

## Acceleration of Creative Economic Groups of Water Hyatt Hyatt Hanax Based On Green Econo-my in Supporting Sustainable Economic Development in Gorontalo District, Indonesia

Muhammad Fuad Alamsyah<sup>a</sup>, Zulkarnain Ilyas Idris<sup>b,\*</sup>, Rofiq Harun<sup>c</sup>, Musafir<sup>d</sup>

<sup>a</sup>University Ichsan Gorontalo, Jl Ahmad Najamuddin, Gorontalo, Indonesia (fuad.88384@gmail.com)

<sup>b</sup>University Ichsan Gorontalo, Jl Ahmad Najamuddin, Gorontalo, Indonesia (idriszulkarnain0@gmail.com)

<sup>c</sup>University Ichsan Gorontalo, Jl Ahmad Najamuddin, Gorontalo, Indonesia (harunrofiq852@gmail.com)

<sup>d</sup>University Ichsan Gorontalo, Jl Ahmad Najamuddin, Gorontalo, Indonesia (mmusafir3398@gmail.com)

\*Corresponding author: idriszulkarnain0@gmail.com

### ABSTRACT

This study aims to determine the level of empowerment of the people of Gorontalo Regency through the formation and development of creative economy groups that focus on water hyacinth crafts. This research method is qualitative interpretive, an in-depth and careful study of all forms of facts that can be trusted on a certain problem in order to make a solution to a certain problem. The results of this study examine and analyze in depth the acceleration and strategic role of the green economy-based water hyacinth craft MSME group in supporting sustainable economic development in Gorontalo Regency. Through their skills, expertise, and creativity, this group is able to become one of the contributors to the source of income for Gorontalo district. This group also maintains and preserves the habitat of the Limboto river and lake in Gorontalo district by taking unused water hyacinth plants that can damage the environment to be used as crafts with economic value. Some of the efforts that have been made by MSME water hyacinth actors to accelerate their productivity are by forming a group of MSME hyacinth crafts, creating a structured and systematic supply chain, innovating handicraft products, utilizing digital marketing technology and being actively involved in promoting and implementing green economy principles in their business activities.

**KEYWORDS:** Creative Economy, Acceleration, Green Economy, Sustainable Economy

### 1. Introduction

Gorontalo Regency is one of the areas in Gorontalo Province that has abundant natural re-sources. Its extraordinary natural tourism potential makes Gorontalo Regency one of the best tourism destinations in Gorontalo Province. To support this advantage, the Gorontalo Regency government is also very intensive in encouraging the growth and development of the creative economy sector in Gorontalo Regency through water hyacinth crafts. Water hyacinth is a type of plant that is very easy to find in Gorontalo Regency. The existence of Lake Limboto makes Gorontalo Regency one of the centers of water hyacinth crafts. Even in this area there is a cen-ter for water hyacinth SMEs. The community uses the water hyacinth to be created into various forms of crafts. Dried water hyacinth can be created into woven bags, tissue holders, storage boxes, baskets, food covers, trash cans to furniture such as tables, chairs and bookshelves.

This research is very important for the people of Gorontalo, which not only describes the conditions and business opportunities through water hyacinth but also provides knowledge on managing natural resources as a potential for regional economic development in Indonesia.

The novelty of this study focuses on several aspects that are advantages when compared to similar studies. One important novelty in this study is the emphasis on measuring the social, economic, and environmental impacts of the acceleration of the creative economy based on water hyacinth crafts. This novelty is to identify indicators that can measure the success of the implementation of the green economy, as well as how this sector contributes to inclusive and sustainable

economic development in Gorontalo Regency. Furthermore, as an effort to encourage sustainable economic development, this study provides novelty by exploring the potential of the creative economy based on crafts in rural areas, especially in Gorontalo Regency. This approach is expected to drive the local economic sector by empowering local communities, increasing income, and reducing poverty without ignoring environmental sustainability.

This condition should be a great opportunity and chance for the people in Gorontalo district. This is because water hyacinth crafts have extraordinary potential to be further developed and have good economic added value. This UMKM woven water hyacinth craft is one of the mainstays of the Gorontalo city government. This UMKM has superior products that are adjusted to the local wisdom of the Gorontalo people. Many of these products are sold to other areas such as Makassar, Manado, Palu, Surabaya and even Bali. This clearly has a positive effect on the economy in the city of Gorontalo [1]. However, woven water hyacinth craft products are currently starting to disappear. Not only that, the limited number of water hyacinth business actors currently available is not balanced by the high level of demand for water hyacinth crafts every week, making this water hyacinth craft business very promising. To overcome these problems, concrete efforts need to be made, one of which is by accelerating the green economy-based water hyacinth craft creative economy group to support sustainable economic development in Gorontalo Regency.

The main objective of this study is to encourage the application of green economy principles in the development of the water hyacinth craft industry. With this approach, the study aims to create an environmentally friendly production model, minimize negative impacts on the ecosystem, and maximize the potential of natural resources sustainably. This study aims to empower the people of Gorontalo Regency through the formation and development of creative economy groups that focus on water hyacinth crafts. By developing community skills and capacities, it is expected to increase community income and create new job opportunities in the creative economy sector. Overall, the purpose of this article is to accelerate the development of creative economy groups based on water hyacinth crafts with a green economy approach, which can contribute to sustainable economic development in Gorontalo Regency.

The question in this study analyzes the concept of accelerating the creative economy group of water hyacinth crafts based on the green economy in supporting sustainable economic development in Gorontalo Regency, Indonesia so that the study can identify various important aspects that underlie the development and challenges in accelerating the creative economy group based on the green economy in Gorontalo Regency, as well as its contribution to sustainable economic development.

## **2. Literature Review**

### **2.1. Creative Economy**

Creative economy reports are used to market a product in urban areas to be proven to the world as a policy reinforcement of ideas as urban solutions and challenges McCann. According to Jokela (Azhana et al., 2024). The creative economy is a new idea about an economic system that places information and humans. (Prasetyani et al., 2021), the creative economy has the potential to realize the relevance of human resources in integrating society and economic goals and opportunities based on creative entrepreneurship.

According to (SILVA et al., 2024), the creative economy refers to activities whose processes and products are based on everyday culture, skills, and knowledge. (Ngatono et al., 2024), the pedagogical approach to creative economic education equips students with an understanding of how to combine elements of art, technology, and entrepreneurship to understand unique and valuable products and services. The creative economy encompasses a wide range of sectors, including digital content production, software development, games, design, and various forms of artistry (Dellyana et al., 2023).

### **2.2. Water hyacinth**

Water hyacinth has advantages in photosynthesis, oxygen supply and absorption of sunlight. The surface walls of the roots, stems and leaves have a very sensitive layer so that at extreme depths of up to 8 meters below the water surface it is still able to absorb sunlight and substances dissolved under the water surface (Noviani, 2020). Many potentials can be extracted from the existence of Water Hyacinth, including being used as a craft material such as bags and others (Sompal et al., 2021). According (Ali et al., 2019), water Hyacinth is an alternative source of organic material that is widely available in waters and waters that have not been utilized are at risk of causing water pollution, considering the discovery of nitrogen, phosphorus and potassium components in water hyacinth. The use of Composites with water hyacinth fibers has the potential to be further developed as an alternative material for socket prostheses in Indonesia (Widhata et al., 2019).

### 2.3. Green Economy

Green Economy is a form of awareness that aims to preserve nature and create sustainable development. This is characterized by low carbon emissions, resource efficiency, and social inclusiveness (D'Amato & Korhonen, 2021), Green Economy seeks to promote social equality and alleviate poverty through sustainable development practices (Wang et al., 2019). Green Economy emphasizes the efficient use of renewable energy development resources, and environmentally friendly investments and policies that aim to achieve sustainable economic growth (Fernando et al., 2023). Green economy is closely related to sustainable development (Vuola et al., 2020). Green economy and green growth are often referred to as key elements of sustainable development. Green economy refers to an economic system that takes into account environmental sustainability and social welfare, while green growth refers to economic growth that is environmentally friendly and socially inclusive (Mentes, 2023).

The green economy is a broad notion that has sparked debate among economists and environmentalists. The green economy uses energy resources regularly to improve environmental performance while lowering climate (Sustainability & Sustainability, n.d.). Due to climatic pressure and brain drain, posing long-term growth and economic stability challenges. The Green Economy is a strategy for attaining long-term development. A green economic plan should encourage innovation and the use of cutting-edge technologies.

### 2.4. Sustainable Economy

Sustainable economy is a concept where government economic policies must support and be in line with economic changes that initially only focused on profit and welfare to an economic concept that is more oriented towards environmental sustainability (Rany et al., 2020). The implementation of a sustainable economy with the aim of profit will not run optimally if there is no role for the government in supporting the concept of a sustainable economy through one of the concrete efforts that can be made, namely by providing capital assistance as a stimulus to water hyacinth MSME actors so that they can continue to work, so that they continue to exist and avoid potential bankruptcy. Companies will have greater profit potential, namely a large number of customers, a large market share, high profit margins, a longer sales period, and a safer competitive position (Hutahayan, B., & Yufra, S. 2019). Environmentally Conscious Sustainable Economic Growth (Green Growth) frames green growth as a prerequisite for building a green economy.

The aim of methodology section is to describe how your research was conducted as well as to enhance credibility of your research. In case your research is quantitative, methodology should present the way numerical data was collected and how mathematical analyses are conducted to observe, analyse, access, and test experiments and hypotheses. Qualitative research involves collection and analysis of non-numerical data (e.g.: text, video, or audio) with the aim of explaining concepts, opinions, perspectives, or personal experiences.

## 3. Methodology

This research is a study that applies qualitative methods. Qualitative methods are in-depth and careful study methods of all forms of reliable facts on a particular problem in order to create a solution to a particular problem (Fajrillah & Arnesia, 2015). Qualitative research uses a naturalistic approach that seeks to understand phenomena in context-specific settings, such as "real world settings (where) the researcher does not attempt to manipulate the phenomenon of interest (Maulana & Sumarji, 2020).

Qualitative research is also called interpretative research, naturalistic research or phenomenological research. The qualitative approach emphasizes the meaning, reasoning, definition of a particular situation (in a particular context), and examines more things related to everyday life. The qualitative approach also emphasizes the process rather than the end result (Lince, 2022).

This research method is carried out in 3 (three) stages. The first stage is to analyze and identify factors that are indicators of the less than optimal acceleration of the green economy-based water hyacinth creative economy group in supporting sustainable economic development in Gorontalo district. The second stage is to analyze and identify factors that can be indicators of the realization of significant acceleration in the green economy-based water hyacinth creative economy group in supporting sustainable economic development in Gorontalo district. The third stage is to carry out and implement the results of the analysis and identification results obtained in creating acceleration in the green economy-based water hyacinth creative economy group in supporting sustainable economic development in Gorontalo district. The targeted research results in this study are a significant increase in terms of acceleration of the green economy-based water hyacinth creative

economy group. The increase in acceleration in the water hyacinth creative economy group will be seen from various MSME performance indicators such as increased operating profits, increased sales volume, market expansion, product quality, turnover to the quality of human resources of water hyacinth MSME actors.

To achieve the output target, the National Competitive Fundamental research method carried out is through several stages as follows:

Stage 1: Conducting Observations, Data Collection and Focus Group Discussions (FGD)

This research began with direct observation at the research location to the water hyacinth creative economy groups located in Gorontalo district. This is done to be able to clearly and definitely find out the problems that occur. In the observation, the researcher will conduct an interview process with water hyacinth UMKM actors. The results of this interview process will later be followed up in more detail and depth by conducting a Focus Group Discussion (FGD) involving experts or parties who have the capacity to provide suggestions and ideas that will be used to perfect the results of this research.

Stage 2: Identifying, Testing, Processing and Analyzing Data

At this stage, the researcher will conduct the process of identifying, testing, processing and analyzing data. These stages are carried out to obtain effective and efficient formulations and solutions in increasing the acceleration of the green economy-based water hyacinth creative economy group in supporting sustainable economic development in Gorontalo district.

#### **4. Results**

Water hyacinth is one type of plant that is very easy to find in Gorontalo district. The presence of Lake Limboto makes Gorontalo district one of the centers of water hyacinth crafts. Even in this area there is a group of water hyacinth UMKM crafts that are still active today. The people in Gorontalo district utilize the water hyacinth to be created into various forms of crafts. Dried water hyacinth can be created into woven bags, tissue holders, storage boxes, baskets, food covers, trash cans to furniture such as tables, chairs and bookshelves.

The lack of public attention to the benefits of water hyacinth as one of the local wisdom values of the Gorontalo community has many factors, one of which is the low understanding of the community regarding the great potential of water hyacinth both in terms of culture and economy. In fact, if managed properly, water hyacinth can be used as a local product with economic value such as local products karawo, upia karanji, Biliu traditional clothing and many more. This is what made some local communities since 2015 start trying to develop this water hyacinth plant into a handicraft product that has a high selling value. Since then, the UMKM of water hyacinth woven crafts was formed in the city of Gorontalo.

The Water Hyacinth UMKM Group is a group that utilizes water hyacinth, a type of aquatic plant that grows floating and is often considered useless, then processed into beautiful items that sell well on the market. Especially for the Gorontalo area, this type of UMKM is quite a lot, because this type of plant is very easy to get in the Gorontalo area, especially around Lake Limboto. With the abundance of water hyacinth plants around Lake Limboto, some local people use these plants to be processed into creative and innovative handicrafts while making water hyacinth a livelihood for the surrounding community.

##### **4.1. Business Improvement and Acceleration**

###### **4.1.1. Formation of Water Hyacinth Umkm Group**

As a region that has enormous potential in tourism development, Gorontalo Regency has continuously strived to innovate in various aspects, both infrastructure, human resources and regulations that are able to accelerate economic growth in Gorontalo Regency. The Gorontalo Regency Government realizes that through the tourism industry, the regional economy can increase significantly, such as increasing community income, opening up employment opportunities and opening up opportunities for MSMEs to be able to sell their products while introducing local products to the international world. This is the target that the Gorontalo Regency Government wants to achieve, so that through the authority it has, the Gorontalo Regency Government makes maximum efforts to provide stimulus to MSMEs to be consistent in increasing their productivity. One of the MSMEs that is expected to be able to contribute to the region is the water hyacinth MSME. This MSME is considered capable of contributing to the region's GDP while introducing the values of local wisdom in Gorontalo Regency. To accelerate the target, one of the steps or strategies taken is to form a water hyacinth craft UMKM group. Since 2020 after Covid-19, the water hyacinth UMKM group has been inactive and disbanded. One by one individuals from the group left and looked for other jobs. This is inseparable from the Covid-19 incident which at that time had a very big impact on the number of orders and sales of water hyacinth crafts.

Through mentoring and training activities carried out since early 2024, the water hyacinth craft UMKM group was finally formed and began to be active again. This group is expected to be able to increase the productivity of creative economic craft products that have economic value and good quality, so that they can provide a source of income for the region. This group is named the "Alata" group, this name refers to the Gorontalo regional language for water hyacinth, namely alata, this group consists of around 12 (twelve) people who are currently active in the production process of creative economic craft products from water hyacinth.



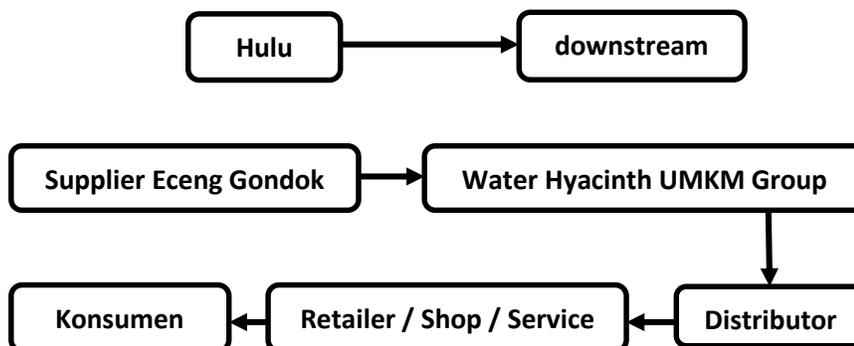
**Fig. 1.** Meeting and Discussion Process Regarding the Formation of the “Alata” Water Hyacinth Craft UMKM Group

#### 4.1.2. Water Hyacinth MSME Supply Chain

One of the keys to accelerating the water hyacinth craft group lies in the supply chain. So far, the water hyacinth UMKM group has had great difficulty in meeting consumer demand due to the absence of a good supply chain management system.

In fact, from 2021 to 2023 after the UMKM group was inactive and disbanded, water hyacinth UMKM actors must take on all roles or responsibilities in producing water hyacinth crafts, starting from taking water hyacinth plants in Lake Limboto, drying them for 1 (one) week, sorting, producing craft products, distributing them to selling directly to consumers. All of these roles are only carried out by 1 (one) person. This is what is being tried to be fixed now. In early 2024 after re-forming the water hyacinth UMKM group, the next step is to carry out supply chain management. Each activity item in the production process must have its own person in charge, so that the production process can run effectively and efficiently.

This has been proven since the implementation of this supply chain management, the productivity of the water hyacinth craft UMKM group can increase many times over. In fact, the UMKM group can work optimally and most importantly, is able to meet the demand that comes from consumers. The following is the flow or cycle of supply chain management owned by the water hyacinth craft UMKM group.



**Fig. 2.** Supply Chain Management Cycle of the “Alata” Water Hyacinth Craft UMKM Group

#### 4.1.3. Product Innovation (Chairs, Tables, Mirrors and Typical Gorontalo Souvenirs)

Innovation is a process of creating new things that have great benefits for society. In the business world, innovation is very necessary so that the business is able to continue to survive and survive from all forms of competition. This is also what makes the water hyacinth craft UMKM group in Gorontalo Regency continue to strive and strive to innovate the products they produce.

Since 2019 to 2020 when Covid hit, the water hyacinth UMKM group has produced many craft products consisting of bags, hats and coasters. These products are very popular, even sales outside the province of Gorontalo such as Makassar, Surabaya and Bali.



**Fig. 3.** Products of the “Alata” Water Hyacinth Craft UMKM Group (Before Innovation)

Since Covid hit the world and Indonesia, this MSME group has finally disbanded and many MSME actors have changed their livelihoods because automatically the sale of water hyacinth crafts has decreased drastically. However, since 2021 there has been 1 (one) water hyacinth craft MSME actor who has tried to reactivate this water hyacinth craft. The MSME actor is named Mr. Encis. He is the one who continues and remains consistent in making water hyacinth craft products until the end of 2023.

In early 2024, through a fairly long mentoring process and discussion process, the water hyacinth craft MSME group was finally formed again. After being formed, the water hyacinth craft MSME group immediately made product innovations that had never been made before. This is a signal that the water hyacinth craft MSME group is starting to rise again and is ready to help accelerate the process of sustainable development in Gorontalo Regency. There are several product innovations carried out by the water hyacinth UMKM group since it was re-formed in early 2024, such as mirror decorations, tables, chairs and souvenirs made from water hyacinth.



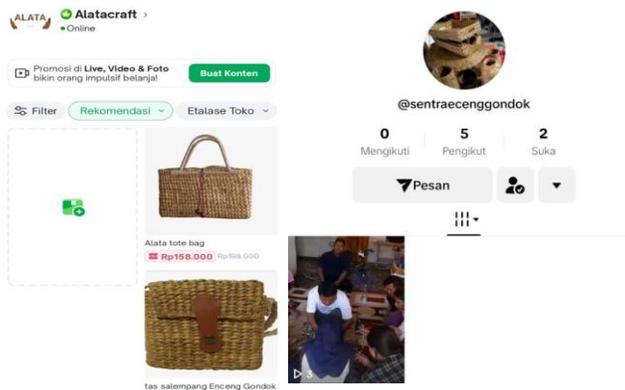
**Fig. 4.** Water Hyacinth Craft UMKM Group Products “Alata” (After Innovation)

**4.1.4. Digital Marketing Implementation**

So far, the water hyacinth craft UMKM group in marketing its craft products has not maximized the use of social media technology. The UMKM group only uses Whatsapp (WA) and Facebook (FB) as a means of promoting the sale of water hyacinth craft products. This condition is less beneficial for the water hyacinth UMKM group, because the social media they use has limitations and is considered less attractive to the current generation Z. This has a negative impact on the progress and acceleration of the water hyacinth craft UMKM group.

With the mentoring and training activities carried out, since the beginning of 2024 the water hyacinth craft UMKM group has begun to be directed to be able to sell water hyacinth craft products to social media that are more popular with generation Z and sell their products to trusted online shopping platforms.

Currently, the water hyacinth craft UMKM group has also started to actively promote its products on social media such as IG and TikTok. Every product that is made is immediately up-loaded and posted to social media IG and TikTok. In fact, there are 2 (two) people who are given the task of selling and promoting water hyacinth craft products on TikTok at least 3 times a week. The results have also experienced a very significant increase, now the sale of water hyacinth craft products has begun to receive attention from the wider community in Gorontalo province.



**Fig. 5.** Implementation of Digital Marketing for the Water Hyacinth Craft UMKM Group

**4.1.5. Implementation of Green Economy Through Pentahelix Economy Model Approach**

Green Economy is an economic concept that aims to improve the welfare and social equality of society. The Green Economy is a shift in thinking about development and growth that can enhance people’s lives and the environment while also promoting environmental and economic sustainability (Zhang et al., 2022). The implementation of green economy helps MSMEs to monitor and evaluate environmental impacts, calculate environmental costs and increase transparency and accountability of their operations. The water hyacinth craft MSME group has begun to implement the green economy concept in its business activities. One of the concrete steps taken is to involve various stakeholders such as academics, entrepreneurs/practitioners, communities, government and the media in carrying out their business activities.



**Fig. 6.** Implementation of Green Economy by Water Hyacinth Craft UMKM Group with Pentahelix Model

Synergy and collaboration between MSME actors and stakeholders are very important (Kurnianti et al., 2024), this is so that all parties have the same goals and vision and mission in advancing and realizing sustainable regional development in Gorontalo Regency emphasized that this collaboration is a must to be carried out immediately, not just an appeal. As a form of commitment to the environment, the water hyacinth craft MSME group often participates in activities or events related to the concept of implementing a green economy. The water hyacinth craft MSME group understands and realizes that in running and building the business they do, they are not only oriented towards economic aspects, but MSME actors, especially water hyacinth MSMEs, also have a role and social responsibility to be able to protect and preserve the surrounding environment.

The water hyacinth craft UMKM group is currently continuing to strive to be able to adjust and adapt to the surrounding environmental conditions, so as not to pollute and damage the environment. In fact, this water hyacinth UMKM group has indirectly helped the local government in Gorontalo district to be able to clean the lakes and rivers in Gorontalo district from the very rapid growth of water hyacinth plants. This water hyacinth plant is a type of weed that has the potential to damage the aquatic environment, especially in Lake Limboto in Gorontalo district. The very rapid growth of water hyacinth can result in the obstruction of the flow of water in Lake Limboto, the shallowing of the aquatic ecosystem and can eliminate surface water up to 4 (four) times.

With the presence of the water hyacinth craft UMKM group, the water hyacinth problem in Lake Limboto can be resolved properly. In fact, in the hands of the UMKM group, the water hyacinth can be utilized and transformed into something of very high value. With the expertise, skills and creativity they have, water hyacinth plants can be transformed into very high value crafts and can be a source of income for the water hyacinth UMKM group. This is one of the roles and contributions that can be made by the UMKM group in assisting the government's task in implementing the green economy concept in Gorontalo district, so that it can accelerate sustainable regional economic development.



**Fig. 7.** Involvement of Water Hyacinth Craft UMKM Groups in Every Activity Related to the Green Concept

## 5. Discussion

This research highlights the importance of empowering the people of Gorontalo Regency through the development of creative economic groups focused on water hyacinth crafts. Specifically, this study explores the role of water hyacinth-based MSMEs (Micro, Small, and Medium Enterprises) in supporting sustainable economic development and making a positive contribution to the environment. This discussion will cover key findings from the research, along with practical and theoretical implications that can help accelerate the development of a creative economy based on local resources.

### **5.1. Community Empowerment and Capacity Building**

One of the key outcomes of this research is the vital role played by community empowerment in enhancing the skills and capacity of individuals in Gorontalo Regency. By involving local communities in the production process of water hyacinth crafts, MSME groups not only provide economic opportunities but also introduce new skills that can improve competitiveness. This empowerment, through training and skill development, is expected to create new job opportunities and increase the income of people who previously had limited access to economic opportunities. However, challenges often arise in terms of sustaining skill development. A more structured and comprehensive approach is needed for outreach and capacity building to ensure that the skills being taught can develop and be widely accepted by the community. This highlights the importance of the roles of both government and the private sector in providing technical support, resources, and broader market access.

### **5.2. The Role of Water Hyacinth Crafts MSMEs in the Green Economy**

The MSME groups focusing on water hyacinth crafts in Gorontalo Regency also play a crucial role in implementing the green economy. By using water hyacinth as raw material for crafts, these groups not only reduce the environmental damage caused by this invasive plant but also transform it into high-value products. This demonstrates the success of the green economy concept, where economic activities are not only profit-driven but also aimed at preserving the environment. The main challenge in developing green economy-based MSMEs is ensuring a sustainable supply of high-quality water hyacinth raw materials and raising market awareness about the importance of environmentally friendly products. Additionally, MSMEs face marketing challenges, often limited to local or conventional markets. Therefore, it is important for MSME actors to develop more innovative marketing strategies, including leveraging digital platforms.

### **5.3. Innovation and Digital Technology as Drivers of Productivity**

Product innovation and the use of digital technology are key aspects discussed in this study. Digitizing the marketing and promotion of water hyacinth craft products can open up access to broader markets, not only at the local level but also nationally and internationally. Using social media, e-commerce platforms, and technology-based digital marketing can help MSME groups introduce their products to a larger audience, thereby improving their competitiveness in the global market. However, the adoption of digital technology is not without challenges. Many MSME actors in remote areas may lack sufficient understanding of digital marketing and face limitations in accessing technology. Therefore, intensive training and mentoring are necessary to help MSMEs optimize the use of these technologies.

### **5.4. The Role of Local Government in Supporting MSME Development**

The role of the Gorontalo Regency Government in supporting the development of water hyacinth craft MSMEs is crucial. An aggressive and proactive government, providing facilities and policies that support MSME development, such as access to capital, training, and networking, will accelerate the achievement of sustainable development goals. Additionally, policy support that prioritizes environmental sustainability, such as incentives for products that embrace green economy principles, can further drive growth in this MSME sector. However, the challenge for the local government is how to design policies that can reach all layers of society, including those in remote areas. The government must also ensure that policies are aligned with the real needs of MSME actors and can foster innovation at the micro level.

### **5.5. Conclusion and Implications**

This research shows that water hyacinth craft MSME groups play a strategic role in supporting sustainable economic development in Gorontalo Regency. Through community empowerment, the implementation of green economy principles, product innovation, and the use of digital technology, these MSME groups can become drivers of job creation and increased local income. The local government plays an important role in creating an environment that supports and accelerates the development of this MSME sector. Therefore, policies that promote innovation, market access, and environmental sustainability need to be prioritized to achieve sustainable development goals in the region. The implementation of the findings from this research is expected to serve as a model for other regions looking to develop creative economies based on environmentally friendly natural resources, while also contributing to the achievement of sustainable development objectives.

This research is very important for the people of Gorontalo, who not only describe the conditions and business opportunities through water hyacinths but also provide knowledge about managing natural resources as a potential for regional economic development in Indonesia.

The novelty of this research is focused on several aspects that are advantages when compared to similar research, One of the important novelties in this research is the emphasis on measuring the social, economic, and environmental impact of accelerating the creative economy based on water hyacinth crafts. The novelty is to identify indicators that can measure the success of the implementation of the green economy, as well as how this sector contributes to inclusive and sustainable economic development in Gorontalo Regency. Furthermore, as an effort to encourage sustainable economic development, this research provides novelty by exploring the potential of handicraft-based creative economy in rural areas, especially in Gorontalo Regency. This approach is expected to drive local economic sectors by empowering local communities, increasing incomes, and reducing poverty without neglecting environmental sustainability.

## 6. Conclusion

The purpose of this study is to accelerate development in the Gorontalo district in a sustain-able manner. To achieve this, the Gorontalo district government is very active and proactive in maximizing the potential of MSME actors in Gorontalo district, one of which is the water hyacinth craft MSME group. This water hyacinth craft MSME group has a very important role in the sustainable development of the Gorontalo district. Through the skills, expertise and creativity they have, this group is able to become one of the contributors to sources of income for the Gorontalo district. Not only in terms of economic aspects, the MSME group also contributes to implementing the green economy concept. This group helps maintain and preserve the habitat of rivers and Limboto lakes in the Gorontalo district by taking unused water hyacinth plants that can damage the environment to be made into crafts that have economic value.

Some efforts made by water hyacinth UMKM actors to accelerate their productivity are by forming water hyacinth craft UMKM groups, creating structured and systematic supply chains, innovating craft products, utilizing digital marketing technology and being actively involved in promoting and implementing green economy principles in their business activities. These efforts are expected to help the local government to accelerate sustainable economic development in Gorontalo Regency as well as to improve the quality of business and welfare for water hyacinth craft UMKM groups.

## Acknowledgements (If any)

These and the Reference headings are in bold but have no numbers. Titles and text of sections references and acknowledgements should be formatted with 10 – point font, yet text in acknowledgements section should be in italic font. Include the names of the funding agencies or organizations, grant numbers - number of project, and any relevant details about the funding.

## References

1. Alamsyah, M. F., Husin, W. L., & Idris, Z. I. (2021). Predicting the Potential for Bankruptcy with the Fullmer H-Score Method in Micro, Small and Medium Enterprises. *Scientific Journal of Management and Business*, 22(2), 319–334. <https://doi.org/10.30596/jimb.v22i2.7955>
2. Ali, F., Sari, T. I., Arina, & Siwitri. (2019). Utilization of PT. Hok Tong liquid waste rubber industry in making of liquid organic fertilizer with addition of eceng gondok and EM4 (Effective Microorganism 4). *IOP Conference Series: Materials Science and Engineering*, 620(1). <https://doi.org/10.1088/1757-899X/620/1/012013>
3. Prasetyani, D., Ardianto, D. T., & Firdaus, A. A. (2021). Integration of livestock supply chain strategy as part of the creative economy and creative industry in Indonesia: Literature review. *IOP Conference Series: Earth and Environmental Science*, 902(1). <https://doi.org/10.1088/1755-1315/902/1/012051>
4. SILVA, F. E. R. DA, CABRAL, A. C. D. A., SANTOS, S. M. DOS, & BARROS, C. D. M. P. (2024). Work values in the context of the creative economy: a study of female artisan-entrepreneurs in natural cosmetics. *Cadernos EBAPE.BR*, 22(2), 1–15. <https://doi.org/10.1590/1679-395120230131x>
5. Ngatono, Al Ma'ruf, A. I., & Waston. (2024). Teacher Empowerment in Creative Economy Education: a Case Study At Sd Ta'Mirul Islam Surakarta Indonesia. *Revista de Gestao Social e Ambiental*, 18(6), 1–20. <https://doi.org/10.24857/RGSA.V18N6-090>
6. Dellyana, D., Arina, N., & Fauzan, T. R. (2023). Digital Innovative Governance of the Indonesian Creative Economy: A Governmental Perspective. *Sustainability (Switzerland)*, 15(23), 1–14. <https://doi.org/10.3390/su152316234>

7. Noviani, L. (2020). The Influence of Product Innovation, Product Creativity, and Product Quality on Competitive Advantage (Case Study on "Wild" Water Hyacinth Mat Crafts). *Journal of Management and Business (Jumanis)*, 2(1), 2076–2086. <http://ejournal.lppm-unbaja.ac.id/index.php/jmb/article/view/982>
8. Sompaa, A. T., Syafari, R., & Al Syahrin, M. N. (2021). Sustainable Community Empowerment Efforts Through the Development of Small and Medium Enterprises of Eceng Gondok. *Proceedings of the 2nd International Conference on Social Sciences Education (ICSSE 2020)*, 525(Icsse 2020), 358–361. <https://doi.org/10.2991/assehr.k.210222.058>
9. Ali, F., Sari, T. I., Arina, & Siwitri. (2019). Utilization of PT. Hok Tong liquid waste rubber industry in making of liquid organic fertilizer with addition of eceng gondok and EM4 (Effective Microorganism 4). *IOP Conference Series: Materials Science and Engineering*, 620(1). <https://doi.org/10.1088/1757-899X/620/1/012013>
10. Widhata, D., Ismail, R., & Sulardjaka. (2019). Water Hyacinth (Eceng Gondok) As Fibre Reinforcement Composite for Prosthetics Socket. *IOP Conference Series: Materials Science and Engineering*, 598(1). <https://doi.org/10.1088/1757-899X/598/1/012127>
11. D'Amato, D., & Korhonen, J. (2021). Integrating the green economy, circular economy and bioeconomy in a strategic sustainability framework. *Ecological Economics*, 188(June 2020), 107143. <https://doi.org/10.1016/j.ecolecon.2021.107143>
12. Wang, M., Zhao, X., Gong, Q., & Ji, Z. (2019). Measurement of regional green economy sustainable development ability based on entropy weight-topsis-coupling coordination degree-A case study in Shandong Province, China. *Sustainability (Switzerland)*, 11(2). <https://doi.org/10.3390/su11010280>
13. Vuola, M., Korkeakoski, M., Vähäkari, N., Dwyer, M. B., Hogarth, N. J., Kaivo-Oja, J., Luukkanen, J., Chea, E., Thuon, T., & Phonhalath, K. (2020). What is a green economy? Review of national-level green economy policies in cambodia and Lao PDR. *Sustainability (Switzerland)*, 12(16), 1–20. <https://doi.org/10.3390/su12166664>
14. Mentés, M. (2023). Sustainable development economy and the development of green economy in the European Union. *Energy, Sustainability and Society*, 13(1). <https://doi.org/10.1186/s13705-023-00410-7>
15. Rany, A. P., Farhani, S. A., Nurina, V. R., & Pimada, L. M. (2020). Indonesia's challenges in realizing strong economic growth and sustainable economic development through the Indonesia Green Growth Program by BAPPENAS. *Jiep*, 20(1), 63–73.
16. Fajrillah, & Arnesia, P. D. (2015). Publikasi : Collection of Scientific Week Papers Period XXII – TA . 2014 / 2015 June 04 , 05 & 06 AND INNOVATIONS IN THE FIELD OF SI / IT IN ORDER TO INCREASE PUBLICATION : COLLECTION OF SCIENTIFIC WEEK PAPERS PERIOD XXII – ACADEMIC YEAR . 2014 / 2015 Date 04 , 05 & 06 Juni 2
17. Maulana, A., & Sumarji. (2020). KAMPUNG WISATA EKOLOGIS (KWE) PUSPA JAGAD SEBAGAI DESA WISATA (Ditinjau dari Aspek Manajemen Sumber Daya Manusia). *REVITALISASI: Jurnal Ilmu Manajemen* Vol. 9, Nomor 2, Edisi Desember 2020, 9, 127–140. <file:///C:/Users/USER/Downloads/1354-25-3897-1-10-20201223.pdf>
18. Lince, L. (2022). Implementation of the Independent Curriculum to Increase Learning Motivation at Vocational High Schools of Excellence. *Proceedings of the National Seminar of the Faculty of Tarbiyah and Teacher Training IAİM Sinjai*, 1(1), 38–49. <https://doi.org/10.47435/sentikjar.v1i0.829>