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¹ Sustainability in Banana Tree Romanticism in the Economic Cycle of Rural Community through Cultural Creative Design

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Abstract. The idea of sustainability has become an interesting topic of discussion in recent decades. Not only because of limited resources, but also the increasing of industrial business awareness of the future life. The concept of sustainable living itself has existed since traditional village life. It slowly decreases and weakened by the entry of industrial products into remote villages with plastic material which is ends up as environmental pollution, considering that waste management in villages is not as good as in some big cities. This amplifies the urgent of circular production which produce the product needs by local using source from its environment. This process require a deep understanding of the culture and the resource to be connected as cultural creative product. In addition, the product should not only functional for local but also have a potential in global market, especially creative industry Dealing with creative industries, designer already been involved into several villages in order to produce attractive commodities in the global market. These products unfortunately become commodities that only benefit a few people, not the local people as the source of the inspiration. Commercialization of cultural products on the one hand can help cultural actors known very well, but on the other hand with traditional systems, this idea does not have a very positive impact on residents, especially in the economic field. Using a model from ritual to form, the author tries to classify the villagers' rituals and formulate cultural products that can be made using materials around them. Thus, the results of these products expected to be useful for local and meaningful for the global market. Using a descriptive analytic method, the author tries to formulate a model for creating local products with global value which is expected to be a model that can be applied to the idea of sustainability in villages, especially in Indonesia.

Keywords: Creative product, Sustainability, Ritual to form, Banana tree, circular economy

1 Introduction

Before the industrialization of daily products in harmful material, the village had their respective follow-up systems, by processing its daily needs from the surrounding resources. The excessive use of energy causes increasingly serious negative environmental impacts, including climate change, which needs to be resolved immediately [1]. Advances in technology and daily product packaging, from production to distribution offer a long -impact practical value. After the industrial revolution, intentions of chasing economic growth caused the blooming of mass production and machine manufacture [2]. This mass production targeting not only people in city but also in rural area. Technological advances make it easier but weaken humans. All needs that are based on the ability to manage natural resources are now not inherited because of the challenges of different times. Ironically, this makes several villages that used to be independent (because they can growth and harvest their own needs), to have dependence on products and facilities distributed from remote industrial cities. These advances provide local population awareness of products that they have never imagined need it. In other words, they get the distribution of products that they do not need, but with certain advertising and marketing strategies the products are present like a part of life that must be present where not infrequently the material of these products is made of industrial materials that are wasteful after use. This study provides an alternative proposal in the practice of sustainability in design by utilizing existing resources as the main raw material in its manufacture. This idea is intended to promote circular production cycles with creative products that are beneficial for local residents and mean to the global market.

Regarding local resources as the material potential, in the west java, especially Cianjur Region, there is a village called Cihea. In this village there are plenty of banana tree which is one of the main commodities for local people. The variety of the banana tree is the one who can growth the leaf faster than the other kind, and that is why the fruit itself is not good to consume but that is not a problem since the local only harvest the leaf for economic purposes. This process of harvesting banana leaf is a daily activity which can be seen almost in every house along the way of the main road. Basically, every people just have to collect the banana leaf, bundle it, and leave it in the side of the road or in front of the house, there will be a pick-up car (local people call it "leaf car") which will collect all of the bundle then distribute it collectively to the capital city of Jakarta. Then the owner of the leaf will be paid for how many bundles they can provide that day.

Behind the process of harvesting banana leaf, there is tons of banana leaf branch abandoned in every corner of banana tree field or even in the side of the main street. This is a potential economic loss. If there is a way to utilize it into another purpose that would be another chance to make another profit from it. From this part this case will become the question of the study, how to utilize the local potential into creative product which is functional for the local and potential for global.

The study about banana shown that in 2017 Indonesian Central Bureau of Statistics record that production of banana fruit reaches 8 741 147.00 tons. According to Wijaya (2014) in Iskandar et.al (2018) the production of banana plants reaches 30% of the

total production of Indonesian fruit crops. The development of banana production in West Java over the past five years (2017-2021) has increased significantly [3]. Banana tree is a fruit plants that grow spread in Indonesian territory. For people of West Java banana plant inherit and already becomes part of the culture.

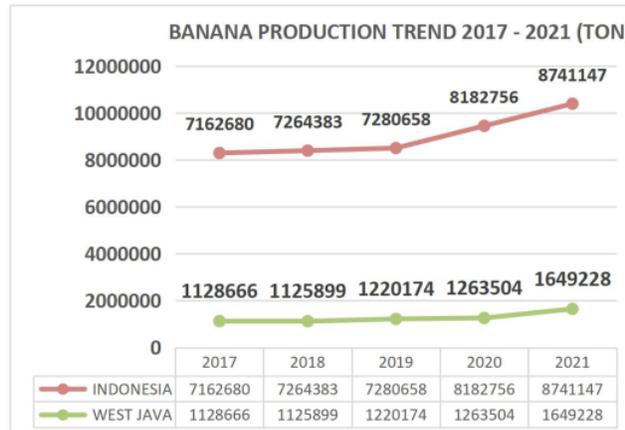


Figure 1. Banana Production trend (2017-2021)

¹ The knowledge of the use of bananas in everyday life is related to the life cycle from birth to death. Almost all parts of the banana tree are used to meet the needs of food, packaging, medicinal plants or herbs, animal feed, to ritual needs. Like Indonesians in rural areas generally plant banana trees in the form of swidden (*ladang* or *huma*), homegardens (*pekarangan*), gardens (*kebon*) and mixgardens (*kebon campuran*) [4].

According to Iskandar et.al (2018) local knowledge related to banana plants is related to the banana cultivation cycle concerning seed preparation, soil preparation, planting, maintenance, harvesting, and post-harvest treatment. The benefits of banana plants apart from for household purposes also can be a source of additional income [4]. All parts of the banana plant have economic value, parts of the leaves, tree trunks can be sold directly to collectors or use the services of a banana leaf handyman who comes to your house or garden and harvests banana leaves who come regularly or upon call as promised. Banana leaves are generally sold.



Figure 2. Banana stalk midrib waste

Through the idea of the idea "from the ritual to the form of" the author tries to connect these two things by observing the daily lives of the residents of Cihea Village, as a daily ritual to record the needs of any product that is relevant to their daily rituals. Then from the data the author will formulate related products that can be created by utilizing the material that can be obtained from the most commodities in the village, a banana tree. This idea in line with the view that provisions for the economic health and wealth of society, while partly built on a foundation of technical proficiency and technological development, must also make efforts to discover excellence and innovative potential in local cultures, using cultural innovation to communicate cultural richness. , shaping lifestyle choices, enhancing industrial competitiveness, and promoting regional development [5] There was a research regarding a model to analyze the cultural wealth into creative product commodity that enhance the value for today market generate by Lin and Kreifeldt (2021) [6]. This model uses as inspiration to generate model regarding the the ritual and form by considering local resource.

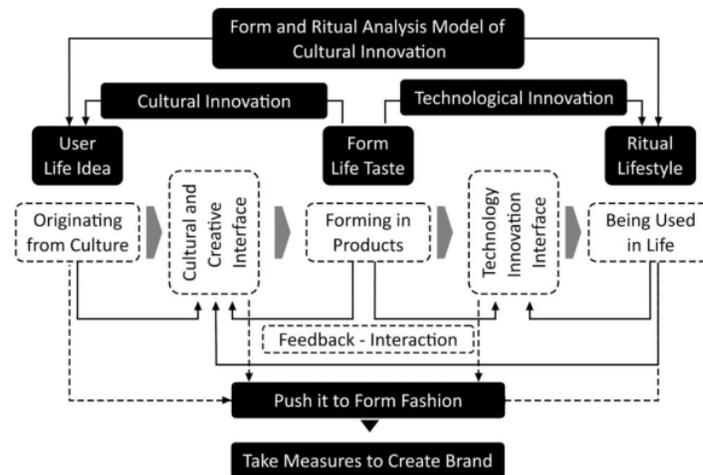


Figure 3. The form and ritual model of cultural Innovation [6]

It is from all these processes that the idea of movement from an industrial idealist process shifts to products from a more realistic and natural lifestyle.

2 Theoretical Framework

2.1 Cultural and Ritual

Koentjaraningrat differentiates cultures into three categories: systems of ideas, systems of activity, and products in the form of artifacts, which are understood as ideas that underlie the patterns of behavior and beliefs of certain groups (ideas), activities, or behaviors that characterize certain cultural groups (activities), and cultural objects that are distinctive and inherent in related culture groups (artifacts) [7]. Liliwari, on the other hand, defines culture as the live view of a group of people in the form of behaviors, beliefs, values, and symbols they receive unconsciously that are all inherited through the process of communication from one generation to the next [8]. From these two perspectives, the study concludes that culture is not a single unique object owned by one group that does not exist in another group, but rather a way of life for a group of humans as a response to their surroundings.

Cihea Village is in the Cianjur Regency of West Java Province, Indonesia. The village is situated in the northern region of Cianjur and is bounded to the north by Karawang Regency, to the west by Mekarsari Village, to the east by Cimahi Village, and to the east by Sukaluyu District.

The village of Cihea is geographically located in a plain at an elevation of 50-100 meters above sea level. The village receives a fair amount of rain throughout the year, with average temperatures ranging from 22 to 27 degrees Celsius. Cihea Village has and unique topology of hills with rivers flowing between them, providing fertility to the soil. This is one of the reasons why farming and gardening are important sources of income for the country's citizens. Banana trees are a natural wealth that is also a source of income for its residents, but this commodity has not been fully explored beyond the leaves.

Cambridge online dictionary identify ritual as a way of doing something in which the same actions are done in the same way every time. In this context it could be define as the daily living Cihea people as farmer and villager. The routine activities of the lives of Cihea residents are the basis for formulating daily products that will be explored using materials in surround, especially banana trees, into products that are locally useful and globally meaningful.

2.2 Sustainability in banana leaf branch romanticism

The concept of sustainability is currently a source of concern for many research areas. Cambridge online dictionary define sustainability as the quality of causing little or no damage to the environment and therefore able to continue for a long time. Spesificaly John Elkington emphasize that sustainability encompasses three interrelated aspects: environmental, social and economic. According to John Elkington's triple bottom line, the People, the Planet and Profits are inter-reliant: "society depends on the economy and the economy depends on the global ecosystem, whose health represents the ultimate bottom line." in this context the notion of sustainability define as the way local people living side-by side with its environment which also unleash the potential of global market for economic growth. Adapt by John Elkintons there will be "The local of Cihea village creates economic value which is walk in tune with global market". The statement could be break down as generating the daily product needs from daily activities that produce with local source (banana leaf branch) in order to fulfil local needs by considering global taste.

In other perspective banana tree romanticism is a variable movement which express something is usual in emotional ways. In this case the romanticism from daily product generated from banana tree which is functional for local people and emotional for global market.

2.3 Cultural Creative Design

The idea of cultural creative design basically a generated design in respond of cultural expression with adding value to its original one. The design generated may carry a noble mission in preserving culture in today business by bridging the gap between the original, traditional (old fashioned) and today market which tend to focus on the looks, feeling, and value.

In those ways the generated product in this paper is not the product generated by the author. Since this paper attempts to generated pilot model, the product chosen as example is the finished product already create by the other designer. This will help us

to validate the idea that those products are possible to generate from the particular material, especially banana tree.

3 Methodology

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A. Ritual

In the ritual section, designer could identify the daily routine of local people which is typical, has a story to tell, and a value to share. By considering this three that would be a key to enhance the value of final product design which is destined for global. The approach of selecting the activity could use Maslow diagram, and cultural level. Maslow diagram help us to understand the activity and group the activity based on Maslow diagram, either the activity of providing physical needs (related with food, and basic living survival), security and safety needs, social needs, esteem needs, or actualization needs.

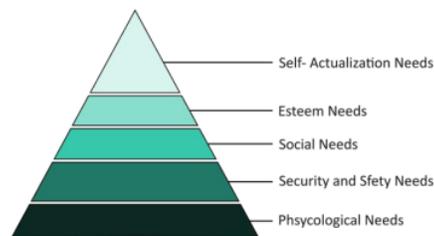


Figure 4. Maslow Diagram

The other way to select the activity we could explore into creative product is using three level of culture. Lin et.al from their paper shows the three level of culture regarding the tangible level which is material or physical, behavioral level related with custom and ritual, and intangible level which is cover the spiritual and emotional aspect. These two approaches are proposed in order to accommodate different community characters, because not all people in a certain area have a distinctive culture as a source of inspiration, and supporting material so that apart from culture, researchers can use the approach of daily activities which can even be formulated from urban communities.



Figure 5. The Form and Ritual Analysis Model of Cultural Innovation. (Redraw from [9]. Copyright 2001 Lin and Kreif)

B. Sustainability

The basic idea of sustainability in simple ways could be sign as circular economy that can apply by local living system. While the same time the product use to sell in global may have different treatment. In this case the role of the creative industry is important. not only as a container for display and marketing of finished products. but also as a system that involves local resources, empowers citizens, and most importantly, has a positive impact on local residents. especially by utilizing local resources, so that the production cycle is expected to minimize pollution with ideas from nature for local residents and return to nature properly.

C. Form

Form of this context is the creative product result from the process. The consideration aspect in designing final product is the product should be designed using modern referral design which is match with today market. On the other hand, the innovation aspect of designing product could follow pyramid of innovation from Rampino (2016) which focus on aesthetic innovation, utility innovation, meaning innovation or typology innovation.

From those process the model generated by now could be translate as identify daily activities (using Maslow consideration as the basic concept), while process of design innovation use to create creative product (using Rampino baseline innovation). Finally, both of the process should consider to explore local resource in order to establish sustainability idea [10].

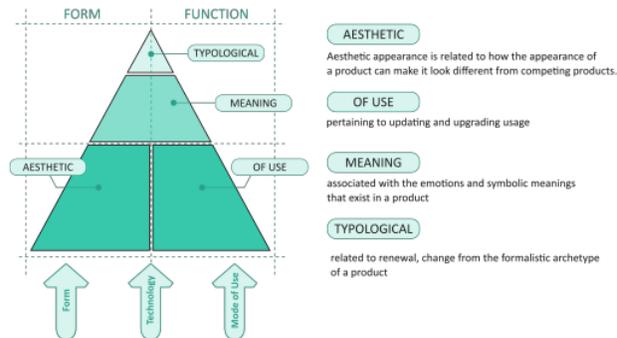


Figure 6. The Pyramid of Innovation by Rampino [10].

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The material itself have material innovation potent, research that explore the banana stalk/midrib waste as a fibre source that uses *pisang kepok* or *Pisang Manggala* describe in three category material exploration.

- Banana leaf stems are processed into composites or pulp to create material in the form of hygroscopic sheet paper [11], [12]The goal of research on the treatment of banana leaf stem waste is to make the paper whiter by reducing or eliminating lignin levels in the pulp. Chemical processes such as the soda process, sulfate process, and kraft process are currently used to improve the quality of paper sheets [11].
- The researchers use a pulp-composite-cast technique to develop creative products from banana midrib stalk to obtain a three-dimensional shape. Material engineering procedures such as drying - grinding - filtering - baking- the press will generate products with material quality that has a durable material character that is not easily broken but is still hygroscopic, requiring chemical treatments such as coatings [12].
- After The banana leaf is dried, the stalk or midrib is pressed into semi-finished fibers. Furthermore, when mixed with other fibers and resin, a composite material with a plywood-like character is produced. Another potential exploration for banana leaf stalk is material for eyeglass frames to replace conventional plywood materials [13]. This potential is due to the cellulose fibers of banana leaf stem [13] approaching 40% for the type of Pisang kepok (*Musa paradicecae sp*) [12].

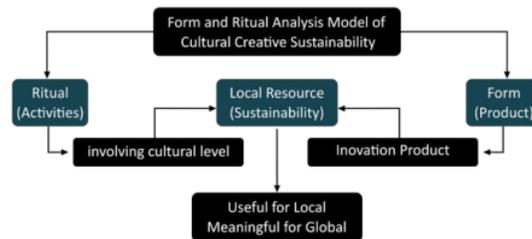


Figure 6. the model of generating creative product locally useful globally meaningful

4 Conclusions

Since this paper attempts to generate pilot model, the product chosen as example is the finished product already create by the other designers or makers. This will help us to validate the idea that those product are possible to generate from the particular material, especially banana tree. From the study above we can conclude that in order to ground the notion of sustainability in rural area in the same hand participate in global creative industry. An attempt could be done by formulating "ritual" into "form". the ritual can be translate as daily routin activity which can be approach by two ways, maslow and cultural level to adjust the condition of the field.

If the community inherit particular culture we can use the cultural level model as an approach to identify the proper "ritual" that gan be generated later as a basic idea. But if the community does not posses any cultural wealth as we seen in some area people in rural area just live by its conctional ways that not represent typacl cultural, we can use maslow diagram as an approach to identify the needs or an idea from its "ritual" to generate idea in order to create a usefull creative product but still meaningful for the global.

From those process the list of the ritual which already gather is connected with the product that equip their "ritual". this kind of product we can take from the existing one or create base on the ritual list. Either the existing and the generated product is design using pyramid of innovation from Rmpino in order to create the adding value. So at least it has a story behind to tell as a meaning value for global market.

Both sides of model, either generating product from "ritual" list and inovating product to create a "form" has to be in line with the notion of sustainability. In that ways this process will provide the meaning to the final product automatically. Finaly this paper may not be abel to shown the product result since this is the step of validating the idea to generate creative product based on "ritual to form" model which can be seen as the picture bellow.

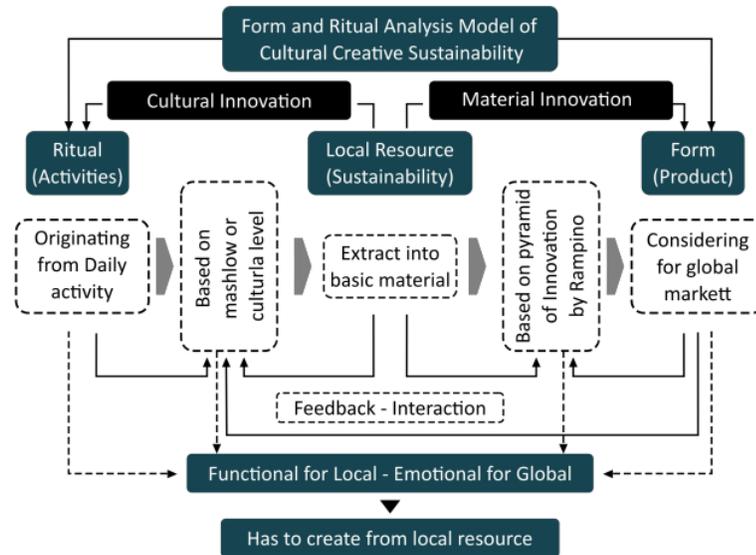


Figure 7. The analysis framework of generating creative product which is locally useful and globally meaningful, retrieve from [9] and redrawn for this study.

Since this paper attempts to generate pilot model, the product chosen as example is the finished product already create by the other designers or makers. This will help us to validate the idea that those product are possible to generate from the particular material, especially banana tree. Nevertheless the author expect that this model from this paper could be trigger an advance discussion to help particular community to uplift their economical situation in the same way to foster sustainability awareness.

Regarding the condition of Indonesia country which possess cultural wealth this paper expected to be useful in the future cultural exploration especially in design field. Because design should not only a knowledge to deal with commercial aspect, but also the strategy to brighten the society.

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