


Utilization of water hyacinth plants as a woven craft business opportunity in subdistrict 1 Ilir Palembang city

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Article Info	ABSTRACT
Keywords: Water Hyacinth, Business Opportunities, Subdistrict 1 Ilir, Palembang City	The reason for community service is because many water hyacinth plants grow massively and fertile and are underutilized, so assistance is needed so that these plants have added value for the community, especially increasing income. One of the locations where water hyacinth grows in abundance is in the Air area, 1 Ilir Village, Ilir Timur II District, Palembang City, South Sumatra. In this activity, it was introduced that the water hyacinth plant is made into a woven craft which is useful as a business opportunity as an alternative to increasing income. . Methods used Training. and discussion and diffusion of water hyacinth fiber processing technology. The processing processes are: process, making patterns, weaving process, embroidery process, making handles, sewing, finishing. In conclusion, with community service, water hyacinth training can reduce the negative impact of the presence of water hyacinth which can reduce oxygen levels in the water. As well as empowering local communities who are tasked with weaving these crafts. Apart from that, the marketing scope is also getting wider as evidenced by the presence of orders for water hyacinth crafts not only from within the city but from outside the city and even overseas.
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INTRODUCTION

So far, water hyacinth is considered a plant that causes a lot of harm because water hyacinth has a very fast and uncontrolled vegetative reproduction rate, especially in tropical and subtropical areas, so that many waters, especially freshwater waters, become covered by water hyacinth S. Suryono (2017). This plant originates from Brazil and was first imported to Indonesia via the Bogor Botanical Gardens in 1894 as a nuisance plant. Now water hyacinth is a weed and damages the aquatic environment. Research says that in two months it can grow up to one square meter. To overcome the relatively massive growth and spread of water hyacinth, various methods are being taken so that this plant can be utilized as a product of economic value. R. A. Retnoningrum (2014).

Initially it was an ornamental plant that was loved because its purple flowers were very attractive to decorate ponds like the lotus. But due to its growth which is very fast and

uncontrollable, this is what causes water hyacinth to have great potential for use A. Nugroho, A. F. Daru, and W. Adhiwibowo (2014). One of the locations where water hyacinth grows in abundance is in the Kampung Air area, Ilir Village, Ilir Timur II District, Palembang City, South Sumatra Province. Types of plants: Water hyacinth lives floating in water, produces good quality fiber and sometimes takes root in mud. Its height is around 0.4-0.8 meters. N. Utomo, Arif Fajar, Primastuti (2013).

According to N. Utomo, Arif Fajar, Primastuti (2013), about making briquettes with a mixture of water hyacinth (*Euchornia crassipes*) which has previously been pyrolyzed into charcoal, with two types of adhesive, namely wheat flour and tapioca flour. The research results showed that briquettes with tapioca flour as an adhesive were better than briquettes with wheat flour as an adhesive. Briquettes with tapioca adhesive have a shatter index with the least loss and better stability, even though the calorific value is slightly below the calorific value of briquettes with wheat adhesive N. Utomo, Arif Fajar, Primastuti (2013).

According to N. L. M. Pradnyawathi and N. L. Kartini (2019), the results obtained from this service activity were that the activity went well where the Buahan Village farmer group was very enthusiastic about this activity as shown by the average attendance of farmer group members was 63%. The organic water hyacinth fertilizer produced meets the compost quality standards. The use of water hyacinth which is a lake weed for organic fertilizer in Buahan Village, Kintamani sub-district, Bangli will be very beneficial for increasing farmers' income as well as preserving Lake Batur.

Community service water hyacinth training can reduce the negative impact of the presence of water hyacinth which can reduce oxygen levels in the water. As well as empowering local communities who are tasked with weaving these crafts. Apart from that, the marketing scope is also getting wider as evidenced by the presence of orders for water hyacinth crafts not only from within the city but from outside the city and even overseas Pudjowati, J., et.al. (2021). Water hyacinth (*Eichornia crassipes*) is a floating aquatic plant that reproduces so quickly that it is thought to damage the aquatic environment. Another negative assumption about this power plant is that it can cause flooding. The implementation of IbM aims to improve the quality of business management and speed up the process of drying and weaving water hyacinth by saving a lot of time. Therefore, the press has had a significant impact; the process of drying and weaving water hyacinth no longer takes a long time and the results show an increase in quality Samsudin, A., & Husnussalam, H. (2017).

The development of Gorontalo water hyacinth crafts based on their characteristics is carried out through diversification and innovation: technology in production, products and distribution, following technological advances and market dynamics. The predictive power of the concept is formulated in a causal statement and its application is explained in systematic work steps. This concept can be used as a reference in the future development of Gorontalo water hyacinth crafts or other similar crafts Sudana, I. W., & Mohamad, I. (2021).

There has also been an increase in the number of craftsmen through adaptation of

weaving skills, as acknowledged by Rorintulus (56 years old) “in the beginning I have been making rattan weaving since 1995...focus on water hyacinth starting 2007 ... if already know that weaving is easier, because This water hyacinth craft is also basic woven... my members were originally craftsmen woven rattan... only we don't have a designer yet to draw new models ...”. Craftsmen in Indah Rattan Company also easily can combine rattan woven with water hyacinth crafts (Putra, 2016). Data This implies, that the increase number of craftsmen can be done by adapting rattan woven craftsmen or even other woven craftsmen became water hyacinth craftsman, because of skill weaving is a craft base water hyacinth. But the numbers are increasing craftsmen must be supported by existence designer to design designs new to anticipate demand consumer. Designers are qualified to estimate current needs and able to creatively anticipate future needs (McCrory, 1996: 12).

Upaya yang dianggap lebih strategis dalam menghambat laju pertumbuhan eceng gondok dilakukan dengan memanfaatkannya sebagai bahan baku seni kerajinan (crafts). Beberapa riset seperti: Retnoningrum (2014); Waty & Dangkoa (2016); Samsudin & Husnussalam (2017); Wolok, dkk. (2019) telah membuktikan, bahwa eceng gondok dapat digunakan sebagai bahan baku beragam produk seni kerajinan untuk peningkatan nilai ekonomi, penyerapan tenaga kerja, dan menghasilkan produk ramah lingkungan. Upaya kreatif dalam mengolah potensi artistik eceng gondok sebagai bahan baku ramah lingkungan, memunculkan seni kerajinan eceng gondok di Gorontalo. Namun kerajinan tersebut kurang berkembang, walaupun berbagai upaya pengembangan telah sering dilakukan, baik oleh pemerintah, BUMN, maupun swadaya. Diduga hal itu terjadi karena upaya-upaya pengembangan yang dilakukan tidak terarah, berbasis pasar, dan bersifat spekulatif. Data hasil observasi menunjukkan, pengembangan seni kerajinan tersebut selama ini cenderung hanya didasarkan pada kebutuhan pasar dengan mengikuti produk-produk sejenis yang sedang tren, dan kurang memperhatikan karakteristiknya. Padahal setiap kerajinan memiliki karakteristik berbeda-beda antara yang satu dengan yang lainnya (Sofyan, dkk., 2018, hlm. 390). Pengembangan seni kerajinan harus berangkat dari karakteristiknya agar tetap mengakar pada masyarakat pemilik budaya kerajinan bersangkutan. Berdasarkan hal itu, maka untuk pengembangan seni kerajinan eceng gondok Gorontalo, perlu dikaji dan dirumuskan konsep pengembangan yang sistematis dan terarah sesuai dengan karakteristiknya.

METHODS

The implementation of this Abdimas activity is to empower the community in the Kampung Air area of 1 Ilir sub-district, Ilir Timur II District, Palembang, South Sumatra, to earn family income by opening business opportunities for water hyacinth chicken crafts which were participated by 30 PKK women in 1 Ilir. This activity is carried out with knowledge and training. and discussion and diffusion of water hyacinth fiber processing technology to produce beautiful woven products. Questionnaires were conducted before and after delivery of the material. The questionnaire after the delivery of the material is an evaluation regarding increasing public understanding and interest in the use of water hyacinth plants for business opportunities. Evaluation was also carried out after the delivery of the material

to determine the increase in public understanding and interest in the use of water hyacinth plants for business opportunities. The water water processing process will be described in Figure 1:

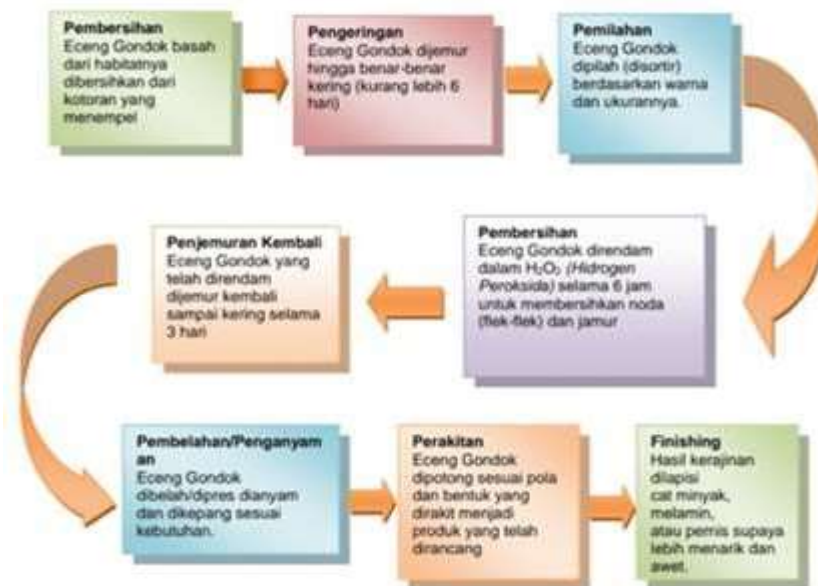


Figure 1: Water Hyacinth Processing Procedure

Figure 1 can be explained as follows:

- a. This process is the initial process for making water hyacinth crafts, namely by taking water hyacinth plants and then drying them for 1 week to 25 days depending on the weather. Each dry water hyacinth plant is still selected and grouped based on size because there are large and small plants. This aims to ensure that during the weaving process the shapes are no longer chosen because they have been grouped according to size and thickness.
- b. Make a pattern.
The next process is to make a pattern, for example making a bag pattern, then cutting wood can be made from plywood which is then made according to your wishes or bag order. The wood is arranged or assembled using a small hammer which is usually square or round in shape.
- c. Weaving process.
After making the pattern, the next stage is to weave with the pattern that has been made. This pattern is used when weaving the water hyacinth into a shape and can be the same size as the others.
- d. Embroidery process.
After the weaving process is carried out, the next process is embroidery. This process is quite difficult because it requires patience and persistence. This is because the pattern that has been made must be embroidered with the same color and shape. In this process, embroidery uses thread, ribbon and other variations, the level of difficulty depends on the volume of the item to be embroidered, the length of time

involved in embroidering a small bag, for example, it can be done by one person in 1 day, therefore it requires special skills in this process.

e. Make a handle.

This process is making handles or hangers for bags because this process uses scissors or other cutting tools to be used as straps for bags.

f. Cutting

This stage of the cutting process is cutting the foam which is used as the inner layer of the bag, the inside of the bag which aims to be nicer, tighter and more voluminous. Cutting the foam follows the shape and pattern of the bag to be made.

g. Sew

The next stage after cutting is to sew the inside of the bag which contains foam and fabric and then sew it as the inner layer of the bag so that it is tighter, safer and more voluminous, and more attractive. When sewing the inner lining of this bag, use your hands without a sewing machine, except when installing the zipper on the part of the bag that has a zipper.

h. Finishing

The final stage, after the water hyacinth craft is almost perfect, is the finishing process. The finishing process is carried out to beautify the water hyacinth craft that has been made so that it meets the wishes of consumers on the market.

RESULTS AND DISCUSSION

A community service activity entitled the use of water hyacinth plants as a weaving business opportunity in 1 Ilir Village, Ilir Timur II District, Palembang City, South Sumatra Province on Monday 25 September 2023. This service activity was attended by housewives who were members of the group PKK. In this activity, an explanation was given about how to make water hyacinth fiber into various products. Processing water hyacinth requires quite a long time, around 25 days for flattening or drying. Then create the pattern you want or according to your request.



Figure 2. Weaving activities make finished products

Figure 2, the embroidery process requires patience and patience, with the aim that the pattern that has been made is embroidered according to the color and shape must be the same. The embroidery process uses thread, ribbon and other variations depending on taste. The level of difficulty also depends on the number and shape of the pattern images. Everyone works on a product that is made so that its quality is maintained.

In this activity, it is easier to obtain materials because of the abundance of water hyacinth plants in Kampung Air, Kelurahan 1 Ilir. To reduce the population of water hyacinth plants which can damage river ecosystems, it is a question of how water hyacinth itself can be utilized and managed into a craft that has high selling value and of course a very unique product.



Figure 3. Craft results of water hyacinth chicken products

In Figure 3, the presence of water hyacinth and environmentally friendly craft products. Water hyacinth craft products are environmentally friendly products because the manufacturing process does not use chemicals that can harm health and the environment. The painting process does not use substances that are safe for the environment. This is done to make the appearance of the product shinier and more beautiful. Initially, the presence of water hyacinth in the waters of the Kebraon reservoir could be detrimental to

water traffic because the reservoir is usually used for jet skiing. Water hyacinth will block the passage of the jetski so that the sport cannot run smoothly,

However, in the end water hyacinth brings benefits to the environment by empowering the community with training activities held at the local village hall where most of the participants come from housewives. The reason is to empower housewives who can have an entrepreneurial, creative and productive spirit. The counseling carried out was also assisted by the owner's wife, Mrs. Heryati, where she also provided guidance on how to process water hyacinth, weave, embroider, model the items to be made and so on. Many housewives also help make water hyacinth handicrafts. With this, Quality Control is carried out simultaneously with the process of making handicrafts made by housewives or PKK women in Kampung Air, Kelurahan 1 Ilir, Kecamatan Ilir Timur II, Palembang City.

CONCLUSION

The environment and society use Water Hyacinth to make handicrafts in the form of bags, shoes, sandals, food hoods, coasters, carpets, vests, hats, chairs and so on. Viewed from a scientific aspect, namely reducing the negative impact of the presence of water hyacinth which can reduce oxygen levels in the water. From the environmental aspect, it can reduce the presence of water hyacinth which has a negative impact on the environment if it is allowed to grow wild. Apart from that, the product used in making water hyacinth crafts does not use chemicals so it is an environmentally friendly and harmless product. In the community aspect, this business empowers the local community, namely those tasked with weaving these crafts. Apart from that, the marketing scope is also getting wider as evidenced by the presence of orders for water hyacinth crafts not only from within the city but from outside the city and even overseas.

REFERENCE

- A. Nugroho, A. F. Daru, and W. Adhiwibowo, "Development of Online Marketing for Water Hyacinth and Pandan Craft Businesses in Lopait Village, Tuntang District, Semarang Regency," *J. Transform.*, 2014, doi: 10.26623/transformatika.v12i1.87 .
- A. F. Utomo and N. Primastuti, "Utilization of Water Hyacinth (*Eichornia crassipes*) Furniture Waste at Koen Gallery as a Basic Material for Making Bioarang Briquettes," *J. Teknol. Kim. and Ind.*, 2013.
- J. Tangio, "Utilization of Water Hyacinth Biomass from Lake Limboto as a Biogas Producer," *Jambura J. Chem.*, 2019, doi: 10.34312/jambchem.v1i1.2105.
- Mccrory, R.J. (1996). *The Design Method In Practice*. In S. A. Gregory (Ed), *The Design Method*. Springer Science+Business Media: New York.
- N. Utomo, Arif Fajar, Primastuti, "Utilization of water hyacinth furniture waste," *J. Teknol. Kim. and Ind.*, 2013.
- N. L. M. Pradnyawathi and N. L. Kartini, "PROCESSING Hyacinth (*Eichornia crassipes*) For Increasing Community Income And Preserving Lake Batur In Buahon Village, Kintamani District, Bangli Regency, Bali Province," *Bul. Udayana Serves*, 2019, doi: 10.24843/bum.2019.v18.i01.p10.

- Pudjowati, J., Wahyuni, S. T., Afifah, N. N., Safi'i, B. A. C., & Kabarudin, K. M. (2021). Pemanfaatan Tanaman Enceng Gondok Sebagai Peluang Usaha Kerajinan Anyaman Di Kelurahan Kebraon Karangpilang Surabaya. *Jurnal Pengabdian Masyarakat Indonesia*, 1(2), 65-70.
- Putra, Y. M. P. (1 September 2016). Rotan-Eceng Gondok Dipadukan Jadi Kerajinan Bernilai Jual. *Republika*
- R. A. Retnoningrum, "Utilization of Water Hyacinth as a Craft Product: Case Study at KUPP Karya Muda 'Syarina Production' Kebondowo Village, Banyubiru District," *Journal of Visual Arts*. 2014.
- S. Suryono, "IbM Utilization of Water Hyacinth and Straw as Animal Feed and Alternative Fertilizer in Ngargorejo Village," *PRIMA J. Community Empower. Serv.*, 2017, doi: 10.20961/prima.v1i1.35149.
- Retnoningrum, R.A. (2014). Pemanfaatan Enceng Gondok Sebagai Produk Kerajinan: Studi Kasus Di Kupp Karya Muda "Syarina Production" Desa Kebondowo Kecamatan Banyubiru. *Eduarts: Journal of Visual Arts*, 3 (1), 73-80.
- Samsudin, A., & Husnussalam, H. (2017). IbM Pemanfaatan Tanaman Eceng Gondok (*Eichornia crassipes*) untuk Kerajinan Tas. *Agrokreatif: Jurnal Ilmiah Pengabdian kepada Masyarakat*, 3(1), 34-39.
- Sofyan, A.N., K. Sofianto, M. Sutirman & D. Suganda. (2018). Kerajinan Payung Geulis Sebagai Kearifan Lokal Tasikmalaya. *Panggung*, 28 (4), 388-402.
- Sudana, I. W., & Mohamad, I. (2021). Konsep Pengembangan Seni Kerajinan Eceng Gondok Gorontalo. *Panggung: Jurnal Seni Budaya*, 31(2), 93-109
- Waty, M., Umar, S., & Dangkoa, S. (2023). Optimalisasi Pembelajaran Berkarya Dua Dimensi Berbasis Bahan Alam Dengan Teknik Kolase. *Jambura: Jurnal Seni dan Desain*, 3(1).