

Carbon Tax As An Implementation Of The Polluter Pays Principle In Indonesia

Stefany Febiola¹, Felicia Edbert², Melissa Ariffin³, Ronaldo Sanjaya⁴

¹Tarumanagara University, DKI Jakarta, Indonesia, stefany.205200248@stu.untar.ac.id

²Tarumanagara University, DKI Jakarta, Indonesia felicia.205200065@stu.untar.ac.id

³Tarumanagara University, DKI Jakarta, Indonesia melissa.205200056@stu.untar.ac.id

⁴Tarumanagara University, DKI Jakarta, Indonesia ronaldo.205200137@stu.untar.ac.id

Abstract

Climate issues are a growing concern that governments around the world are realizing needs to be addressed. Climate change and its damages have been felt all over the world. Particularly the issue of greenhouse gas emissions in 2015. This research aims to analyze the comparison of the application of Polluter Pays Principle as an effort to implement carbon tax in Indonesia. Through the normative legal research method, the research found that the carbon tax policy in Indonesia is contained in Article 13 of Law of the Republic of Indonesia Number 7 of 2021 concerning Harmonization of Tax Regulations and Article 58 of Presidential Regulation Number 98 of 2021 concerning the Implementation of Carbon Economic Value for Achieving Nationally Determined Contribution Targets and Controlling Greenhouse Gas Emissions in National Development. The implementation of a carbon tax in Indonesia provides many benefits, including reduced emissions, varied energy sources, jobs in renewable energy, cleaner air, and preservation of important ecosystems. A carbon tax in Indonesia is part of a climate change mitigation strategy to protect the environment and realize a green future.

Keywords: Carbon Tax, Polluter Pays Principle, Greenhouse Gas Emissions

Abstrak

Isu iklim adalah keprihatinan yang berkembang yang disadari oleh pemerintah di seluruh dunia yang perlu ditangani. Perubahan iklim dan kerusakannya telah dirasakan di seluruh dunia. Khususnya isu emisi gas rumah kaca tahun 2015. Penelitian ini bertujuan untuk menganalisa perbandingan tentang penerapan *Polluter Pays Principle* sebagai upaya pengimplementasian atas pajak karbon di Indonesia. Melalui metode penelitian hukum normatif, dihasilkan penelitian bahwa kebijakan pajak karbon di Indonesia, tertuang dalam dalam Pasal 13 Undang-Undang Republik Indonesia Nomor 7 Tahun 2021 tentang Harmonisasi Peraturan Perpajakan dan Pasal 58 Peraturan Presiden Nomor 98 Tahun 2021 tentang Penyelenggaraan Nilai Ekonomi Karbon untuk Pencapaian Target Kontribusi yang Ditetapkan Secara Nasional dan Pengendalian Emisi Gas Rumah Kaca dalam Pembangunan Nasional. Penerapan pajak karbon di Indonesia, memberi banyak manfaat, termasuk pengurangan emisi, sumber energi bervariasi, pekerjaan di energi terbarukan, udara lebih bersih, dan pelestarian ekosistem penting. Pajak karbon di Indonesia merupakan bagian strategi mitigasi perubahan iklim untuk menjaga lingkungan dan mewujudkan masa depan hijau.

Keywords: Pajak Karbon, *Polluter Pays Principle*, Emisi Gas Rumah Kaca

A. INTRODUCTION

Climate change has become a serious challenge faced by Indonesia and the world as a whole. Indonesia as a country located in a tropical area with a rich diversity of ecosystems, is experiencing a significant impact due to climate change. In recent decades, the country has experienced extreme temperature spikes, increased occurrences of floods and landslides, and decreased air quality, among other environmental problems. The impacts of climate change in Indonesia vary widely, including threats to natural resources, agriculture, marine affairs, public health, and the economy as a whole. Rising sea levels are also a serious threat to the islands of Indonesia, such as damage to coastal ecosystems, seawater intrusion into coastal areas, and loss of wildlife habitat. In addition, climate change also has an impact on food security and food security in Indonesia. Climate variability, changes in rainfall patterns, and increasing temperatures can affect agricultural and fisheries productivity, which has the potential to disrupt the country's food security and farmers' welfare.

The Indonesian government has realized the serious impact of climate change and is taking steps to reduce environmental damage and address this challenge. Indonesia is committed to reducing greenhouse gas emissions and protecting and managing ecosystems that are vulnerable to climate change. Without major and urgent efforts to slow the accumulation of carbon dioxide (CO²) and other greenhouse gases in the atmosphere, future generations will inherit a much warmer planet at the risk of dangerous climate events, higher sea levels and the destruction of nature. The international community's response was based on the 2015 Paris Agreement, which had the main goal of limiting future global warming to between 1.5 and 2°C above pre-industrial levels. One hundred and ninety parties submitted climate strategies for this agreement, nearly all of which included mitigation commitments. A typical promise among developed countries is to reduce emissions by 20–40 percent by 2030 relative to those in the base year. This promise is voluntary, for this international response to

be successful, policymakers need carefully crafted measures that effectively meet their mitigation commitments while at the same time limiting their country's economic burden and overcoming political barriers to implementation. If successfully implemented, the country's current pledge will reduce global emissions by only about a third of the amount needed to meet climate stabilization goals. Therefore, an innovative mechanism is needed to increase mitigation efforts at the international level.

Climate issues are a growing concern that governments around the world recognize need to be addressed. Climate change and its devastation are being felt around the world. Specifically, the issue of greenhouse gas emissions in 2015. The Paris Climate Convention was held to discuss how the world will strive to achieve net zero carbon emissions. Unlike the previous convention (Tokyo Protocol) which applies only to developed countries, the Paris Agreement tries to invite all levels of countries to participate in this international issue. Since Southeast Asian countries are important because they are mostly made up of developing countries, learning how they can adopt carbon pricing is helpful.

At present, the issue of climate change has become a growing concern and is recognized by governments around the world. The phenomenon of climate change and its damage has been felt globally. One issue that has received special attention is greenhouse gas emissions since 2015. This study aims to analyze a comparison regarding the application of the Polluter Pays Principle as an effort to implement carbon taxes in Indonesia. To achieve this goal, the type of research used in this study is descriptive qualitative normative. This study has an analytical descriptive specification. Given the impact of climate change that has occurred, global challenges that need to be addressed together, the government has attempted to use various methods and systems to achieve the target of reducing greenhouse gas emissions in the medium to long term. In carrying out these efforts, the government must be careful in preparing the appropriate collection system, tax basis and tariffs for the correct use

of revenues. Carbon tax implementation must also be supported by simple administration, clear rules, and effective outreach.

Based on existing research, there is a hypothesis as follows:

1. Application of the Polluter Pays Principle in carbon taxes in Indonesia can provide incentives for business actors to reduce greenhouse gas emissions.
2. Appropriate carbon tax collection systems can increase government revenues and be used to support climate change mitigation efforts.
3. Implementation of a carbon tax supported by simple administration, clear rules, and effective outreach will be more successful in reducing greenhouse gas emissions.

However, further research is needed to test these hypotheses and evaluate the effectiveness of implementing the Polluter Pays Principle in the context of a carbon tax in Indonesia.

B. METHODOLOGY

This research was conducted using normative legal research methods. This research uses normative legal methods because the issues discussed in this proposal contain principles, norms, rules of law (Susetiyono, W., Perdana, M. T., & Iftitah, 2020). This research uses the nature of descriptive research, in the form of research that describes the problems or events in this research and basically to provide the data studied about humans, conditions, and their symptoms. The type of data used in this research is the type of secondary data, the type of secondary data is the type of data that is not obtained from the main source, but has gone through the umpteenth source, this secondary data can be found in various sources such as books, journals, dictionaries, the internet and previous research (Ibrahim, 2011).

D. RESULTS AND DISCUSSION

1. Carbon Tax in Indonesia

Taxes or Carbon Pricing are regulations that impose a fee on emissions. The goal of a carbon tax is to reduce climate change and greenhouse gas emissions by providing economic incentives to individuals and companies to adopt cleaner and more sustainable practices. Carbon taxes internalize the cost of emissions into the prices of products and services, influencing consumer and producer decisions about environmental impacts. Revenue from carbon taxes can be used to support investments in renewable energy and other mitigation efforts. Carbon Pricing aims to quantify and bear the hidden costs of carbon emissions, with polluters paying compensation to society. Carbon tax is a form of compensation that encourages reduction of carbon emissions (Saputra, 2021).

Fossil fuels such as oil, coal and natural gas are the main sources of carbon emissions. Carbon taxes are implemented to increase the price of fossil fuels and reduce carbon emissions. Global carbon emissions continue to increase and need government intervention. In Indonesia, the energy sector (power generation and transportation) as well as deforestation, land use change, agriculture, industry and waste are the main contributors to carbon emissions. For example, oil palm plantations, paddy rice farming, the cement industry, and organic waste decomposition. Carbon taxes aim to reduce emissions and encourage behavior change in these sectors (Bappenas, n.d.).

From an environmental perspective, the application of a carbon tax can be used as a levy on GHG emissions from hydrocarbon fuels which cause global warming. From an economic perspective, implementing a carbon tax can increase state revenues, especially in the emission-producing sector, which has not yet entered the potential tax revenue radar. Meanwhile, from the aspect of business behavior, carbon taxes can be used as an instrument to influence economic patterns and business behavior so that they are environmentally

friendly and sustainable (Madalina, 2022). The objectives of imposing a carbon tax include changing the behavior of economic actors to switch to green, low-carbon economic activities; support GHG emission reduction targets in the medium and long term; encourage the development of carbon markets, technological innovation, and investments that are more efficient, low carbon and environmentally friendly. The main objective of imposing a carbon tax is not only to increase APBN revenues alone, but as an instrument for climate control in achieving sustainable economic growth according to the polluter pays principle (Margono, 2022).

Carbon pricing works by capturing the external costs of carbon emissions i.e. costs that society has to pay, such as loss of property due to rising sea levels, damage to crops caused by changes in rainfall patterns, or health care costs associated with heat waves. and drought and returning those costs to the source. Carbon Pricing effectively shifts the responsibility for paying for the damages caused by climate change from society to the producers of GHG emissions. This gives producers the option of reducing their emissions to avoid paying high prices or continuing to emit but having to pay for their emissions. Carbon Pricing also creates price signals that reduce, or regulate.

The imposition of a carbon tax is expected to change the behavior of consumers and producers to prefer energy sources that are environmentally friendly and reduce greenhouse gas emissions. In the long term, it is hoped that carbon taxes can help achieve global emission reduction targets and further mitigate climate change. Implementation of a carbon tax requires careful planning and coordination, as well as considering its impact on various sectors of the economy and society. In the Indonesian context, discussion and exploration related to tax implementation (R. F Harris, & MF A, 2022). Carbon is ongoing, and final decisions regarding implementation will be influenced by prevailing political, economic and social conditions.

Government Regulation No. 41 of 1999 regulates carbon emission control in the industrial sector, including manufacturing, mining and stationary power plants. This regulation states that the person in charge of a stationary business must comply with ambient air quality standards. If they violate these quality standards, they are required to pay compensation in accordance with the Polluter Pays Principle regulated in Law Number 32 of 2009 concerning Environmental Protection and Management.

Nonetheless, the regulations regarding compensation for violations of ambient air quality standards do not specify the nominal amount or percentage of compensation in accordance with the Polluter Pays Principle (R. F Harris, & MF A, 2022). These regulations only provide manual emission monitoring tables and calculation formulas adjusted for industrial emissions per year. This does not create legal certainty and does not provide the clear price signals that a Carbon Tax concept should have (Muhdar, 2009) (Kusumawardhani, 2020).

The implementation of a carbon tax also has a negative impact that needs attention. These impacts include (Kusumawardhani, 2020):

1. Economic impact on industry: Carbon taxes can increase production costs for industrial sectors with high carbon emissions. This can reduce the competitiveness of companies in international markets and potentially lead to a decrease in investment and employment.
2. Social impact on society: Carbon taxes can have a direct impact on society by increasing the price of energy and goods due to carbon emissions. This could place an additional economic burden on groups of people who are already financially vulnerable, impacting household consumption and purchasing power.
3. Possible waste and negative impact on the informal sector: There is a risk that some companies or individuals will try to avoid the carbon tax by irregular actions or find

ways to reduce tax payments. In addition, the informal sector or activities that are not officially registered can suffer unintended negative impacts from carbon taxes.

4. Unequal distributional effects: Carbon taxes can place an unfair burden on certain groups of people. If not implemented carefully, carbon taxes can deepen social and economic disparities between different groups of people. Therefore, special efforts are needed to ensure that the impact does not burden socially and economically vulnerable groups in society.
5. Potential displacement of emissions: A carbon tax in one country can encourage a shift in economic activity to another with weaker environmental standards. This can result in "leakage" or displacement of emissions, in which emissions that should be reduced in one country actually increase in another country. Therefore, international cooperation and coordination is needed to minimize the potential displacement of these emissions.

Carbon taxes have the benefit of reducing greenhouse gas emissions and driving changes towards a low-carbon economy. However, the negative impacts also need to be considered, and the government must take appropriate steps to respond to these impacts. One of the steps the Indonesian government can take is to use revenue from carbon taxes to tackle social inequality and provide incentives for industries to innovate and shift to clean energy sources.

Several strategies that can be carried out by the Indonesian government to reduce the impact of carbon taxes and mitigate climate change include the following:

1. Promoting renewable energy: Governments can provide incentives and invest in renewable energy sources such as solar, wind, hydro and geothermal. Switching to cleaner energy sources will reduce dependence on fossil fuels and reduce carbon emissions.

2. Improve energy efficiency: Implementing energy-efficient measures in the transport, industrial and building sectors can help reduce energy consumption and carbon emissions. Governments can provide incentives, regulations and awareness campaigns to encourage businesses and individuals to adopt energy efficient practices.
3. Support for sustainable transport: Promoting electric vehicles, expanding the public transport network, and improving infrastructure for cycling and walking can help reduce carbon emissions from the transport sector. Governments can provide incentives, subsidies and build infrastructure to accelerate the adoption of electric vehicles and public transport.
4. Afforestation and reforestation: Governments can implement policies and initiatives that promote afforestation and reforestation, protect existing forests, and encourage planting of new trees to sequester carbon dioxide.
5. Strengthen carbon pricing mechanisms: Governments can establish transparent and effective carbon pricing mechanisms, ensuring that carbon taxes are imposed consistently and fairly across all industries. This will incentivize businesses to reduce emissions and innovate in clean technologies.
6. Collaboration with international initiatives: Indonesia can actively participate in international climate agreements and initiatives, such as the Paris Agreement, and work together with other countries to address climate change collectively. By engaging in global efforts, governments can gain financial and technical support to implement climate-friendly projects and reduce carbon tax burdens.
7. Sustainable agriculture program: The agricultural sector in Indonesia contributes significant greenhouse gas emissions, mainly through deforestation for oil palm plantations. Governments can implement sustainable agricultural practices, protect forest

areas, and encourage responsible land use to reduce emissions and reduce carbon tax obligations.

While reducing carbon taxes may provide short-term economic benefits, the priority should be long-term environmental sustainability to effectively address climate change.

2. Polluter Pays Principle (The Polluter Pays Principle)

The principle comes from the Latin word *principium*, in English principle, in French *principe*. Principles are often translated in terms of principles, such as environmental law, environmental law principles (environmental law principles) mean the basic principles or legal basis for the environment (Danusaputro, 1981).

There is an economist, John Maddox, who gives an argument that pollution can be solved by calculating the expenses incurred (prices) and is an economic problem. Described in the sentence that "we can reduce pollution if we are prepared to pay for it", which can be understood that how much is the ability to pay either with programs to create anti-pollution tools or indirectly by paying for losses caused by pollution (Daud, 2001).

The polluter pays principle is a principle often referred to in international declarations, international agreements, and is a principle of international environmental law. This principle was first introduced by the Organization for Economic Cooperation and Development (OECD) in 1972. The OECD is an international economic organization which has 34 member countries and aims to promote world economic development through cooperative action.

The polluter pays principle supports the allocation of pollution prevention and control costs to promote the rational management of environmental resources and avoid distortions of international trade and investment. This principle requires that polluters bear the costs of actions taken by public authorities to maintain environmental conditions in an acceptable

state. These costs must be reflected in the prices of goods and services that cause pollution during the process of production and consumption.

To implement this principle, an effective monitoring system is needed to identify parties that pollute the environment and assess the level of pollution. Law enforcement against environmental violations is also important in implementing this principle. This involves cooperation between law enforcement agencies and environmental agencies to enforce rules and impose appropriate sanctions.

Implementation of the polluter pays principle involves the role of related government agencies, such as the Ministry of Environment and Forestry, the Environmental Impact Management Agency, and the Ministry of Energy and Mineral Resources. An effective monitoring system includes clear monitoring standards, an extensive monitoring network, modern monitoring technology, information reporting and disclosure, data analysis, and cooperation between various parties.

The polluter pays principle is a principle applied in the international and national legal systems as part of the idea of the unity of all laws that affect human life. Although this principle has not yet provided adequate regulation at the basic level of rule of law and meaning in court decisions, this principle can be found in the settlement of environmental pollution cases in Indonesia.

The application of the polluter pays principle creates risks for business actors, especially manufacturers who pollute the environment. In Indonesia, this principle is regulated in the Regulation of the Minister of Environment of the Republic of Indonesia Number 13 of 2011 concerning Compensation for Environmental Pollution and/or Damage. Law on the Environment Number 32 of 2009 also includes the principle of a polluter paying as a preventive and repressive measure in enforcing environmental law. The application of the polluter pays principle is not only related to economic aspects, but has also been regulated

in positive law in Indonesia. Law Number 32 of 2009 concerning Environmental Protection and Management adopts this principle in Article 2, which states that those responsible for businesses that cause environmental pollution or damage are obliged to bear the costs of environmental restoration (Indonesia, 2009).

Article 87 paragraph (1) of the Law also states that the person in charge of a business that commits an unlawful act in the form of environmental pollution or damage is obliged to pay compensation or take certain actions. By applying the polluter pays principle, it is hoped that the actors who pollute the environment can be held accountable, the costs for environmental restoration can be borne, and environmental protection can be realized (Indonesia, 2009).

Article 87 paragraph (1) of the Law of the Republic of Indonesia Number 32 of 2009 concerning the Protection and Management of the Environment explains that the polluter pays principle is applied. In addition to paying compensation, the perpetrators of environmental pollution may also be required by the judge to take certain actions, such as installing or repairing waste treatment units to comply with environmental quality standards, restoring environmental functions, or eliminating and destroying the causes of pollution. Responsibility for acts that violate environmental law is based on the fault of the perpetrator (liability based on fault). The perpetrator of pollution is responsible for paying the losses suffered by the victim as a result of his actions.

Indonesia has adopted and implemented the principles of international environmental law to create a clean environment without pollution and economic progress. The "Polluter Pays Principle" is used to allocate costs for pollution prevention and control, encourage the responsible use of environmental resources, and prevent distortions in international trade and investment. This means that polluters must bear the costs of the actions set by public authorities to maintain environmental sustainability. These costs must be reflected in the

prices of goods and services that cause pollution in production and consumption. These measures must not be offset by subsidies that can cause distortions in international trade and investment (Erowati, 2021).

The adoption of the polluter pays principle in Indonesia helps promote corporate and individual responsibility for the environmental impact of their activities. This principle supports the country's efforts to reduce pollution and achieve sustainable development that takes into account the balance between the economy, the environment and the interests of society as a whole. This principle is implemented through mechanisms such as environmental taxes, financial sanctions, and emission trading systems, and plays an important role in maintaining the balance between economic growth and environmental protection.

Implementing a carbon tax on the principle of "whoever pollutes pays" has several advantages. First, carbon taxes help reduce greenhouse gas emissions by providing economic incentives for reducing carbon emissions. Second, carbon taxes generate additional revenue for the government that can be used for sustainable projects and strengthening public infrastructure and services. Third, carbon taxes encourage innovation and investment in clean technologies and renewable energy. Fourth, the application of a carbon tax under this principle achieves social justice by imposing more polluting sectors on the environment and providing incentives for sectors that are more environmentally friendly. Fifth,

The Polluter Pays Principle involves taking full responsibility for those who pollute or cause environmental damage, prevention of negative impacts, linking costs to levels of pollution, appropriate legal and regulatory systems, and compensation and restoration of damaged environments. Each country may apply this principle with different rules, including the imposition of environmental taxes, strict licensing systems, and administrative or criminal sanctions. Only with strong commitment and cooperation can the Polluter Pays principle be successfully applied and contribute to better environmental protection and restoration.

3. The urgency of implementing a carbon tax in Indonesia with the polluter pays principle

Reducing carbon emissions has a very important urgency in efforts to overcome global climate change. Carbon emissions are caused by various human activities, such as the burning of fossil fuels, deforestation, and industrial processes. This causes an increase in the concentration of greenhouse gases in the atmosphere, resulting in global warming and significant climate change. As a country that plays an important role in global climate change, Indonesia has an obligation to reduce carbon emissions. Countries around the world have agreed in the Paris Agreement to limit global temperature rise to below 2 degrees Celsius above pre-industrial levels. To achieve this target, reducing carbon emissions is very important. Several concrete steps are needed to address the urgency of reducing carbon emissions, including increasing energy efficiency, expanding the use of renewable energy, adopting environmentally friendly technologies, reducing deforestation, and promoting sustainable transportation.

Indonesia is one of the world's largest carbon emitters. Implementing a carbon tax in Indonesia is a difficult measure because the impact of carbon emissions has not directly affected Indonesian society. However, the Indonesian government has been working to implement a carbon tax to encourage technological innovation and reduce carbon dioxide and greenhouse gas emissions. The goal is to achieve a maximum Net Zero Emission in 2060 and reduce emissions by 31.89% in 2030 according to the Nationally Determined Contribution (NDC) document.

Implementing a carbon tax on the principle of “who pollutes pays” is essential to addressing the environmental and economic challenges associated with climate change. Carbon taxes can be an effective policy tool for reducing greenhouse gas emissions by placing a price on carbon dioxide and other greenhouse gas emissions produced by industrial

activities. Implementation of a carbon tax in Indonesia has several benefits, including: climate change mitigation, environmental protection, revenue generation, international commitments, as well as economic incentives and competitiveness. Carbon taxes can also provide revenue that can be used for investments in renewable energy, sustainable infrastructure, and research and development of clean technologies. Although the plan to implement a carbon tax in Indonesia has been postponed several times, the government plans to start implementing it in 2025 in accordance with Law of the Republic of Indonesia Number 7 of 2021 concerning Harmonization of Tax Regulations (HPP). The implementation of carbon taxes in developing countries will also be a topic at the G20 Summit (G20 Summit) to be held in November (Handoyo, n.d.).

There are several proposals for implementing carbon tax objects in Indonesia and their allocation, such as: newly purchased vehicles are subject to a tax per consumption of fuel oil (BBM) per year and allocated to public transportation in Indonesia. oil boiler carbon tax above 100 tons/hour and reallocated to subsidized high-efficiency biomass boilers and every few liters of fuel is taxed and allocated to the development of renewable energy (Madalina, 2022). In this case, carbon tax can be implemented in Indonesia in accordance with the polluters pay principle. Which means that in implementing a carbon tax the government can charge the cost of environmental damage due to carbon emissions to those who issue carbon emissions. The policy in implementing this carbon tax is the commitment of the Indonesian government to reduce greenhouse gas emissions or to achieve the net zero emission target in 2060. This policy also has two advantages (double dividend), namely as an instrument to reduce carbon emissions and also as a fiscal tool. to increase state revenue if designed ideally.

The following is the legal basis for carbon tax (Indonesia, 2021):

1. Article 13 of Law 7/2021 concerning Harmonization of Tax Regulations (UU HPP)
2. Article 58 of Presidential Decree 98/2021 concerning Implementation of NEK

3. Implementing Rules that are being Prepared

- a. RPMK Concerning Carbon Tax Tariffs and DPP
- b. PMK Concerning Procedures and Mechanisms for Imposing Carbon Tax
- c. PP About Carbon Tax Road Map

Implementation of carbon tax in Indonesia has a high urgency. The Minister of Finance has stated that Indonesia will need Rp 266.2 trillion per year to reduce greenhouse gas emissions. Regarding the carbon tax, the rate set is a minimum of IDR 30 per kilogram of carbon dioxide equivalent (CO₂e) or USD 2 per tonne of CO₂e. This carbon tax will be applied using a cap and tax scheme or based on emission limits.

However, the implementation of the "who pollutes, pays" principle in Indonesia is still facing challenges. Although this principle is recognized in laws and regulations related to the environment, its implementation has not been fully optimal. Several factors influencing its implementation are regulations and policies that still require stronger monitoring and enforcement, institutional capacity that needs to be increased, a transparent monitoring and reporting system, public awareness and participation that needs to be increased, and strict law enforcement against environmental violations.

The application of a carbon tax with the Polluter Pays Principle has many benefits. First, carbon taxes can reduce carbon emissions in Indonesia, which is one of the countries with the highest carbon emissions in the world. Second, the principle of justice in this principle provides an understanding that those who pollute the environment must be financially responsible for the damage they cause. Third, carbon taxes can encourage innovation and energy efficiency and support sustainable development. Fourth, revenues from carbon taxes can be allocated to sustainable development programs. Finally, the implementation of a carbon tax will contribute to Indonesia's commitment to reducing carbon emissions and global climate change. To implement a carbon tax on this principle requires

strong collaboration between government, industry and society. It is also necessary to increase public awareness and participation, firm law enforcement, and strengthen the capacity of related institutions. The implementation of this carbon tax is an important step in tackling climate change and achieving sustainable development, as well as providing long-term economic benefits and protecting the environment for future generations.

E. CONCLUSION

Utilizing a carbon tax can be an effective policy instrument to reduce carbon emissions in Indonesia. By imposing an additional levy on activities that generate carbon emissions, the government can incentivize businesses and individuals to reduce carbon pollution and shift to greener practices. The implementation of a carbon tax provides many benefits, including emissions reduction, diversification of energy sources, renewable energy job creation, improved air quality, and preservation of natural ecosystems that are important for human well-being and environmental sustainability. Carbon taxes have proven to be an effective component of climate change mitigation strategies, synergistically complementing initiatives such as renewable energy development, forest conservation, and climate adaptation. Therefore, a carbon tax shows great potential to reduce carbon emissions in Indonesia, and thereby contribute to global efforts to address climate change. Through prudent measures, a carbon tax can be a powerful tool to uphold environmental sustainability and realize a greener and more sustainable future for Indonesia. In addition, to address the worsening environmental damage stemming from carbon emissions by industries in Indonesia, further investigation and accountability for the ecological damage done is necessary. Supported by data from the BP Statistical Review of World Energy and the OECD in 2019, Indonesia's prominence as a significant carbon emitter underscores the government's efforts to implement a carbon tax to spur technological innovation and support environmentally friendly and low-

carbon economic activities. Furthermore, with the aim of improving environmental quality and minimizing damage, the government has enacted a carbon tax policy as outlined in Article 13 of Law of the Republic of Indonesia Number 7 of 2021 concerning Harmonization of Tax Regulations (HPP Law) and Article 58 of Presidential Regulation Number 98 of 2021 concerning the Implementation of Carbon Economic Value for Achieving Nationally Determined Contribution Targets and Controlling Greenhouse Gas Emissions in National Development.

REFERENCES

- Bappenas. (n.d.). *National Initiative for Reducing Greenhouse Gases from the Agricultural Sector*. Retrieved June 13, 2023, from <https://www.bappenas.go.id/files/8515/7679/3602/2018-Buku-Inisiatif-Nasional-Pengurangan-Gas-Rumah-Kaca-dari-Sector-Pertanian.pdf>
- Danusaputro, M. (1981). *National Environmental Law II*. Bandung: Binacipta.
- Daud, M. (2001). *Environmental Law in Indonesia's Law Enforcement System*. Bandung: Bandung Alumni.
- Erowati, E. K. P. & E. M. (2021). Polluter Pays Principle in the Indonesian Legal System. *Journal of Citizenship Education Undiksha*, 9(2).
- Handoyo. (n.d.). *Carbon Tax Implementation Comes Into 2025*. Kontan.Co.Id. Retrieved June 4, 2023, from <https://nasional.kontan.co.id/news/implement-penerapan-pajak-karbon-mulai-berlaku-tahun-2025>
- Ibrahim, J. (2011). *Teori & Metodologi Penelitian Hukum Normatif*. Malang: Bayumedia Publisng.
- Indonesia. (2009). *Law of the Republic of Indonesia Number 32 of concerning Environmental Protection and Management. Section 2*.
- Indonesia, M. of F. of the R. of. (2021). *Carbon Tax PPT in Indonesia" 2 December 2021*. https://gatrik.esdm.go.id/assets/uploads/download_index/files/2bb41-bahan-bkf-kemenkeu.pdf
- Kusumawardhani, R. P. & R. T. (2020). Measuring Carbon Tax Policy Plans. *APBN Bulletin*, V(05).
- Madalina, F. W. Y. and M. (2022). Policy Formulation for Implementation of Carbon Tax in Indonesia. *Journal of Democracy and National Defense*, 1(1).
- Margono, et al. (2022). The Legality of Imposing Carbon Tax in Tax Regulations. *Journal of USM Law Review*, 5(2).
- Muhdar, M. (2009). The Existence of Polluter Pays Principle in Environmental Law Arrangements in Indonesia. *MIMBAR LAW*, 21(1).
- R. F Harris, & MF A, R. (2022). Juridical Formulation of the Urgency of Carbon Tax Policy Design as a Driver for the New, Renewable Energy Transition Based on Pancasila. *Indonesian Law Student Writers Association Law Journal*, 2(2).
- Saputra, A. I. (2021). Carbon Tax as a Source of State Revenue and its Collection System. *Journal of Indonesian State Budget and Finance*, 3(1).
- Susetiyo, W., Perdana, M. T., & Iftitah, A. (2020). Perlindungan Hukum dari Paparan Asap Rokok di Kota Blitar. *Jurnal Supremasi*, 10(2). <https://doi.org/https://doi.org/10.35457/supremasi.v10i2.1176>