depend on forest areas[11,15,16].

4. Conclusion
It can be drawn as the conclusion that Indonesia's interest in cooperating with Norway is to build a positive image of Indonesia as a country that is committed to the problems of forests. Another interest of Indonesia is to integrate the concept of a more balanced rural economy with the environment in which it targets the economy continues to run smoothly while preserving the environment. It also aims to strengthen the rights of local or customary communities over land and resources in the forest to meet their economic needs. On the other hand, Norway has the interest to fulfill the moral responsibility as a developed country that is incorporated into Annex 1 countries in the UNFCCC, while also having a positive image embedded in the country. It is related to environmental concerns that are reflected in many policies adopted by Norway. These two countries have the same interests and the same views on the importance of protecting the forest. Norway has been known as a very generous country for developing countries. Therefore, when Indonesia wanted to repair its damaged forest areas, Norway helped by providing incentives to Indonesia through a Letter of Intent that has been mutually agreed upon.

The impact arising from the REDD+ program is the existence of a wider opportunity for the community to channel their aspirations. The incentives provided by Norway are channeled to local communities, making people more aware of the issue of climate change. This program also impacts the creation of interaction and support from various parties. In the end, the community can carry out sustainable development without damaging the environment. However, the problem faced by the two countries in implementing the REDD+ program is the lack of information received by local governments regarding REDD+ so that there is a low level of commitment from the parties concerned. There are also inter-community conflicts and corruption that are still present in the Indonesian central government, making them become challenges for the implementation of the REDD+ program.

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