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Integration of Local Wisdom in Low Carbon Development Policies and Industrial Downstreaming

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ABSTRACT

As an implementation of Indonesia's commitment to implementing the 'Paris Agreement', the government has issued various policies related to reducing greenhouse gas emissions that cause climate change that threatens the lives of living things, including humans. Several government policies, such as carbon trading, carbon storage, energy transition, have been regulated in several legal products. Complex problems arise because at the same time Indonesia is experiencing social problems, a high number of job seekers, increasing unemployment rates and the need for efficient utilization of non-renewable natural resources (coal, nickel, tin, gold). So the government made an industrial downstream policy. All management processes from raw materials to finished goods ready for consumption domestically. Of course, many factories will be built, which will carry out the process of converting raw materials into ready-to-consume goods, which in the production process will produce greenhouse gas emissions, especially carbon dioxide (Co2). There is a commitment to carry out low-carbon development, but on the other hand there are socio-economic needs that must be met. To combine these two interests, the local wisdom of the community in its closeness to nature, in 'protecting, caring for and utilizing' natural resources wisely, can be a strengthening and supporting element for low-carbon development. The normative legal method is used in examining various legal products and other references. The conclusion or implication of this article is that socio-cultural aspects must be a concern in the implementation of development because the principle of sustainable development is to align economic, ecological and socio-cultural aspects to achieve the welfare of the Indonesian people.
Keywords: Downstream Industry; Low Carbon Development; Local Wisdom.

INTRODUCTION

The awareness to correct the development model for maintaining the earth, has begun since 52 years ago at the first Summit in Stockholm Belgium. Synergizing economic, ecological, and socio-cultural factors in implementing Development is not easy for developing countries like Indonesia, which are rich in natural resources of

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forests, oil, coal, tin, nickel, and gold. The downstream industry that is currently being encouraged by the government, processes these natural resources into goods that are ready to be consumed. Many socio-economic benefits are obtained, but it also poses a risk that greenhouse gas emissions will increase because many factories will be built. On the other hand, Indonesia is bound to implement several international agreements that have been ratified including the Paris Agreement, namely to maintain the average temperature increase on earth not exceeding 1.5 degrees Celsius through the target of reducing GHG emissions by carrying out ow-carbon development in all sectors, and to achieve the target of zero GHG emissions by 2050.

Indonesia has 6 large islands, namely Sumatra, Java, Bali, Kalimantan, Sulawesi, Papua and Maluku. A Dutch researcher, Van Vollenhoven (visited the Dutch East Indies, currently Indonesia in 1906-1923) and based on the results of the study published in a book entitled *Het adatrecht van Nederlandsch-Indië* [1] , found that cultural diversity in Indonesia can be seen from the characteristics of each regional tribe which has different traditional houses, traditional clothes, traditional weapons, regional songs and dances, typical foods, crafts, traditional ceremonies, kinship systems to the fields of agriculture and forestry, namely hereditary habits in utilizing natural resources.[2] The cultural diversity that exists in each region spread across six large islands (Sumatra, Java, Bali-Lombok, Kalimantan, Sulawesi, Papua, Maluku), has cultural values that are used as guidelines for life, including customs in the fields of agriculture and forestry, in utilizing natural resources as part of the community's life sources (forests, rattan, resin, gardening/farming, etc.). As a source of life, there are inherent values to care for and maintain by utilizing it wisely according to needs. This is what is then called 'local wisdom'. These values are recognized in the Indonesian legal system. Sustainable development is carried out not only to realize economic growth but also to maintain environmental quality and ecological balance that guarantees the availability and carrying capacity of natural resources, as well as paying attention to the socio-cultural aspects of the community.[3] The issue of climate change has become an important consideration in

[1]The book Het adatrecht van Nederlandsch-Indië, which means the Customary Law of the Dutch East Indies (another name for Indonesia during the colonial period), was written in 1919. Cornelis Van Vallenhouven was a professor of customary law at Leiden University. In his writing, Van Vollenhoven created a system of customary law areas that attempted to group hundreds of customs in Indonesia into 19 customary law circles.

[2]https://www.popmama.com/big-kid/10-12-years-old/nabila-els-nur-azizah/bisnis-lingkaran- Hukum -adat-indonesia- menurut-van-vollenhoven .

[3] Law No. 32/2009 Article 1 point 30, 'Local wisdom is the noble values that apply in the order of life to, among other things, protect and manage the environment sustainably'.

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Indonesia due to the compromise between economic development and environmental protection.[4] The values of utilizing natural resources by maintaining environmental carrying capacity (maintaining ecological balance) are inherent in the principles of Indigenous people's lives because they are their source of life that has a spiritual meaning to be cared for and maintained. This is what is meant as the 'local wisdom' of the community in maintaining the availability of natural resources and environmental carrying capacity (Van Vallenhouven groups 19 Indigenous communities.

The problem is how to synergize low-carbon development and industrial downstreaming policies? The purpose of writing this article is to raise the issue of industrial downstreaming policies that have the potential to increase GHG emissions and synergizing local wisdom is one of the solutions.

The local wisdom of communities in all regions and which is a cultural 'asset' that needs to be integrated in implementing low-carbon development and industrial downstreaming platforms. This will make it easier for the government to mobilize communities to participate in implementing low-carbon development. Integrating local wisdom values into various implementation activities including technical regulations.

RESULTS AND DISCUSSION

Low Carbon Development

Currently, Indonesia is targeting zero emissions by 2050 by implementing various policies, including low-carbon development. Low-carbon development is an obligation for all countries that ratify the Paris Agreement for the future of human life on Earth. Until now, the obstacles to low-carbon development are deforestation, forest fires (kahutla), access to community forest management and biodiversity, pollution, and waste [5], all of which trigger global warming and climate change. Several programs that are simultaneously socialized in implementing low-carbon development are all related to changes in behavior to be environmentally friendly, which in essence have been practiced by indigenous peoples.

Furthermore, point 31 states that 'customary law communities are groups of people who have lived in certain geographical areas for generations because of ties to ancestral origins, strong relationships with the environment, and the existence of a value system that determines economic, political, social, and legal institutions'.

[4]Theresa Novalia, et al., "Leading Sectors and Low Carbon Development: An Approach of Environmentally-Extended Input-Output Table", *Journal of Economics and Development Policy*, July 2024, 13(1), p. 44.

[5] Minister of KLHK, Annual Report 2023.

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Low Carbon Development is a new platform that must be carried out by the Indonesian government as an implementation of commitments in various international conventions related to climate change that have been ratified. Low carbon development aims to maintain economic and social growth through low GHG emission and GHG emission intensity development activities, as well as minimizing the exploitation of natural resources. Low carbon development is one of the transition strategies towards a green economy in achieving the vision of an advanced Indonesia in 2045 and achieving zero emissions by 2050 and placing the 13th [6] *Sustainable Development Goals (SDGs) (Climate Change Action) as the main basis for supporting SDGs.* In a book issued by the Low Carbon Development Secretariat-Ministry of Bappenas, it is explained that the Low Carbon Development Project is an initiative for GHG emission reduction and GHG emission intensity actions that directly impact the improvement of the economy and society through the utilization and management of sustainable natural resources, which includes the scope of the forestry, agriculture, energy, transportation, waste and blue carbon sectors. The low-carbon development platform will encourage economic growth and improve social welfare while maintaining environmental quality. The implementation of the Net Zero Emission policy through Low Carbon Development can be realized by making a transition to a green economy. The government in the 2020-2024 RPJMN prioritizes three programs, namely improving environmental quality, increasing disaster and climate change resilience, and low carbon development. The three programs are interrelated with each other.

Carbon Trading

One of the efforts in Low Carbon Development, the government issued Presidential Regulation No. 98 of 2021 concerning the implementation of carbon economic value to reduce GHG emissions. That carbon as a universal indicator in measuring the performance of climate change control efforts reflected in nationally determined contributions, in addition to having important economic value and having an international dimension, especially in the form of economic benefits for the community, is also a reflection of the principle of sustainable resource management according to the mandate of Article 33 paragraph (4) of the 1945 Constitution of the Republic of Indonesia.[7] It seems that this Presidential Regulation is intended to limit the activities of companies and individuals to reduce GHG emission production through a carbon trading scheme. Article 3 of Presidential

[6] Indonesian Low Carbon Development Secretariat, Ministry of National Development Planning/Bappenas, "Seven Indonesian Low Carbon Implementation Projects", 2020.

[7] Presidential Decree 98/2021 on Consideration point a.

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Regulation 98/2021 states that the purpose of this Presidential Regulation is to regulate the reduction of GHG emissions, increase Climate Resilience, and NEK (Carbon Economic Value) in order to achieve the NDC (*Nationally Determined*) target. *Contribution,* referring to the GHG Emission Baseline in 2030 of 2,869 (two thousand eight hundred and sixty-nine) million tons of CO2 and the Climate Resilience Baseline and Climate Resilience targets.

Carbon Trading is a market-based mechanism to reduce GHG Emissions through the buying and selling of Carbon Units, Carbon Units are proof of carbon ownership in the form of a certificate or technical agreement stated in 1 ton of carbon dioxide recorded in the SRN PPL.[8] Furthermore, this regulation explains that GHG Emission Control is carried out with policies in national, central and regional development as well as from, for, and by the Government, regional governments, Business Actors, and the community.[9] Carbon trading is different from the meaning of 'trade' in general, in carbon trading the object of trade is 'efforts or efforts' made by business entities and/or groups and/or individuals in minimizing GHG emissions. These efforts or efforts are proven in the form of a GHG Emission Reduction Certificate (by authorized experts). The GHG Emission Reduction Certificate, hereinafter abbreviated as SPE-GRK, is a letter of proof of emission reduction by businesses and/or activities that have gone through Measurement, Reporting, and Verification, and are recorded in the National Climate Change Control Registry System in the form of a number and/or registry code.[10] The implementation of Climate Change Mitigation Actions can be carried out through the implementation of NEK (Carbon Economic Value) which can be carried out in Sectors and Sub-Sectors, and can be implemented by:[11] a. ministries/institutions; b. local governments; c. Business Actors; and d. the community. The implementation of NEK can be carried out through the following mechanisms: a. Carbon Trading; b. Performance-Based Payment; c. Carbon Levy; and/or d. other mechanisms in accordance with regulations.

The community can participate in the implementation of Climate Change Mitigation Actions through the implementation of NEK in the Sectors: a. energy; b. waste; c. industrial processes and product use; d. agriculture; e. forestry; and/or f. other sectors in accordance with the development of science and technology. And Sub Sectors consisting of: a. power plants; b. transportation; c. buildings; d. solid waste; e. liquid waste; f. garbage; g. industry; h. rice fields; i. livestock; j. plantations;

[8] Presidential Decree 98/2021 Article 1 points 15 & 17.
[9] Presidential Decree No. 98/2021
[10] KLHK Regulation No. 21/2022 Article 1 point 18
[11] KLHK Regulation No. 21/2022 Article 2 and Article 3.

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k. forestry; peat and mangrove management; and other Sub Sectors in accordance with the development of science and technology.

The government's efforts to involve community participation in climate change mitigation actions are technically regulated in Permen No. 21/2022. Furthermore, how to socialize community involvement through these sectors and sub-sectors by integrating local wisdom values that live in society, for example in the agriculture and forestry sectors, and in the transportation, rice fields, livestock, plantations, forestry, peat and mangrove management sub-sectors, sub-sectors that are very close to people's lives.

Government Regulations Regarding Climate Change Control

The government issued two laws as the basis for industrial downstreaming in Indonesia, namely:
1) Law Number 3 of 2020 concerning Mineral and Coal Mining which mandates not to export raw materials;
2) Law Number 3 of 2014 concerning Industry, and
3) Government Regulation Number 25 of 2024 concerning Amendments to Government Regulation Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities.

Government policies in order to control climate change are carried out in various technical laws and regulations, especially related to how to reduce GHG emissions through low-carbon development by implementing carbon trading mechanisms in all businesses and/or activities. These technical regulations can be seen as follows:
1. Presidential Regulation No. 98 of 2021, regulates several main matters as follows:
a) Implementation of NEK is carried out through Carbon Trading mechanisms, Performance-Based Payments, Carbon Levy and/or other mechanisms in accordance with developments in science and technology as determined by the Minister.
b) Carbon trading can be carried out through domestic trade and/or foreign trade.
c) The main elements of implementing Carbon Trading through domestic trade and/or external trade include:
   • Emission Trading mechanisms and procedures applied to businesses and/or activities that have an upper emission limit set by the relevant minister;
   • GHG Emission Offset mechanisms and procedures applied in the case of a business and/or activity that does not have an upper limit on GHG emissions and provides a statement of emission reductions using the results of mitigation actions from other businesses and/or activities;

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- Use of state revenues from domestic Carbon Trading;
- Mechanisms and procedures for approval and recording;
- Trade profit sharing;
- Guidelines for the implementation of Carbon Trading; and the transfer of Carbon Rights status domestically is carried out through the SRN PPI recording mechanism, and abroad is carried out through the SRN PPI recording mechanism and authorization of foreign Carbon Trading.

d) Carbon trading through domestic and/or foreign trade is carried out based on the related PPI SRN; or prioritizing the use of GHG Emission Reduction Certificates generated through the national emission reduction certification mechanism.
e) The implementation of carbon trading through foreign trade mechanisms does not reduce the achievement of the NDC target in 2030.
f) Domestic and/or international carbon trading is carried out using carbon market mechanisms through carbon exchanges and/or direct trading. The carbon market exchange center is based in Indonesia.

2. Regulation of the Minister of Environment and Forestry No. 21 of 2022, in essence regulates the following matters:
1) Carbon trading is carried out through domestic carbon trading and/or foreign carbon trading
2) In carrying out Carbon Trading, the following provisions must be met:
   a) in accordance with the Carbon Trading roadmap
   b) provide emission reduction reserves (buffers)
   c) in the form of a Greenhouse Gas Emission Reduction Certificate (SPE-GRK) for Cross-Sector Carbon Trading.
3) Foreign carbon trading must meet the following requirements:
   a) carried out after the relevant Minister has determined and submitted the achievement plan and strategy related to the NDC in the Sector and Sub-Sector to the Minister
   b) has achieved the NDC target in the Sub-Sector or Sub-Sectors for Foreign Carbon Trading
   c) obtain authorization from the Minister.
4) The procedures for carbon trading in sectors or sub-sectors are determined by the relevant Minister according to his/her authority after coordinating with the Minister of Environment and Forestry.
5) Carbon trading is carried out through the following mechanisms:
   a) Emissions trading, applied to businesses and/or activities that have an Upper Limit on GHG Emissions determined through the Technical Approval for Upper Limit on Emissions (PTBAE) by the relevant Minister.

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b) Emission offset, applied to businesses and/or activities that do not have an Upper Limit on GHG Emissions. The Minister and governor, according to their authority, determine the GHG emission baseline and emission reduction targets.

6) Recording and reporting of carbon trading
7) Recording of carbon units in the Carbon Registry of the National Climate Change Control System (SRN-PPI) (Articles 52-54).

3. Regulation of the Minister of Energy and Mineral Resources No. 16 of 2022, in essence regulates the following matters:

1) Implementation of the NEK in the power generation sub-sector includes:
   a) determination of Technical Approval of Upper Emission Limits (PTBAE)
   b) preparation of a monitoring plan for GHG emissions from power plants
   c) determination of Technical Approval for Upper Emission Limits-Business Actors (PTBAE-PU)
   d) carbon trading
   e) preparation of reports on GHG emissions from power plants;
   f) evaluation of the implementation of Carbon Trading and PTBAE-PU auction.
2) The PTBAE for each type of power plant is determined by the Minister. If it is necessary to tighten the PTBAE for each type of power plant, the Minister can make changes to the determination of the PTBAE.
3) Business actors who participate in carbon trading must prepare a plan to monitor the power plant's GHG emissions and submit it to the Minister.
4) Business Actors participating in Carbon Trading are required to submit a report on GHG emissions from power plants for each power plant unit containing data on power plant unit activities and data on the operation of power plant units submitted via APPLE-Gatrik no later than January 31 of the following year.

4. OJK Regulation No. 14 of 2023, regulates the following matters:

1) OJK regulates, permits, supervises and develops carbon trading through carbon exchanges.
2) Carbon units are securities. Carbon units transacted on the carbon exchange must first be recorded on the SRN-PPI and the carbon exchange organizer.
3) Parties who can carry out business activities as a carbon exchange are market organizers who have a business license from the OJK as a carbon exchange organizer.
4) Carbon units traded on carbon exchange organizers consist of PTBAE-PU and SPE-GRK.

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5) settlement of funds and Carbon Units, between Parties in the same sector and/or in different sectors and can be carried out using a clearing mechanism with or without guarantee.

Improving Environmental Quality in Implementing Low Carbon Development

The Ministry of National Development Planning/Bappenas, has determined Seven Indonesian Low Carbon Development Implementation Projects, which have involved active community participation and projects that directly touch community needs, as follows:[12]

1) Biogas Utilization for Household Energy Supply; The objective of this project is to reduce GHG emissions and GHG emission intensity from livestock waste by producing renewable energy (biogas), low emission waste (bioslurry), and compost, which are good for soil quality and ecosystem, and increase carbon stock (from revegetation activities). Through this project, local communities are trained to build biodigesters and operate nursery centers. This project also helps local communities to rehabilitate ex-sand mining land and replant with various types of trees.

2) Community-Based Rehabilitation of Upstream Watershed Upstream Watershed: Ciliwung experienced landslides and floods due to the large amount of degraded forest. With the status of Production Forest but located in a conservation area, so its sustainability needs to be maintained as a buffer zone and water reservoir. In addition, the community is also trained on the utilization of other forest products so that they have a fast utility value through environmental services (tourism) and non-timber forest resources.

3) Food Security and Economic Development for Vulnerable Communities through Sustainable Agriculture; This project aims to save forest degradation with a total area of 400 ha and provide livelihoods for the surrounding community and encourage the community to form Community Forestry (HKm) groups that play an active role in managing and maintaining forest areas sustainably.

4) Conservation of Nipah Ecosystem and Eastern Buffer Forest of Lamandau River Wildlife Reserve as Community Forest Reserve Area (HKm); Fishpond Field School has been established to stop the use of chemical fertilizers and replace them with organic fertilizers.

5) Climate Projection and Rice Planting Adaptation Strategy with the System of Rice Intensification (SRI) method; ICCTF in collaboration with the Faculty of Agricultural Technology, Universitas Gadjah Mada, developed an innovation to increase crop

[12]Seven Implementations of Low Carbon Development, Secretariat of Low Carbon Development of Indonesia, Ministry of Bappenas, 2020.

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yields and overcome water shortages. This project helps local governments and communities adapt to climate change.
6) Agrarian Reform Model and for Increasing Productivity; This project aims to carry out agrarian reform to increase forest productivity in an effort to accelerate the achievement of food sovereignty, poverty alleviation and reduction of GHG emissions and GHG emission intensity.
7) Utilization of Former Mining Land as a Mangrove Tourism Park in Ecosystem Rehabilitation and Carbon Sequestration Efforts of Belitung Mangrove Park (BMP) Forest Resources;

Some of the activities above are the Seven Low Carbon Development Implementation Project Programs under the coordination of the Ministry of Bappenas, which were prepared by the Low Carbon Development Secretariat in 2020. Low carbon development is a solution to overcome the trade off between the economy and the environment as well as the government's commitment to implementing the 13th SDGs goal, namely climate change action.[13]
Community involvement with local wisdom values inherent in people's lives is accommodated in these seven activities. The efforts made by the Ministry of Bappenas can be carried out by other ministries according to their duties and functions to involve community participation in the implementation of projects in strengthening climate change mitigation actions.

Industrial Downstreaming (Nickel)

In the downstream process that changes raw materials into materials ready for consumer use, through a long chain of processes carried out in factories, which produce GHG emissions. Industry is an economic sector that requires large amounts of energy, which is often obtained from the combustion of fossil fuels, the cement production process, for example, requires the combustion of limestone and coal, which produces CO2 emissions as a by-product, as well as in producing batteries used for electric vehicles is a series of manufacturing processes in processing fossil fuels into batteries. Industrial downstreaming has a positive socio-economic impact, being able to absorb labor in overcoming poverty and political stability to achieve community welfare, although it is prone to increasing GHG emissions. Increasing the quantity of industry will affect air quality, which is polluted, dry and dirty, industry

[13]Dwi Sartika Adetama et al., "Evaluation of Low Carbon Sustainable Development in the Rice Farming Sector", Jurnal Tata Loka Vol 25 no.1, February 2023, p.68.

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as a source of stationary emissions has a significant effect on air quality. [14]. The use of fossil fuels such as coal and petroleum in the combustion process in boilers can also produce pollutant particles that have an impact on human health and the environment, these particles can be absorbed into the human body through every breath, have a direct physical impact on the lungs and can be absorbed into the blood. [15]The downstream program has a negative impact in the form of environmental pollution, excessive deforestation, and disrupting public health .[16]

Nickel Industry as an example of downstreaming that is currently being carried out by the government. Several Main Challenges in Decarbonizing the Nickel Industry. Several problems that are inhibiting factors in downstreaming (nickel), namely: 1) Limited & non-scalable low-carbon technology options; 2) Installation of PLTS has the potential to cause large-scale land clearing and 3) High investment & operational costs, implementing a decarbonization strategy requires high investment and 4) There are no regulations that require the implementation of decarbonization in the nickel industry, there are no fiscal & non-fiscal incentives for decarbonization (tax exemptions, technology subsidies, ease of licensing, ease of access to green energy, or awards), 5) there are no regulations that allow the distribution of excess green energy to the community through CSR

Deforestation is one of the main causes of global climate change because it removes CO2 sinks and releases carbon stored in tree biomass into the atmosphere, also threatening biodiversity and reducing the capacity of ecosystems to store carbon. In addition, the process of forest burning, both intentional and unintentional, produces significant GHG emissions. Deforestation also reduces the ability of forests to absorb CO2 through photosynthesis, thereby increasing the concentration of greenhouse gases in the atmosphere. The more rapid industrial growth, the greater the potential for carbon emissions produced because most of the energy used still uses fossil fuels. Low-carbon development is a win-win solution in industrial development. [17]Indonesia's renewable energy potential can help support a

[14]Made Wipra Pratistita, et al., "Legal Protection for the Community Against Air Pollution Caused by the Aluminum Recycling Waste Smelting Industry", Vol. 5 No.1 April 2024, p.60

[15]Achmad Sandy Pratama and Didin Agustian Permadi, "The Impact of Emissions from Manufacturing Industry Activities
On Air Quality (Pm2.5, Pm10, Black Carbon and Organic Carbon) in Tangerang City", *Jukung Journal of Environmental Engineering*, 10 (2): 2024, p.7.

[16]Yusuf Al Hafiz et al., "The Impact of Nickel Downstreaming on the Environment and Society", Iqtishaduna: *Scientific Journal of Islamic Economic Law Students*, Vol 6 No.3, April 2025, p.12.

[17]Sri Wahyuning, "Literature Review: Inclusive Industrial Development Based on Low Carbon Development", *Jurnal Sains Edukatika Indonesia* (JSEI) Vol. 4, No. 1, May 2022, p. 62.

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green economy that does not produce carbon dioxide emissions to the environment and achieve net zero carbon emissions.[18]

The Indonesian government has identified the transition to a green economy as a key strategy to boost economic growth and achieve Indonesia Vision 2045. [19]Indonesia has enormous natural resources and biodiversity potential, but is also vulnerable to the impacts of the climate crisis. Therefore, Indonesia must take concrete actions to increase resilience to the impacts of the climate crisis, and build a more economically and environmentally sustainable society. This requires a joint effort from the government, private sector, civil society, and international institutions to address this global challenge with sustainable and inclusive solutions.

Local Wisdom of Indigenous Communities and Low Carbon Development

In every society, whether simple or complex, there are cultural values that have become a system, become guidelines for ideal concepts, which become strong drivers that direct people's lives. Ideal concepts related to life, ways of life that are very closely related to natural resources which are the place where people live and which are the source of life. Long before the birth of the concept of a 'modern state', cultural values have become guidelines for people's behavior in their interactions with fellow citizens and in their interactions with nature.

Indonesia has vast forest wealth which is a carbon bank because forests have the ability to absorb carbon dioxide (CO2) in the process of photosynthesis. This means that forests have the ability to minimize GHG emissions. In the forest environment, there have long been groups of people (customs) who have lived from the forest for generations, they guard and care for the forest because it is their source of life. The attachment of the community around the forest is very close and has a spiritual spirit. To maintain the existence of forests in all regions of the Republic of Indonesia, the local wisdom of the community in all regions that have forests and there are communities living in them is a force in moving the community to participate in implementing low-carbon development. Noble values related to wisdom in environmental management and preservation grow in customs, exist in norms and are maintained in the law (customs) in general of Indonesian society from Sabang to Merauke. Where there is a society, there is a law (custom) that grows which is adhered to and maintained as a regulation to maintain social order and legal order

[18]Aulia Sabila Syarifa Qalbie; Rahmaniah, "The Opportunity to Achieve Net Zero Emissions in Indonesia Through Green Economy Implementation to Address Climate Change", *Global South Review*, Vol 5, No 1 (2023), p. 84.

[19] Kementerian Ketenagakerjaan RI, Green Jobs: Masa Depan Pekerjaan Hijau Di Indonesia, https://majalahsenta.kemnaker.go.id/artikel/green-jobs:-masa-depan-pekerjaan-hijau-di-indonesia , accessed 24 September 2024

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in society, in order to avoid disasters and dangers, which are spiritual and physical, visible or invisible, but believed and trusted from birth until buried with the ground again. In every society, whether simple or complex, there are cultural values that have become a system, become guidelines for ideal concepts, there is the same understanding in almost all indigenous communities in Indonesia, where the relationship between humans and nature is viewed from a religious/spiritual perspective. [20]These noble values are undoubtedly able to be obeyed by the community. Data published by The World Conservation Union in 1997 from around 6000 cultures in the world, there are 4,000-5,000 of them are indigenous communities in rural areas. This sacred dimension is also seen in Local wisdom which is a system of values or behavior of local communities in interacting with the environment in which they live wisely. The criteria for local wisdom related to environmental protection and management consist of: 1. Noble values that apply in the order of community life; 2. Protecting and managing the environment sustainably and continuously, and both of these have the following characteristics: 1) Produced, presented, developed, preserved, and transmitted in a traditional and intergenerational context; 2) Realistically distinguishable, or recognized according to custom, as originating from a customary law community, which preserves and transmits traditional knowledge from generation to generation, and continues to develop and use it in a traditional context within the community itself; 3) Is an integral part of the identity within the community itself.

CONCLUSION

The downstream industry that is currently being promoted by the government has both positive and negative impacts. Economically, it has a positive impact and socially, it is able to absorb labor while minimizing the number of unemployed. However, the negative impact is the construction of many factories that in the process will produce GHG emissions, especially carbon dioxide (CO2). On the one hand, there is a commitment to carry out low-carbon development but on the other hand there are socio-economic needs that must be met. To integrate these two interests, the local wisdom of the community in its closeness to nature, in 'maintaining, caring for and utilizing' natural resources wisely, can be a strengthening and supporting element for low-carbon development. Synergizing the green industry program as an effort to fulfill the commitment to reduce GHG emissions, with noble values related to wisdom in environmental management and preservation. Strengthening the local

[20] Marhaeni Ria Siombo, "Local Community Wisdom from an Environmental Law Perspective: A Study of the Baduy Tribe, Banten Province", *Environmental Law Development* Vol 7 No.1 August 2022, Page 102.

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wisdom of environmentally friendly communities, by integrating it into regulations, will be able to synergize government policies related to industrial downstreaming and low-carbon development. Because in principle, sustainable development is to harmonize economic, ecological and socio-cultural aspects, to achieve the welfare of the Indonesian people.

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