

## COMMUNITY-BASED STRENGTHENING OF CROSS-SECTOR AWARENESS ON FOOD SAFETY TO REDUCE HOUSEHOLD FOOD WASTE THROUGH FORUM GROUP DISCUSSION

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### Abstrak

Di Tanjung Uban Selatan, limbah makanan rumah tangga tetap menjadi masalah masyarakat yang terus berlanjut karena pemahaman yang terbatas tentang praktik keamanan pangan, fasilitas penyimpanan makanan dan pemilahan sampah yang tidak memadai, serta dukungan regulasi yang lemah di tingkat masyarakat. Kegiatan pengabdian kepada masyarakat ini bertujuan untuk menyamakan persepsi lintas sektor dalam upaya pengurangan *food waste* rumah tangga melalui penerapan *food safety*. Metode yang digunakan adalah *forum group discussion* (FGD) yang dilaksanakan di Tanjung Uban Selatan dengan melibatkan ibu PKK, pengurus Bank Sampah PENSOSMAS, tokoh masyarakat, serta instansi pemerintah terkait. Hasil FGD menunjukkan bahwa kendala utama yang dihadapi masyarakat adalah rendahnya pengetahuan, minimnya fasilitas pendukung, dan lemahnya regulasi dalam pemilahan dan pengelolaan sampah. Dari diskusi ini disepakati tindak lanjut berupa edukasi berkelanjutan, penyediaan fasilitas pemilahan dan penyimpanan bahan pangan, penguatan regulasi dengan dukungan lintas sektor, serta monitoring dan evaluasi untuk memastikan keberlanjutan program. Kegiatan ini menghasilkan komitmen bersama yang diperkuat dengan penandatanganan nota kesepahaman antar pemangku kepentingan. Simpulan dari kegiatan ini adalah bahwa penyamaan persepsi melalui FGD efektif dalam membangun kesadaran kolektif, mendorong partisipasi masyarakat, dan mendukung pengurangan *food waste* rumah tangga secara berkelanjutan.

**Kata Kunci:** *Food Safety, Food Waste, Forum Group Discussion, Rumah Tangga, Penyamaan Persepsi*

### Abstract

*In Tanjung Uban Selatan, household food waste remains a persistent community problem due to limited understanding of food safety practices, inadequate food storage and waste segregation facilities, and weak regulatory support at the community level. This community service activity aimed to align cross-sector perceptions in reducing household food waste through the application of food safety. The method used was a forum group discussion (FGD) conducted in Tanjung Uban Selatan, involving women's community groups (PKK), PENSOSMAS Waste Bank representatives, community leaders, and related government agencies. The FGD revealed that the main obstacles faced by the community were limited knowledge, inadequate supporting facilities, and weak regulations regarding waste segregation and management. The discussion resulted in an agreement on several follow-up actions, including continuous education, provision of facilities for food storage and waste segregation, strengthening regulations with cross-sectoral support, as well as monitoring and evaluation to ensure program sustainability. This activity produced a joint commitment formalized through the signing of a memorandum of understanding among stakeholders. The conclusion of this program is that aligning perceptions through FGD is effective in building collective awareness, encouraging community participation, and supporting sustainable household food waste reduction.*

**Keywords:** *Food Safety, Food Waste, Forum Group Discussion, Household, Alignment of Perceptions*

## INTRODUCTION

Reducing food waste is a global challenge closely linked to food security and environmental sustainability. Food availability alone is insufficient to ensure food security, as improper food handling, storage, and consumption practices at the household level significantly contribute to food loss before consumption. Inadequate food safety practices accelerate food spoilage, increase household waste generation, and exacerbate environmental health risks, making food waste a critical issue in sustainable food consumption systems (Chaerul & Zatadini, 2020; Hermanussen et al., 2022).

In Tanjung Uban Selatan Village, household food waste constitutes a persistent community-level problem. Data from BPS Kepulauan Riau indicate that approximately 20% of household food is wasted before consumption, largely due to limited public knowledge and awareness regarding proper food management and food safety practices (BPS Kepri, 2020). Baseline observations conducted prior to the implementation of the community service program showed that food was often stored without adequate hygiene standards, leftovers were frequently discarded prematurely, and organic food waste was commonly mixed with inorganic waste at the household level. These baseline conditions indicate that food safety implementation and household food management practices remain suboptimal, contributing to increased food waste and environmental discomfort within the community.

Waste management efforts at the household level play a crucial role in fostering environmental stewardship within the community. One such initiative is the establishment of the PENSOSMAS Waste Bank in Tanjung Uban Selatan Village in 2022, which aims to manage waste through the 3R (reduce, reuse, recycle) approach. At the initial stage prior to this community service intervention, community participation in waste sorting activities was limited, particularly at the household level, as plastic and food waste were commonly mixed, resulting in unpleasant odors and reducing the effectiveness of recycling activities. Although extension activities related to organic waste utilization, such as composting and eco-enzyme production, have been conducted, limited land availability and insufficient household-level food management practices have constrained community participation and program sustainability (Hutabarat & Mulyani, 2022). (Hutabarat & Mulyani, 2022).

Previous studies emphasize that food waste reduction requires preventive strategies beginning at the household level. Highlights that inadequate food safety knowledge contributes significantly to food waste accumulation and environmental degradation (Bambang Hermanu, 2022). Household food waste is strongly influenced by consumer behavior, particularly in food planning, storage, and disposal practices (Chaerul & Zatadini, 2020; Hermanussen et al., 2022). These findings reinforce the importance of strengthening food safety knowledge as a foundation for behavioral change and food waste reduction.

In addition to empirical evidence, institutional and policy frameworks emphasize the role of community participation and cross-sector collaboration in waste management and food security programs. Strengthening household food safety practices aligns with national objectives on environmental health, sustainable consumption, and food security. Waste bank programs are expected to function not only as waste collection units but also as community-based educational platforms that promote responsible consumption behavior and sustainable waste segregation practices (Bambang Hermanu, 2022; Hutabarat & Mulyani, 2022).

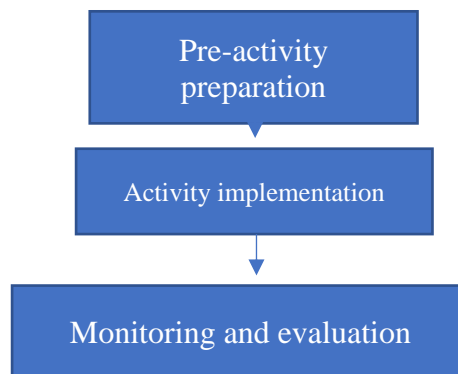


Based on these conditions, this community service program aims to strengthen cross-sector alignment in the implementation of food safety practices to reduce household food waste in Tanjung Uban Selatan. Through a forum group discussion (FGD) approach involving women's community groups (PKK), the PENSOSMAS Waste Bank, community leaders, and relevant government agencies, the program seeks to build collective awareness, formulate joint solutions, and establish sustainable commitments to support household food waste reduction.

## METHOD

Implementation of community service activities (PKM) to obtain cross-sector support in activities to increase knowledge of reducing food waste with the application of food safety methods carried out at the South Tanjung Uban Village Residents' Association Hall building on August 27, 2025. Implementation of PKM activities using the forum group discussion (FGD) model.

The stages of the forum group discussion activities can be seen in the flow chart below:



Picture 1 Activity Stages FGD

The implementation of the PKM was systematically carried out in three main phases: **pre-activity preparation**, **activity implementation (opening session, material preparation, FGD, and signing of the memorandum of understanding)** and **monitoring and evaluation**.

The pre-activity phase involved coordination with partner institutions, including the PENSOSMAS Waste Bank, village officials, and relevant government agencies. This phase included identification of community problems related to household food waste, preparation of educational materials on food safety, development of discussion guidelines, and participant recruitment. Invitations were extended to community representatives and stakeholders to ensure cross-sector participation.

The implementation phase consisted of four sequential stages. The first stage was the opening session, including a welcoming speech to introduce the objectives of the activity. The second stage involved the delivery of educational materials on food waste issues and the importance of household food safety practices. The third stage was an interactive Forum Group Discussion (FGD) session aimed at identifying community challenges, sharing experiences, and formulating joint solutions related to food safety and

household food waste reduction. The final stage involved the signing of a memorandum of understanding (MoU) as a form of collective commitment and cross-sector support for the sustainability of the program.

A total of approximately 15 participants were involved in the activity, consisting of women's community groups (PKK), neighborhood associations (RT/RW), representatives of the PENSOSMAS Waste Bank, the Deputy Village Head, and officials from the Health Office, community health center Tanjung Uban, Food Security Office, and Environmental Office. Supporting equipment included an LCD projector and PowerPoint-based educational materials

Monitoring and evaluation were conducted to assess the effectiveness of the FGD process and the outcomes of the community service activity. Evaluation focused on qualitative indicators, including participant engagement during discussions, achievement of consensus on key issues, formulation of agreed follow-up action plans, and formalization of commitments through the signing of the MoU.

Documentation in the form of discussion summaries, attendance lists, photographs, and agreement records was used to support the evaluation process. This phase ensured that the FGD functioned not only as a discussion forum but also as a structured decision-making mechanism leading to actionable and sustainable community interventions.

## RESULTS AND DISCUSSION

This community service activity serves as a form of academic support for waste bank partners in reducing food waste, a challenge faced by the community in waste sorting.

### 1. Delivery of material on the application of food safety in reducing food waste

This presentation is an implementation program for the research results of the Perpetuation Chairperson Aprilia Nurcahyaning Rahayu in an effort to reduce food waste through food safety. Food waste is food waste at the consumer level. This activity focuses on household food waste. Food safety is an effort to maintain food safety to reduce food contamination that accelerates food spoilage while reducing food waste through food planning methods. The following is a picture of the presentation activity for the application of food safety in reducing food waste.



Picture 2. Delivery of Material

This material discusses the problem of food waste, which impacts environmental health, climate change, and the quality of agricultural products. Inappropriate food waste management creates a breeding ground for disease-carrying vectors, leading to health problems such as diarrhea, malaria, and ticks. This lack of sanitation results in suboptimal nutrient absorption. This high level of food waste and its devastating impact, if reduced, can lead to malnutrition. This illustrates the social disparity that makes it crucial to address this issue.

**2. Forum Group Discussion**

The Forum Group Discussion (FGD) was conducted not only as a participatory discussion forum but also as a mechanism for collective decision-making among stakeholders. The FGD aimed to reach a shared understanding of household food waste issues and to formulate consensus-based agreements regarding feasible solutions and follow-up actions. Through guided discussion and cross-sector dialogue, participants collectively identified priority problems, validated field conditions, and negotiated practical interventions related to food safety implementation. This Focus Group Discussion (FGD) is crucial for formulating strategic steps in empowering coastal communities in Busung Panjang Village, with a focus on natural resource management and the development of micro, small, and medium enterprises (MSMEs) based on existing natural potential (Valentina et al., 2024). The following is a picture of the focus group discussion forum activity below.



Picture 3. Forum Group Discussion

Table 1 presents the thematic outcomes of the FGD, summarizing the agreed field conditions, key challenges, and cross-sectoral solutions that were collectively endorsed by participants..

Table 1 *Forum Group Discussion* Discussion Results

No	HOW ARE THE FIELD CONDITIONS	CHALLENGES AND OBSTACLES	CROSS-SECTORAL SOLUTIONS AND PARTICIPATION
1	<ul style="list-style-type: none"> <li>Public knowledge and awareness remain limited, leading to the view that food waste is unimportant.</li> </ul>	Food waste due to lack of knowledge of ingredients resulting in food waste accumulation and food planning being difficult to implement.	Raise public awareness about avoiding food waste and better waste management by: <ul style="list-style-type: none"> <li>Providing education (a low-waste lifestyle)</li> <li>Providing education about daily food needs</li> </ul>



	<ul style="list-style-type: none"> <li>• Lack of education and information disseminated evenly to the public.</li> <li>• Poor practices regarding food safety and household waste management.</li> </ul>		<ul style="list-style-type: none"> <li>• Shopping wisely for what's needed that day or saving by buying just enough</li> <li>• Implementing the food security guidelines "Consume wisely, avoid food waste"</li> <li>• Reducing the purchase of unused food items</li> <li>• Processing food faster for pre-processing (meal planning)</li> <li>• Educating about proper food and food storage.</li> <li>• Behavioral changes</li> </ul>
2	Inadequate facilities, no containers for storing leftover food	There is no policy that accommodates waste sorting	<ul style="list-style-type: none"> <li>• Collaborate with relevant agencies and all community leaders</li> <li>• Promote and promote composting in every household</li> <li>• Provide ongoing understanding and support</li> </ul>
3	<ul style="list-style-type: none"> <li>• Improper management of food waste/waste can lead to contamination, namely environmental pollution.</li> <li>• Regarding the problem of mixed organic and inorganic waste, environmental cleanliness needs to be emphasized.</li> </ul>	<ul style="list-style-type: none"> <li>• Delays in DKP waste collection in every alley</li> <li>• Lack of strict supervision and regulation</li> </ul>	<p>Be wise in managing food waste by:</p> <ul style="list-style-type: none"> <li>• Storing and reprocessing excess food before throwing it in the trash, for example, reprocessing leftover rice into rice crust.</li> <li>• Separating organic and inorganic waste.</li> <li>• Place leftover food waste in a closed container and process it properly to prevent pollution (composting).</li> <li>• Collecting/putting it with wet waste to be processed into compost at the Pansosmas waste bank.</li> <li>• Providing land if possible.</li> <li>• Organic alternatives can be disposed of directly on plants by chopping them to break down quickly. While inorganic waste, such as plastic bottles, can be collected separately and deposited into a waste bank to generate savings.</li> </ul>

Based on the FGD process, three main thematic agreements were collectively reached. First, participants agreed that limited food safety awareness and improper household food management practices constitute the primary drivers of household food waste. Second, there was a shared consensus that the absence of supporting facilities and weak regulatory enforcement hinder effective waste segregation and food waste

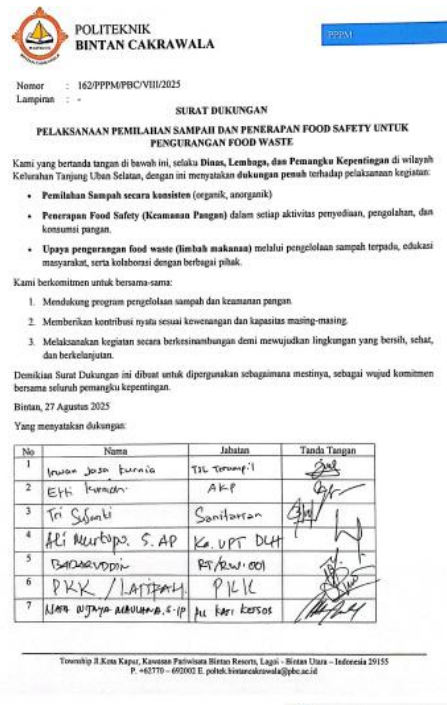


reduction. Third, stakeholders collectively agreed that sustainable food waste reduction requires cross-sector collaboration through continuous education, provision of facilities, regulatory strengthening, and active involvement of waste banks.

These thematic agreements reflect a collective consensus rather than individual opinions and serve as the basis for subsequent action plans and the formalization of commitments through the signing of a memorandum of understanding (MoU).

### 3. Follow-up Plan

Following the Community Service Program (PKM) activities on the implementation of food safety in reducing household food waste in South Tanjung Uban, four follow-up actions were formulated. The first was strengthening cross-sector capacity to gain support from stakeholders and strengthening strict regulatory oversight because behavioral change requires regulations, where strict regulations will strengthen the will to act. It is hoped that regulations from external factors, such as stakeholders, will increase the public's desire to implement food safety in reducing food waste. This willingness or intention is in line with previous research that the intention to implement healthy food processing is influenced by internal and external factors in the environment. The strength of this intention becomes a motivation in someone trying to implement new behaviors (Rustiawan & Suryani, 2021). Cross-sector synergy in supporting this community service activity was evidenced by the signing of a memorandum of understanding document. The following is a picture of the signing of the letter of support from across sectors.



Picture 4. Signing of the Letter of Support for Community Service

Both food safety and food waste education programs are conducted to increase knowledge and the importance of reducing food waste by implementing food safety to maintain food safety, remain healthy and nutritious, and proper storage can reduce the rapid deterioration of ingredients (Annashr, N.N., Oematan, G., Permata, R.P.H., 2023). The implementation of proper storage will reduce food waste and households can manage their finances better. This form of education will be implemented through material



presentations, posters on food safety and food waste. Third, the community service team will improve facilities to help make it easier for the community to implement food safety in food storage areas and provide trash bins to facilitate the sorting of organic and non-organic waste. The fourth activity that needs to be carried out to monitor the activities implemented and to familiarize community behavior is a monitoring and evaluation activity for 1 month.

## CONCLUSION

The Forum Group Discussion (FGD) conducted in South Tanjung Uban successfully functioned as a community service (PKM) deliverable, producing three main outcomes: shared understanding, cross-sectoral commitment, and joint action planning for reducing household food waste through food safety implementation.

First, the FGD facilitated a shared understanding among stakeholders regarding the root causes of household food waste, particularly limited food safety awareness, inadequate facilities, and weak regulatory enforcement. Second, the activity generated a cross-sectoral commitment involving community groups, waste bank representatives, and government institutions, which was formally reinforced through the signing of a memorandum of understanding (MoU). Third, the FGD resulted in agreed action plans formulated into four strategic steps: continuous food safety and food waste education, provision of food storage and waste sorting facilities, strengthening regulatory support through government and community collaboration, and the implementation of monitoring and evaluation (M&E) activities to ensure sustainable behavioral change.

These outcomes demonstrate that FGD-based PKM activities are effective in transforming dialogue into collective decisions and actionable commitments, thereby supporting sustainable household food waste reduction, food security, and environmental health.

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