

PKM Increasing the Economic Value of Tuna Fish 'Trips' Waste in Pedungan Village, Denpasar

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ABSTRACT

By Providing Added Value from waste is a very important thing to implement in developing the Blue Economy. In this PkM Activity, waste handling is carried out in stages and sustainably, until the Zero Waste principle is achieved. The Community Service activity carried out at the IRT owned by Ni Wayan Sarimi (Partnersa) turned Tuna Fish Skin waste into a food product in the form of fish skin crackers. The meat part is used as Fish Abon. The method of Community Service is using the interview method and participation in the practice of making tuna fish floss. The purpose of this PkM is to provide solutions to Partners to make meat from waste Tuna fish skin into Tuna fish floss. . This PkM activity has been published in Print and Electronic Media. Activity videos are uploaded on YouTube.

INTRODUCTION

Activities related to the Field of Research and Community Service should always be based on the Benefits of the Activities carried out. SDGs (Sustainable Development Goals) are a series of sustainable development goals set by the United Nations (UN) to be achieved by 2030. SDGs No. 14 specifically emphasizes the importance of maintaining and sustainably utilizing marine and marine resources (Putri Nur Aliyah et al., 2024). Indonesia, as an archipelagic country rich in marine resources, has a great responsibility in achieving SDGs target No. 14. In handling the fisheries sector from upstream to downstream, the thing that must be considered is the Blue Economy Principle, namely the sustainable use of marine resources (Naila Najma Alifa, M. Syaprin Zahidi, 2024), one of which is Conservative. If Indonesia successfully implements the Blue Economy, then the SDG's targets can be accelerated significantly. According to estimates from the World Bank, the marine economy in Indonesia can generate more than USD 280 billion annually with its two main sectors being the maritime construction and manufacturing sectors (Bank, W. 2019).

Zero Waste is a conservation concept with its implementation such as using resources through responsible production, consumption, reuse, and recovery (recycle) of products, packaging, and materials without burning and without releasing them into the soil, water, or air that threatens the environment or human health. Related to the background of the Fisheries Problems as described above, the Partners who work with Community volunteer have a business in the field of Fisheries Product Processing, especially in the Processing of Waste from Fish Exporters in the Benoa area. Partners Concentrate on Processing Waste from Tuna Fish Skin. From Tuna Fish Waste, Partners together with Community volunteer have Produced three (3) forms of Products and the one implemented in 2024 is the Fourth (4th) Product in the form of Tuna Fish Floss. Partners contact the Devotees to be given Counseling and Practice on Making Abon from Tuna Fish 'Tetelan'. The definition of "Tetelan" in this case is the remaining meat that is still attached to the skin of Tuna fish. This Tetelan meat has not been used economically before. Partners also have other problems, namely the frequent shortage of Tuna Fish Skin as a raw material for making Tuna Fish Skin Crackers.

This change occurred due to a shift from tuna fish skin which was previously considered waste and is now being used as several types of food ingredients, there is even an issue that tuna fish skin has now entered the export market. The void of time experienced by Partners can reach a period of two (two) months so that Partners have no activities. The availability of Tuna fish 'Tetelan' meat is a solution to fill the void of time above. The 'Tetelan' meat obtained is also quite a lot if Partners are producing Tuna Fish skin crackers. The devotee then provided counseling and training related to making tuna fish floss, which in the 2024 activity took the title 'PKM Increasing the Economic Value of Tuna Fish 'Trips' Waste in Pedungan Village, Denpasar.

Situation Analysis

Benoa Port is the largest port in Bali. This port is located on the south coast of Bali Island, which is one of the gateways to Bali. Various activities are in Benoa Port, including fishing vessel activities, cruise ships carrying foreign tourists, logistics transportation activities related to business. Around Benoa Harbor, there are many large companies that export Tuna in various forms. With the many exporters of Tuna, there is also a lot of Tuna waste produced. The waste above has been widely utilized, such as Fish bones are used as a source of Calcium for making Seaweed Sticks (Firat Meiyasa and Nurbety Tarigan, 2020). Parts of fish heads, scales, tails and fish intestines are used as fish bone meal (Ahmad Fahrizal and Ratna, 2018). Fish bone meal is used as a source of calcium. Tuna skin parts have also been used as fish vein crackers (Ni Made Darmadi, Dewa Nyoman Sadguna, Dewa Gede Semara Edi, 2022), and also as liquid organic fertilizer (Ainal Mardhiah et al., 2022).

One of the Home Industries (IRT) located around Benoa Harbor, precisely on Jalan Diponogoro, Gang Pantus Sari no 44, Pedungan Village, Denpasar. Before working on processing Fish Skin waste, Partners worked at one of the Tuna Fish Processing Export Companies. Many Tuna fish waste, especially the fish skin, are not utilized and even spend some money to remove the waste. Partners sees a business opportunity. This housewife chooses to process waste from the Tuna Fish Skin. Furthermore, the Home Industry will be called Partners. Partners saw a business opportunity. Starting from this in 2010 Partners tried to process fish skin waste into Fish Skin Crackers. Part of the fish skin waste originating from the Company not only contains the Skin component, but also contains veins and parts of the meat that are still attached to the inner skin.

In 2022, Community volunteer was asked by Partners to provide Empowerment to partners to improve the manufacturing, marketing and packaging techniques of tuna skin crackers. After the partners were mentored by Community volunteer for one year, Community volunteer gave an idea to utilize the fish tendons that were still attached to it to make Fish Tendon Crackers. In its journey, Partners give names to Products made with the Putra Susila trademark. Devotees help partners to complete the legality of Products made such as PPIRT Number, Halal Certificate, Processing Eligibility Certificate (PEC), Business Identification Number (BIN). There is a very big problem for Partners, namely, when the Tuna Export Processing is seasonal, the Company produces a lot, at that time the volume of skin waste is very large, partners are short of space in storing raw materials, until partners rent cold storage as a storage place, because the freezer they have is no longer able to accommodate the existing raw materials. Partners can spend around 200-300 kg of skin waste per production. During the fish season, Partners produce 200-300 kg every day. If there is a drought, many companies will experience reduced production, raw materials will become very scarce. At times like this, cold storage and freezers must remain on even when empty, this makes partners spend a lot of money to fulfill electricity to cool the freezer. On the other hand, because they are not producing, income will automatically decrease, financial income will decrease.

To overcome this, Partners asked the Devotees to provide Empowerment in making Tuna Fish Abon. This idea came about because the offal meat that had not been utilized had piled up quite a lot in the cooler. The fish skin still contains meat, which is usually set aside for daily consumption. The meat attached to the fish skin is called 'Offal' meat. The free time experienced by Partners during the famine lasts between 2-5 months, so it is a very long time wasted without any activities that generate money. To fill free time during the famine, we recommend that Partners make Tuna Fish Floss. The part of the meat that sticks to the skin is a solution to overcome the empty activities of Partners. There is a time substitution and also a new product owned by Partners by participating in Community Service provided by the Community Service. In this way, it is hoped that existing problems can be overcome.

Based on the situation analysis above, several problems that have been identified as partner problems include:

1. Partners do not yet have the knowledge to handle Tuna fish skin waste 'Tetelan' and increase its economic value.
2. Partners do not yet know the Technology for Making Tuna Fish Floss
3. Partners do not yet have knowledge about Packaging and Marketing Tuna Fish Floss
4. Partners do not yet have a PPIRT Number for Tuna Fish Floss Products
5. Partners want to learn more about product marketing practices

The solution that will be given to Partners from the above problems prioritizes handling : With Counseling/Learning will provide Partners:

1. Knowledge in handling Tuna Fish Skin Waste
2. Knowledge to Increase the Economic Value of Tuna Fish Skin Waste
3. Knowledge and Training on Making Fish Floss from Tuna Fish Skin Waste
4. Knowledge and Training on Product Packaging and Labeling
5. Product Marketing

IMPLEMENTATION AND METHODS

The Purpose of this Activity

To provide solutions to problems that have not been resolved, to create new products, by handling waste from 'Tetelan' tuna fish skin waste, Partners can earn more income.

Benefits of the Activity:

1. Partners understand the Zero Waste Principle in dealing with waste
2. Partners get Appropriate Technology in making Tuna Fish Floss
3. Partners gain knowledge in maintaining sanitation and the environment of the production site
4. Partners gain knowledge about product packaging and labeling
5. Partners gain knowledge about product marketing

Implementation Method: In the implementation of community service, the methods used are:

1. Interview and discussion methods to find out the problems faced by partners. Extension methods through direct face-to-face meetings so that partners gain knowledge in handling fish waste, to increase the economic value of fish waste, making tuna fish floss, product packaging and labeling, product
2. Direct practice method by providing appropriate technology in handling waste, making tuna fish floss and its packaging and labeling, product marketing.

Stages of Implementation of Devotion: The sequence of implementation of the Devotion is as follows :

1. Exploration to the Partner's location, to find out the situation of the Partner's production site.
2. Interview, Q&A regarding the problems faced by the Partner so that the PKM Team can provide solutions to the problems faced by the Partner appropriately Penanganan Masalah Partners di Bidang Produksi
3. Handling Partner Issues in Production
 - a. Providing Counseling Such as: 1. Handling Fish Waste and increasing its economic value
 - b. Maintaining the Cleanliness of the Production Environment to be able to produce quality products
 - c. Making Fish Floss from Tuna Fish Skin Waste Pengemasan dan pelabelannya Produk
 - d. Carrying out monitoring and evaluation after training and periodic mentoring.
 - e. Helping partners find PPIRT numbers for Tuna Fish Floss
4. Handling Partner Problems in the Management Field: Partners have been moving individually in advancing their businesses. In this Activity, Counseling will be provided to increase the scale of the business by forming a Business Group in the same field to get the opportunity to obtain government assistance so that the scale of the business will increase. It is deemed necessary that Partners are also given Counseling in the field of Business Management and Entrepreneurship (Suherman Eman. 2008).
5. Handling Partner Problems in the Marketing Field Previous partners already had two types of products marketed, namely Fish Skin Crackers and Fish Tendon Crackers. The manufacture of these products has also been assisted by the Servant since 2020. For Marketing Problems, it will be easier to implement, because Partners have been given a way to market Products, still using Online Marketing Strategies, Reseller services, Buyers come to the Business Place themselves. For the third product, namely Tuna Fish Floss, the Marketing Model will also

follow the method above because it has been proven that with this model the marketing reach is good.

The implementation of Community Service Activities (PkM) can be seen in the image below:



Figure 1. Extension and Practical Activities During PkM

RESULTS AND DISCUSSION

The results of Community Service with the title PKM Increasing the Economic Value of Tuna Fish 'Tetelan' Waste in Pedungan Village, Denpasar can be concluded as follows :

1. Community Service Activities have been going well and smoothly
2. Partners have received solutions from the devotees for the problems they face.
3. Partners already have new skills, namely the technology for making good Tuna Fish Floss.
4. Partners have started marketing the Fish Floss Products made around the Regency and City.
5. Partners are often invited by the Provincial Maritime Affairs and Fisheries Service to take part in exhibitions held and often receive orders for use by the Maritime Affairs and Fisheries Service for guests visiting the Service.

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Tuna Fish Floss which is the result of the Implementation of Community Service can be seen in the image below:





Figure 2. Appearance of Fish Floss ready for Sale

In Community Service Activities, what needs to be considered is the occurrence of Technology Transfer from Devotees to Partners. In this Community Service, an illustration of IPTEK Transfer can be provided as in the Flowchart below.

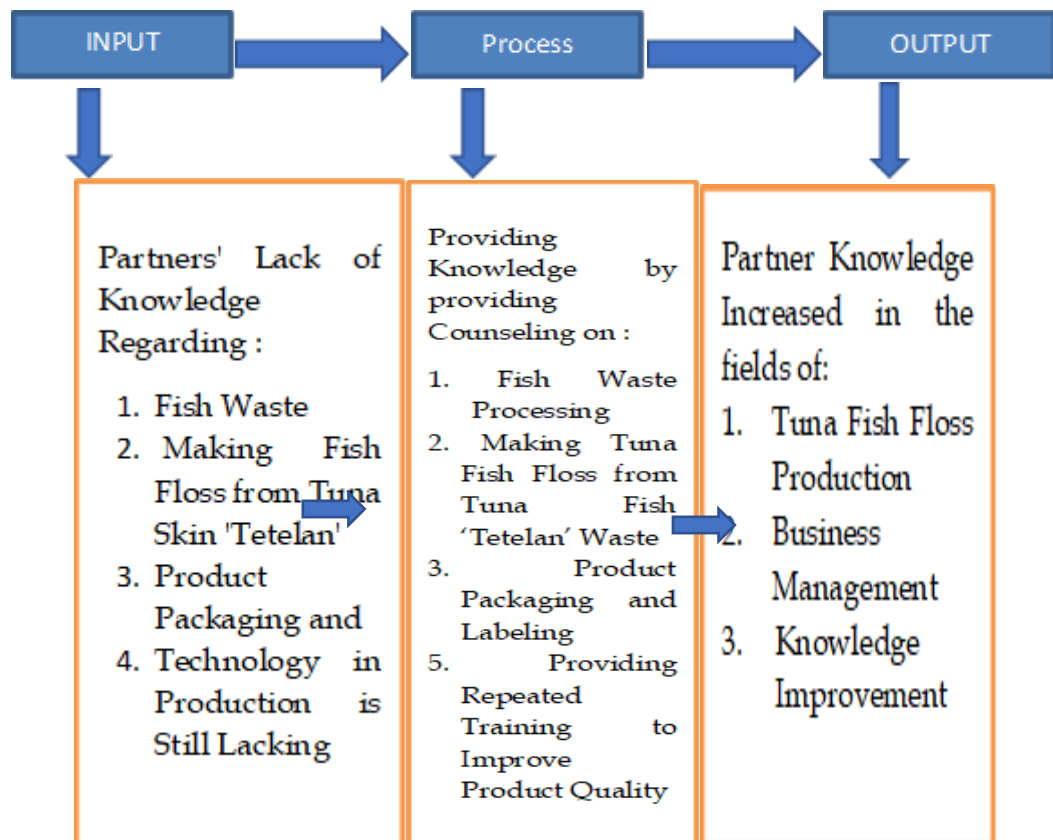


Figure 3. Overview of Science and Technology

CONCLUSIONS AND RECOMMENDATIONS

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