Indonesia-Australia Cooperation in Handling Environmental Issues through the IAFCP Program (Indonesia-Australia Forest Carbon Partnership)

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Abstract

Global environmental issue is a matter of concern and no longer underestimated, humans must strive to maintain environmental sustainability and safety, namely in regards to carbon emissions increase. REDD+ is a mechanism that offers reduced carbon emissions by focusing on reducing deforestation and forest degradation. Limited budget for the environment, pushes Indonesia forge partnerships with Australia in 2008 through Australia on Indonesia-Australia Forest Carbon Partnership (IAFCP). IAFCP is an example of a partnership that significantly supports the achievement of GHG emission reductions in Indonesia by reducing deforestation and improving sustainable forest management. This research focuses on Indonesia's national interest to maintain the sustainability in the environmental sector by reducing emissions through the IAFCP. The research method uses descriptive analysis, also Green Theory and bilateral cooperation concept. The purpose of this article is to find out the contribution of Indonesia-Australia collaboration through the IAFCP program in the success of overcoming environmental issues that occur in Indonesia.

Keywords: Australia; Carbon Emission, Environmental Issue; IAFCP; Indonesia

Isu lingkungan global adalah isu penting yang tidak dapat disepelekan, sehingga menjadi penting bagi manusia untuk menjaga kelestarian dan keamanan lingkungan, seperti dalam isu peningkatan emisi karbon. REDD+ adalah mekanisme upaya pengurangan emisi karbon yang berfokus kepada penanggulangan deforestasi dan degradasi hutan. Keterbatasan anggaran Indonesia di bidang lingkungan, mendorong Indonesia untuk membangun kemitraan dengan Australia pada 2008 melalui Indonesia-Australia Forest Carbon Partnership (IAFCP). IAFCP adalah contoh kemitraan yang secara signifikan mendukung pencapaian pengurangan emisi GRK Indonesia melalui pengurangan deforestasi dan peningkatan pengelolaan hutan. Penelitian ini berfokus kepada kepentingan nasional Indonesia untuk menjaga keberlanjutan di bidang lingkungan dengan menurunkan emisi melalui IAFCP. Metode penelitian yang digunakan adalah deskriptif analisis, serta menggunakan Green Theory *dan konsep kerjasama bilateral. Penelitian ini ditujukan untuk mengetahui upaya yang dihasilkan dari kerjasama Indonesia-Australia, melalui program IAFCP, dalam membawa keberhasilan penanggulangan isu di Indonesia.*

Kata Kunci: *Australia; Emisi Karbon; Indonesia; IAFCP; Isu Lingkungan*

Introduction

The environmental issue, namely climate change, has become an urgent issue and has become a global issue, because the impact of climate change itself will directly affect the quality of human life on earth as well as political issues and impacts as well as economic problems. This environmental problem is also a threat, not only threatening the country, but also threatening all of humanity, because these environmental problems contain issues related to the oceans, climate system, ozone and other systems that support humans and their survival. In addition, the emergence of environmental issues is considered a global and important issue due to several reasons: first, there is public and media awareness of global environmental changes, such as a long dry season or summer. Second, the large number of scientific communities that disseminate information about the presence of holes and ozone depletion, and other explanations for environmental damage that can threaten humans, besides that, greenhouse gas emissions are important because they can cause climate change or global warming. Greenhouse gases include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF6). In United States or U.S. Environmental Protection Agency records Environmental Protection Agency (EPA), the largest gas emission comes from industrial process CO2 and fossil fuels, which is 62 percent. CO2 from forests and other land uses contributed 11 percent. Other contributors to gas emissions are CH4 (16%), N2O (6%), and other gases (2%).

The United Nations, through the United Nations Environment Program and the World Meteorological Organization (WMO) formed The Intergovernmental Panel on Climate Change (IPCC) in 1988 to research and analyze emerging scientific issues. Since 1990 every five or six years the IPCC has issued reports relating to science through observations and predictions to determine future trends. Early 1990, the issue of global warming also echoed in various parts of the world. Amid public pressure in December 1990, the UN General Assembly agreed to form an agreement to tackle climate change. Then the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCC) was formed as a single forum for the intergovernmental negotiation process under the auspices of the UN General Assembly. This committee met four times from February 1991 to May 1992, drafting a climate change framework to be launched at the Earth Summit in Rio de Janeiro, Brazil, in 1992. May 1992, INC/FCC submitted a final draft for adoption in New York. A week later, the draft was released and opened for signatories

to the Earth Summit. During the summit, 154 countries signed a climate change framework called The United Nations Framework Convention on Climate Change (UNFCCC) in March 1994. The Climate Change Convention took effect. All parties that are signatories to the UNFCCC also hold an annual meeting to discuss strategies for dealing with climate change. This meeting is called the Conference of the Parties (COP) or the conference of the parties involved in the UNFCCC and the Kyoto Protocol which is also an amendment to this conference where an international agreement on global warming. Countries that ratify this protocol commit to reducing emissions/emissions of carbon dioxide and five other greenhouse gases, or to cooperate in emissions trading if they keep or increase emissions of these gases, which have been linked to global warming. Recognizing that developed countries are responsible for the level of greenhouse gas emissions in the atmosphere as a result of industrial activity for more than 150 years, this protocol places a heavier burden on developed countries under the principle of "common but differentiated responsibilities".

Indonesia and Australia are two countries that have significant gas emissions, Indonesia itself is the fourth largest emitter of greenhouse gases in the world in 2015. Indonesia's economy is the 16th largest in the world and the largest in Southeast Asia. The highest source of emissions comes from deforestation and peat forest fires, followed by emissions from burning fossil fuels for energy. And Australia was the country with the largest gas emissions in 2007. Australia has one of the highest per capita greenhouse gas emissions in the world, with 0.3% of the world's population releasing 1.07% of the world's greenhouse gases, which contribute to global climate change.

Australia primarily uses coal power (70%) for electricity but this is decreasing as more and more new sources of energy make up the energy supply mix. The extent and quality of Indonesia's forests have decreased and the pressure from the international community on the country that has the largest forest in the world to reduce carbon gas emissions, this is one of the things that urges Indonesia to announce a joint commitment with Australia. From an Australian perspective, this is even stronger because Australia can reduce carbon gas emissions without affecting the pace of the economy by providing compensation to Indonesia as a substitute. One of them is by establishing a collaborative partnership between Indonesia-Australia through the IAFCP (Indonesia-Australia Forest Carbon Partnership) which aims to support achievements in reducing carbon gas emissions in Indonesia significantly and effectively through reducing deforestation, encouraging reforestation and improving

sustainable forest management.

Literature Review

To support the data and information in the preparation of this research as well as to support the existing facts, the researchers reviewed several theses and related international journals. One of them is a journal entitled "Carbon Emission Disclosure and Firm Value: A Study of Manufacturing Firm in Indonesia and Australia" (Kurnia 2020). In this journal, he states that the arena of controlling carbon emissions can be a fundamental aspect to ensure business sustainability, companies are more likely to develop organizational structures that can control carbon emissions, evaluate carbon emission risks, and solve carbon emission problems. By conducting tests on the effect of disclosure of carbon emissions on company value in Indonesia and Australia using a sample of 39 companies owned by Indonesians and 25 companies managed by Australians. And the results of the analysis of this journal's research show that disclosure of carbon gas emissions can increase company value and bring a competitive advantage to Indonesian companies, while on the other hand, disclosure of carbon gas emissions does not affect Australian companies because the implementation costs higher capital and low cash flow.

The next literature is a journal entitled "Upaya Australia dalam Pengurangan Emisi Gas Karbon Melalui Kerjasam IAFCP di Kabupaten Kapuas Kalimantan Tengah" (Sari, Dewi & Prameswari 2015). This article discusses Australia's efforts to reduce carbon emissions through cooperation with the IAFCP located in the Kapuas Region, Central Kalimantan. As for the efforts that have been made by Australia in the context of reducing carbon gas emissions in Indonesia, especially in Kapuas District, namely seeking funds by Australia through IFCI, establishing an Indonesian carbon accounting system, establishing an information system on Indonesia's natural resources, developing a monitoring system and preventing forest fires Indonesia, as well as encouraging the participation of village institutions.

The third literature is also a research journal entitled "The Indonesia-Australia Forest Carbon partnership: A Murder Mystery" (Davies 2015). This journal contains a discussion of the time period of the IAFCP in a political context and also questions some of the reasons behind it. But not because of politics but because of the project failure of the developer and the Australian government itself to engage with REDD+ on the provision of proportional financial incentives that impact sustainable reduction of cost savings in land use carbon emissions.

Research Method

This type of research uses qualitative descriptive analysis based on the narratives in books, journals and related articles. Descriptive research is also called taxonomic research which aims to describe precisely the characteristics of an individual, condition, symptom, or a certain group, as well as the characteristics of a symptom or problem under study and also reveal how this happens. This study uses 2 conceptual approaches, namely Green Theory and also on Bilateral Cooperation.

Jackson & Sorensen (1999) in their book 'Introduction to international Relations' argues that Green Politics or green theory emerged and was also present to provide its views on International Relations since the 1960s or around the 20th century. This theory initially appeared to criticize the perspective of liberalism and see real issues when the Cold War had caused excessive environmental damage. Green theory holds that the state is not the only influential force, and the state in its role regarding environmental issues must work together because the impact of the damage that occurs certainly affects more than one country (Steans et al 2005). In International Relations, it means not only having to discuss Peace, Security, Culture and Economy. International Relations also discusses environmental issues, global warming, etc. Green Theory or Green Politics believes that if a country has many members of the population in it, to achieve a sustainable environment or environmental improvement will not be realized, smaller communities or decentralization are needed in realizing environmental improvements. As is the case with IAFCP cooperation which originated from environmental problems that will threaten the economy and the rate of international growth.

Bilateral cooperation as we understand it is a relationship between two countries that aims to meet the needs of each country and establish good relations between the two parties and is beneficial. According to Kusumohamidjoyo, bilateral relations are defined as a form of cooperation between the two countries, either geographically adjacent or far across the ocean, with the main objective of creating peace by taking into account the similarities in politics, culture and economic structure. This is of course done by Indonesia and Australia, which carry out bilateral cooperation through the IAFCP program to mutually fulfill their respective national interests by entering into agreements or collaborations related to certain fields in this case, namely the area of environmental issues of concern.

Results and Analysis

In accordance with the theoretical approach used in this research journal, namely the Green Theory approach in looking at problems in the international world, especially in the field of environmental issues and the like. Where this theory explains that the state must be ready and alert to protect and care for the state of its environment which is very influential in various aspects as well as the impact of environmental damage which will affect other countries, in this case it can be seen that Indonesia and Australia as countries neighbors also participate in programs and activities to reduce the impact of environmental damage as well as strengthen the country's economy, namely by entering into a cooperation agreement through the IAFCP (Indonesia-Australia Forest Carbon Partnership) program which focuses on reducing the occurrence of carbon gas emissions.

Surely this bilateral cooperation between Indonesia and Australia provides an opportunity for the two countries to increase their capacity in the carbon gas emission reduction program, which is quite a concern for the situation of their respective countries. There are three main areas in the scope of the formation of the IAFCP, namely Development in policy and capacity building carried out for the involvement of two countries in international negotiations and also the upcoming carbon market, Provision of technicalization for Indonesia in the development of a carbon accounting system and monitoring, and Development of activities regarding demonstrations and provisions. linked to support for piloting REDD+ approaches.

Development of REDD+ Trials Activities (KFCP)

The Kalimantan Forest and Climate Partnership is one of the activities of the REDD+ trial which has a large scale and is also the most advanced in Indonesia (Rosenberg & Wilkinson 2013). Activities are taking place by applying 120,000 forested and degraded tropical peatlands in Central Kalimantan province, while the second trial site will focus on mineral soil forest (non peat swamp) land. The partnership also aims to demonstrate that REDD+ can be put into practice in a fair and effective trial way to achieve demonstration of reductions and estimates of emissions from peat swamp forest. Also as the contribution of Indonesia-Australia in the post-2012 climate change global agreement and enabling Indonesia's real participation in the international carbon market in the future.

There are several main components in this initial stage, namely reducing emissions from deforestation and degradation of peat swamp forests, including: socialization of REDD, behavior change, peatland restoration, reforestation, monitoring of GHG (Green house Gas) and payment mechanisms. Monitoring, measurement and determination of GHG emission baseline which is integrated with FRIS/NCASI development. Development of a practical and effective REDD incentive payment mechanism. Enhancing the management and technical capacity of REDD and its readiness at the provincial, district, sub-district and village levels.

The location and area of KFCP are in a single peat dome covering an area of 120,000 Ha in the northern part of the ex-PPLG 1 million Ha. Most of the area has a peat depth of more than three meters which is very sensitive to disturbance. Part of the area in the northern part of Block A is in the form of a mixture of logged-over forest and damaged peat swamp forest and open areas. Some of the other areas in Block E are in a fairly intact peat swamp forest. The entire area is located in Kapuas District, Central Kalimantan Province, most of which are in Mentangai District and a small part in Tabah District.

The activity phases start from the determination of the baseline reference emission level (BAU and prediction) for the KFCP and Kapuas District areas and contribute to the provincial area and the implementation of emission reduction, namely fire control, wetting peat, revegetation, developing alternative livelihoods that are economical and low emissions. Measurement and verification testing and developing technologies for monitoring emissions, measuring reductions, monitoring annual success to evaluate credits generated. Distribution of performance-based incentive payments and services provided by stakeholders, namely local communities, local governments (provincial/district) and/or other private parties. Lastly is the development of institutional capacity in the regions to implement REDD.

Picture 1. Fires on Degraded Peatlands

Sumber: International Tropical Peatlands Center 2021

Fires on degraded peatlands are a cause of emissions and the calculation methodology is unclear. Peatland rehabilitation is a significant opportunity to achieve REDD targets.

Indonesia's National Carbon Accounting System Program (INCAS)

The INCAS program under the auspices of the IAFCP provides funding and technical support to be able to build Indonesia's capacity in developing and implementing a national carbon accounting system (Roswintiarti et al 2013). As part of the International Forest Carbon Initiative, the Australian Government is supporting Indonesia to develop and implement INCAS. Of course, this program will support Indonesia's ability to monitor and limit carbon gas emissions from deforestation and forest degradation. To achieve this, the INCAS Program developed a pilot forest carbon accounting system designed to support future Indonesian government MRV institutions and adhere to international good practice guidelines for forest carbon accounting. The system is also developed with sufficient flexibility to meet the requirements for future revised emissions measurement and reporting of Indonesia.

INCAS was developed by adopting the Australian INCAS components in the carbon gas accounting process by adjusting the conditions of Indonesia's forests (DCC 2010). These components are remote sensing data consisting of thousands of satellite images used to monitor land cover and its changes, maps containing monthly climate information such as rainfall, temperature and humidity, soil type maps, databases containing information on plant species, land management and changes over time, and ecosystem modeling (LAPAN 2010). One of the most important data to use for forest carbon calculation is remote sensing data, namely with thousands of satellite images throughout Indonesia. Imagery

is a very important satellite for measuring the extent of Indonesia's forests and supporting other INCAS activities in a sustainable manner (Atmadja et al 2014).

The possible requirements include; (1) Support participation in future carbon markets in things like REDD+; (2)Tracking progress towards emission reduction targets and possible international agreements; (3) Support informed decision-making and proper management of greenhouse gas emissions from Indonesia's forests; (4) Form the basis for international climate change negotiations and REDD+; (5) Reference Emission Level (REL) scenario creation; (6) Sustainable land use planning. Since the inception of INCAS in 2009, the Australian Government has provided intensive support to implement Australia's efforts through training and provision of information to complete a satellite image-based remote sensing operational system. In addition, the expertise of CSIRO has helped Indonesia to make INCAS an effective and accountable carbon measurement system.

Establishment of Support for Capacity Building and Information System for Indonesia' Natural Resources

With the REDD+ sector and the results of pilot activities available, policy makers are increasingly able to design the institutional and governance frameworks needed to support Indonesian policy development. The IAFCP supports the development of Indonesia's policies on forests and climate through technical assistance and knowledge gleaned from its pilot activities. Policy makers in Central Kalimantan province and Kapuas district are assisted in understanding and advancing REDD+ through training, data, research results, and other information source materials. Data and lessons learned from the KFCP and INCAS programs are shared through various local and national government forums and workshops, as well as in international forums.

Based on the commitment to reduce Indonesia's carbon gas emissions, Australia has carried out its efforts in building Indonesia's capacity system to support the reduction of carbon gas emissions in Indonesia. In this case, Australia has helped raise awareness of policy makers, namely the government, to pay more attention to forest conditions in Indonesia. This was done by Australia by encouraging the Indonesian government to developing a policy on forest resources information system or what is often called the Forest Resource Information System (FRIS). The support provided by Australia is also to support FRIS policies through the provision of workshops to review, complement and compile a major policy

framework together with other assisting parties. This activity is known as the FRIS grand design as a strategy in achieving sustainable forests.

With the transparency or openness of the provision of public information, it will optimize public supervision of the implementation of this policy. The government, in this case, must announce and convey information regularly, so of course the existence of FRIS is very strategic. FRIS is a necessity for Indonesia, especially to build good governance based on openness in the forestry sector. Through FRIS, Indonesia has the availability of comprehensive and integrated forest resource information to achieve sustainable forest management.

Community Participation in Consultations and Village Institutions

Assistance programs from outside the village must support village development. Therefore, KFCP started the preparation of the Village Agreement by integrating the program into the RPJM-Desa. After that, the activities listed in the Village Agreement are compiled into a village work plan. The Village Agreement was drawn up through a series of consultations and negotiations, which started on a pilot basis in two villages and continued in five other villages. This is the first step in introducing the Village Agreement to the village. To conduct consultations, KFCP has developed, procured and tested various strategies, approaches, and village agreement consultation instruments. These include various studies and workshops to map the initial conditions of the village, mapping the village area, mapping interest groups and community gathering groups, coordination with local governments, involving women and vulnerable groups, and the use of various communication products such as booklets and videos to make it easier. delivery of information to residents. KFCP and the village agreed to apply various management standards, such as standards for procurement of goods and services, financial reporting, and preparation of budgets and work plans. This is done to ensure that the management of activities is in accordance with the standard principles stated in the Village Agreement. In addition, KFCP also encourages villages to try to implement and verify safeguards independently. TPK/TP are teams that work hard on behalf of the village to manage and monitor the course of activities so that they are in accordance with the intended principles and standards, as well as safeguards.

Of course, it is very important and necessary for the local community to greatly assist the success of the program, especially in recognizing the needs of indigenous people in implementing the REDD+ program. In this case, the KFCP team placed local people including village communities as stakeholders (KFCP 2014). In addition, part of the KFCP pilot program was managed by the village with the KFCP core team acting as a companion to provide technical assistance and capacity building and could not be separated from collaboration with related parties such as Indonesia, NGOs, Universities, and related organizations (IAFCP 2012). Of course this is done with the aim of the village community being more familiar with environmental conditions and being able to manage village forests in the future. In carrying out its efforts as an initial phase, KFCP through CARE under Australian management assisted by ICRAF and GRM (World Forestry Center) conducted visits to villages to conduct studies and initial discussions with various village parties (CARE 2009). During the discussion, CARE together with the village community exchanged ideas regarding the condition of their village. After the data was obtained, KFCP arranged a meeting with village officials and experts from the local area.

The main challenges that arise during the drafting process include the issue of land ownership and function transfer, as a result of village experiences with pre-KFCP programs that impact the area (for example, PLG which causes forest degradation) or conservation programs that limit access to forest areas. In addition, the village political situation in which several parties disagree over obtaining certain positions in the village, often using the program as a tool to strengthen their influence in the village. Initially, these issues raised reluctance and concern from citizen groups, so that the consultation process was slow. Increasing the participation and activeness of vulnerable groups and women in the public sphere also remains a challenge that must be continuously sought for creative ways to solve it.

Conclusion

REDD+ is a mechanism that offers reduced carbon emissions by focusing on reducing deforestation and forest degradation. Bilateral cooperation in the environmental sector is one of the efforts that countries can undertake in dealing with the problem of climate change due to increased carbon gas emissions that are scattered in the air. In 2008 there was a partnership between Indonesia and Australia called the Indonesia-Australia Carbon Partnership (IAFCP). IAFCP is an example of a partnership in global environmental policy that also supports the achievement of significant and effective GHG emission reductions in Indonesia through reducing deforestation, and improving sustainable forest management.

The results of this collaboration include the Development of REDD+ Pilot Activities (KFCP) Kalimantan Forest and Climate Partnership, which is one of the activities of the REDD+ trial which has a large scale and is also the most advanced in Indonesia. Activities take place by applying 120,000 forested and degraded tropical peatlands in the province of Central Kalimantan. Furthermore, Indonesia's National Carbon Accounting System (INCAS) program, which provides funding and technical support to be able to build Indonesia's capacity in developing and running a national carbon accounting system. Forming support for capacity building and information systems for Indonesia's natural resources as well as community participation in village consultations and institutionalization.

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