

# **Renewable Energy Directive II Impact on Combating Deforestation in Indonesia**

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## **Abstract**

EU's Renewable Energy Directive II or RED II was aimed to achieve the renewable energy use target in EU and reduce the environmental issues especially greenhouse gas emissions from every industry within the EU's member states. However, the impact of this EU's environmental policy has grown outside the region, including to Indonesia. This article is intended to discuss the growing impact of RED II to Indonesia, especially deforestation as one of the EU's concerns in RED II, and at the same time it also shows how the EU exerts influence and brings changes to other states. With Creswell's (2019) qualitative research methods, we find that since its enactment, EU's RED II in 2018 had a growing impact to Indonesia including raising awareness regarding environmental issues, leading to changes in the environmental policies related to palm oil industry, as to cope with EU's RED II policies and the previous directive's impact, and indirectly combat and pushing down the deforestation cases in palm oil concession to the lowest rate. The result of this study preserving that the collaboration between Indonesia and EU achieving a beneficial relation.

## **Keywords**

European Union, RED II, Indonesia, Palm oil, Deforestation and International Organization.

## **1. Introduction**

Oil palm is one of Indonesia's most important plantation crops, producing both palm oil and palm kernel. This plant is Indonesia's greatest non-oil and gas foreign exchange earner, as well as its second-largest agricultural product. Indonesia has held a significant place in the global economy since 2006, when it became the largest country to produce palm oil and vegetable oil in the world (GAPKI 2021). In 2018, Indonesia supplied an output of around 40.6 million tons, and export volume of 29.3 million tons of palm oil. And ever since, Indonesia has been considered as the world's largest producer of palm oil. Malaysia, Thailand, and Colombia came in second, third, and fourth, respectively (Wicaksono 2021). Palm oil's composition is needed for various purposes, including fuel, household necessities in many states. India, Pakistan, China, America, and the European Union are the largest states of Indonesian palm oil markets which use palm oil for the biofuel's material as a renewable energy. In 2008, the total of Indonesia's CPO exports to the European Union alone were 2.8 million tons and in 2016, Indonesia's total CPO exports to the European Union had reached 4.3 million tons (GAPKI 2022), proving that the European Union recognizes the significance of palm oil as a major trading commodity as it stated on Amsterdam Declaration 2015. Furthermore, European Union establish cooperation based on free trade agreement with Indonesia.

Due to its ability to produce vegetable oil, which is needed in many industrial sectors, palm oil plays a significant role in the Indonesian social welfare and economy. It supports Indonesia in creating jobs and increasing farmers' incomes as the production is divided into three belongings: the people, private parties, and states. In 2018, the industry is able to employ up to 4.2 million direct workers and 14.3 million indirect workers, with 4.6 million people working on independent smallholder oil palm plantations (Office of Assistant to Deputy Cabinet Secretary for State Documents & Translation 2022). In 2020, palm oil industry contributed 3.5 percent to Indonesia's gross domestic products. In the same year, the export volume reaches 27.63 million tons, with export value reaching US\$ 18,69 million, which is directly proportional with the area expansion up to 14,586,597 Ha (Badan Pusat Statistik 2022).

Indonesia's significant palm oil production has impacted the national palm plantation and land expansion policies. Which then the Indonesian palm oil industry causing several problems in the business practice, which an enormous

deforestation is one of them. From 2013 to 2017, the palm oil industry alone was responsible for 586.531 Ha of overall deforestation in Indonesia to increase the palm plantation area (Forest Watch Indonesia 2022). The deforestation of plantations for oil palm in 2017 places Indonesia as the country with the third-largest level of forest loss after Brazil and the Democratic Republic of Congo (Weisse and Goldman 2012). Whereas the amount of forest in Indonesia is particularly important as Indonesia play a role as the second country with largest forest area and the world's second largest producer of oxygen (PPID 2022).

Regarding the deforestation case, various responses from other countries emerged. European Union as a global green leader and a region where carbon dioxide emissions are at the lowest, carried out a response which is known as Renewable Energy Directive in 2009. The response attempted to reduce the impact of non-renewable energy usage on global warming or greenhouse gas emissions and was also part of the European Union's commitment to the Kyoto Protocol (Dewi 2013). As a directive, this policy obliges the European Union to implement renewable energy values to their programs and urges the member states to incorporate renewable energy projects, including biofuels, in their national action plans. Until 2018, it has been upgraded to Renewable Energy Directive II, or known as RED II, as a perfection and revision of the previous directives, which aim to achieve the renewable energy use for the European Union in 2030 of at least 32 percent of energy needs (Ciucci 2022). The RED II, not only impact the member states, but it also has impact to Indonesia, it indirectly prohibits palm oil-based fuels usage in the European region as an effort to reduce greenhouse gas emissions, by categorizing palm oil as a High Indirect Land Use Change Risk (ILUC) product as the palm oil production from Indonesia is considered environmentally unfriendly.

According to Adelle et al. (2018) as European Union environmental policy progressed from "incidental" to a "system of environmental governance", the environmental policies, regulations, and objectives imposed by the European Union have a growing impact, not just on its own member states but also on the rest of world (Adelle et al. 2018). Several studies have been done to discuss the RED II impact on Indonesia in terms of economic performance (Khairunisa and Novianti 2017; Rifin et al. 2020). However, the significant impact of this EU's environmental based policy on Indonesia's deforestation, has never been discussed as the growing impact of EU's policy on Indonesia, and to demonstrate the EU's influences over other states and maintain their position as the global green leader. Therefore, with this background, to complete the perspective regarding the issue, this research attempt to analyze the impact of Renewable Energy Directive II on deforestation in Indonesia. In particular, we are interested in asking what is the

## **1.1 Objectives**

This research aims to complete and add a new point of view regarding the impact of RED II to Indonesia, provide an example about the way that European Union choose, as global green leader, to influence other countries, using environmental issues. We attempt to explain what the impact of EU's are RED II on environmental issues especially deforestation in Indonesia, including the changes in Indonesia's palm oil policy as a result of the directive enactment.

## **2. Literature Review**

In doing this research, the author uses studies from previous research which are used as references and benchmarks in writing references, avoiding duplication and repetition of research reviewed by previous researchers, this research is related to how the impact of the EU's RED II on Indonesia has been carried out by several previous researchers, so that some similar things can be used as the basis of this research.

Ever since the European Union committed to Kyoto Protocol, the European Commission adopted several policies to implement the European Council commitments to combat climate change and promote renewable energy, and one of them is Renewable Energy Directive or RED, a set from the background of the European Union's dependence on fossil fuel energy sources, which aims to increase energy security, reduce gas emission levels, and make changes related to the use of fossil fuels into renewable energy (Chairunisa and Haryanto 2020; Dewi 2013; Winanda et al. 2021). The RED has set numerous goals for the use of renewable energy in the context of lowering global gas emissions, including a 20 percent decrease in energy consumption via efficiency by 2020; and by that year, renewable energy will account for 20 percent of overall consumption, while biofuels will account for 10 percent of transportation fuels (Dewi, 2013).

By 2018, the RED has been revised to Renewable Energy Directive II or RED II, it establishes a new binding renewable energy goal for the European Union is committed to ensuring energy sustainability in the amount of 32 percent of the target of using renewable energy (Arief et al. 2020). According to Winanda et al. (2021) the RED II was created to reduce dependence on imports of biofuel raw materials and secure the domestic energy supply of

European Union member countries. In addition, Robertua (2019) sees that the EU's Renewable Energy Directive II is a manifestation of the ambitious environmental diplomacy that focused on reversing economic globalization and limiting economic growth.

As it was established to reduce dependence of biofuel raw materials and secure domestic energy supply (Winanda et al. 2021; Pradhana 2020), the establishment of RED and the revised version, RED II, has pull out some controversy, as it assessed as an act that discriminates against palm oil products (Sinaga and Foekh 2021), and attempt to phase out the use of crude palm oil based biofuel to 0 percent by 2030 (Arief et al. 2020). After considering the Report on Palm Oil and Deforestation on Rainforests, which stated that palm oil is also a major contributor to corruption, child labor, human rights violations, omission of Indigenous people's rights, and deforestation and habitat destruction, the RED II has classified palm oil as a high ILUC product, which means that as a raw material for biofuels, palm oil has a high risk of greenhouse gas emissions (Robertua 2019; Sinaga and Foekh 2021; Winanda et al. 2021; Rifin et al. 2020). However, it does not question deforestation from vegetable oil production produced in European countries themselves (Suwarno, 2019), therefore RED II is seen as a form of discrimination against palm oil which create a new sort of barrier built by the European Union. Yet the RED II is thought to have breached the WTO's most fundamental principle, the Most Favored Nation principle (Sinaga and Foekh 2021).

To cope with EU's RED II policies and the previous directive's impact, Indonesia have done several efforts including file a lawsuit to the WTO regarding the EU's discrimination in RED II, a bilateral approach, developing research and human resources related to palm oil both in terms of governance and institutional improvement in the oil palm sector, and triggered changes in the palm oil industry management policy (Abdi et al. 2021; Arief et al. 2020). Other than that, the RED II and the previous directive which has ban on palm oil products in European Union member states apparently had an impact to Indonesia as the largest palm oil distributor in the world. Khairunisa and Novianti (2017) argue as they analyze the competitive position of Indonesian palm oil, Indonesia still has superior competitiveness in the European Union market compared to its competitors, namely Malaysia, Colombia, Ecuador, and Thailand, even. However, Indonesian palm oil has experienced a decline in export performance to seven member countries of the European Union. Indonesia is in a retreat position which indicates a decline in demand for Indonesian palm oil in the European Union. The EU ban on Indonesia palm oil affect the palm oil prices and the palm oil production (Arief et al. 2020). In addition, Rifin et al. (2020) also argue, there is an impact on real GDP, welfare level, exports and import value, trade balance and terms of trade from the ban of palm oil products to the European Union compared to other main palm oil producer countries, yet Rifin et al. (2020) considered the impact are still manageable.

From here authors can conclude that the dispute about RED II and previous directive is not only in concern of environmental issues but also business concern as to protect the domestic vegetable oils existence as the biofuel's material. The EU's RED II does have an impact to Indonesia as the largest palm oil producer, including but not limited to states palm oil export performance, and states economic situation. However, the environmental impact, notably deforestation, must be considered in order to complete the picture of the RED II impact and to learn more about how the European Union uses environmental issues to influence other countries.

### **3. Methods**

As this research aim to understand how the EU's RED II give an impact on deforestation in Indonesia, as well as changes in Indonesia's palm oil policy as a result of the directive, this study employs a qualitative research design, which, according to Cresswell (2009), aims to explore and understand the meaning of a social or human situation. It is primarily an investigative process in which the researchers attempt to make sense of a social phenomenon by contrasting, comparing, duplicating, categorizing, and classifying the object of study (Miles and Huberman 1994). The qualitative data collection in this research involves the process of gathering and examining multiple types of data which related to the topic, such as literature reviews from previous related studies. Books, journals, state documents regarding trade agreements, written reports, articles, and a compilation of news on the internet from relevant sources such as from both Indonesia government and European Union, and any other parties associated with this research are among the resources available.

As Cresswell (2009) add-up, the collected data then gone through a process of qualitative data analysis involves using inductive analysis to grasp the larger meaning of the arranged data and concluding the narrative that emerges the data analysis. Which to analyze and validate authors argument, Adelle et al. (2018) study about the European Union external environmental policy is used to understand how the RED II give impact to Indonesia in this research. Adele et al. (2018) argue EU environmental policy have an intend to widen its impact to other parties with non-environment

instruments, such as multilateral environmental agreement, preferential trade agreement, and environmental issues movement. At the end, after analyzing the collected data, the authors arrange to describe the validation in words, as according to Merriam (1988) and Miles and Huberman (1994) the results of a qualitative research are a descriptive data, which means that the product is a rich description in the form of words of the phenomenon under study rather than in numerical. Regarding the research's scope, the author focuses on Indonesia, not only realizing the important of forest area in Indonesia as the world's lungs but also to minimize the research budget, nevertheless the author still attempts to present a comprehensive and a factual analysis.

#### **4. Data Collection**

Regarding the EU's RED II and its impact on deforestation in palm oil concessions in Indonesia, the authors sought and discovered that changes occurred in Indonesia before and after the RED II was enacted, changes in policies related to palm oil production and changes in deforestation rate, which appears to be decreasing to the lowest rate by 2020 based on Chain Reaction Research (2022) data.

At first Indonesia had various regulations in place to address environmental concerns with sustainable solutions even before the EU's RED II was adopted in 2018 or the previous directive in 2008. Prior to the implementation of sustainable plans in oil palm farms, all Indonesian plantations overlooked the social and environmental issues, resulting in 586.531 hectares of deforestation between 2013 and 2017 (Forest Watch Indonesia 2022). The enacted policies regarding the palm oil before the Renewable Energy Directive II includes the Roundtable on Sustainable Palm Oil, or RSPO, which is a multi-stakeholder worldwide organization founded in 2004 that uses the MDGs in the Principles and Criteria as a foundation for its members' business practices. It is a voluntary business initiative in which members join the RSPO system in order to produce and consume sustainable palm oil using plantation practices that prioritize legality, the environment, and long-term socio-economic feasibility. From Working Group Indonesia National Interpretation (2022) the authors found, since November 2007, the initial set of RSPO Principles and Criteria, Indicators, and Guidance, which well known as RSPO Principles and Criteria 2007, has been in effect, with a National Interpretation process following. The Principles and Criteria of RSPO itself are also always reviewed every five years. Next, the authors found in 2011, Indonesia president has issued Presidential Instruction No. 10 of 2011 about the postponement of new permits for clearing primary forests and peatlands is respond from the government as the conversion of primary forest and peatland causes environmental degradation which continue to eat Indonesian forest. This presidential instruction gives a temporary time for the government around 2 years to improve forest governance; both in terms of permits, standards, and other matters in the context of reducing emissions due to deforestation and peatland use (Sherlita 2022). Authors also found in the same year, ISPO which stands for Indonesia Sustainable Palm Oil, was established by the Indonesian Ministry of Agriculture as a counter-initiative to the RSPO (Wijaya and Glasbergen 2016). It was established with the purpose of improving Indonesian palm oil's competitiveness while also maintaining its long-term viability, particularly in terms of avoiding palm oil-related issues. Because it is based on laws, regulations, and government provisions (Directorate General of Plantations 2014), ISPO is a mandatory for all palm oil companies in Indonesia. It ensures that oil palm plantation companies and oil palm plantation companies have correctly and consistently applied ISPO principles and criteria in producing sustainable palm oil.

After the European Union Renewable Energy Directive II enacted in 2018, authors found that the Indonesia government had implemented several changes to the policies on environmental issues, includes related to palm oil industry. Since 2018, new conditions were added to the RSPO Principles and Criteria to ensure the RSPO's effective contribution to reducing deforestation. The High Carbon Stock Approach (HCSA) Guidelines incorporated into the updated standard to accomplish this. Following GA15's acceptance of the 2018 RSPO Principles and Criteria, criterion 7.12 states that any new land clearing must be preceded by a High Conservation Value (HCV) and High Carbon Stock (HCS) Forest assessment (Working Group Indonesia National Interpretation 2022). Next, authors found after multiple changes, Indonesia's president released Presidential Instruction No. 5 in 2019 as the most recent update from the prior temporary Presidential Instruction No. 10 published in 2011. It was issued in relation to the termination of land clearing licenses, rather than just postponing them, and the improvement of primary natural forests and peatlands governance (Nugraha and Saturi 2022). The current Presidential Instruction intends to achieve a balance and harmony in economic, social, cultural, and environmental development, as well as to put in place steps to lessen greenhouse gas emissions by lowering deforestation and forest degradation emissions. Then, the Indonesian government also updated the Sustainable Oil Palm Plantation Certification System in Indonesia, known as Perpres ISPO, in 2020 under Presidential Regulation Number 44. This renewal is said to be aimed at guaranteeing and improving oil palm management and development in compliance with ISPO principles and criteria, in order for Indonesian oil palm plantation products to be accepted and competitive in national and international markets, as well as accelerating efforts

to reduce greenhouse gas emissions. The adoption of a new principle of transparency, as well as the removal of the concept of primary forest and peatland conservation, are the two most significant modifications in this Perpres ISPO (EIA 2022). Not yet done, authors also found there were new policy also emerges on the same year when the RED II enacted in 2018, a Presidential Instruction No. 8 on palm oil moratorium was announced. The issuance of this Presidential Instruction was motivated by several basic problems in oil palm plantations, including the weak management of sustainable oil palm plantations, legal certainty, environmental sustainability including reducing greenhouse gas emissions, the need to develop oil palm farmers, and increasing oil palm productivity. This Presidential Instruction included the suspension and examination of oil palm plantation licenses, as well as enhancing oil palm plantation productivity. This Instruction directs national and regional government entities to reconsider the release of forest lands and to postpone the start of oil palm plantations for three years (BPDPKS 2022). Ever since Indonesia's policies were reviewed and revised in 2018 and on, following the enactment of the EU's RED II, Indonesia had the lowest deforestation rate in palm oil concessions which is 22.040 hectares or 58 percent from 38.000 hectares Southeast Asia palm oil deforestation in 2020 (Chain Reaction Research 2022).

## **5. Results and Discussion**

### **5.1 Proposed Improvements**

To support this article and gain a better understanding of RED II, more research and study of the impact of RED II on Indonesia, or in general, on other countries than its members, is required. Primary data, such as interviews with relevant parties, is required for research in order to support, validate, and complete the secondary data based on this study. Other factors and supports that may have an impact on Indonesia's decreasing deforestation rate, other than the EU's RED II, as well as the effectiveness of RED II as a European Union environmental policy to influence over Indonesia using instruments other than preferential trade agreements as Adelle et al. (2018) study, must be analyzed to sharpen the analysis in this research.

### **5.2 Validation**

From the previous literature review and data collection, the authors argue that the European Union's RED II and even the prior regulation had a significant additional or growing impact in raising environmental awareness among Indonesia government, leading to changes in palm oil sector policy and finally indirectly has reduced deforestation in palm oil concessions to the lowest rate in 2020. Despite the fact that the RED II and prior directives were designed to strengthen the EU's position and authority as the global green leader.

By 2018, the Renewable Energy Directive, has been changed to Renewable Energy Directive II to maintain the European Union position as a global green leader, a leading nation in renewable energy, and, more broadly, to enable the European Union in completing its Kyoto Protocol emission reduction targets. The Directive establishes a new binding renewable energy goal for the European Union of at least 32 percent of energy demands by 2030, with a clause allowing for a possible higher adjustment by 2023, as well as a new 14 percent goal for renewable fuels in transportation by 2030 (Ciucci 2022).

For the same reason, the EU's environmental policy includes efforts to transfer the EU's environmental rules, regulations, and aims to third countries and international organizations (Adelle et al. 2018). The efforts require the deployment of a variety of non-environmental instruments, namely multilateral environmental agreement, preferential trade agreement, and environmental issues movement. In line with Adelle et al. (2018), in this research the RED II as an EU environmental policy used preferential trade agreement to change Indonesian behavior on environmental issues. The RED II has ridden the Sustainability Impact Assessment (SIA) in support of EU-Indonesia FTAs as a strategy to broaden the EU's impact in Indonesia and influence governmental institutions before finally having an impact on deforestation in Indonesia. The RED II has been imposed on the SIA as a form of continuation of the earlier dialogue between the two parties which specified that the EU RED should be pursued constructively (Vision Group 2022). Therefore, with RED II as an environmental standard, the SIA's detailed sector chapter 8.1 on vegetable oil and oilseeds suggests that, in addition to FTAs, both parties work together to strengthen the use of certification schemes in the palm oil sector, with regard to working conditions and environmental issues such as deforestation. In terms of working conditions, the section recommends that FTAs might strengthen labor rights by include clauses that require the ratification and implementation of ILO Conventions that guarantee workers' fundamental labor rights and decent working conditions. In terms of the environment, the chapter recommends inserting a commitment to continue

cooperation on land-use change practices, such as deforestation, in earlier FTA sections that address environmental issues related to trade.

The adjustments in Indonesia palm oil management policy are being tracked once the EU has succeeded in bringing RED II to be counted in SIA and making it more legally binding on an FTA between the EU and Indonesia. The policy changes are viewed as a kind of ratification of the EU-Indonesia FTAs, which include RED II. The policies that had previously suspended permits were promptly altered to cancel all new land clearing permits. In order to comply with RED II as an environmental standard, palm oil management standards have also become binding and mandatory for palm oil sector players in Indonesia. Even new guidelines are being developed to improve the domestic palm oil industry. As a continuation after the changes, the authors found a decrease on deforestation rate in Indonesia, including in palm oil concession.

From here, it can be seen that as the EU's RED II had a growing impact beyond its borders to Indonesia, it indirectly helped to combat the deforestation in palm oil concession to the lowest rates, despite the fact that it only employs one of the three tools identified by Adelle et al (2018). Step by step, start from raising environmental awareness since the enactment, then become a concern for Indonesia's government to revise the policies, until the deforestation in palm oil concession in Indonesia pushed down to the lowest rates. However, the author recognizes that RED II is not the only factor contributing to lower deforestation rates in palm oil concessions, and that more research is needed.

## **6. Conclusion**

Appreciation for the two actors, the European Union and Indonesia, for their commitment to maintaining cooperation and addressing existing environmental challenges. We can see how RED II is having a growing impact not only on the internal conditions of EU societies, particularly the domestic biofuels industry, but also in Indonesia, where it is raising environmental awareness among Indonesian government, leading to changes in palm oil sector policy and reducing deforestation in palm oil concessions. The authors recommend that, in the future, the governments of all developing countries should be more aware of the standards enacted by prospect markets, particularly if they are developed countries. Vice versa, developed countries that have partnerships with developing countries, particularly in terms of resources, must be aware of and adapt their policies to their partner countries' capabilities. Other than that, both developed and developing countries must be more conscious and adapt their policies quickly to the dynamic environmental issues.

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