

The Effect of Long-Term Plantation Land Investment on The Environment in Indonesia

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Abstract. Plantations play an essential role in Indonesia. Plantation investment is an alternative that should be considered, given the large number of people working in this field. The method of this article is the normative legal research method. This study finds that apart from potentially increasing the trade balance through the products it produces and providing promising opportunities, plantation investment impacts environmental exploitation, resulting in several adverse complications, including ecological damage including the loss of tropical forests in Indonesia. This study concludes that the expansion of investment in the plantation industry in Indonesia not only has the potential to be advantageous but also has an effect on the environment. Plantation land can be a safe investment because it has a positive correlation with inflation, and many people are employed in this industry in Indonesia. It has been established that plantations still dominate Indonesia's investment potential. Its development depends on how best to use already-existing natural resources to spur growth.

Keywords: Plantation, Law, Investment

1 Introduction

As one of the world's largest developing countries, Indonesia has the most densely populated population, which automatically requires high growth to achieve eligibility per capita income. One of them is from the Gross Domestic Product. Gross Domestic Product includes government spending, household consumption, exports, imports, and investment. Investment is one of the components of the national development process that encourages Indonesia to contribute to the Indonesian economy by utilizing natural resources, humans, capital, technology, and other means of production.

The plantation sector is one of the contributors to the Indonesian economy. Plantations produce products that are consumed domestically (sugar, cloves, cotton, etc.) as well as essential foreign exchange products such as oil, rubber, palm kernel, coffee, cocoa, tobacco, pepper, and tea. In addition, plantation activities play an essential role in developing the people's economy, regional development, and supporting factors for developing renewable energy. The plantation sector has proven capable of opening a center for economic growth through employment. Therefore, the government encourages investment activities to invite domestic and foreign investors.

Undoubtedly, there have been both positive and negative effects of the fast-growing plantation

sector in Indonesia. This facility's economic value is significant and competitive, and its beneficial effects can help the country's economy. The plantation sector is vital because it provides employment and other resources for local people. Despite significantly contributing to the economy and welfare of the Indonesian people, the plantation sector faces increasing challenges, especially in environmental protection.

Based on this background, the author will examine further how investment in plantations, whose benefits are guaranteed for the Indonesian economy, but in fact, it also affects the utilization of the environment. So, this study formulated the problems: What are the potential developments for investment in plantations and the environment in Indonesia? And how does long-term investment in plantation land affect the environment in Indonesia?

2 Method

The method of this article is the normative legal research method. Literary law research is a normative juridical research method that involves an assessment of literature or secondary data through deductive reasoning (a way of thinking in drawing conclusions drawn from something general in nature that has been proven true, and the decision is intended for something special). This writing used data collection strategies such as literature or document studies to obtain secondary data related to the topics presented, such as books, legal journals, and research results.

3 Results and Discussion

3.1. Plantation Development

Plantations, according to Law Number 18 of 2004, are all economic activities related to certain plants, both in the processing and marketing of goods and services originating from these plants, which are carried out with the help of science, technology, capital, and management and produce welfare for plantation business actors and the community. Its implementation aims to increase the income of the community and the state, which will create jobs, meet the consumption needs of the community, and sustainably optimize resources. According to Article 4, the plantation business serves economic, ecological, and sociocultural purposes.

In addition to food and horticultural crops, plantation commodities are very diverse. Thus, the diversity of plantation commodities is very diverse, so it is hoped that it will further develop by discovering the benefits of certain plants that can be used as raw materials in certain businesses. Oil palm, coconut, rubber, sugar cane, tobacco, quinine, tea, coffee, and cocoa are the primary plantation commodities. The superior plantation commodities in an area include pepper in Lampung Province, cinnamon in West Sumatra Province, cloves in North Sulawesi Province, and nutmeg in Maluku and North Maluku Provinces. Plantations are classified as smallholders and large estates based on their management. Smallholder plantations are the cultivation of plantation crops carried out by the people/smallholders, where most of the produce is for sale in a limited area and is cultivated on a large scale. Large plantations, namely plant cultivation businesses carried out by State-Owned Enterprises (BUMN) or the private sector, are sold with a huge concession area. In addition to food crops and horticulture, plantations can be interpreted as a plant cultivation business carried out by the public, government, or private sector, depending on the type of plant. Plantations can be defined as plant cultivation businesses aimed at producing industrial materials (for example, rubber, tobacco, cloves, and cotton), food

industrial materials (for example, coconut and oil palm), and food and beverage industrial materials (for example, sugarcane, tea, coffee, chocolate, and cinnamon). Another difference between smallholdings and large estates is that smallholdings are owned by farmers with a relatively small area, often 1-2 ha. One garden unit or garden unit (afdeling) in a large estate can cover tens or hundreds of hectares. According to this definition, gardens are not limited to plantation commodities; they can be coffee plantations (plantation commodities), salak gardens (horticultural commodities), or both.

Plantation development targets are set by the Directorate General of Plantations to encourage achievement of the national development agenda and plantation development targets. The following are the medium-term plantation development targets:

- a) Increasing plantation production, productivity, quality, added value and competitiveness;
- b) Increasing the income and welfare of plantation communities;
- c) Increase state revenue and foreign exchange from the plantation sub-sector;
- d) Support the provision of food in the plantation area;
- e) Support the development of bio-energy by expanding the role of the plantation sub-sector as a provider of bio-energy;
- f) Fulfill consumption needs and increase the supply of raw materials for domestic industries;
- g) Optimizing wise and sustainable resource management and promoting regional development:
- h) Increase plantation human resource capacity;
- i) Expanding the plantation sub-sector as a source of employment;
- j) Improving the quality of organizational services

Plantations are a producer of trading commodities, mostly for the export market.

Plantation commodities are export commodities related to plantation commodities as export-oriented trading commodities. Until now, exports of CPO, palm oil, crumb rubber, coffee beans, tea, cocoa, pepper, tobacco and other plantation commodities are important sources of foreign exchange for Indonesia. Production of cane sugar in particular is still needed to meet domestic needs both for family food needs and industrial needs, most of which is imported refined sugar.

3.2. Investment in the Plantation Sector

The Investment is a person's or company's decision to buy a factor of production which will be used to gain benefits and guarantee the long-term sustainability of a person or company, from the results of the goods and services produced. Or in a simple sense, Investment is an investment with a period of time and the emergence of certain risks that are considered.

Investments must be implemented innovatively, imaginatively, creatively, and dare to take risks. To make an investment in any field, it is necessary to know the long-term prospects of the business being undertaken. Because, the main goal of everyone investing is to get profits in the future by minimizing risk.

In increasing investment potential and opportunities, promotion has an important role to provide information regarding investment potential and opportunities for investors and business actors.

To obtain information, investors can obtain it from various increasingly sophisticated communication tools (Elizabeth, 2019). In addition, several strategies can be used to attract investment, people and industry:

- a) Image Marketing
- b) Information associated with an icon or feature. Consists of unique ideas, beliefs, or expressions that are owned.
- c) Attraction Marketing
- d) Is an attraction to attract capital from investors based on real action due to events or based on location.
- e) Infrastructure Marketing
- f) Infrastructure marketing from quality in the form of reach of capital, physical resources, ease of access, and others.
- g) People Marketing
- h) Marketing by promoting from person to person or through famous influential people from the government and so on.

Type	Total Production of Indonesian Plantation Plants (Thousand tons)		
	2019	2020	2021
Palm oil	47120.20	48296.90	46223.30
Coconut	2839.90	2811.90	2853.30
Rubber	3301.60	2884.60	3121.30
Coffee	752.50	753.90	774.60
Cocoa	734.70	713.40	706.50
Sugarcan e	2227.00	2130.70	2418.40
Tea	129.90	127.90	145.10
Tobacco	269.80	261.40	236.90

The plantation sub-sector is one of the agricultural sub-sectors that can increase the country's foreign exchange and absorb labor. The government has prioritized the plantation sub-sector because of its high desire to be exported to industrialized countries. To develop the potential of the plantation sector in Indonesia and invite investors to invest, it is necessary to focus on efforts to maximize self-sufficiency in food, meet the nutritional needs of the community, increase export commodities and industrial materials, create employment opportunities to improve people's lives by implementing updating and improving quality, production, and marketing, as well as developing plantation business.

Plantation investment is an option that should be considered, considering that many Indonesians work in this industry. Plantation land has been shown to have a positive relationship with

inflation as an aggregate asset class. The value of plantation land has historically increased faster than inflation, making it a good inflation hedge and can make capital safer. These benefits may appeal to investors concerned about the government's inflationary actions (unprecedented increases in the money supply and monetization of government debt). Plantation land can provide investors with consistent income.

The table above shows that plantation production in Indonesia is increasing every year. Plantation commodities such as coconut, palm, cocoa, coffee, tea, and essential oils are part of the agro-industry that can encourage exports of value-added products from domestic processing companies. The export performance in the first half of 2022 was USD 14.21 billion or 56.6% of the total agricultural industry exports of USD 25.21 billion (Agus, 2022). With the widening of the types of downstream products for these commodities, from 54 kinds of products in 2011 to 168 in 2021, exports of palm products alone account for 89% of other plantation commodities. Then, the rubber industry reported natural rubber production, which reached 3.1 million tons in 2021, contributing 22% of the world's crude rubber production of 14 million tons. Tea is another superior plantation product. As the seventh largest tea producer in the world, Indonesia exports green and black tea to 58 countries and ready-to-drink (RTD) tea to 33 countries.

3.3. Plantation Investment Potential

Indonesia is in the tropical region, so Indonesia's plantation sub-sector runs optimally because of the level of rainfall, which is supported by adequate exposure to sunlight. This is also a factor that plantations significantly contribute to in this country. Indonesia has always dominated as the largest producer of tropical agriculture, one of which is from primary commodities such as palm oil, cinnamon, cloves, coconut oil, vanilla, rubber, and nutmeg—not left behind also from other items such as cocoa, tea, coffee, tobacco, rice, and cassava. Of the many commodities produced from these plantations, this is also supported because Indonesia has ideal soil fertility so that all forms of agriculture and plantation sub-sectors can be cultivated in Indonesia.

Being the backbone for the country's foreign exchange contributors and a means of employment, investment in plantations in Indonesia is very promising because it can potentially increase the trade balance of the products it produces. The plantation sub-sector needs to maximize export performance from plantation commodities (Darmawan, 2021) by following up on comprehensive sustainable development. This is realized by strengthening policies from all sectors that strengthen national food, paying attention to the growth of plantations whose quality must be improved, developing economic diversification along with rural infrastructure, and procuring natural resources such as renewable energy.

As stated in Law Number 39 of 2014 concerning Plantations, plantations as the basis for the state's foreign exchange are organized to ensure that business actors and the community can be adequately and sustainably protected. The focus is that the people are prosperous and open up opportunities from expanding employment opportunities to increasing productivity through quality and competitive production results. Implementing good plantation management pays attention to the principles of environmental function sustainability, fairness, local wisdom, and other sustainability principles.

Plantation Investment Opportunities:

1. Guaranteed Producer of Industrial Raw Materials

As is known, plantations have a major role in economic growth as well as the country's foreign exchange. Plantations have economic value in producing food, sources of special products that are promoted to certain target consumers (coffee and essential oils), industrial raw materials and energy producers (Ramadhani, et al. 2019). The scope of plantation crops, based on the product approach produced as industrial raw materials, can be classified as biofuel-producing plants (coconut, oil palm, and jatropha), fiber-producing plants (cotton, kapok, rosella), spice-producing plants (pepper, cloves, nutmeg, cinnamon), and others.

2. Encouraging Regional Development

In order for the regional development approach to work properly and on target, it must be seen in detail the potential diversity of its commodities (Wang et al., 2019; Zhou et al., 2020; Aboal et al., 2020). Building a plantation business is not only centered on the agribusiness sector, but also leads to regional development. Thus, in addition to benefiting from the production and added value and export of commodities, they can benefit from the utilization of local resources by developing a plantation partnership program. Thus, the existence of these efforts can have a multiplier effect that is influential for regional development.

3. Agro Tourism Development

The target market for agro-tourism is foreign tourists who have a history of plantations in the past, such as the Netherlands, Europe and Japan. In order to increase side income, plantation agro-tourism is one of the right products in the context of diversification. The development of agro-tourism in Indonesia features the plantation sector to prepare attractive tourism products and synergize with other tourism sectors. Tourism is expected to be a driving force for the regional economy and a foreign exchange earner for the country. This is because people's interest in visiting agro-tourism locations is increasing with the existence of many other businesses such as transportation, restaurants, culinary, hotels and other performances.

3.4. Utilization of Plantation Natural Resources

As mandated in Law No. 18 of 2004 concerning Plantations, sustainable Natural Resources must be implemented optimally. These natural resources include land, water, air, and what is contained therein. The rise of Plantation Investment affects natural exploitation, which results in negative consequences from plantation development, namely environmental damage. This attracted national and international ecological activists who raised ecological issues, which were then used as plantation commodity trade issues. The world of plantation exports in Indonesia is threatened because they are not environmentally friendly. To build a good image for environmental conservation and maintain a strategic and ideal supply of raw materials,

importing countries or companies carry out a strategy by making eco-labeling policies and certification bodies.

Utilization of natural resources by the environment's carrying capacity is profitable because it is an effort to use natural resources to meet the needs of human life. Plantation development zones are usually located near forest areas, including conservation, protection, and production forests. The plantation is a vast land development company. Issues arise when plantation expansion intersects with forest areas, and plantations are labeled as deforestation or forest encroachment. Even though the clearing of plantation land is not included in the state forest area, other countries will still see and criticize plantations' clear forests, which are habitats for wild animals such as orangutans, tigers, elephants, rhinos, reptiles, and birds. Forest clearing also removes biodiversity that cannot be valued economically. Forest stands previously occupied by various flora and fauna then turned into monospecies such as oil palm, sugar cane, coffee, cocoa, or rubber. Large plantation companies generally carry out land clearing on a large scale. This is what many environmental activists criticize.

Meanwhile, the government continues to issue good Cultivation Right Permits for plantation investors, especially oil palm. Even though the clearing of plantation land is not included in the state forest area, other countries will continue to pay attention and criticize plantations because they remove forests home to wild species such as orangutans, tigers, elephants, rhinos, reptiles, and birds. Deforestation also destroys biodiversity, which cannot be valued economically. Once home to various flora and wild animals, forest stands are now dominated by monospecies such as oil palm, sugar cane, coffee, cocoa, or rubber. Large plantation companies are usually responsible for large-scale land displacement. This is something environmental activists have denounced. Despite this, the government continues to grant lucrative Cultivation Rights permits to plantation investors, especially those interested in oil palm.

Then, is there an alternative to provide income for the community if the forest stands cannot be used for smallholder plantations? The problem is that Indonesia's forests are considered the world's lungs and a gathering place for various species that must be preserved. Is it fair for developed countries to emit large amounts of carbon while developing countries are under pressure to conserve forests as carbon sinks instead of turning them into plantations? Experts propose alternative ideas such as:

- a) Developing community plantations that are more environmentally friendly
- b) Encouraging plantations, which are a mixture of non-timber and timber-producing commodities known as agro-forestry
- c) Develop ecotourism
- d) Following a carbon trading scheme

3.5. Effects of Long-term Plantation Investment

There have been several plantation investigations, especially oil palm plantations, both internationally and domestically. There are competing viewpoints that put health and the environment first. However, there is also discussion about positive perspectives, especially from oil palm plantation stakeholders. We need to assess the magnitude of the problem and determine how best to deal with it. Frankly, it is also understood that oil palm plantations impact nature. We cannot ignore that oil palm plantations employ people and contribute to our economy. The

success of the development of a region can be measured, among others, by the level of economic growth, which is only one crucial indicator that must be considered. However, the rapid economic activity driving expansion could negatively affect the environment. All countries, including those belonging to the Association of Southeast Asian Nations (ASEAN), are concerned about environmental damage. The ecological footprint is a measure of environmental damage. Carbon dioxide emissions are often used as a proxy for ecological damage in scientific research. However, CO₂ emissions are only one contributor to this problem.

The Indonesian government is not concerned about ensuring that domestic companies involved in all stages of palm oil production (from planting to refining) comply with national palm oil laws and certification mechanisms. However, the government continues to push for increased palm oil production, a vegetable oil derived from the fruit of the oil palm tree. The government must fulfill its responsibilities in human rights and climate change and its oversight of domestic companies through regulation.

Undoubtedly, there have been both positive and negative effects of the fast-growing plantation sector in Indonesia. This facility's economic value is significant and competitive, and its beneficial effects can help the country's economy. The plantation sector is vital because it provides employment and other resources for local people. Despite significantly contributing to the economy and welfare of the Indonesian people, the plantation sector faces increasing challenges, especially in environmental protection. The conversion of forest land, particularly peatland, into plantations is a long-term consequence of the rapid growth of this industry.

Thus, land degradation occurs, and agricultural output declines. Deforestation involving fire increases the severity of greenhouse gas impacts on the climate because of the additional carbon emissions caused by burning land. Because of this, the sun's heat is stored on Earth, and the planet as a whole warms up. If this continues, it will change the global climate.

Rural communities living on or near land converted to plantations in Indonesia have been violated by property rights, livelihood rights, and other human rights by government policies targeted at economic growth. Indonesia's efforts to reduce carbon emissions and prevent the worst effects of climate change have been hampered by its approval to convert peatlands to commercial agriculture, resulting in the loss of one of the world's most significant carbon sinks. For example, palm plantations and palm oil, as the primary commodities driving economic growth in Indonesia, make most of the world's palm oil come from Indonesia. The majority of this oil palm comes from the provinces of Riau, Kalimantan, and Sumatra, all of which have been the main targets of transmigration initiatives in the past. More than half of the world's crude palm oil (CPO) was produced in 2019, and the country's production is twice that of Malaysia, the next largest producer. The European Union (4.6 million), China (6 million), and India were the leading destinations for Indonesian palm oil exports in 2019 (4.8 million).

The monoculture approach used in oil palm cultivation requires land clearing first. Since the growth of these plants will inevitably result in the extinction of other plants, the monoculture pattern is even more damaging to the environment. The current biodiversity will suffer if the area being destroyed is a forest. Ecosystems become complex and mutually beneficial when biodiversity is present.

The loss of natural actors (such as those in the food chain) is just one example of how ecological

disturbances can damage the natural order (Silvia, Astuti, and Rahmayani 2021). If an organism at the top of the food chain disappears, the population of organisms at the bottom of the food chain will grow without natural predators to guard it. Population explosion can be a problem for some people. Populations that cause problems are classic cases of pests. The clearing of forest areas, not only land for oil palm, is sometimes followed by burning to speed up the process. Smoke from forest fires (or other burning) is standard, and the consequences are well known. Agricultural and plantation practices, such as fertilizing, transporting crops, cultivating land, and other activities, have damaged the land that has been planted. This is because, physically, the soil becomes textured due to these practices. Rigid and water-repellent; can't hold liquid. Herbicide and pesticide residues will accumulate in the ground due to planting work. Likewise, using chemical fertilizers instead of organic fertilizers will contaminate groundwater and increase soil acidity. The plants used to make oil absorb a lot of water. Land converted to oil palm plantations will have less access to groundwater. Because of this, less water will be available for people and plants. Once an oil palm plantation is up and running, it will be difficult for farmers to grow crops due to the reduced water in the soil. Abandoned land left without regard for its long-term effects may eventually become arid.

Conflicts over land and other natural resources are increasing in Indonesia, and plantations significantly contribute to these problems. There are various possibilities. Disputes arose between residents and plantations, workers and employers, landowners, and the state. The scope of conflicts can also increase if they involve third parties, such as governments, corporations, non-profits, or even other communities. Disputes between companies with overlapping land permit issuances can further complicate this widespread conflict, as it can arise between plantation companies, gatherings, and other parties. The situation is more complex if the competing business is an international company.

The emergence of disputes is exacerbated by the fact that provincial and district governments have different ordinances, each of which can be interpreted differently. Local regulations, let alone regional or district rules, may or may not comply with national government policies. Conflict is unavoidable in these circumstances. In addition, government oversight needs to be stronger in these plantations. The government is cautious about issuing permits but rarely dares to revoke licenses from plantations that break the rules. Regulatory issues aren't the only ones exacerbated by frequent land-use changes. For example, the area may have previously been used for plantations, but now, a new policy is designating it as a protected area.

Many plantation businesses exacerbate existing tensions through ineffective community and government outreach. Local social culture needs to be understood, and the issue of purchasing communal property must still be resolved. The company's decision to prioritize the development of nucleus estates over plasma plantations adds to the delay in managing the plantations. Communities can be directly affected by threats or loss of agricultural land, fisheries, and forest products (timber and non-timber), forced displacement of people, disputes between neighbors, destruction of historical and cultural landmarks, and environmental pollution, leading to disease. Moreover, they are disturbing the ecosystem and the arrest and prosecution of community and customary leaders.

The company suffers from the cessation of its operations, which results in a loss or decrease in revenue and pressure from many parties, which can lead to a business termination. Of course, this is terrible news for everyone involved, not just the business owner. Loss of state revenue

from PAD (Regional Original Revenue) or taxes, as well as the accompanying social vulnerability issues and neglect of land that impacts the environment without returning to its original function before it became a plantation.

Many countries in the world, including Indonesia, are still developing. Like many other developing countries, Indonesia continues to rely on exports of renewable and non-renewable natural resources. The enormous value of oil palm makes plantations vital to the Indonesian economy. Soils in Indonesia are also ideal for growing oil palms. Indonesia's geological conditions are one reason this country's soil is so fertile. The number of active volcanoes in Indonesia, which can emit volcanic ash at any time, significantly impacts the country's soil fertility. Volcanic ash will increase the fertility of Indonesian soil. Naturally, concerns have been voiced in response to the large oil production. What about the remaining plantation processing waste? What harm will waste do to nature? Some of the questions mentioned above are enough to describe the current concerns of society as a whole. The abundance of natural resources is like having two razors at your disposal. There is no denying the great benefits it offers. On the other hand, if waste is not handled correctly, it can damage the environment.

Rapid economic activity, although beneficial for development, can have negative environmental consequences in the form of damage and pollution. ASEAN countries, like other countries in the world, are concerned about environmental damage. Developing countries are familiar with investing in a country to help its economic growth. Foreign investment is significant during the early stages of development in developed countries. Lack of financial resources is a hallmark of poor countries. Capital stock and the speed of creation of new capital are low. A country's economic growth can be accelerated with the help of foreign investment. Poor infrastructure, inefficient bureaucracy, limited access to funds, unfavorable labor regulations, unstable policies, unfavorable tax regulations, lack of educated workforce, inflation, corruption, foreign exchange regulation, unstable government, excessive taxes, poor work ethic, crime, and theft are the main factors driving the growth of FDI (Foreign Direct Investment) in Indonesia.

There is a significant gap between the size of developing countries' investment capital requirements and the size of the domestic financing pool in many developing countries. In other words, it is difficult for a developing country like Indonesia to save enough money to invest. Since the level of investment in the economy is affected by accumulated savings, low savings is a significant concern. Therefore, domestic savings must still be balanced with capital inflows from outside (capital inflow) without reducing the need for the government and society to continue building domestic savings to fund expenditures deemed necessary to reach the momentum stage in development.

Forests in Indonesia are sometimes referred to as "one of the lungs of the world" because of their role in providing oxygen for organisms that consume carbon dioxide (pollutants) and convert it into oxygen (human needs). Forests' economic, social, cultural, and environmental benefits are undeniable, making them an invaluable natural resource (Rivai and Anugrah 2016). Loss of forest habitat leads to extinction, which has several negative consequences, including increased greenhouse gases. Land degradation due to logging and land conversion for plantations is one of the five most significant environmental problems that have surfaced. The palm oil business is a primary source of Indonesia's export revenue. It employs a large number of people, contributing to the expansion of the country's sustainable oil palm plantation landscape.

Deforestation, the destruction of forested land, is a complex problem to solve, so it is essential for different parts of society to work together and share information to convince local people to participate in efforts to prevent deforestation. Threatening all forms of life, deforestation occurs when forest land is converted into something else, such as cities, farms, mines, or plantations. Uncontrolled forest fires, destructive logging, land clearing for plantations, fuel dredging, and the development of transmigration areas have all contributed to Indonesia's deforestation problem, which has far-reaching impacts on the country's economy and the livelihoods of its citizens, who depend heavily on forest resources.

The forest area has decreased due to land conversions for infrastructure, cities, agriculture, mining, and plantations, all of which have significant impacts, especially global warming, and pose a danger to all life forms. Rising sea levels naturally can cause the inundation of productive coastal areas and impact the livelihoods of coastal communities. Warmer sea water will affect marine life and threaten coral reefs. Various diseases that can reproduce through water are only some of the adverse effects that can arise from high emissions.

The economic, social, and environmental benefits provided by plantations are not the exclusive property of the agricultural industry. SDGs benefit economically, socially, and ecologically from plantations because of their versatility. Economically, the plantation sector has contributed to growth (both national and regional), and foreign exchange and state revenues have contributed to rural development and poverty reduction. Carbon dioxide and oxygen cycles, degraded land, soil and water, land biomass and carbon stocks, greenhouse gas emissions, and degraded peatlands are all impacts caused by plantations.

The Indonesian government's excessive investment in the plantation industry has created several complications. The widespread conversion of land to plantations is linked to several environmental problems, including the loss of Indonesia's tropical forests and the extinction of many of the country's unique species. In addition, the emergence of significant issues faced by people who live around plantation areas is usually triggered by the establishment of plantations. Effluent from plantations has been known to contaminate water supplies, causing a continuous decline in water quality and quantity. Indeed, the plantation sector is only one of many that will feel the impact of reduced community water potential.

The development of large-scale plantations inevitably leads to environmental degradation. Soil absorption of chemical fertilizers and pesticides is the cause of the emergence of an unhealthy environment. The remaining fertilizer will flow into the river, destroying the ecosystem and the people who live there. Given that river water is often used for household purposes. In light of this, it is tragic that most landowners in and around plantations are willing to sell their property for conversion to plantation land. They often give land to plantation companies in exchange for promises and advertisements that the company will bring wealth to the local population. They are unsure whether local people will also be negatively affected by environmental damage.

In addition, the loss of customary territories and the depletion of natural resources and local wisdom are also risks associated with clearing land for plantations. In other words, fewer individuals can take over farm and plantation properties in the area. Ultimately, they could not support themselves and were forced to work for a plantation company that exploited their wealth. In general, plantation development will destroy forests, increase the risk of forest fires, floods, water scarcity, and water pollution, reduce soil fertility, and reduce biodiversity.

Communities that grow near plantations will be the first to feel the impact. For this reason, we must adopt a future environmental management strategy that is astute, environmentally friendly, and socially inclusive.

4 Conclusion

Among the various agricultural sub-sectors, the plantation sector can increase national income and increase employment, maximize agricultural output, provide basic needs, encourage exports and availability of industrial raw materials, create new jobs, and improve the standard of living for everyone is the goal of this initiative. Plantation land is positively correlated with inflation, and many people work in this sector in Indonesia, so this can be a guaranteed investment. It is proven that plantations still dominate investment potential in Indonesia. Developing it depends on how the utilization of existing natural resources can be optimized to accelerate development.

The development of investment in the plantation sector not only has the potential to benefit but also has an impact on the environment in Indonesia. Excessive investment by the Indonesian government in the plantation industry has created several complications. One of them is in the main plantation commodity, namely oil palm. Rural communities in Indonesia living on or near land converted to oil palm plantations have been denied property, food, and housing rights by government policies designed to spur economic development. The Indonesian government's plan to open up more forest areas for industrial agriculture runs counter to the country's stated goal of reducing carbon emissions and adapting to the impacts of climate change. Plantation practices such as clearing land, harvesting crops, plowing fields, and other similar activities have damaged ecosystems that have been degraded. Likewise, chemical fertilizers can cause soil erosion and increase crop yields.

The geological conditions in Indonesia are one of the reasons why the land in this country is so steep. Rapid economic activity, while aiding development, may have unintended consequences. The significant advantages it provides cannot be discounted. Indonesia's forests are referred to as "one of the most valuable forests in the world." Forests' economic, social, cultural, and environmental benefits cannot be overstated, making them an invaluable natural resource. Deforestation, or clearing forest land, is a complex problem to solve when forest land is converted into something else, such as cities, mines, or plantations. Therefore, many sectors of society need to collaborate and share information to convince residents to take part in efforts to stop the problem.

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