



COMPARISON OF GREEN ECONOMY IMPLEMENTATION IN INDONESIA, CHINA AND AFRICA

1st Budiyansa
post graduate
tadulako university
palu, central sulawesi
budiyansamatra@gmail.com

2nd Hendra Iskandar
post graduate
tadulako university
palu, central Sulawesi
hendraisikandarh@gmail.com

3rd Sukirman
post graduate
tadulako university
palu, central Sulawesi
qirman.syahputra@gmail.com

4th Hirman Madjid
post graduate
tadulako university
palu, central Sulawesi
immang110508@gmail.com

5th Lathifah Lanonci
post graduate
tadulako university
palu, central Sulawesi
lathifahal@gmail.com

This study aims to see the implementation of the green economy concept in Indonesia, China, and Africa. The method used is the literature review. The result of this study is that there are differences in the application of the green economy concept in Indonesia, China, and Africa based on the needs and priorities of their respective countries, namely 1) Indonesia focuses a lot on socializing and increasing public knowledge; 2) China which focuses on forest protection and conservation; 3) Africa focuses on forest improvement and community economic development. (Abstract)

Comparison, Implementation, Green Economy (key words)

I. INTRODUCTION

Green Economy is a concept of economic development that still pays attention to maintaining natural resources. That is because the existing natural resources are minimal while the number of people who use them is increasing. On the other hand, the use of natural resources causes many environmental problems because they are not appropriately managed and cause disasters everywhere such as global warming that increases the average temperature of the atmosphere, sea, and earth's surface.

Agnes, et al (2015), in their research, water pollution comes from household waste, industrial waste, and urban waste. In the air, Budiyono (2001), contains heavy metals that pollute the air and harm humans in the form of diseases of the respiratory tract, lowering the level of human productivity and reducing agricultural productivity. Akhmaddhian and Hanipah (2015) that contamination of the soil causes the quality of the soil to decrease and endangers living things that use the land.

In China, Kang Yan, et al (2022) explained that the places contaminated with heavy metals in China include large mining areas, industrial zones, irrigation waste, and demolition sites which are very serious in Southeast China than in Northwest China. In Africa, Mvovo (2021) explains that water pollution occurs in all regions of the East, West, North, and South African continents. This happens because

of the wrong management of plastic waste management and poor water waste management infrastructure.

To minimize or even eliminate the adverse environmental impacts of the world's economic activities, cooperation from all parties is needed, including the government, the private sector, and the community. This is because natural resources need to be preserved for future generations to use.

II. CONCEPTUAL

A. Concept of Green Economy

Green Economy is defined as an economic activity that can create people's welfare through the limitation of natural resources and low carbon. The Indonesian government has also prepared a Green Growth program as a mitigation measure to deal with climate change. This step includes the policy mix, in substance, institutional, and financing. One form of this step is the substitution of the climate change aspect in the 2020-2024 National Medium-Term Development Plan (RPJMN).

Indonesia is one of the regions in Southeast Asia which is included in the category of developing countries. In its development, the government is intensively carrying out national development that is multidimensional or covers various aspects. According to Moesa (2002) "Development is an effort to consciously utilize the environment to meet the needs of human life to improve life and welfare". Therefore, economic activities and the environment are closely related to each other.

However, in its development, there is an imbalance between economic activity and the environment. Economic development tends to lead to the exploitation of natural resources. The environment that is getting damaged little by little is starting to be felt by the world community. Various international forums were held to discuss the issue, one of which was "the UN Sustainable Development Rio+20 conference located in Rio de Janeiro, Brazil which produced two major themes, namely the green economy and

institutional framework for sustainable development” (Jakarta Newspaper, 2012).

The concept of green economics can also be applied in the development of tourism goods, this is one of the efforts to protect and preserve the environment. Green Economy brings changes in tourism development because tourism development is generally only focused on increasing the area to the exclusion of environmental sustainability.

According to some experts, the application is an act of practicing a theory, method, and other things to achieve certain goals and for an interest desired by a group that has been planned and arranged in advance (Tomuka, 2013). The definition of green economy according to the green economy training offer letter No. 0317/P.01/01/2003 issued by the Ministry of National Development Planning is "A new economic order that uses less energy and natural resources". So, the application of a green economy is to apply a new economic concept that is oriented towards improving the economic aspect while still paying attention to environmental sustainability in development activities.

One form of implementing green economics for tourism development to realize environmentally sound development is as follows:

1. Application of environmentally sound development principles
 - a. The principle of intergenerational justice
Implementing the principle of intergenerational justice embodied in the development of tourist villages is one of the right ways to reduce environmental problems that arise, so that the next generation, as heirs of all potential, both natural resources and artificial resources, will continue to feel the benefits.
 - b. The principle of justice in generations
Soil degradation and climate change have an impact on decreasing productivity, which is a form of problem that occurs in one generation. The solution to soil degradation by replacing the use of artificial fertilizers with organic fertilizers has not been fully implemented. Therefore, the principle of justice in one generation has not yet been fully achieved.
 - c. The principle of early prevention.
The problem of soil degradation which has an impact on decreasing apple productivity has led to a step, namely the supply of organic fertilizer to farmers.
 - d. Principles of protecting biodiversity.
Biodiversity is an important factor to maintain a balance between nature and living things. To maintain the biodiversity of existing villages, namely the biodiversity of flora and fauna, is to form a tourist village.
 - e. Internalization of environmental costs.
One of the principles of environmentally sound development that has not been implemented by the Government is the internalization of environmental costs.
2. Application of green economy principles

- a. Prioritizing use value, intrinsic value, and quality, utilizing non-governmental funds. It can be seen that a small initial capital can produce huge benefits, only by utilizing the natural beauty and potential of the local village. This is a manifestation of economic activities that are in harmony with environmental conservation without destroying and exploiting natural products so the community can improve its economy.
- b. Following the flow of nature. A tourism village is a tourist attraction that utilizes the potential of the local environment. The environmental potential that is utilized, namely natural resources can be renewed.
- c. Garbage is food
Garbage is an important thing that must be handled, especially in a tourist attraction.
- d. Neatness and diversity of functions
In the development of tourism objects, many involve various actors in it. In addition to the community, the government and the private sector also have their respective roles. However, each actor has his portion and the community plays the biggest role in developing tourism based on community empowerment.
- e. Appropriate scale/linkage scale
The operational scale by turning a village that has unique natural potential into a tourism village is indeed appropriate. However, the benefits of the existence of the tourist village have not been able to touch all circles of society. There are still farmers and other communities who feel that there is no transparency in management, to the lack of packaging of existing tourism packages and incomplete facilities.
- f. Diversity
Kampung Wisata offers various tour packages that can be enjoyed by visitors from all walks of life. Parents who are not strong anymore when walking far, can enjoy fruit-picking tour packages, horse riding, or enjoy art tours. Meanwhile, for children to adults, you can enjoy educational tour packages, milking cows, outbound, and flying foxes. However, the diversity in fruit-picking tour packages has decreased.
- g. Self-awareness, self-organization, and self-design of tourist villages are aimed at improving the welfare and creativity of rural communities in processing and utilizing existing local potential. However, this is still not comprehensive, because the majority of rural communities are still traditional and unfamiliar with tourism activities. So there are still people who do not participate in the use of tourism activities because people are confused about their role.
- h. Participation and democracy
The community has applied the principles of participation and democracy. This can be seen in the community that initiated the formation of a tourist village, always involving the community in every decision for the development of a tourist village.

Community participation is a major aspect of the success of village development.

- i. Creativity and community development. Creativity and community development in Indonesia are still lacking. The creativity and innovation of the community to manage and develop their village by packaging tourism packages as attractive as possible are still not visible.
- j. Strategic roles in the artificial environment of landscapes and spatial design. Strategic roles in the artificial environment, landscape, and spatial design, have not been fully implemented in tourism development. When viewed in an efficient spatial arrangement so that the conservation of nature can continue, it has been implemented, with a comparison of the forest area which is larger than the residential area. However, there are still some spatial arrangements that are not appropriate. Such as the placement of each tour package that do not have directions and signage. As well as outbound places that are still not well organized.

B. Green Economy Implementation in Indonesia

Green economy policy in Indonesia is based on Government regulation Number 46 of 2017 concerning Environmental Economic Instruments. There are several sectors in Indonesia's Green Economy Policy, namely Energy, Waste, IPPU, Agriculture, and Forestry. The green economy has been implemented in various sectors such as the environment, tourism, employment, and small and medium industries. According to Priantoko, et al. (2021) The Bali Clean and Green Program in the Province of Bali which carries the concept of a Green Economy is very influential in the tourism sector. Various policies, both central and local governments, support this program. Various certifications related to the green economy have also been issued. In contrast to what happened in the Kungkuk Tourism Village, Batu City, according to Sari, et al, (2014) that the application of green economy principles has not been implemented properly, is indicated by the application of justice in one generation, internalization of environmental costs, waste is food, self-efficacy, creativity, and community development. This is due to the factors of human resources, infrastructure, and culture in the community in the area.

The environmental sector applying the principles of a green economy has both opportunities and challenges in Indonesia. According to Erwinsyah (2021), there have been many green economic policies in the form of laws and certifications that have been made and are in the implementation stage. The challenge in implementing a green economy to achieve Indonesia's Zero Emission commitment in 2060 is constrained by the provision of green skilled workers. As for the opportunities in implementing a green economy and supporting the preparation of a green skilled workforce, many have succeeded but have not been supported by regulations from the Indonesian government, still based on global environmental issues.

The 3R concept (Reduce, Reuse and Recycle) is part of the implementation of the green economy in Indonesia in

the small and medium industry sectors. Green City Development Program (P2KH), there are three main pillars in sustainable development in terms of economic growth, social sustainability, and environmental sustainability. According to Antasari (2019) that the 3R program implemented in Kediri Regency is the Waste Bank program which is one of the applications in the green economy, in addition to socializing the use of plastic equipment, and its impact on the environment. The production process carried out by small and medium industries is certainly not following applicable green economy standards. There are many challenges faced by small and medium industry players as such as increasing knowledge about the green economy concept for industry players, the infrastructure used by players, as well as ignorance of the applicable green economy regulations. According to Prasetyo (2021), that collaboration between stakeholders is needed to realize the concept of a green economy in East Java Province. In addition, building public awareness to implement a green economy through socializing the habit of not littering and littering, and environmental health issues need to be improved through easy access to information, especially in the current digital era.

C. Green Economy Implementation in Other Countries (China and Africa)

1. Green Economy in China

China has made remarkable achievements in the last four decades, ranging from economic reforms and opening up but above all it has sacrificed serious environmental damage and a lack of energy resources. Currently, China's economy maintains a medium-high growth pace, and its GDP continues to rank second in the world. However, China's environmental pollution is serious, so economic development and environmental pollution have received widespread attention in China.

The green economy which was started to develop for compatibility between the economy and the environment has started a momentum both in academia and policy-making, which is aimed at programs in various sectors and has a positive influence around the world. To better carry out the construction of ecological civilization in the new era and apply the concept of building a harmonious coexistence between man and nature, China's economic development needs to shift to a growth mode that takes into account economic growth, environmental protection, and resource conservation, that is, green development, so that it can realize the goal of building a beautiful China. As an emerging economic power, China's green economic development will have a broad impact on its future economic prosperity and even global economic development.

China has made great achievements in the last four decades of economic reform and opening up, but at the expense of serious environmental damage and a shortage of energy resources. Dangdong Wu, et.al. (2020) stated that Currently, China's economy maintains a medium-high growth pace, and its GDP continues to rank second in the world. However, China's environmental pollution is serious, so economic development and environmental pollution have received widespread attention in China. Green economy refers to a form of economy developed for harmony between the economy and the environment and has

gradually been widely recognized. It has gained momentum in both academia and policy-making, leading to international programs in various sectors and driving national agendas around the world. The Chinese government's next five-year plan for green development must be firmly established in those five years. To achieve an overall improvement in environmental quality and to pursue green development, China must adhere to the basic state policies of resource conservation and environmental protection and at the same time, follow the path of green development with ecological civilization. The pursuit of comprehensive, coordinated, sustainable economic, community, and environmental development reflects the basic requirements of green development.

The pursuit of such development is not only the current phase of China's economic development but also a requirement for sustainable economic and social development. In addition, Wei Pan et.al. (2019) from the results of his research states that the empirical results show that China has seen a balanced development of green growth from 2000–2016, achieved in a series of clear stages. To sustain sustainable low-carbon economic growth in the future, China must rely more on technological advances. In addition, he also stated that the impact of China's industrial structure and energy consumption structure on the green economy is short-term, with an impact duration of approximately four years.

2. Green Economy in Africa

In the face of global climate change, increasing degradation of natural resources, and increasing environmental pollution, several African countries are seeking to embrace the concept of the green industry – to grow their economies rapidly without externalizing negative environmental development costs. With encouragement from international development partners, countries such as Rwanda, Ethiopia, and Mauritius have sketched out ambitious plans to separate industrialization from environmental impacts and jump into a green economy (UNEP, 2011; Wakeford et al., 2017). For example, the implementation of a green economy that prioritizes forest conservation to encourage development in one of Africa's poorest countries is at the core of the latest initiative launched by the Ethiopian government ahead of the Rio+20 negotiations.

The four initiatives selected by the government for fast-track implementation include: exploring Ethiopia's massive hydropower potential; large-scale promotion of advanced cooking technology for rural communities; improvement of livestock value chain efficiency; and Reducing Emissions from Deforestation and Forest Degradation (REDD). “These initiatives have the best chance of accelerating growth as soon as possible, capturing the potential for substantial reductions, and attracting climate funds for implementation.” Ethiopia plans to develop renewable energy technologies and protect forests, a dual strategy aimed at promoting economic growth and fighting climate change.

As stated by C. Okereke et.al (2019) that it was found: (i) a clear articulation of the importance of climate change mitigation and economic growth; (ii) a strong high-level government commitment to the reforestation agenda in the context of accelerating industrialization; and (iii) the nascent

innovation system that is starting to develop in line with these priorities. However, the analysis also identified important challenges, including coordination mechanisms between different stakeholders; framing the problem; availability of resources; the ongoing tension between tackling climate change and driving economic growth. It also highlights the importance of providing cross-border resources for a purposeful sustainability transition in low-income countries.

III. METHOD

The research method used is library research, which is a method that uses literature as well as articles related to this research. The objects of research are Indonesia, China, and Africa. This study looked at literature data from many journals that were summarized and concluded.

IV. RESULT AND DISCUSSION

Table I. Green Economy Differences in Indonesia, China, and Africa

Country	Source	Result
Indonesia	Implementation of the Green Economy on Sustainable Development in the City of Kediri (Dewi Wungkus Antasari, 2019)	3R (Reduce, Reuse, and Recycle) Program in Kediri. 1) It is necessary to socialize the use of plastic equipment that has an impact on the environment 2) The production process in the small and medium industry sector is not following applicable green economy standards The challenge is 1) Increased knowledge of the green economy concept for industry players 2) Infrastructure improvement 3) Regulatory knowledge for the community and industry players about the green economy
Indonesia	Implementation of Green Economy Policy in 7 Small and Medium Industrial Sectors in East Java (Sugeng Prasetyo A., 2021)	1) Many parties play a significant role in the implementation of the green industry 2) The main strength is in the form of policies and regulations of regional and district governments, regional apparatus organizations, and green industry certification bodies. Weaknesses in the synergy between OPD and industry, industry competitiveness, industry knowledge and

		awareness, dependence on the central government, and low incentive funds. 3) Opportunities for commitment to the regions, regulations, program budget allocations, CSR support, and technical guidelines for the green industry. The challenges of changing officials/in charge, public awareness, geographical constraints, access to information, community habits, and environmental health.
China	Efficiency Evaluation and Dynamic Evolution of China's Regional Green Economy: A Method Based on The Super-PEBM Model and DEA Window Analysis (Wu D, dkk., 2020)	1) Overall Green Economic Efficiency (GEE) is slowly increasing and the differences in each region are still significant. 2) Increasing GEE can help reduce regional disparities.
China	Assessing The Green Economy in China: An Improved Framework	China has seen a balance of green growth from 2000-2016, reaching a series of clear stages. To maintain the sustainability of low-carbon growth in the future, China is more dependent on technological progress. Furthermore, it was found that the impact of China's industrial structure and energy consumption structure on the green economy in the short term has an impact duration of about four years. It was also found that the green economy development assessment illustrates appropriate policy implications.
Africa	Governing Green Industrialisasti on in Africa:	1) The necessity of mitigating climate change and economic growth.

	Assessing Key Parameters for a Sustainable Socio-Technical Transition in the Context of Ethiopia (Okereke C. et al, 2019)	2) Strong government commitment to the reforestation agenda in the context of accelerating industrialization. 3) An innovation system is born and is starting to develop according to this priority.
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Green Economy is an economic activity that has the ultimate goal of creating human welfare through environmental protection, namely limiting the excessive use of resources and reducing carbon emissions. This is because excessive economic activity without being followed by awareness certainly causes severe environmental damage both in the region of the country and throughout the world. Related to the above, world governments from various countries have begun to realize and implement various policies to overcome this.

The concept of a green economy in Indonesia is reflected in the green growth program through climate change mitigation measures as outlined in the 2020-2024 National Medium-Term Development Plan (RPJMN). The implementation of a green economy program in Indonesia that is oriented towards improving the economic aspect while still paying attention to environmental sustainability in development activities. This can be seen through tourism development as a way of realizing environmentally sound development.

There are five principles applied in environmentally sound development, namely intergenerational justice, generational justice, early prevention, biodiversity protection, and internalization of environmental costs. Furthermore, several principles that must be considered in the application of the green economy are prioritizing use value, intrinsic value, and quality, utilizing non-governmental funds; following the flow of nature; trash is food; neat and diversity of functions; appropriate scale/linkage scale; diversity; self-ability, self-organization, and self-design; community participation and democracy; creativity and community development; A strategic role in landscape-made environments and spatial design.

Green growth programs in Indonesia are implemented in various sectors such as the environment, tourism, employment, and small and medium industries. According to Priantoko, et al., (2021) that the implementation of the green growth program in Batu City has not been implemented properly. This is shown in the application of several previous principles, namely justice in one generation, internalization of environmental costs, waste in food, self-ability, creativity, and community development. There are three contributing factors, namely the quality of human resources, inadequate infrastructure, and culture in society.

According to Erwinsyah (2021), there are opportunities and challenges in implementing green growth programs. The Indonesia Zero Emission Commitment in 2060 has challenges, namely constraints in the provision of green

skilled workers. The opportunity, according to him, is that support for the preparation of green skilled workers has been successful, but it is still constrained by Indonesian government regulations which are still based on global environmental issues.

In addition to the tourism sector, to carry out the green growth program, in the small and medium industry sector, there are 3R (Reduce, Reuse, and Recycle) programs. According to Antasari (2019), the 3R program implemented in Kediri district is the waste bank program. This program is one of the green economy implementation programs. In his writings, there is still a need to socialize the use of plastic material equipment and production processes that still need to be improved because they are not following applicable green economy standards. So then the challenge for achieving the government's green growth program is the need to increase public knowledge or industry players about the concept of a green economy, attention to infrastructure, and understand the community and industry players related to green economy regulations.

In the province of East Java, according to Prasetyo (2021) about realizing the green economy concept, two important things must be considered. The first is to build public awareness through socialization not to throw garbage and waste carelessly. The second is improving environmental health through easy access to information for the public.

Based on the above, it is known that the implementation of the green economy concept is carried out by the Indonesian government through green growth programs, one of which is through the tourism sector or small and medium industries. In the tourism sector, it was achieved in other places such as the Bali Clean and Green program but still needs improvement in other places. This can be seen in the Batu City Kungkuk Tourism which is still constrained in terms of human resources, infrastructure, and community culture.

In the small and medium industry sector, especially in Kediri district, in general, it is necessary to disseminate information to industry players and the public both on knowledge of green economy concepts in the production process and applicable government regulations. Furthermore, the production process that is still not following green economy standards implements the green economy program in the Kediri district also still needs to be improved. Furthermore, in East Java province, it can also be found that the implementation of the green growth program still needs attention, namely to build public awareness, socialization is still needed and it is still necessary to improve public environmental health with one of them access to adequate information. In general, in East Java Province to achieve this is a need for collaboration between stakeholders, including the government, the private sector, and the community.

Over the past forty years, China has experienced increased economic growth but has impacts on damage and the environment and lack of natural resources. To overcome this problem, China made changing to its economic growth program by protecting the environment and conserving natural resources. This involves collaboration between academics and policymakers.

Dongdong Wu, et.al (2020) stated that China carried out a green development plan within five years. This can be seen from the basic state policies related to the conservation of natural resources and environmental protection with ecological civilization. In this regard, China is accelerating the comprehensive, coordinated, and sustainable economic development of society and the environment. Wei Pan, et.al (2019), China's green economy development from 2000 to 2016 showed a balanced green economy development and to maintain a sustainable low-carbon green economy in the future, relying on technological advances, especially in the industrial sector, needs to be improved.

In Africa, due to global climate change, diminishing natural resources, and environmental pollution, several countries in Africa are trying to implement the concept of a green economy. With the encouragement of assistance from international development partners, several countries in Africa have begun planning national development with the concept of a green economy.

The Ethiopian government's to promote development, at the Rio+20 international meeting in Brazil, puts forest conservation at the core of its initiatives. For the implementation to be carried out quickly, the government carried out four initiatives, namely exploring the potential of large hydropower, advanced cooking techniques for rural communities, increasing the efficiency of the livestock value chain, reducing emissions from deforestation (forest logging), and forest degradation (degradation of quality). These initiatives have the opportunity to increase community economic growth and improve and protect the environment (forests) through the use of renewable energy technologies.

Okereke, et.al (2019) mentioned that there was a meeting about the importance of mitigating environmental change and economic growth, the government's commitment to the greening agenda in the context of accelerating industrialization, and an innovation system that was starting to develop according to priorities. The challenges faced are coordination mechanisms between stakeholders, focusing or framing problems, ongoing tensions between climate change, and promoting economic growth. So this highlights the importance of cross-border resources for sustainable growth, especially in low-income countries.

Based on the foregoing, it is understood that the impact of implementing the green economy in Indonesia on the sector for several places still requires development in terms of human resources, infrastructure, culture, labor, and regulations. In the small and medium-sized industrial sectors, it is still necessary to socialize the concept of a green economy to the community to build awareness of industrial players both in behavior, production processes, and understanding of the applicable rules. To achieve this, collaboration is needed among all parties, whether government, private, or community, including access to information.

In China, the implementation of the green economy concept can be seen in the Chinese government's plan that considers economic growth that pays attention to environmental protection and the conservation of natural resources. In addition, to develop a low-carbon green economy, the Chinese government relies on technological

advances. In Africa, specifically in Ethiopia, the implementation of the green economy concept focuses on forest conservation and community economic development and government commitments, and innovation systems that develop according to priorities.

Based on the things above, it can be concluded that there are differences in the implementation of the green economy concept in Indonesia, China, and Africa based on the needs and priorities of each country. Especially in the tourism sector, Indonesia chose to develop tourist areas while improving small and medium industry sectors to focus on increasing the knowledge of the community and industry players. China chooses to carry out environmental protection, nature conservation, and the use of renewable technology. In Africa, especially in Ethiopia, the focus is on forest conservation and community economic development.

CONCLUSION

Based on the things above, it can be concluded that there are differences in the implementation of the green economy concept in Indonesia, China, and Africa based on the needs and priorities of each country. Especially in the tourism sector, Indonesia chose to develop tourist areas while improving the tourist area and small and medium industry sectors to focus on increasing the knowledge of the community and industry players. China chooses to carry out environmental protection, nature conservation, and utilization of renewable technology. In Africa, especially in Ethiopia, the focus is on forest conservation and community economic development.

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