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Integration of Permaculture and Creative Economy to Embody the Sustainable Agriculture in Handari Permaculture

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ABSTRACT

The green revolution policy harms environmental sustainability, particularly because of the use of chemical fertilizers and pesticides. Farmers become dependent on the chemicals to increase agricultural production and the conventional agricultural practices like this can cause various problems in the long term; one of which refers to the soil and land damage, leading to an ecological crisis. The ecological crisis, social inequality, and dependence on external inputs in conventional agricultural systems drive the need for a transition to sustainable agriculture. This study aims to analyze the integration of permaculture and creative economy for the environmental sustainability and farmers' welfare in Handari Permaculture. The creative economy serves as a catalyst for an innovation in developing permaculture. This study employs a qualitative method to examine such integration between permaculture practices with ecological principles and creative business models, focusing on enhancing product value and community empowerment. The Handari permaculture case study shows that the creative economy can expand the reach and economic value of sustainable agricultural practices. This article recommends integrating creative economy strategies as a crucial element in designing a resilient and inclusive permaculture system.

Keywords: permaculture, creative economy, sustainable agriculture

INTRODUCTION

The concept of permaculture (or sometimes called permanent agriculture) focuses on three pillars of sustainable agriculture, namely economy, social, and ecology. Permaculture seeks to create a harmonious integration between nature and humans in sustainable ways. The concept was formalized in the 1970s by Bill Mollison and David Holmgren, and is now practiced in more than 100 countries by thousands of permaculture graduates. Permaculture offers techniques and ideas that help us move towards a healthy environment, culture, and society. [1]

The concept refers to a system that resembles a natural ecosystem, which is regenerative and able to preserve itself. [2] The aspect of human culture in permaculture is interpreted as an inclusive design that combines ecological design with the human culture that surrounds it. Permanently "sustainable" human

communities have thoughts and developments towards caring for the ecological environment, which is manifested in design planning both on a spatial scale and in the scope of the area. This permaculture can be a solution to overcome the agricultural land crisis due to the use of technological inputs in the form of chemical fertilizers and pesticides. The use of chemical fertilizers and pesticides has become a habit for farmers since the green revolution program was launched through Bimas and Inmas. The green revolution is a modernization of agriculture, an effort to increase agricultural production through the use of modern technology such as superior plant varieties, chemical fertilizers, pesticides and intensive irrigation. In Indonesia, the green revolution was launched by the government for economic development and food security. The program launched during the New Order era then shifted the traditional agricultural system to modern agriculture which made agriculture no longer based on ecological principles and ultimately created farmer dependence on chemical fertilizers and pesticides. [3]

The green revolution started by an agronomist named Norman Borlaug was able to overcome hunger in many developing countries, but had a negative impact on environmental sustainability. The green revolution in Indonesia is manifested in the *pancausaha tani* program with an agricultural extensification and intensification approach. The expansion of agricultural land with the extensification causes deforestation due to the clearing of forests for agricultural land and results in long-term environmental damage. Indonesia is one of the countries having the greatest environmental degradation with a deforestation rate of 1.8 hectares per year which causes 21% of Indonesia's 133 million hectares of forest to be lost. This causes a decline in environmental quality, natural disasters and the threat to the sustainability of flora and fauna. [4]

The green revolution has a positive impact on increasing agricultural production, especially rice farmers, with the emergence of superior varieties that are resistant to pest attacks. However, dependence on the use of chemical fertilizers and pesticides is increasing. The use of technology such as tractors has also shifted rice field workers or sharecroppers. The green revolution has caused sharecroppers to have difficulties and also caused damage to agricultural land. [5]

The rampant use of inorganic fertilizers, pesticides, herbicides and intensive long-term land exploitation have consequences in the form of environmental damage, ranging from soil, water, air and living things. [6] The use of synthetic chemicals has implications for the destruction of soil structure and soil microbes so that from day to day our agricultural land becomes increasingly critical. Modern agricultural practices that are carried out unwisely result in environmental pollution, poisoning, disease and death in living things, which can then cause disasters and calamities. [7] These facts show that preserving biological resources, maintaining soil fertility by not using technological inputs that damage the ecological system is very important. Thus, the use of organic materials, local wisdom of the local community that is environmentally friendly is important for the sustainability of agriculture. The best choice is to develop a sustainable agricultural system.

Sustainable agriculture is defined as an agricultural business that utilizes and at the same time conserves resources optimally in order to produce optimal harvest products, using reasonable inputs and costs, able to meet social, economic and environmental sustainability criteria, and using renewable production facilities and resource productivity throughout time. An integrated farming system is the one option for a sustainable agricultural system with a zero-waste system. [8]

The permaculture approach, which is based on the principles of ecological design and

sustainability ethics, offers locally based regenerative solutions. [1] On the other hand, the creative economy has emerged as a sector that empowers the potential of local culture, art, and innovation to create new economic value. [9] The Institute for Development Economy and Finance defines the creative economy as a process of increasing added value resulting from the exploration of intellectual property in the form of creativity, expertise, and individual talent into a product that can be sold. [10] Permaculture and the creative economy can synergize for environmental sustainability and farmer welfare.

MATERIALS & METHODS

This study uses a qualitative approach with an exploratory case study in Handari permaculture, located in Lalodati village, Kendari City. Data collection methods include in-depth interviews with farmers, with Kendari City Agriculture Service and with Handari visitors, as well as participatory observation of agricultural and marketing activities. This observation technique is to support data obtained through interviews so that the data provided by informants would be in accordance with the facts in the field. According to Bungin this observation method is very important in qualitative research because through observation, various types of events and field conditions are recognized. [11]

Data are analyzed thematically to identify patterns of synergy between permaculture practices and creative economic activities. According to Sugiyono data analysis is the process of systematically searching for and compiling data obtained from interviews, field notes, and documentation by organizing data into categories, describing them into units, synthesizing them into patterns, choosing which ones are important and which ones would be studied and making conclusions so that they are easy to understand. [12]

RESULT & DISCUSSION

This study analyses the integration of permaculture and creative economy applied by Handari permaculture. To see the relationship, it would connect the principles of permaculture and creative economy, and how they are integrated into sustainable agriculture and farmer welfare.

Permaculture

Permaculture is a design system that aims to create a sustainable environment by imitating the patterns and relationships found in natural ecosystems. According to Mollison & Holmgren (2021), there are 12 principles of permaculture in which four principles are applied by Handari. [1]

1. Observing and imitating nature.

Natural systems such as forests and swamps show high efficiency in the use of energy and resources. Permaculture is designed to mimic this balance.

2. Diversity

Natural ecosystems have a diversity of species that create stability, as does permaculture integrate plants and animals in one system.

3. Placement of elements based on function

Each element in permaculture design (plants, water, livestock, humans) is placed in such a way that they support and strengthen each other.

4. Natural patterns

The natural patterns in question are spiral shapes, and natural landscape patterns are used to design efficient and harmonious agricultural and settlement systems.

Handari designed his garden based on its utilization elements, where each element (plants, water, livestock, compost, buildings) is placed based on functional relationships. The kitchen garden is placed close to the house because it is often visited. The chickens are placed close to the vegetable garden so that their manure can be

used as fertilizer, while the ducks are placed close to the fish pond. This model was carried out by Handari which was based on a process of observing the landscape. In the highlands, there are forests with perennial plants as buffers, houses and vegetable gardens, and in the lowlands, there are fruit plants, vegetables, and fish ponds. Fish ponds are made on the lower plains to collect rainwater.

Meanwhile, the permaculture concept is very energy efficient because it reduces external input, maximizes the function of natural systems, and combines various elements to support each other. With this approach, permaculture is not only efficient but also regenerative, where it can improve ecosystems while meeting human needs.

Creative economy

The creative economy refers to an economic sector that relies on creativity, innovation, and human inventiveness to create added value for a product. According to the Indonesian Ministry of Tourism and Creative Economy, there are 17 sub-sectors of the creative economy, such as culinary, crafts, product design, photography, fashion, performing arts, and others, and many of them are integrated with the agricultural sector. [13] In this case, the creative economy is the main strategy to increase the added value of products from sustainable agricultural practices, which include:

1. Product innovation, where farmers can process garden produce into creative products, such as banana chips, various types of chili sauce, various types of processed food from livestock, health drinks such as *kombucha* and syrup.
2. Services and experiences, such as educational tourism based on permaculture. This can provide learning to school children or the general public who are interested in developing permaculture. In addition, it can provide consulting services for the development of permaculture.
3. Strengthening local cultural communities can be done by collaborating with local cultural figures or artists to hold harvest festivals, community markets or agricultural-based cultural events.

Handari has shown quite significant results related to the development of the creative economy. Until now, it has had superior products in the form of health drinks from butterfly pea flowers and rosella flowers, namely *kombucha* and syrup. In addition, there are also green grass jelly and braised chicken. More complete Handari permaculture creative economy products can be seen in Table 1:

Table 1. Creative economy products of Handari permaculture

No.	Product	Turnover (IDR/month)	Description
1.	Green grass jelly	500.000	Starting production in the second year after plantation
2.	Rosella syrup	2.000.000	The first harvest is three months old, and the maximum age of the plant is six months.
3.	Butterfly pea flower syrup (kombucha)	1.200.000	Butterfly pea flower is a perennial plant. The production process begins after the flowers appear.
4,	Banana chips	600.000	Turnover every time there is a harvest
5.	Cassava	100.000 – 200.000	Some are served as dishes for visiting guests.
6.	Papaya	50.000	Papaya fruit is often used as a souvenir/gift for visitors.
7.	Onion sauce	100.000	-
8.	Braised chicken	700.000 – 800.000	The price is 150.000 per each
9.	Fresh vegetables (bitter gourd, spinach, cassava leaves, Moringa and papaya flowers)	200.000	For certain distances, it can be delivered to the address.
10.	Anchovy and torch ginger	-	For personal consumption only

	chili sauce		
11	Parrot fish	-	Currently under pond repair. The price is 50,000/kg
12.	Duck	-	The production failed because the pond was leaking.

Source: Interview results with Handari management

Creative economy integration

The integration of the creative economy in permaculture farming is not only about selling more products, but also about how to increase added value, convey a message of sustainability, and to connect local culture with modern innovation. In Handari's case, this integration is already visible with the presence of various processed food and beverage products from the garden. Even more than that, Handari guarantees that the quality of their products is safe for health without containing chemicals because the source comes from organic farming. Permaculture is more fundamental in preparing healthy food to ensure human health because healthy food must start from the production process and from land preparation to post-harvest.

The nutrients contained in healthy food would affect the level of intelligence of the people who consume it. Therefore, a healthy body must be supported by nutritious food with guaranteed quality. The quality of healthy food can be obtained through an environmentally friendly agricultural process that does not use chemicals. In addition, Handari has also started processing his agricultural products into innovative products such as chips, syrup, and chicken *parende*.

Waste-free farming

The integration of the creative economy and other permaculture farming can be seen in the use of waste as raw materials for creative products. In the concept of permaculture, waste is not considered as garbage but rather a resource that can be reused in the system. This is in line with the permaculture principle of "produce without waste". The goal is to create a closed farming system that is efficient, sustainable, and has minimal environmental impact. The following (see Table 2) is an example of waste utilization carried out by Handari permaculture.

Table 2. Waste utilization table

Types of waste	Its utilization
Household organic waste (vegetable, peel and fruit waste)	Processed into compost, eco-enzymes
Chicken and duck manures	Manure and vermicompost raw materials
Agricultural waste (plant stems and leaves, etc.)	Used as mulch and compost material
Rice washing water or kitchen water	Used for watering plants

Source: Interview with Handari manager

The application of permaculture can reduce the volume of waste, reduce pollution, and increase soil fertility. Economically, it can save the cost of agricultural inputs (fertilizers, pesticides, feed, and energy) and can even be a source of business (compost and waste crafts). Permaculture also encourages people to be environmentally aware and creative in using waste and reducing dependence on external inputs, and creating an independent agricultural system.

CONCLUSION

The integration of permaculture and the creative economy that has been carried out by Handari permaculture has a significant impact on sustainability through socio-cultural, economic, and ecological dimensions. Permaculture maintains and revitalizes cultural practices that are in line with sustainability by sharing knowledge and cooperation, encouraging independence through diversification of agricultural products, utilization of local resources, and

creation of added value such as product processing and creative economic activities based on agriculture. Handari permaculture has creatively created a market for the products produced. Permaculture also contributes significantly to maintaining the balance of nature, improving environmental quality, and strengthening biodiversity. Overall, permaculture is not only a farming method but a holistic approach that is able to transform the way humans live side by side with nature sustainably.

Declaration by Authors

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REFERENCES

1. Mollison, B., & Holmgren, D. Permaculture. Ch. Corlet, 2021.
2. Kusumaningdyah, N. H., & Mintarga, P. Satu Proses Merajut Asa dari Yang Sisa: Belajar dari Alam dan Ibu Bumi. Jurnal Sustainable Culture Architecture. 2014.
3. Gultom, F., & Harianto, S. Revolusi Hijau Merubah Sosial-Ekonomi Masyarakat Petani. TEMALI: Jurnal Pembangunan Sosial. 2021; 4(2): 145–154. https://doi.org/10.15575/jt.v4i2.12579
4. Farawita, F. Degradasi Ekologi dan Kapitalisme Revolusi Hijau dalam Buku Teks Sejarah SMA. HISTORIA: Jurnal Pendidik dan Peneliti Sejarah. 2018: 1(2).
5. Yulia, D. Revolusi Hijau Kebijakan Ekonomi Pemerintah Bidang Pertanian Di Kanagarian Selayo Tahun 1974-1998. HISTORIA: Jurnal Program Studi Pendidikan Sejarah. 2019: 4(2), 78–89. https://doi.org/10.33373/hstr.v4i2.1931
6. Wulansari, Sunarsi, D., Rohaeni, N., Andriani, J., Muslimat, A., Rialmi, Z., Kustini, E., Kristianti, L. S., Rostikawati, D., & Effendy, A. A. Effect of E-Leadership Style, Organizational Commitment and Service Quality Towards Indonesian School Performance. Syst. Rev. Pharm. 2020; 11(10): 472–481.
7. Ginting, R. R. B. R. Pemberian Pupuk Cair pada Tanah dengan Tekstur Yang Berbeda Terhadap Pencucian Hara dan Serapan Hara Kalium Tanaman Jagung. Skripsi, 2014.
8. Rachmawatie, S. J., Respati, A. N., Oktyajati, N., Widiastuti, L., Rahayu, E. S., & Sutrisno, J. Penerapan Integrated Farming System (IFS) Menuju Desa Agrowisata di Desa Jatisari, Kecamatan Jatisrono, Kabupaten Wonogiri. Spekta. 2021; 2(1): 33–40.
9. Machado, A. F., Paglioto, B. F., & Bruzzi de Carvalho, T. Creative Industries in Brazil: Analysis of Specifics Cases for a Country in Development. Theoretical Economics Letters. 2018; 08(07): 1348–1367. https://doi.org/10.4236/tel.2018.87087
10. Madani, A. Pengertian Industri Kreatif: Jenis, Contoh & Kebijakan Pemerintah. 2022.
11. Bungin, B. Analisis Data Kualitatif. Jakarta: Penerbit PT Raja Grafindo Persada, 2003.
12. Sugiyono, P. D. Metode Penelitian Kuantitatif Kualitatif dan R&D. Jakarta: Alfabeta, 2019.
13. Winarso, W. Pengembangan Ekonomi Kreatif dan Andil Pemerintah dalam Menghadapi Perdagangan Bebas. Jurnal Kajian Ilmiah. 2017; 17(1): 12.

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