Exploring the Socio-Economic Realities of Muara Badak Ulu: A Descriptive Study on the Impact of Mulawarman University's *Silvofishery* Program

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Abstract. This study explores the implementation and impact of *Silvofishery* on improving the socio-economic welfare of the community in Muara Badak Ulu. Before *Silvofishery*, crop yields and community productivity declined, which affected the society's income. This was due to several problems such as disease, declining water quality, and limited feed availability. In 2021, Mulawarman University, together with the Indonesian Peat and Mangrove Restoration Agency, took the initiative to provide assistance with the aim of improving the community's skills in managing ponds using *Silvofishery*. The type of research used in this study was a qualitative descriptive method through interviews, observations, and literature studies, with a research focus on the role of *Silvofishery* in improving the socio-economic welfare of the community in a healthy and clean form in the form of mangrove ponds and the development of marine commodities. This research informatics consist of 4 (four) people, including lecturers, students, communities, and society and the interviews reached data saturation after interviewing the fourth informant. The results of the study can be concluded that the role of University Social Responsibility (USR) in this case *Silvofishery* has a positive impact on improving the socio-economic welfare of the community in Muara Badak Ulu, as shown by increased crop yields, reduced dependence on external additives, and lower production costs.

Keywords: *Silvofishery*, Socio-Economics, University Social Responsibility

1 Introduction

Mulawarman University as an educational institution in higher education does not only have a responsibility for providing education to students. However, the responsibility to the community in providing education and development can be implemented to their businesses. Mulawarman University also carries out this responsibility openly where students, the community, and the private sector also participate in the development and empowerment efforts of the community. *University Social Responsibility* (USR) is the university's commitment to support the creation of sustainable development which is a long-term goal. USR owned by Mulawarman University is a form of university commitment with the aim that the developed community can implement business at *profit* by being carried out without damaging the environment and social welfare is maintained.

This emission is significant considering East Kalimantan, particularly the Mahakam Delta region, is recognized as one of the largest and most diverse mangrove areas in the world. Ironically, approximately 60% of mangrove deforestation has been driven by land conversion into shrimp and fish ponds. This situation is exacerbated by the fact that the conventional production of one kilogram of shrimp is estimated to generate emissions equivalent to the combustion of 2,000 liters of gasoline. This condition raises serious environmental concerns, as shrimp remains an important food commodity despite its production contributing to significant greenhouse gas emissions.

In 1994, the coastal area of East Kalimantan was still dominated by mangrove forests. By 2015, most of this area had been converted into shrimp farms, including abandoned and inactive ones. A shrimp harvest yield of 14 kg/ha was obtained, which decreased annually before the implementation of the *Silvofishery*

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W. Sari et al. (eds.), *Proceedings of the 5th Mulawarman International Conference on Economics and Business (MICEB 2025)*, Advances in Economics, Business and Management Research 406,
https://doi.org/10.2991/978-94-6239-815-3_18

program [1]. Fish farmers also face difficulties in managing their ponds due to the government's designation of the areas surrounding the ponds as conservation zones.

Under these conditions, fish farmers tend to be reluctant because they cannot manage the ponds if there are mangroves in the middle of the pond area. Based on these constraints, BRGM has sought solutions that enable mangrove restoration to proceed without halting community cultivation activities, leading to the emergence of *Silvofishery* as a viable alternative.

Mulawarman University has developed a *Silvofishery* program in Muara Badak that integrates mangrove rehabilitation with aquaculture activities. *Silvofishery* is an integrated approach that combines mangrove rehabilitation and aquaculture to address environmentally unsustainable economic practices. The implementation of this program requires substantial adjustments to established cultivation practices, the acquisition of new technical skills, and enhanced ecological understanding. Therefore, many coastal communities find it difficult to implement this program independently without direct guidance.

Research on *Silvofishery* has developed rapidly, but most studies still focus on the ecological impacts of the *Silvofishery* program, such as mangrove rehabilitation, water quality, and other environmental aspects. Meanwhile, research on the socio-economic aspects based on University Social Responsibility (USR) is still very limited. In addition, research with a multi-perspective approach involving lecturers as program initiators, students as program implementers, the community as beneficiaries, and local authorities such as BUMDes and RT Chairmen, is highly necessary to comprehensively understand the success of the *Silvofishery* program through the simultaneous analysis of various perspectives.

The results of this study provide a holistic overview of the impact of the *Silvofishery* program on the social aspects of the community, which has important implications for related practices and policies. These findings can serve as a consideration and reference for stakeholders, both in monitoring efforts and in specific evaluations of the resulting socio-economic impacts.

2 Literature Reviews

2.1 Stewardship Theory

The practice of social responsibility, both specifically in CSR programs and programs with similar orientations, is a form of an institution's contribution to the social community and the surrounding environment. This contribution is not only on the financial aspect but also includes the non-financial aspect. Stewardship theory states that the collective behavior of an organization that puts aside individual interests is actually the goal of the organization [2]. Organizational leaders, in this case business and non-business organizations, are not oriented to their own economic interests but have the awareness to act for the benefit of the organization collectively [3]. *Stewardship theory* It is built based on the philosophical assumptions of human nature, where in essence humans can be trusted, able to act responsibly, have integrity and honesty towards others [2]–[4]. Based on this, the management in an organization is seen as a trustworthy party and will act as best as possible in the public interest at large. View *Stewardship* Describe that the organization's leaders understand the existence of *Trade Off* between personal needs and organizational goals [2], [3]. This kind of balance requires an organizational mechanism that facilitates this.

Accountability in *Stewardship Theory* is seen as a mechanism for organizational leaders to provide an explanation of what has been done in the operational process to *Stakeholders*, as well as then considering the response *Stakeholders* about this [3]. This then becomes the basis for setting future strategies to achieve collective goals. Accountability is carried out based on *spirit of respect* and *Cooperation* that do not undermine trust in each other, and override *Negative Sense* that makes the leader feel unappreciated [5]. It can be concluded that, *Stewardship Theory* based his assumption on the concept that human beings are social beings, not egoistic beings, so that they have the consciousness to be oriented towards *Goal Alignment*, with intrinsic motivation that is more dominant than material orientation.

2.2 Relevance of Stewardship Theory to USR

Stewardship theory based on organizational activities on nature conservation, maintenance and protection of natural, social and economic assets for the benefit of stakeholders and communities, and society in general. This concept is closely related to the issues of sustainability, accountability, and CSR development [6]. CSR emphasizes shared responsibility to safeguard all interests *Stakeholders* which includes environmental management and social responsibility. In context *Stewardship Theory*, an organization consciously feels responsible for the progress of society and initiatives to protect the environment [6], [7]. This shows that social responsibility initiatives do not always arise due to repressive pressures but arise from personal awareness to contribute to the community and the surrounding environment. Referring to this conception, this theory is relevant to be related to CSR initiatives in non-profit oriented organizations.

University Social Responsibility (USR) can be defined as a policy of ethical quality in the activities of the university community (students, faculty, administrative staff), through responsible management of the university's impact on education, cognitive, employment, and the environment, in participatory dialogue with society to promote sustainable human development through four steps: (1) commitment, (2) self-diagnosis, (3) compliance, and (4) accountability. In Valleys (2013), USR can also be described as "the involvement and partnership of a university with its community, achieved through education (knowledge transfer), service provision, research, teaching, and scholarship. USR can be understood as a university philosophy as an ethical approach to develop and engage local and global communities in order to sustain social, ecological, environmental, technical, and economic development. USR initiatives have proven to have a positive impact on society, the environment, universities institutionally, and on socio-economic quality at large [8]–[12]. Based on this, USR is a form of integration of social responsibility in educational institutions through efforts to innovate sustainability and empower the community so as to create an ethical organization that is committed to the SDGs.

2.3 Triple Bottom Line (TBL) Approach to USR Outcomes

The concept of triple bottom line (or 3P) is the underlying principle of sustainability accounting and CSR implementation. The triple bottom line was initiated by Elkington (1998) argues that the success of the market in the future will depend heavily on the company's ability to meet three components, namely profitability, environmental quality, and social justice. Elkington later simplified this term as *Profit, People¸ Planet*. Profit is established as the basis in every business activity that is achieved through increased productivity and cost efficiency, so this is an economic responsibility that must be fulfilled [13], [14]. People refer to the community as part of the stakeholders, where the company is responsible for this group because of the need for support from the community to maintain the principle of going concern and the progress of its business activities [13], [15]. Planet refers to the environment, where every operational activity carried out by the company considers environmental preservation with the aim of creating a healthy and comfortable environment and maintaining the availability of resources which will ultimately also have an impact on business continuity [13]. In the context of USR, the Browse refers to inclusive and quality education, community service, and socially based innovative research [9], [10], [16]–[18]. Meanwhile, the *planet* Includes initiatives *Green Campus*, an educational curriculum that is integrated with sustainability values, and community environmental engagement [10], [16], [19]. Aspects Profit in the context of USR emphasizes more on the value of Prosperity which means that the focus of USR is emphasized on the impact on the economic welfare of the community [10], [16], [17]. This can be done by increasing the economic capacity of the community, as well as creating economic value through innovation.

3 Research Methodology

This study uses qualitative descriptive by involving various sources to develop a comprehensive understanding of the phenomenon being studied, the impact of *Silvofishery*. This research focuses on the area or area that will be the center of this research, namely Muara Badak Village, Kutai Kartanegara Regency, East Kalimantan, Indonesia. Data was collected through in-depth interviews with relevant informants. A total of 4 (four) informants participated, representing the implementers of the *Silvofishery* program and community members who benefited from the program. The informants were given numerical

codes ranging from 1 to 4. Informant 1 is a lecturer, informant 2 is a student, informant 3 is a community, and informant 4 is the people of Muara Badak. The data saturation was obtained after the 4th informant interview, namely the community and observation to Muara Badak.

The interview protocol is a form of question that has been created by researchers to assist researchers in the interview process. In order for the interview to be neatly arranged and the informant can easily understand the flow of the conversation, it is important for researchers to arrange the interview protocol in several parts, namely opening questions, introductions, transitions, keys, and closing questions. The interview process is carried out offline and online. With interview time being conducted for 60 to 90 minutes for each informant. To ensure the validity of the data, several of the same questions were repeated for different informants, so that it was obtained whether there was a suitability of the facts in the field. The interview framework includes the following open-ended questions:

1. Basic Understanding and Background of the USR *Silvofishery* Program
2. Implementation and Experience in *Silvofishery* Practice
3. Economic Impact (Profit)
4. Social Impact and Empowerment (People)
5. Environmental Impact and Sustainability (Planetary)
6. Challenges and Expectations for the Implementation of the USR *Silvofishery* Program

After the interview is conducted, the process of transcribing interview data from the results of the fourth informant observation is carried out to then take sources that are in accordance with the research objectives, namely the impact of *Silvofishery*. Data analysis used the following steps: (1) Making transcripts in the form of narratives and quotes based on the results of field interviews, (2) Reading the overall transcripts of the four informants repeatedly, (3) Choosing statements related to the research objectives. At this stage, the researcher underlines each transcript made, (4) Compiles categories based on the keywords found in the statement, (5) Enters keywords into the NVIVO 15 data processing based on the category of *Silvofishery* impacts, (6) Creates a narrative based on the results of the research, (7) Re-validates based on transcripts or initial research descriptions from the interview results, (8) Compiles economic impacts, social, and environmental of the *Silvofishery* program.

4 Results And Discussion

Based on Bengen in Suorakto et al., (2013), *Silvofishery* consists of two words, namely "sylvo" which means forest and "fishery". *Silvofishery* is an activity that integrates mangrove rehabilitation and aquaculture. The form of cultivation developed in *Silvofishery* ponds is a traditional pond with a polyculture cultivation pattern. The planting of mangroves is carried out with the main purpose of being a biofilter in pond waters. In addition, the nutrient source of mangrove litter can be converted into natural feed so that the need for fertilizer by the community is reduced.

Silvofishery encompasses three main activities with different but mutually supportive roles. The three concepts are:

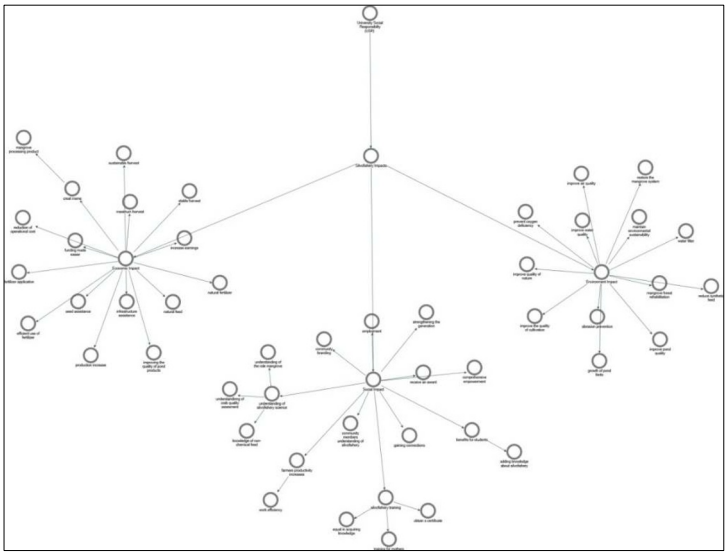
Restoration aquaculture, was developed because of the need for great efforts to repair abandoned environments (damaged environments). *Restoration aquaculture* aims to restore damaged ecosystems. Because when mangroves are damaged, fish populations will decline and even disappear. *Restoration aquaculture* is carried out not only by planting mangroves, but also getting fish that are ripe gonads, which are fish that are ready to spawn to become natural attracters for various other types of fish.

Conservation aquaculture, applied in conservation areas that are prohibited for use by human activities. This conservation aquaculture approach is a solution for the community to continue to carry out fishery activities without damaging the ecosystem. Conservation aquaculture in *Silvofishery* is carried out by creating a waterway that functions at high tide so that water will enter and carry fish seeds, shrimp, crab eggs, which are then closed using a sluice. These fish are subsequently cultivated and harvested within approximately three months. This approach eliminates the need for artificial seeding and minimizes environmental damage caused by feed waste and excess organic matter, as the cultivation process relies on natural tidal fluctuations.

Production aquaculture, is a cultivation activity with the aim of food production, in which in practice there is a clear division of territory. Production aquaculture combines ecological sustainability with an economic orientation, where people can manage ponds intensively while still maintaining the existence of mangroves as an ecological buffer. This separation of space is important so that the ecological function of mangroves is maintained, while ponds are still able to provide optimal production results.

4.1 University Social Responsibility (USR) *Silvofishery*

The University Social Responsibility (USR) program of Mulawarman *Silvofishery* University was formed with the goal from the beginning to the community directly and the environment to be able to develop the community and rehabilitate the environment without anyone being sacrificed. Based on data processing from interviews with 4 sources using NVIVO 15, it shows that University Social Responsibility (USR) *Silvofishery* has a socio-economic and environmental impact including education, development, training, business deepening and sustainable improvement of nature quality.



Source: NVivo 15

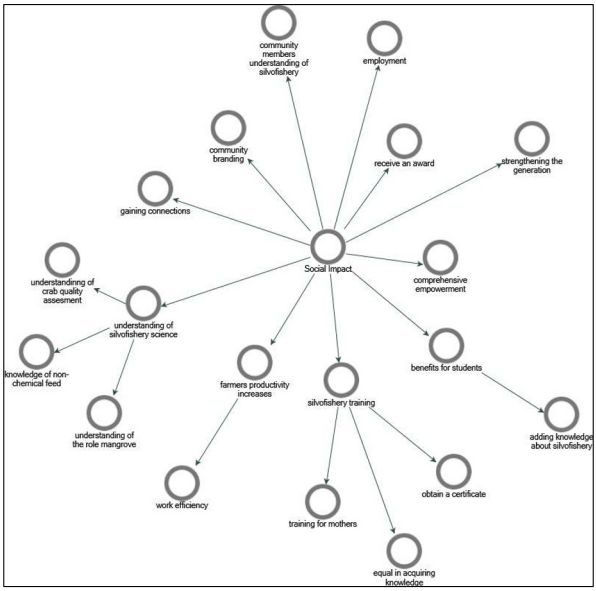
Fig 1. Mapping of the social, economic, and environmental impacts of the USR *Silvofishery* program in Muara Badak Ulu based on NVivo 15 qualitative analysis.

Based on the mapping that has been processed from the data of the interview results of 4 interviewees in fig 1. The *Silvofishery* program demonstrates tangible social, economic, and environmental impacts.

4.2 The Impact of Social University Responsibility (USR) *Silvofishery*

The findings of this study indicate that the University Social Responsibility (USR) *Silvofishery* program has generated social impacts across multiple stakeholder groups. These impacts include comprehensive community empowerment, enhanced practical knowledge, improved farmers' performance, training and competency certification, expanded social networks, and the attainment of formal recognition.

This is explained visually from the results of data processing through NVivo 15 that has been processed.



Source: Nvivo 15

Fig. 2 Mapping of the social (People) impacts of the USR *Silvofishery* program in Muara Badak Ulu based on NVivo 15 qualitative analysis.

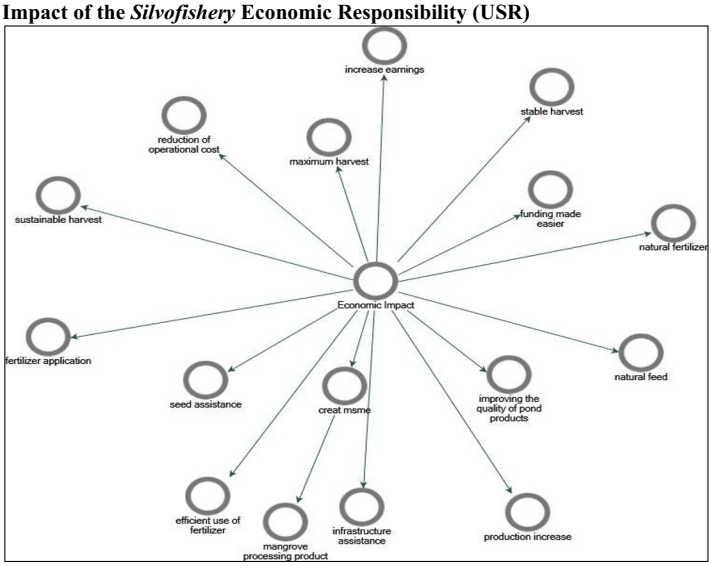
Based on Fig 2. obtained from the data of these 4 speakers, *Silvofishery* has various positive social impacts felt by the initiators, students, communities, and communities related to this *Silvofishery* program. The *Silvofishery* program provides training and mentoring as key instruments of community empowerment that are inclusive and accessible to all groups, regardless of age or educational background, while generating benefits without disadvantaging any stakeholders. The training focuses on mangrove planting and maintenance techniques, pond management within mangrove integrated systems, and the assessment and maintenance of harvest quality including crabs, shrimp, and fish for both farmers and students.

This is in accordance with the statement of informant 4 "*Farmers are also fostered, in the sense that they are not completely released for the implementation of this program, such as being given training, seeds, fertilizers, so that Silvofishery can be carried out*". informant 1 also stated that they also have a positive impact to be able to practice the theory that has been taught to him and even obtain certified achievements "*In the development of knowledge and skills, farmers and students will be given training and then after the requirements are met, they will get a BNSP* standard competency certificate". The results of this training were also tested by the good tree trail community to be able to find out that the training of this program was successful as stated by informant 3 "*We conducted pre-tests and post-tests, so that we can see changes in their knowledge before and after the training, for example, better understanding how to assess the quality of crabs, knowing the type of feed that is safe and can be processed by themselves instead of chemical ones and also understanding how the role of mangroves can help accelerate cultivation process*".

Silvofishery training is provided without restrictive participation requirements. As stated by Informant 1, "There is no age limit to take part in this training, even the training in Muara Badak there are participants who graduated from high school with the age of 17 years old and are the children of farmers. Meanwhile, in Gresik District, Paser Regency, one of the training participants is 62 years old." In addition, Informant 4 emphasized that the program is not limited to farmers and students, but also includes women, as "The existence of *Silvofishery* can add new jobs, for example for mothers in Muara Badak Ulu are given training that can increase income."

The social impact that is realized in the *Silvofishery* program is also the addition of relationships, stated in informant 3 "*Well, with us having these projects, actually, it must be our branding so that it is easier for us to get cooperation or financing with other stakeholders."* In this statement, the community from informant 3 gets a good relationship and also a good branding is emphasized again by interviewee 1 also who gets a relationship in the form of funding for the continuity of the program *"Silvofishery is now getting more attention and rising so that it is relatively easy to get funding*".

4.3 Impact of the *Silvofishery* Economic Responsibility (USR)



Source: Nvivo 15

Fig. 3 Mapping of the economic (Profit) impacts of the USR *Silvofishery* program in Muara Badak Ulu based on NVivo 15 qualitative analysis.

The University Social Responsibility (USR) *Silvofishery* program implemented by Mulawarman University has generated significant economic impacts on the community of Muara Badak Ulu. These impacts include improved pond product quality, increased production and household income, enhanced access to funding, greater operational cost efficiency, the growth of micro, small, and medium enterprises (MSMEs), and the provision of support in the form of seeds, fertilizers, and infrastructure.

Through the implementation of *Silvofishery*, the community has experienced direct improvements in both the quantity and quality of aquaculture harvests, which subsequently increase product value and overall income because people can use the harvest to make new processed products that can be an opportunity for MSMEs as additional income. The *Silvofishery* program has enabled the development of processed products derived from fish, shrimp, and crabs as a result of increased harvest quantity and quality. Furthermore, the emergence of micro, small, and medium enterprises (MSMEs) has created new employment opportunities for the local community, particularly for women seeking additional household income.

In accordance with the explanation from Informant 4 who said *"The existence of Silvofishery can add new jobs, for example, for mothers in Muara Badak Ulu are given training that can increase income."* this statement was also reaffirmed by Informant 2 who stated *"... But with this it can benefit various aspects, namely MSMEs on the road, these programs mean that the manufacture of processed mangrove products is one of the advantages of this / positive impact of the Silvofishery system."* The source of income is not only from pond harvest but also from processing to selling cultivation products to buyers as a source of additional income such as transportation services and others. These findings demonstrate that the

Silvofishery program contributes to the improvement of the local economy in Muara Badak Ulu.

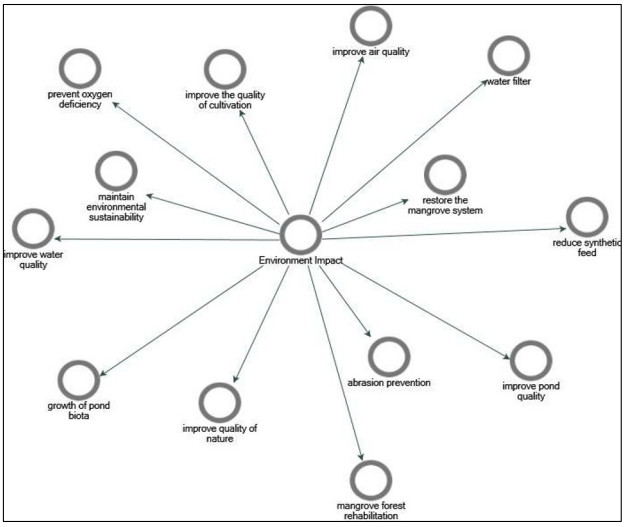
Interview data from farmers in Muara Badak Ulu indicate that *Silvofishery* reduces operational costs by lowering dependence on synthetic fertilizers and chemical toxins. As stated by one farmer "*With Silvofishery, we as farmers can reduce operational costs because we no longer depend on synthetic fertilizers and toxins to get maximum harvest because it is available naturally with the presence of mangrove trees".*

The presence of mangroves reduces farmers' reliance on synthetic feed and fertilizers, as mangrove litter provides natural nutrient sources and supports plankton growth. In addition, mangrove substrates foster beneficial microorganisms, eliminating the need for commercial probiotics. Although *Silvofishery* requires allocating part of the pond area for mangrove planting, this integration ultimately enhances both the quality and quantity of aquaculture production.

Silvofishery has currently received various attention from both the government and the private sector so that it is easier for farmers to get infrastructure assistance such as seeds, machinery, and also boats to farmers who participate in the *Silvofishery* program. Infrastructure assistance as well as seeds and fertilizers were obtained from various parties such as the government and the private sector involved in this *Silvofishery* program. Farmers can take advantage of these aids to run *Silvofishery* programs and help optimize their farm processes. Support in the form of boats and machinery facilitates farmers' mobility and operational efficiency. In addition, assistance such as seeds, fertilizers, and feed is essential to ensure the effective implementation of mangrove cultivation and *Silvofishery* practices.

This assistance is one of the main reasons for farmers to participate and keep this *Silvofishery* program running. These impacts are in accordance with information from Informant 4 who said *"It is quite helpful because of the amount of assistance from fisheries ranging from seeds, to boats and machines. Because if the pokdakan gets assistance, all communities are empowered so that the community feels a big impact after the existence of Silvofishery.*

4.4 Environmental Impact University Responsibility (USR) *Silvofishery*



Source: NVivo 15

Fig. 4 Mapping of the environmental (Planet) impacts of the USR *Silvofishery* program in Muara Badak Ulu based on NVivo 15 qualitative analysis.

Based on NVivo-assisted analysis of interview data from four informants, the findings indicate that the *Silvofishery* program has a positive environmental impact, particularly in terms of mangrove ecosystem rehabilitation and restoration.

Silvofishery aims to restore mangrove ecosystems that have been cleared for conventional aquaculture ponds.This is in line with the explanation from informant 1, "*Mangrove rehabilitation itself includes mangrove planting and embroidery activities with the aim of restoring mangrove ecosystems that have been deforested by climate change and human activities*".

This also includes the function of mangroves as an abrasion barrier as stated by informant 2 "*Silvofishery is actually to rehabilitate mangrove forests with the concept of various concepts in coastal areas, areas of forests that have been abrasive and in cultivation areas, especially those that are rehabilitated...*", and informant 4 stated that mangroves have a function as a water filter to prevent abrasion when there is rain "*Mangroves planted on the edges of ponds function as water filters and also hold the soil from descending (into ponds) so as to prevent abrasion when there is rain*".

Silvofishery is applied to traditional ponds, mangroves function as effective carbon sinks. Carbon absorbed through photosynthesis is stored in mangrove biomass, including roots, stems, and leaves. The ability of mangroves as carbon traps makes them an important component in reducing the largest carbon emissions from the aquaculture sector and restoring fresh air in coastal areas, as explained by informant 1, "*Increasing soil fertility and carbon traps, because when Silvofishery is applied to traditional ponds, it is able to absorb carbon*". Mangroves are also a provider of mangrove litter which is the main source of nutrients that help support the fertility of the mangrove ecosystem and the surrounding waters.

Silvofishery also functions as a natural water filter, improving pond water quality and thereby enhancing the quality of aquaculture harvests. Water quality is important to maintain because it is vital for the pond environment, according to the statement of informant 1, "*The environment becomes healthy because there is more oxygen available, water quality improvement...*", from this is evidenced by the statement of informant 3, *"Actually with the progress until now the results have been seen with the production results, the water quality is good*".

The *Silvofishery* program promotes a shift in cultivation practices by eliminating the use of chemical toxins and replacing them with environmentally friendly water management systems based on natural tidal dynamics. Without the *Silvofishery* program, pond cultivation generally requires the use of poisons to eradicate seed predatory fish. This is in line with what Informant 4 said*, "Water drain is used to kill seed-eating fish by opening the sluice. Meanwhile, before the existence of Silvofishery, the destruction of seed-eating fish was carried out by poisoning."* Such practices can degrade soil and water quality, harm pond biota, and, in the long term, increase the risk of cultivation failure. Therefore, *Silvofishery* represents an appropriate and sustainable approach for environmentally friendly aquaculture in Muara Badak Ulu.

4.5 The Relationship of Stewardship Theory with the *Silvofishery* Program

Silvofishery is a form of USR initiative program from Mulawarman University, in collaboration with other stakeholders, aimed at providing sustainable benefits to society and the environment. As stated in stewardship theory, organizational managers, specifically referring to organizational leaders, have self-awareness in contributing to improving the quality of life of the community and the surrounding environment (Davis, 1997). The *Silvofishery* program initiated by Mulawarman University is a form of USR that aligns with the principles of Stewardship Theory. As the theory emphasizes, a steward acts for the collective interest rather than personal gain. The university's active role in rehabilitating mangrove ecosystems and improving community well-being reflects a commitment to long-term social and environmental sustainability. This alignment emphasizes that universities function not only as knowledge producers but also as responsible stewards in supporting sustainable development in their surrounding environment (Karwowska, 2023). Through the integration of academic expertise, community empowerment, and ecological restoration efforts, this program demonstrates the university's orientation toward pro-social behavior, intrinsic motivation, and organizational collectivism. The USR *Silvofishery* program serves as an organizational initiative that reflects a conscious commitment to social and environmental responsibility.

5 Limitations

Silvofishery, as a form of University Social Responsibility (USR) at Mulawarman University, has demonstrated positive socio-economic impacts for various stakeholders, including students, local communities, and program initiators. The program has successfully supported mangrove rehabilitation without reducing farmers' pond areas within the same hectare; however, several limitations should be acknowledged. In particular, the findings of this study cannot be generalized, as the analysis was confined to the Muara Badak Ulu area and does not encompass all regions implementing the *Silvofishery* program.

The perspective of sustainability in *Silvofishery* has indeed been achieved in terms of socio-economy from various parties and the environment, but the *Silvofishery* program is still considered to be used as a comprehensive sustainability program in various regions where there is a comparison of other sustainability programs in Indonesia.

6 Conclusions

Based on all the results of the analysis and research findings conducted in Muara Badak Ulu, Muara Badak District, Kutai Kartanegara Regency, East Kalimantan, it can be concluded that the *Silvofishery* Program initiated by Mulawarman University since 2021 with the Indonesian Peat and Mangrove Restoration Agency (BRGM) is a tangible form of University Social Responsibility (USR) that is very successful and has a significant and sustainable positive impact on three main pillars: social, economic, and environmental, without having to sacrifice one of the parties. In social impact, this program creates empowerment for farmers and housewives with an impact manifested in increasing skills and knowledge about *Silvofishery* through the training and certification provided. From the main economic aspect, *Silvofishery* cuts operational costs incurred by farmers so as to maximize the profits obtained. In addition, the emergence of new business opportunities in the form of MSMEs processing pond products also increases the income of the people there. The above is supported by the assistance provided to the community such as fertilizer assistance, seeds, boats, and machinery. This program has not only succeeded in significantly improving the socio-economic welfare of the people of Muara Badak Ulu, but also makes a real contribution to the preservation of the coastal environment of East Kalimantan and becomes an example of the implementation of University Social Responsibility that is effective and can be replicated in other regions with a record of adjusting local conditions. Overall, the *Silvofishery* Program of Mulawarman University has proven to be an effective, environmentally friendly, and sustainable coastal aquaculture model by successfully integrating mangrove rehabilitation with aquaculture activities.

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