

## Technical guidance on making fish shredded meat for coastal communities in Kendari City

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### ABSTRACT

This community service activity aimed to provide knowledge and skills to women in coastal villages on how to make fish floss from tuna scraps, resulting in floss with a texture, aroma, and taste similar to beef floss. The activity was conducted in Abeli Subdistrict, with participants from five coastal neighborhoods in Kendari City: Abeli Village (3 participants), Lapulu Village (3 participants), Talia Village (5 participants), Nambo Village (4 participants), and Sambuli Village (4 participants), totaling 19 participants. The activity was conducted using educational sessions and demonstrations. The evaluation results showed that the community, particularly the women who participated in the training, were able to master and apply the fish floss production techniques taught. Based on observations by the program implementers, approximately 90% of the women were already able to make fish floss, as most participants had previously been accustomed to making traditional Bajabu fish floss. With this knowledge, they were able to utilize their free time productively by producing fish floss from tuna scraps.

**Keyword:** Meat, Shredded, Technical Guidance, Tuna Fish,

### ABSTRAK

Kegiatan pengabdian penerapan ipteks ini bertujuan memberikan pengetahuan dan keterampilan kepada kaum wanita di kelurahan kawasan pesisir, mengenai teknik pembuatan abon ikan dari meat ikan tuna, yang menghasilkan abon dengan tekstur, aroma dan rasa yang mirip dengan abon daging sapi. Kegiatan ini dilaksanakan di Kecamatan Abeli yang pesertanya berasal dari 5 kelurahan yang berada dipesisir di Kota Kendari yaitu kelurahan Abeli sebanyak 3 orang, Kelurahan Lapulu sebanyak 3 orang, Kelurahan Talia sebanyak 5 orang, Kelurahan Nambo 4 dan Kelurahan Sambuli 4 orang sehingga total peserta adalah 19 orang. Kegiatan ini berlangsung dengan metode penyuluhan dan demonstrasi. Hasil evaluasi kegiatan menunjukkan bahwa masyarakat khususnya kaum wanita yang menjadi peserta pelatihan ini, mampu menguasai dan menerapkan teknik pembuatan abon yang diberikan, dan dari hasil pengamatan pelaksana pengabdian ini bahwa terlihat sekitar 90% ibu-ibu sudah bisa membuat abon ikan karena sebagian besar dari peserta sebelumnya sudah terbiasa membuat abon ikan tradisional bajabu dan dengan bekal pengetahuan tersebut, mampu mengisi waktu luangnya dengan kegiatan yang produktif berupa pembuatan abon dari meat ikan tuna.

**Keyword:** Abon, Bimbingan Teknis, Ikan Tuna, Meat,



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## 1. Introduction

Southeast Sulawesi Province has a very high potential of marine and fisheries resources. These resources have been widely utilized by the people of Southeast Sulawesi, and are one of the sources of community livelihood, although relatively not yet providing optimal results for the welfare of the community. The main activities that have developed include capture fisheries, marine and coastal aquaculture, marine service industry, trade (docks and facilities), marine ecotourism and settlement development.

One of the districts / cities in Southeast Sulawesi is Kendari City which has Kendari Bay so that there are several sub-districts located in the coastal area so that the majority of people who live on the coast make a living as fishermen, in addition, in Kendari City there are already several companies engaged in fisheries, especially frozen tuna fish processing. The company usually gets fish from fishermen who help fishermen to market their fish directly to the company so that there is a mutually beneficial relationship between the community and the company where the company can easily get fresh fish without the need to make more effort to get raw materials for frozen fish processing which is then exported to several countries.

Frozen tuna processing for export purposes applies strict quality standards so that there are no rejections or complaints from destination countries. Quality demands are generally related to health and food safety. Another demand is that the exported frozen tuna must not contain red-brown meat (Adyphosa brown tissue). In addition, the weight size and dimensions of the length x width x thickness of the exported tuna meat must also meet the predetermined standards. Therefore, a whole tuna fish, after being cut into pieces according to size, will leave "patchwork" meat (borrowing the term "patchwork" fabric in the garment industry), which in the people of Kendari City is known as "meat". Meat is actually meat (tuna fish) with small irregular pieces, which is cut to tidy up the meat part to be exported, [1] the definition of meat is, the remaining meat attached to the bone, which has been peeled off the bone and cut into pieces). The proportion of meat accounts for about 15% of the total weight of whole tuna.

[2] Indonesia has 84,276 villages. [3] 12,827 of them are categorized as coastal villages, where most of the population is still poor. [4] Kendari City consists of 65 villages spread across 12 sub-districts, 30 of which (46.15%) are coastal villages. [5] The poor population of Kendari City is recorded at 18,200 people, which is 5.19% of the total population of Kendari City, which totals 350,267 people. Coastal villages are poverty pockets, so one way to alleviate poverty is to empower coastal communities. The villages around the PPS Kendari location are all coastal villages, and women in these areas generally have a lot of free time that could potentially be utilized for productive activities. On the other hand, in the PPS Kendari complex there is a potential by-product of the fisheries processing industry, in the form of tuna fish meat, which can be processed so that its economic value increases (rough calculation, it can reach 327.2 tons per month at the peak of the fishing season). Despite this, there was no effort from the local community, especially women, to utilize this potential to improve family welfare.

[6] This science and technology application service activity aims to provide knowledge and skills to women in coastal villages, regarding the technique of making shredded fish from tuna fish meat, which produces shredded with a texture, aroma and taste similar to shredded beef. [7] [8] Shredded fish is a ready-to-eat snack or side dish. The product has been known by the general public for a long time. Abon is made from meat that is processed in such a way that it has dry, light, crispy, and savory characteristics. This activity also aims to introduce one alternative home industry business opportunity to the community around the coastal area in order to increase family income.

## 2. Methods

### 2.1. Time and place

This community service initiative was carried out in Abeli District, involving participants from five coastal villages: Abeli, Lapulu, Talia, Nambo, and Sambuli.

### 2.2. Preliminary activities

This activity begins by communicating with the government, namely the village around the coastal area, to convey the desire of the implementers of activities from the university to introduce one of the alternative home industry businesses that can be applied by the community by utilizing the potential of tuna fish meat from the

fish processing company which is located not far from where they live.

### *2.3. Extension and demonstration*

This activity was designed to equip the target audience with knowledge and practical skills in utilizing tuna meat sourced from the Kendari Ocean Fishing Port (PPS Kendari) as a raw material for producing shredded fish. A total of 19 participants took part in the program, coming from five coastal villages in Kendari City: Abeli Village (3 participants), Lapulu Village (3 participants), Talia Village (5 participants), Nambo Village (4 participants), and Sambuli Village (4 participants).

The series of activities included a presentation on the potential of tuna meat produced by export-oriented tuna fillet companies at PPS Kendari and its possible use as a raw material for small-scale home industries, particularly for making shredded fish. Participants were also introduced to a comparison between traditional bajabu shredded fish production techniques and the modern method introduced in this program. Furthermore, the training included an explanation and video screening—sourced from a segment of Trans TV's "Good Morning" program—on how to produce shredded tuna in a style like beef floss.

The participants were then involved in a practical demonstration of the beef-style shredded fish production process using tuna meat, followed by a discussion session. To evaluate the outcome, participants conducted an organoleptic test of the shredded fish they produced. As a form of support for continued practice, each village received equipment aid in the form of shredded oil filters and oil squeezers.

### *2.4. Evaluation design*

The success of this activity can be assessed from two key aspects: the implementation process and the outcomes achieved. From the process perspective, the focus was on evaluating the participants' attitudes—particularly the women from Puday, Talia, Poasia, Bungkutoko, and Lapulu villages—towards the information and materials delivered during the training. This also involved assessing their willingness to adopt and apply the new knowledge shared with them.

From the results aspect, it was observed that the participants were able to understand and apply the techniques for making shredded tuna meat taught during the program. With this acquired skill, they are now able to utilize their spare time for productive activities such as producing shredded fish. Moreover, this newly gained capability holds potential to be developed further into a small-scale home industry, contributing to improved economic opportunities within their communities.

## **3. Results and Discussion**

### *3.1. Preliminary activities*

The initial communication of the implementation team with the urban village in the coastal area was carried out to request permission as well as assistance for the success of this science and technology application activity. The team's wishes were welcomed by the Abeli Sub-district Head, who immediately issued a memorandum of assignment for the team to forward to the village heads who were the target of the activity. The sub-district head also coordinated the plan of science and technology activities with the activities of the Chairperson of the Abeli Sub-district PKK Movement Team, who at that time was actively preparing the PKK in this area to take part in the P2WKSS (Increasing the Role of Women towards Healthy Family Welfare) competition at the Kendari City level, so that this science and technology activity was welcomed as additional knowledge and skills for women in this area in welcoming the competition. A positive welcome was also obtained from the village that became the location of the activity, which invited the team to coordinate with the necessary parties.

### *3.2. Extension and demonstration*

Counselling and demonstration activities take place with a fairly formal method where the community service implementer provides an explanation to the participants starting with laying out on the table the ingredients for making shredded tuna meat while explaining the names of the ingredients then the speaker starts practicing how to make shredded fish starting with heating oil and sautéing spices by mixing coconut milk until entering

tuna fish that has been cut into small pieces so that it becomes shredded fish (Figure 1-4). The participants listened attentively and paid close attention. Therefore, this activity is expected to increase the knowledge and skills of the participants in making shredded fish so that they can make this shredded fish as an additional income and ultimately improve their welfare.

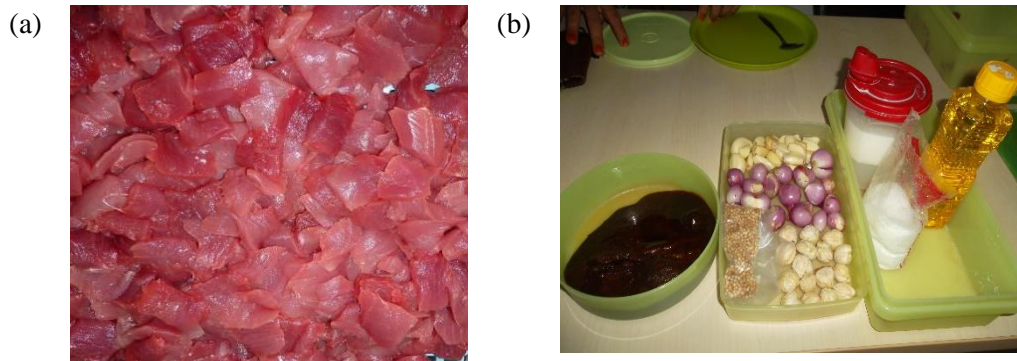


Figure 1. (a)Shredded fish meat and, (b) Seasoning ingredients.



Figure 2. Implementation team provides training materials.



Figure 3. Shredded making process.

Organoleptic tests were conducted by participants on the shredded fish produced using the introduced technique, allowing them to compare it not only with traditional bajabu shredded fish but also with other modern tuna floss products. While the basic cooking process of traditional bajabu is similar to the method introduced in this community service activity, there are key differences: traditional bajabu uses grated coconut instead of coconut milk and is typically packaged in banana leaves. In contrast, this activity utilized plastic packaging, which aligns more closely with modern tuna floss packaging methods that prioritize extended shelf life, hygiene, and marketability.

Organoleptic testing is a sensory evaluation method used to assess product quality in various industries. In food science, this method evaluates characteristics such as taste, aroma, color, and texture of products such as corn juice [9]. This method is also applied in the non-food sector, such as assessing the quality of sports shoes



[10]. Organoleptic tests are advantageous due to their simplicity, speed, and cost-effectiveness, as they do not require expensive equipment [11]. Evaluation usually involves panelists to rate products on a scale from “dislike” to “like very much” [9]. While visual, taste, and odor assessments are common for food products, audio methods are more relevant for certain non-food products [11]. Organoleptic testing helps in product development, quality control, and can contribute to increasing the marketability and diversification of local food products [12][13][14].

The participants generally admitted that the texture, aroma and taste were very similar to shredded beef. The delivery of the shredded oil press and shredded oil filter was welcomed by the participants who generally expressed their desire to apply the technology provided.



Figure 4. Pressing and displaying shredded meat in ready-to-eat packaging.

### 3.3. Activity evaluation

The success of this science and technology application activity can be viewed from two main aspects: the process and the results. From the process aspect, the participants generally demonstrated strong enthusiasm throughout the activity. This was evident from the active dialogue and numerous questions posed, reflecting the high level of curiosity and interest among the participants. Furthermore, the Chairperson of the Abeli Sub-district PKK Team played a significant role in motivating her members to adopt the shredding technology introduced during the training. Her active encouragement contributed greatly to the participants' engagement, indicating that the activity had successfully reached its intended audience in terms of process implementation.

However, in terms of results, particularly the participants' ability to master and apply the shredded tuna production techniques, as well as their use of free time for productive activities such as processing tuna trimmings, the objectives appear to have been only partially achieved. While the implementing team assessed that the participants had adequately absorbed the knowledge shared, the practical application of that knowledge—especially in utilizing spare time for producing shredded tuna—was still limited. Moreover, based on observations, the application of the technology in the villages of Abeli, Lapulu, Talia, Nambo, and Sambuli was not entirely driven by the participants' own initiative or entrepreneurial motivation. Instead, much of the activity was influenced by external encouragement, particularly from the Chairperson of the PKK Mobilization Team, due to Talia Village being selected to represent Abeli Sub-district in the Kendari City-level P2WKSS competition. This suggests that sustainable adoption may still require stronger internal motivation and support mechanisms at the community level.

Community service activities in the form of applying shredded tuna fish making techniques in five coastal villages in Kendari City, as an effort to introduce alternative home industry business opportunities through the utilization of by-products from fisheries processing companies, have been carried out by the Haluoleo University Community Service Implementation Team in coastal villages, Kendari City. The material presented generally received a positive and quite satisfying response from the women in the village, considering that so far, no similar activities have been carried out. In fact, the women in the target villages are thirsty for skill development and new information, and complain about the lack of women's skill development activities that reach their area, both from the Kendari City PKK Movement Team and from the Province. Openness to new innovations is also generally shown by the target audience, thus facilitating the transfer of knowledge that is expected to take place in this activity. Questions and answers between the implementation

team and the target audience, which took place after the extension and demonstration, showed the great interest of the community to know and master the technique of making shredded tuna fish meat. The lecture material, which included preliminary information about bajabu traditional fish floss and its differences with beef floss-style fish floss that will be introduced to how to make it, the ingredients and tools needed in making floss, the amount of each ingredient/seasoning used, how to prepare, how to process and procedures for making up to packaging, was generally able to attract the attention and enthusiasm of the participants. In addition, participants were also very interested when tasting shredded fish from tuna fish meat, and admitted that the texture, taste and aroma were not at all impressive that the raw material was fish.

Participants' responses to the training activities were evident not only through dialogue and the question-and-answer sessions following the demonstrations, but also during the monitoring activities conducted after the program's implementation. Observations revealed that approximately 90% of the women were able to produce fish floss, largely because many were already familiar with the traditional method of making bajabu fish floss. Through discussions with the participants, several supporting and inhibiting factors in the implementation of this science and technology program were identified.

On the supporting side, the community demonstrated openness to the introduced technology, which was further encouraged by the strong availability of tuna fish meat sourced from PPS Kendari. The materials needed for making tuna-based shredded fish were relatively easy to obtain, especially with the help of equipment such as shredded oil filters and oil squeezers provided by the program team to each village. Additionally, the simplicity of the introduced technology made it accessible for the women, many of whom could easily replicate the process independently. The Chairperson of the PKK Team of Abeli Sub-district, Kendari City, also showed great enthusiasm, actively motivating members to apply the new method—particularly in the context of preparing for the city-level P2WKSS competition. Familiarity with traditional bajabu production further helped participants quickly grasp the new techniques introduced during the training.

However, several inhibiting factors were also noted. Some participants who were already involved in the traditional bajabu industry and earning a stable income were resistant to adopting new methods, as seen in the case of Mrs. Nurtin's fish floss business in Poasia Village. Moreover, coastal communities often faced difficulty in accessing tuna meat due to limited capital and competition with larger household industries, such as fishball producers, who frequently pre-book supplies from tuna fillet exporters at PPS Kendari. Compounding this issue is a shift in international market demand from processed tuna fillets to whole fresh tuna, reducing the availability of meat by-products traditionally used for shredded fish. Economic constraints further limited the communities' ability to invest in small-scale businesses, as daily income was often just enough to meet essential needs. Additionally, the lack of entrepreneurial spirit among some participants hindered the willingness to take risks and start the business alternatives introduced through this program.

#### 4. Conclusions

The implementation of the science and technology application activity titled "Techniques for Making Shredded Tuna from Fish Trimmings in Five Coastal Villages in Kendari City" generally proceeded well and received strong support from local government officials and members of the PKK women's groups. The participants, who were women from five urban coastal villages, showed high levels of enthusiasm and actively engaged in the training sessions. This response indicates a clear need for guidance and capacity building among coastal communities, particularly for women seeking to develop both their personal potential and the economic potential of local resources.

The development of women's potential in these coastal areas requires ongoing mentoring and support from trusted local leaders—such as the heads of the PKK Movement Team at both the village and sub-district levels. These figures play a vital role in motivating community members and ensuring that development programs are successfully implemented, as communities tend to struggle when left to operate without consistent guidance and encouragement. Interestingly, the program also revealed that participants with no prior experience using traditional methods were more open and receptive to the new technology. In contrast, those already proficient and successful with older methods tended to resist adopting innovations, showing a preference for familiar practices over new approaches.

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