



COMMUNITY OF PRACTICES ON EXTENSION AND ADVISORY SERVICES FOR NUTRITION SECURITY IN INDONESIA: A Sustainable Agri-Food Systems Approach



Community of Practice:

Effective Integration of Nutrition into Extension and Advisory Services

Integrasi efektif aspek gizi dalam penyuluhan dan pendampingan



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Executive Summary

Poverty and hunger are significant global challenges that require lasting solutions. Indonesia faces a triple burden of malnutrition, encompassing undernutrition, overnutrition, and micronutrient deficiencies. Addressing food and nutrition needs is crucial for developing human resources. Enhancing agricultural practices is essential to meet these nutritional and health demands. Extension and advisory services (EAS) are vital in this effort. In response to these issues, a Community of Practice (CoP) for extension and advisory services has been established in Indonesia. This community promotes knowledge sharing and experience exchange among its members while seeking solutions related to nutritional security. The CoP also aims to provide policy recommendations for effectively integrating nutrition into extension and advisory services. This policy brief outlines the CoP's context, core principles, and proposed future directions. Developing a CoP is a learning process that requires the involvement of stakeholders engaged in these initiatives. Our CoP comprises agricultural extensionists, Rural Advisory Service (RAS) practitioners, researchers, academics, civil society representatives, youth, university students, and journalists. This brief presents insights from the CoP and offers policy recommendations. The CoP forum can advocate for effective nutrition-sensitive extension practices. We recommend that the CoP for extension and advisory services on nutrition security adopt a comprehensive approach. This approach should include utilizing new media and digital technologies to disseminate nutrition information, engaging multiple stakeholders, implementing participatory and inclusive strategies to ensure no one is left behind, developing capacity, empowering communities for nutritional security, and establishing a robust data-based monitoring and evaluation system.



INTRODUCTION

Agricultural Extension (AE) in Indonesia serves as the foundation of agricultural development. The contributions of AE to national development in the 1980s earned Indonesia the FAO Award for Self-Reliance in Food, presented in Rome in 1984. Indonesia enacted Law Number 16/2006 on the Agricultural, Fisheries, and Forestry Extension System (AFFES) to support the implementation of initiatives in agriculture, fisheries, and forestry. This law aims to organize extension services to enhance the capabilities, knowledge, and skills of community members managing enterprises in agriculture, fisheries, and forestry, fostering sustainable prosperity for the people. Furthermore, Law Number 16/2006 on AFFES stipulates that AE providers include the public, private, and community sectors. A pluralistic approach to AE has been adopted in Indonesia to improve farmers' knowledge and skills in producing quality yields. For instance, paddy rice farmers benefit from the Rural Empowerment and Agricultural Development (READ) program, while cocoa farmers are supported through the Empowerment and Agricultural Development Scaling-up Initiative (READSI). The impact of READSI has also enhanced knowledge and skills in implementing good agricultural practices (Amanah et al., 2021; IFAD, 2022).

Presidential Regulation Number 35/2022 regarding strengthening agricultural extension functions aims to enhance food consumption availability, access, quality, and safety. This is achieved through strategic efforts to boost production and productivity, regulate distribution, improve agricultural productivity, strengthen human resources in agriculture, and promote the application of technology and innovation in the farming sector. The regulation addresses topics such as agriculture management, agricultural extension, and food security. It emphasizes implementing agricultural extension in provinces and districts, focusing on comprehensive agricultural extension that encompasses not only farming aspects but also integrated agricultural management, the development of micro, small, and medium enterprises in food distribution, and the enhancement of food quality.

To effectively integrate nutrition into Extension and Advisory Services (EAS), FAO (2021) suggests that stakeholders take action on four levels: (i) facilitate the provision of nutrition-sensitive EAS; (ii) assess the nutrition-related capacity of the EAS system; (iii) strengthen the organizational and individual capacity of EAS providers; and (iv) enhance the enabling environment. Fanzo et al. (2015) assert that nutrition-sensitive EAS heavily relies on the capacity of national governments to coordinate multi-sectoral strategies and on the resource constraints faced by individual countries. Insights from the series of webinars on Nutrition-Sensitive Agriculture (NSA) held by the Rural Advisory Services for Southeast Asia (RASSEA) from August 2023 to October 2024 indicate that further education and training were organized for extension workers to enhance their knowledge and skills in NSA. The training includes developing extension materials about NSA using various delivery methods while leveraging advancements in information and communication technology to create content for extension. The preparation of extension material should consider various aspects, including the potential of natural resources, availability of local food genetic resources, opportunities for market development, availability of human resources, access to agricultural facilities and infrastructure, planting seasons and harvest schedules, market demand, prices at the producer and consumer levels, conditions of food insecurity and malnutrition cases, regulations related to the standardization and quality of food products, local food availability and insecurity, and public interest in consuming food.

Food and nutrition issues are also driven by individual and household consumption patterns and behaviors; thus, implementing nutrition-sensitive agriculture is essential. Ecker and Breisinger (2012) provide an overview of the food and nutrition security system. This overview suggests that food and nutrition within microsystems (households and their members) can be viewed as macro systems, where external shocks influence nutritional status. Nutritional status reflects human capacity and productivity. Interventions can be conducted through economic policies, social policies, and programs, as well as nutrition and health initiatives.

Enhancing agricultural practices to satisfy people's needs for nutritious and healthy food. Strategies and entry points for nutrition-sensitive value chains (Figure 1) consider the interconnectivity between agriculture's on-farm and off-farm contexts, as well as supply and demand.

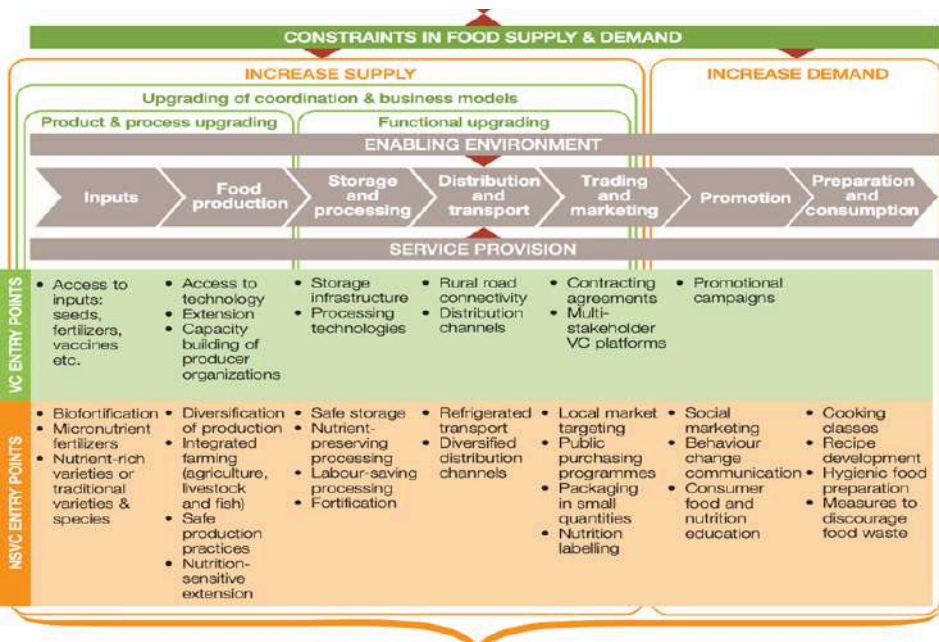
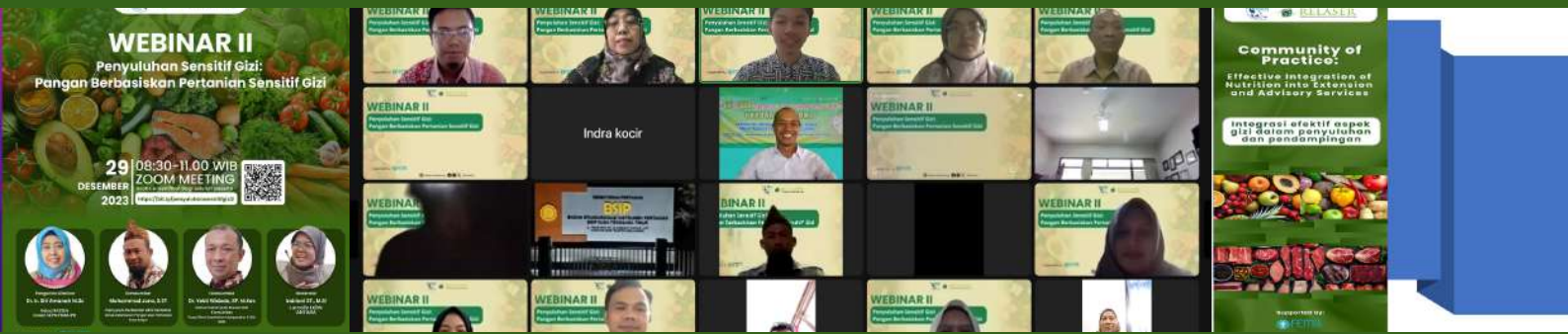


Figure 1 Nutrition-sensitive value chains framework
Source: De la Peña et al. (2018)

In several regions, efforts to improve toddler and family nutrition are implemented through the Sustainable Food Yard (P2L), formerly known as the Sustainable Food House Area (KRPL) program. The objective of P2L is to help provide food and nutrition sources for families, sustainably increase income, and enhance awareness, roles, and community participation in achieving diverse, nutritionally balanced, and safe food consumption patterns. A project focusing on a nutrition-sensitive value chain to improve the nutritional status in Maluku (East Indonesia) identified a shortlist of foods that the local community in Maluku chooses as sources of carbohydrates, protein, fat, vitamins, and minerals, including cassava, maize (corn), sea fish, chicken, chicken eggs, spinach, groundnuts, papaya, bananas, mangos, cabbages, tomatoes, carrots, and coconut (IFAD, 2018). The criteria used for assessing the foods to be utilized in nutrition-sensitive value chains are based on: (a) local cultivation; (b) potential for income increase; (c) capacity for large-scale production; (d) opportunities for value addition through processing; (e) potential for job creation; and (f) likelihood of market demand. Table 1 illustrates an example from the IFAD project in Maluku aimed at improving nutrition using locally produced foods from the area.

Table 1 Example of nutrition improvement using value chains criteria in Maluku

Potential commodity	Energy	Protein	Micronutrients	Contributes to further dietary diversity	Availability	Familiarity	Processing potential
Fish	Very low	Very high	Vitamins A, B1, B6, B12	No	Very available	Very familiar	Can be processed (e.g., canned, salted)
Banana	Low	Very low	Vitamins B6, C	No	Very available	Very familiar	Juiced or mashed
Spinach	No	Very low	Vitamins A, B6, folate, C, iron, calcium	Yes	Familiar	Available	-
Maize (corn)	Low	Low	Vitamin B3, folate	Yes	Available	Familiar	Can be processed into flour, fortified with vitamins
Cassava (white)	Medium	Very low	Vitamin C	Yes	Very available	Very familiar	Can be processed and fortified, including through biofortification
Cassava leaf	Very low	Medium	Vitamins A, B6, C, zinc, calcium	Yes	Very available	Very familiar	

Source: IFAD, 2018

The information in Table 1 shows that nutrition-sensitive extension, and vice versa, requires understanding, learning, and sharing at various levels. The Community of Practice (CoP) was established to act as a platform for exchanging and disseminating knowledge and experiences related to integrating nutrition into extension. This policy brief outlines the approach taken to develop the CoP's fundamental principles and presents policy recommendations for future directions. The following section details the strategy and development of the CoP.



APPROACHES TO DEVELOP THE CoP

Wenger (1998) suggests that a Community of Practice (CoP) is "a group of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly." Before establishing the CoP, we conducted a survey using an online form distributed to extension practitioners, female farmers, farmer leaders, and youth farmers. The survey was open for a week in January 2024, during which we received 229 responses: 133 from males and 99 from females. The respondents' backgrounds are as follows: 58 percent are government staff, 19 percent are from the community, 2.2 percent are from the central government, 2.2 percent are from universities, and 0.43 percent are from the media. Most respondents have not been exposed to nutrition-sensitive extension and advisory services (NSEAS) and lack knowledge about CoP. They are interested in CoP for the following reasons: 44 percent want to understand NSEAS, 22 percent wish to share knowledge, 12 percent find CoP relevant to their roles as extension workers, and 10 percent view CoP as a platform to seek solutions through the transformation of knowledge, skills, and attitudes related to nutrition.

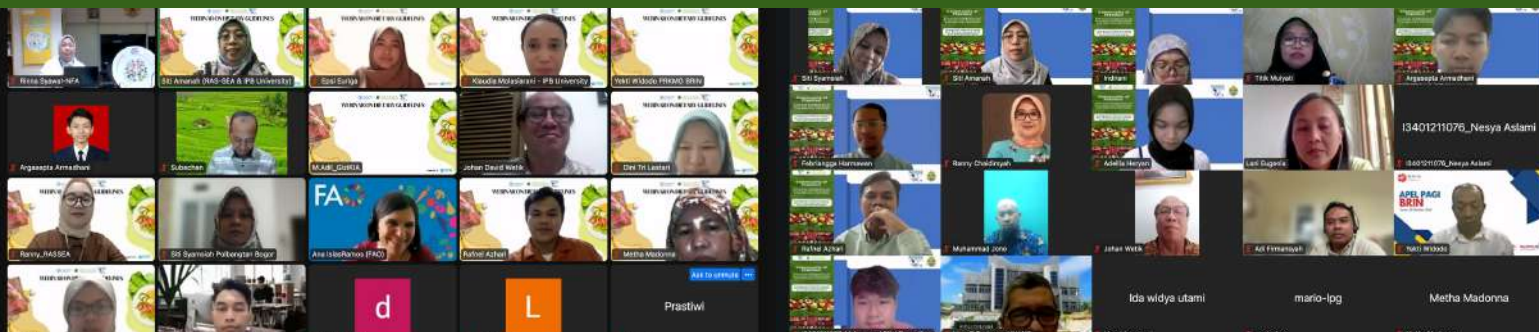
We practiced the RELASER and GFRAS approaches to knowledge management in the CoP "Nutrition-Sensitive Extension" (GFRAS, 2022). We create a space for learning and exchanging knowledge, experiences, and best practices. We also communicated with potential champions, including extensionists who have worked closely with communities in food production, processing, and nutrition-related contexts. We focused on participant interaction, emphasizing the willingness to share experiences through effective communication. We utilize virtual, synchronous, and asynchronous methods for the CoP. We use the information generated from the CoP to systematize, store, and organize for sharing. Monitoring and evaluation of the CoP will be conducted quarterly to assess the degree of satisfaction with the initiative.

In line with the above approach, we implemented the development of the CoP on NSEAS. Our CoP objectives are as follows: (i) advocate for the role of extension and advisory services in nutrition and food security in Indonesia from a multi-sectoral perspective; (ii) provide evidence of the impact these services have on nutrition and food security; (iii) guide extension and advisory services in agricultural education and nutrition, offering learning and exchange opportunities for all interested parties, not just members of the Community of Practice (CoP); (iv) contribute to policies, organizational mandates, and programs related to extension and advisory services that promote food and nutrition security within a sustainability context.

Implementation of the CoP. A kick-off meeting on the CoP was organized in person by the Rural Advisory Services for Southeast Asia (RASSEA) on June 29, 2024, at the IPB Baranang Siang Campus, involving the Indonesia Forum for Rural Advisory Services (IFRAS), the Indonesia Association for Development Extension (PAPPI), the Indonesia Agency of Research and Innovation (BRIN), extension workers, students, journalists, and the RASSEA team. This meeting also served as training for nutrition-sensitive extension and vice versa. The participants employed a participatory approach during the meeting, which highlighted that the market for bio-fortified paddy rice remains limited, despite this type of rice being suitable for those who are undernourished and for preventing stunting in children. Further actions must be considered to enable farmers to adopt the Inpari IR Nutri Zinc (on-farm) from the supply side. To increase the targeted population's preference for consuming the zinc-fortified rice, several actions should be taken: (i) introduce diverse products based on Inpari IR Nutri Zinc paddy; (ii) implement social marketing of products that feature Nutri Zinc rice and its health benefits; and (iii) provide extension and advisory services involving multiple stakeholders to ensure the program reaches the targeted population.

Another issue of concern was the causes of the increase in chronic renal diseases in young children and possible solutions in the discussions about nutrition issues. The recommendation proposed is that nutrition education and extension should be programmed using multiple approaches. The approaches vary and depend on the need for fruitful outputs.

Following the kick-off CoP meeting on 29 July 2024, four CoP meetings were held from July to October 2024, with volunteers from diverse organizations. RASSEA led the CoP. CoP members' interest and participation are excellent, as proven by their commitment and engagement in the CoP.



POLICY RECOMMENDATIONS

Efforts to improve community nutrition in order to prevent and address the triple burden of malnutrition require a multidisciplinary approach and involve participation from multiple sectors and communities. The Community of Practice on EAS for nutrition security in Indonesia holds promise for sustainability for five main reasons: (1) It updates practices and finds solutions that extend beyond the members; (2) It strengthens the roles of EAS to reach more stakeholders, encouraging colleagues, volunteers, and relevant organizations to contribute to knowledge enrichment and management; (3) It assists colleagues from various stakeholders in collaborating on policy formulation within the context of EAS, nutrition, and sustainable agri-food systems to meet future challenges; (4) It fosters networking among those engaged in similar areas of interest and cultivates cooperation to discover innovative solutions for food and nutrition security; and (5) It develops recommendations for diverse agencies and stakeholders based on facts, evidence, knowledge, and scientific understanding.

The policy recommendations for effectively integrating nutrition into extension and advisory services generated by our CoP are as follows:

1. Investment in nutrition must be prioritized to effectively tackle the triple burden of malnutrition. Strategic initiatives aimed at preventing and addressing this issue should cover the entire life cycle, encompassing the preconception period, pregnancy, infancy, early childhood, school-aged children, adolescents, couples of childbearing age, and seniors.
2. Community nutrition requires improvement through enhanced quality food production, improved distribution channels, increased food consumption, and the fortification and supplementation of micronutrients. Additionally, community nutrition can be advanced by promoting socio-economic development, fostering behavioral changes through extension and advisory services, and enhancing food and nutrition security at individual, family, and community levels. A comprehensive approach is necessary for the effective integration of nutrition into extension and advisory services in Indonesia, which includes the following strategies:
 - (i) New media and digital technology will help spread nutrition information by reaching more people through mobile applications, e-learning platforms, and social media. These tools can also educate individuals about food by launching campaigns that target all sectors of society, including schoolchildren, housewives, and workers. The campaigns may include information about the importance of a balanced diet, examples of healthy menus, and training for those who need skills in preparing nutritious meals, including personnel.
 - (ii) Multi-stakeholder engagement should involve various nutrition program sectors, including the Ministry of Health, the Ministry of Agriculture, NGOs, and the private sector. This collaboration can encompass distributing nutritious food, providing nutrition education, and enhancing access to health services.
 - (iii) Implement inclusive and participatory strategies to ensure that no one is left behind. This involves engaging the community, particularly mothers and vulnerable populations, in nutrition-sensitive extension initiatives. Programs that promote healthy behaviors include focus groups, training, and incentives.
 - (iv) Capacity development and community empowerment are essential. This strategy involves training local health cadres to disseminate nutrition information within their communities. The training should include nutrition knowledge, communication skills, and effective outreach methods. As part of the community empowerment strategy, individuals who can serve as champions or local leaders should be encouraged to actively identify nutrition issues in their area and collaboratively seek solutions.
 - (v) Data-driven monitoring and evaluation should be thoroughly developed. This can be achieved incrementally by establishing a robust system to track the progress of the nutrition program. The data can then be used to adjust strategies and interventions effectively. It is essential to keep the data updated. Additionally, information on extension practices that integrate nutrition across various areas should be shared widely to inspire others and encourage future initiatives.



REFERENCES

Amanah, S., Seprehatin, S., Iskandar, E., Eugenia, L. and Chaidirsyah, M.R. 2021. Investing in farmers through public-private-producer partnerships – Rural Empowerment and Agricultural Development Scaling-up Initiative in Indonesia. FAO Investment Centre Country Highlights, No. 7. Rome, FAO and IFPRI. <https://doi.org/10.4060/cb7126en>

De la Peña, Garrett and Gelli. 2018. Nutrition-sensitive value chains A guide for project design. Volume 1. IFAD.

Ecker, O and Breisinger, C. 2012. The Food Security System: A New Conceptual Framework. IFPRI Discussion Paper 01166 March 2012. Development Strategy and Governance Division, IFPRI.

Fanzo, J.C., Graziose, M.M., Kraemer K, Gillespie, S., Johnston, J.L., de Pee, S., Monterrosa, E., Badham, J., W Bloem, M, Dangour, A.D., Deckelbaum, R., Achim Dobermann, A., Fracassi, P., SM Moazzem Hossain, SMM., Ingram, J., Jerling, J., Jones, J.C., Jap S. I., Kiess, L., Marshall, Q., Martin, K., Narayan, A, Amuyunzu-Nayamongo, M., Pepping, F., and West, KP., 2015. Educating and Training a Workforce for Nutrition in a Post-2015 World. American Society for Nutrition. Adv Nutr 2015;6:639–47; doi:10.3945/an.115.010041.

GFRAS. 2022. Concept Note of Nutrition Sensitive Agriculture. GFRAS NWG.

IFAD. 2018. Developing Nutrition-sensitive Value Chains in Indonesia. Findings from IFAD research for development. The findings in the report are from the research project “Support of development of nutrition-IFAD, in partnership with the CGIAR Research Program on Agriculture for Nutrition and Health, funded by the Government of Germany.

IFAD. 2022. Indonesia 2000001181: READSI Interim (Mid-term) Review Report August 2022, Project: Agricultural Development: Rural Empowerment and Agriculture Development Scaling-up Initiative. <https://www.ifad.org/en/-/indonesia-2000001181-readsi-interim-mid-term-review-report-august-2022-1>

Wenger, E. 1998. Communities of Practice: Learning, Meaning, and Identity. Cambridge University Press.

Law and Regulation:

- Law Number 23/2014 on Regional Government
- Law Number 18/2012 on Food
- Presidential Regulation, Number 35/2022 on Strengthening Function of Agriculture Extension

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