

## PARTICIPATORY TRAINING: SOLUTIONS TO ADDRESS LIVELIHOOD LOSS DUE TO ENVIRONMENTAL CHANGE

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### Abstract

This study aims to analyze the participatory training organized by PKBM Maharani Sumedang and its impact on livelihood change and community empowerment. The training was specifically designed to restore the self-reliance of affected community members by equipping them with the skills to make shredded fish, which utilizes local natural resources. Using a qualitative approach with descriptive methods, this study aimed to gain an in-depth understanding of the training process and outcomes. Data collection techniques included interviews, observations, questionnaires and documentation to obtain comprehensive views from participants, trainers and community leaders. Triangulation was applied to ensure data reliability, while data were analyzed through reduction, display, and conclusion drawing or verification. The results showed that the training used a participatory approach in accordance with the needs, skill levels and resource potential of the local community. This approach not only actively involved participants but also tailored the training to realistic economic opportunities in the area. The training fosters self-reliance, allowing community members to use their newly acquired skills to create alternative livelihoods. By utilizing available fish resources, residents can now generate a sustainable income that complements the natural environment in the region. This initiative highlights a successful model for community-based training programs, demonstrating how participatory training can drive livelihood change and long-term resilience for communities affected by large-scale infrastructure projects.

**Keywords-** Community Empowerment, Independence, Livelihood Change, Participatory Training, PKBM.

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### Introduction

The utilization of natural resources such as agricultural land, plantations, and fisheries, is an activity commonly carried out by the local community. The community has been accustomed to utilizing the potential of natural resources around them as a source of livelihood, (Tebboth et al., 2023) For example, in rural areas such as Jerlun, Kedah, natural resources provide important ecosystem services that support daily life and economic activities. Households in these areas often have a high level of knowledge about the benefits of these resources, which underscores their importance for survival and health. (Abu Bakar et al., 2022). Similarly, the Ha Nhi Tribe in Vietnam utilizes indigenous knowledge to exploit forest resources, including timber, firewood and non-timber products (Thai et al., 2023). Even in the northeastern Himalayas of India, tribal rights and local governance have enabled sustainable resource management, reduced poverty and prevented out-migration. This model highlights the importance of recognizing ecosystem services and developing markets for them (Everard et al., 2021). Utilizing natural resources as a source of livelihood if managed properly will certainly provide positive results. This statement is supported by Tajima et al. (2022) that autonomous innovation in rural communities of developing countries has shown potential in improving livelihoods while promoting sustainable resource management. This innovation emphasizes public values and ecosystem services, encouraging resilience and well-being among vulnerable populations.

The role of the environment with all its potential greatly affects the lives of the surrounding community, not infrequently a community depends on natural resources. (Abu Bakar et al., 2022;

Everard et al., 2021; Thai et al., 2023). Therefore, it is very important to maintain and preserve natural resources. (Wahid et al., 2021). especially so that these natural resources can be optimally utilized by local communities. This is evident, as in Tanjungsari Village, where community involvement in natural resource management leads to successful conservation and economic benefits. Local initiatives, supported by government and NGOs, have conserved water sources and developed tourism, improving community welfare. (Mutiarra et al., 2024).

Problems will arise when there are changes in the environmental conditions where people live, because this will change their livelihoods. This is in accordance with what is conveyed in research conducted by Van Thao et al., (2023), that environmental changes can result in changes in the livelihoods of local residents. As in mountainous areas, climate change has degraded resources, reduced agricultural productivity, and exacerbated social injustice, disproportionately affecting poor households with limited adaptive capacity. (Shahzad et al., 2019).. Then another study, as a result of the construction of the Tanjung Jati B Steam Power Plant (PLTU), precisely in Tubanan Village, Kembang Subdistrict, Jepara Regency, had an impact on changes in the livelihoods of the local community. (Nooraliza & Salam, 2022).. Even Liu et al. (2023) Mentioned that environmental changes can lead to an increase in crime as individuals struggle to meet their basic needs.

Similarly, the construction of the Jati Gede reservoir has implications for changes in the livelihoods of the surrounding community. This phenomenon must be taken seriously, because it results in the loss of people's livelihoods which results in them not being economically independent and leads to mass unemployment. So it needs attention from all parties so that local communities are able to have a spirit of independence in order to adapt and survive with change. Independence can be fostered by integrating life skills programs by applying certain conditions, one of which is through training, of course, this training must be able to utilize the potential of surrounding natural resources. Training activities that are based on the potential of the environment are very important for realizing community welfare. Such programs enable communities to manage and utilize their resources effectively, leading to increased self-reliance and prosperity. (Harafah, 2023). Neighborhood-based training also ensures that the skills taught can be applied directly to the local context, thereby increasing the employability and productivity of community members (Mertasari et al., 2023). (Mertasari et al., 2019).. In addition to increasing independence, training that utilizes surrounding natural resources is key to community empowerment, as stated by Hidayat & Syahid, (2019) identifying and utilizing local resources, both natural and human, is a key strategy in community empowerment. This approach encourages the development of a range of skills, including technical, social, and managerial skills, which are essential for entrepreneurship and economic growth.

Seeing the conditions that occurred in the Jati Gede community, PKBM Maharani came up with a new breakthrough in the form of training in making shredded fish as an effort to empower the community while helping them restore livelihoods affected by various environmental changes and development in the area. This training aims not only to improve the skills of the residents, but also to foster a spirit of independence and empowerment among the community. Therefore, this research aims to deeply analyze the training process organized by PKBM Maharani and evaluate its impact on community economic recovery. In addition, this research is expected to explore the potential of the training as an adaptation model that can be applied in other areas with similar conditions, thus providing practical recommendations for other communities or organizations in addressing the impacts of development and environmental change through innovative and sustainable approaches.

## Literature Review

Several previous studies have been conducted in an effort to conduct effective training, so that it can provide the desired results, but apparently, some studies show unsatisfactory results. Such as research conducted by Tawiah & Thusi-Sefatsa, (2022). Their study highlighted significant failures in training programs aimed at empowering rural women in South Africa, mainly due to the lack of skills training initiatives and limited access to Adult and Community Education and Training (ACET) programs. These inadequacies have perpetuated socioeconomic challenges, leaving many women vulnerable to issues such as poverty and unemployment. The researchers recommend restructuring

ACET programs to better meet women's specific learning needs, thereby enhancing their empowerment and overall community development. Further research conducted by Nur Hayati, (2020) The failure of training to empower communities often stems from an inadequate understanding of local potential and ineffective marketing strategies. In the case of Dusun Kalongan, while the community recognized their local resources and developed banana products, they struggled with potential mapping and market segmentation. This disconnect led to counterproductive results, as the community was empowered to create but not sell, highlighting the need for training programs to effectively address both the cognitive and practical aspects of empowerment. The ineffectiveness of the training could also be due to the absence of all-party involvement. Newmont Nusa Tenggara's community development program faces challenges due to employees' lack of knowledge and skills in community engagement, highlighting the need for better communication and social responsibility training. (Hasri Rosandi & Nila Rakhmatullah, 2020)

Evidence of participatory training can be an appropriate option such as research conducted by Shomedran, (2019) Participatory training in community settings, such as Bank Sampah Manglayang Bandung, has been shown to improve community behavior and self-reliance. By involving community members in the planning and implementation of waste management activities, there is an important shift towards environmental preservation and active participation in social activities. Entrepreneurship-based life skills training in non-formal education settings can significantly improve economic self-reliance. This approach overcomes the misconception that entrepreneurship requires large amounts of capital, instead focusing on skill development and self-reliance. (Suryaman et al., 2023). The next previous research that is considered relevant is research conducted by Sun et al., (2022) Their research revealed that in rural areas around biosphere reserves in China, skills training, especially off-farm training, had a positive impact on household income outside protected areas. Agricultural training also increased farm income, suggesting that training should be aligned with local economic activities. whereas the research discussed in this article is more directed at looking at the process of participatory training to communities who have lost their main livelihoods and need to get new skills in order to return to earning a living to meet the basic needs of affected communities.

## Research Methods

This research uses a qualitative approach with a descriptive method, using this approach and method because the research seeks to get a real picture and holistic analysis of the implementation of the training organized and its impact on restoring the livelihoods of affected communities. This research was conducted from December 2019 to March 2021. PKBM Maharani which is located at Jln Raya Situraja No 163-165 Situraja Village, Situraja District, Sumedang Regency. The resource persons involved in the research amounted to four people, consisting of one PKBM manager, one tutor and two people from the learning community. The resource persons were selected based on consideration of the criteria of the person directly involved in the training activities, namely the manager, the person who understands the process and implementation of the training directly, namely the tutor and the person involved in the process as well as the research subject, namely the learning community (community). Then at the research implementation stage, the first thing to do is to communicate and discuss with the head of PKBM Maharani as the organizer of the training held, then conduct an interview process with the resource person. Then the data is also complemented by training documents that have been organized, such as evaluation data on the learning outcomes of learning citizens. After the data is collected, report writing is done systematically. This research uses data collection techniques, namely interviews, observations, questionnaires and documentation studies. Data validation in this study used data source triangulation, namely training managers, training tutors and learning citizens. Data analysis used the Miles and Huberman model. The pattern of this analysis model is data reduction, data display and conclusion drawing or verification.

## Results and Discussion

Training activities are carried out in several stages, namely the planning stage, the implementation stage, and the evaluation stage. (Izzah & Lubis, 2021). The findings in the field, the

training begins with planning that has been carried out by the organizers by carrying out identification and needs analysis steps by involving the learning community directly. Then formulate goals, by formulating general goals and specific goals. Designing the program, in its design the manager collaborates and coordinates with various parties such as BLK as a partner and tutors and learning citizens, which includes planning the preparation of materials, approaches and methods used, determining the place and determining the allocation of time and costs. The training planning process has been carried out very well where there are elements of training planning, according to Fauzi in (Triwahyuni, 2021). (Triwahyuni, 2021) states that at the planning stage there are several elements that must be carried out and fulfilled such as identification and analysis of needs, determining objectives, designing programs, determining places, determining the time and allocation of training costs.

The research results at the training implementation stage showed that several activities were carried out in preparation for the training. Information on the content, objectives, schedule and rules of the training was provided to participants. Training modules containing training materials are prepared, as well as supporting materials such as presentation tools, printed or digital materials, and others. The training room is prepared with appropriate lighting, temperature and comfort. The training begins with greetings and an introduction session between tutors and participants to create a familiar atmosphere. Participants are asked to complete a pretest as an initial assessment of knowledge before the training begins. Each training meeting consisted of lecture and practical sessions. The materials were delivered in a clear and easy-to-understand manner, followed by practical sessions to apply the knowledge through exercises or simulations. Evaluation was conducted after the training, using written and practical tests. The written test evaluation showed that the absorption of the material by the participants was categorized as good with a percentage of 76%. The practical test evaluation showed that the participants' ability to make shredded fish was very good with a percentage of 74.7%. The following is a table of initial and final evaluations that have been conducted in this training.

**Table 4.19****Final Evaluation**

No.	Name/Initials	Final Evaluation	Final Grade
1.	Ap	95	81
2.	Id	85	76
3.	Im	85	75
4.	Lm	85	75
5.	Ny	85	74
6.	Rh	80	72
7.	Rt	78	72
8.	Rt	85	76
9.	Sk	90	78
10.	Sm	90	78
11.	Sn	90	78

12.	St.	95	81
13.	Tr	90	79
14.	Wd	75	74
15.	Wn	85	75
16.	Yl	90	78

The research results at the training evaluation stage in this study were carried out to obtain conclusions from the training activities. Based on the results of the research the author found that the evaluation tools used were written tests in the form of pre tests, post tests, questionnaires and observations for participants and practical tests, besides that there were also performance tests where there were questionnaires distributed to assess tutors and managers. When viewed from this, the evaluation in this training includes two things, first the process evaluation and the final evaluation, this is in line with what Fauzi said in (Triwahyuni, 2021). (Triwahyuni, 2021) that there are two aspects that must be evaluated, namely process evaluation which includes participants, facilitators and organizers, from the aspect of participants, an evaluation is carried out by looking at various aspects such as the qualities that must be possessed by learning citizens, according to Hidayatulloh (2019) Evaluation of results includes the quality of students after participating in the training process which is assessed from changes in the behavior of learning citizens from the affective, cognitive and psychomotor domains. Meanwhile, in terms of facilitators can be seen from the aspects of pedagogical/andragogic, social, professional, and personality competencies . Peters-Dasdemir et al., (2023) emphasized that facilitators must have a deep understanding of pedagogical and andragogical principles to adapt their approach to different learning contexts. It is also important to have professional skills in order to implement innovative learning practices. (Niyazova et al., 2021). On the other hand, social competence is needed in order to foster a conducive learning climate through good communication. (Mafumo et al., 2022).. Finally, facilitators are encouraged to engage in introspection and continuous personal development to improve their effectiveness (Niyazova et al., 2021). (Niyazova et al., 2021)..

The findings show that the tutors or instructors have met the criteria of an effective facilitator. They are able to carry out their duties well, such as delivering training materials in an interesting manner, using quality teaching materials, attracting participants' attention, and closing the training session by leaving a positive impression on participants. In accordance with the principles of pedagogic and andragogic competence mentioned by Hidayatulloh (2019) and Peters-Dasdemir et al.(2023), instructors demonstrate the ability to create a conducive learning climate through good communication. (Mafumo et al., 2022) and delivering materials in a professional and innovative manner (Niyazova et al., 2021).. From the organizer's perspective, responsibilities were well executed, including the provision of accommodation, cleanliness of the training room, and other supporting services to ensure participants' comfort. In the final evaluation, the training showed a positive impact, not only in the improvement of participants' skills, but also in their behavioral changes in the affective, cognitive and psychomotor domains. Participants were able to apply their new skills for entrepreneurship or employment, resulting in increased income. In addition, they also contributed to society by sharing the knowledge gained, reflecting a commitment to sustainable personal and social development.

The training organized by PKBM Maharani uses a participatory model, which is reflected in the active involvement of learning citizens in every stage of the training, from planning, implementation, to evaluation. This participatory model emphasizes the principle of participant involvement in the entire learning process, thus encouraging collaboration, discussion, and direct



involvement in activities. (Yohana et al., 2023).. According to Sudjana in (Elian & Ilyas, 2020)According to Sudjana in (Elian & Ilyas, 2020), participatory training is a teaching and learning approach that involves learning citizens actively in planning, implementing, and evaluating learning activities. The tutor acts as a facilitator who motivates and encourages the participation of learners in all three aspects. (Sharma et al.;Raflah & Pratama, 2020). This approach provides greater space and time for participants to understand and process the material in depth. With this method, participants not only receive the material passively but also play an active role in processing the information provided. Participatory methods are expected to improve participants' abilities, including in specific aspects such as financial management. (Hadita et al., 2021) This confirms that participatory training focuses not only on knowledge transfer, but also on empowering participants to achieve more optimal results. Participatory training applies a learning approach that actively involves adult participants in the entire learning process. This approach is important because adult participants bring with them pre-existing knowledge, experiences and skills, which should be valued and integrated in the learning process. (Prawira & Nugraha, 2021). Grounded in the principles of adult education, participatory training not only encourages active engagement, but also creates a learning atmosphere that is relevant and meaningful to participants.

**Table 1.1**  
**Difference in Independence Score Before and After Training**

No.	Independence	Answer Score		Difference Score
		Before	After	
1.	Responsibility	26	36	10
2.	Not relying on others	22	30	8
3.	Meet minimum basic needs	19	34	15
4.	Have a Work Ethic	18	34	16
5.	Discipline	27	36	9
6.	Dare to Take Risks	21	31	10
<b>Total</b>				68

The training organized has a positive impact on the community as a result of research on the independence of learning citizens who change after attending training by looking at several indicators of entrepreneurial independence. According to Lutfiansyah in (Sugiana et al., 2020) that a person's independence can be seen from several indicators such as responsibility, not depending on others, being able to meet minimum basic needs, having a work ethic, discipline, and taking risks. The

following table 1.1 shows the difference in the independence of learning citizens seen from before and after training and graph 1.1 regarding score comparison.

**Chart 1.1**  
**Comparison of Learning Citizens' Independence Score**



Based on the data shown in Table 1.1 and Graph 1.1, the independence of the learners showed a significant increase after the training. Aspects such as responsibility, independence from other people's assistance, ability to meet minimum basic needs, work ethic, discipline, and courage to take risks experienced positive changes. The impact evaluation also revealed that the learners were able to utilize the skills acquired for entrepreneurship or work, thus generating a new source of income that is relevant to their environmental conditions. In addition to creating new livelihoods, the training also had an impact on increasing participants' income. Thus, the training does not only focus on skills mastery, but also makes a real contribution to increasing the spirit of independence of the learners. Similar results were found in a study by Sinurat et al. (2022) which showed that the liquid soap-making training for women in Sukaraja Village successfully empowered them to produce and sell their own products, increasing their income potential. Active participation in the program reflects the positive impact of training on economic empowerment through entrepreneurship. In addition, Amalia et al. (2022) highlighted that the cross-training system for MSMEs in Depok successfully improved the skills of participants, which in turn led to an increase in their productivity and business output. This training-based approach not only improves individual skills, but also provides broader economic benefits, such as increased revenue and business profits.

A limitation of this study is the focus on short-term outcomes and early indicators of economic independence, which does not include long-term impacts. Nonetheless, the findings provide a positive picture of the effect of the training on participants' skills and motivation. External factors, such as economic conditions and market demand, as well as individual differences among participants, may not have been explored in depth. However, these variations do not appear to reduce the overall effectiveness of the training program.

## Conclusion

The shredded fish making training organized by PKBM Maharani applies a participatory approach, where learners are actively involved in every stage of the training, from planning to evaluation. This approach is designed to address the needs of communities affected by the construction of the Jati Gede Reservoir, with a focus on developing new skills that match the potential resources in their new environment. The results of the training show that the community is able to process fish from the reservoir into a value-added product, namely shredded fish, which not only meets local consumption needs but also has wider market potential. With the active involvement of participants, the training successfully improved their technical skills while empowering them to create sustainable business opportunities. This approach proved its effectiveness in supporting community adaptation to environmental change, providing long-term social and economic benefits.

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