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Asian Mega-Deltas



Guideline on Implementing Nutrition-sensitive Actions in the Agri-food Systems

November 2024





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Key Messages

1. **Broader Focus on Nutrition:**

- Integrate nutritional goals into all stages of intervention design and implementation.
- Conduct thorough contextual and process evaluations to address specific nutritional needs and local contexts.

2. **Effective Reporting:**

- Implement robust monitoring and documentation to assess the true impact on nutritional outcomes.
- Plan timely economic evaluations and maintain detailed records to guide decision-making and scalability.

3. **Stakeholder Engagement:**

- Involve key nutrition stakeholders early to align with broader nutritional goals and leverage diverse expertise.
- Actively engage nutritionally vulnerable populations to tailor interventions to their needs and empower communities.

4. **Sustainability through Empowerment:**

- Focus on capacity building and empowering communities, particularly women, for sustainable nutrition and production.
- Provide training, resources, and foster community ownership to ensure long-term success.

5. **Integrated Approaches:**

- Combine agricultural initiatives with livelihood support and market linkages for sustainable impacts.
- Collaborate with local and national governments, NGOs, and the private sector to enhance intervention effectiveness and sustainability.

By implementing these strategies, agri-food systems interventions can achieve long-term success, reduce malnutrition, and improve the livelihoods of vulnerable populations.

What is Nutrition-sensitive Action?

Nutrition-sensitive actions are strategies designed to address malnutrition by incorporating nutritional goals into various sectors, particularly agriculture. These actions go beyond the production of staple crops to emphasize micronutrient-rich foods, such as fruits and vegetables, essential for a balanced diet (Pingali & Sunder, 2017). They involve multiple pathways, including food production, nutrition education, income generation, women's empowerment, and strengthening local institutions (Sharma et al., 2020).

While these interventions aim to improve dietary practices and reduce disease occurrence, their direct impact on nutritional status can be less pronounced (Sharma et al., 2020). Effective nutrition-sensitive agriculture (NSA) interventions should consider the specific needs and contexts of different populations, using a multi-pathway approach to tackle the underlying causes of undernutrition (Mayorga-Martínez et al., 2023). This requires designing tailored strategies that address local dietary habits, agricultural practices, and social factors to ensure sustainability beyond the project cycle.

Understanding of the Problem

Nutrition-sensitive agriculture aims to maximize the impact of agricultural interventions on nutrition outcomes. This involves strategies like promoting diverse food production, improving post-harvest handling to retain nutrients, and empowering women in agriculture. However, successfully implementing such approaches requires overcoming several obstacles related to program design, coordination, capacity, and evidence generation. Our framework serves as a comprehensive tool for determining nutrition sensitive actions in agri-food systems interventions (Figure 1).

*We reviewed **40+** interventions which are reported as nutrition-sensitive. Our scoring mechanism identified several questions which can indicate whether a agri-food intervention is truly nutrition sensitive.*

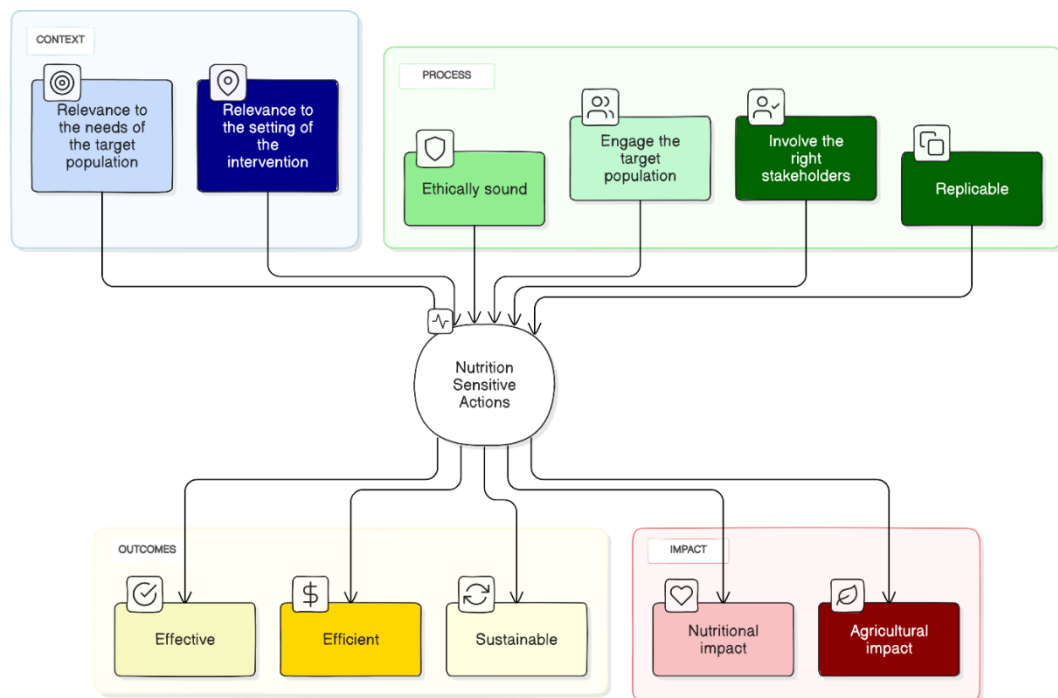


Figure 1: Framework for identifying and evaluating nutrition-sensitive actions in agri-food systems interventions.

Method for Guideline Development

The development of the *Guideline for Implementing Nutrition-Sensitive Actions in the Agri-food Systems of Bangladesh* was structured following the **GRADE-ADOLOP** (Grading of Recommendations Assessment, Development and Evaluation–Adopt, Adapt or De Novo) framework. The GRADE-ADOLOP methodology is particularly well-suited to such contexts because it allows for the adoption and adaptation of existing evidence while addressing specific local needs. This method ensures a structured yet flexible approach to developing actionable guidelines in resource-constrained settings, such as Bangladesh.

The initial phase of guideline development involved a synthesis of existing evidence on nutrition-sensitive interventions. The GRADE methodology facilitated the assessment of evidence quality and ensured that the guideline recommendations were based on high-confidence data. Contextual factors, such as socioeconomic and environmental conditions within Bangladesh, were integrated to ensure the relevance of the guideline for both local policymakers and community-level stakeholders. Building on the evidence synthesis, the guideline framework was drafted, focusing on three pillars: integrating nutritional goals into agri-food system interventions, adapting interventions to local contexts, and ensuring scalability and sustainability.

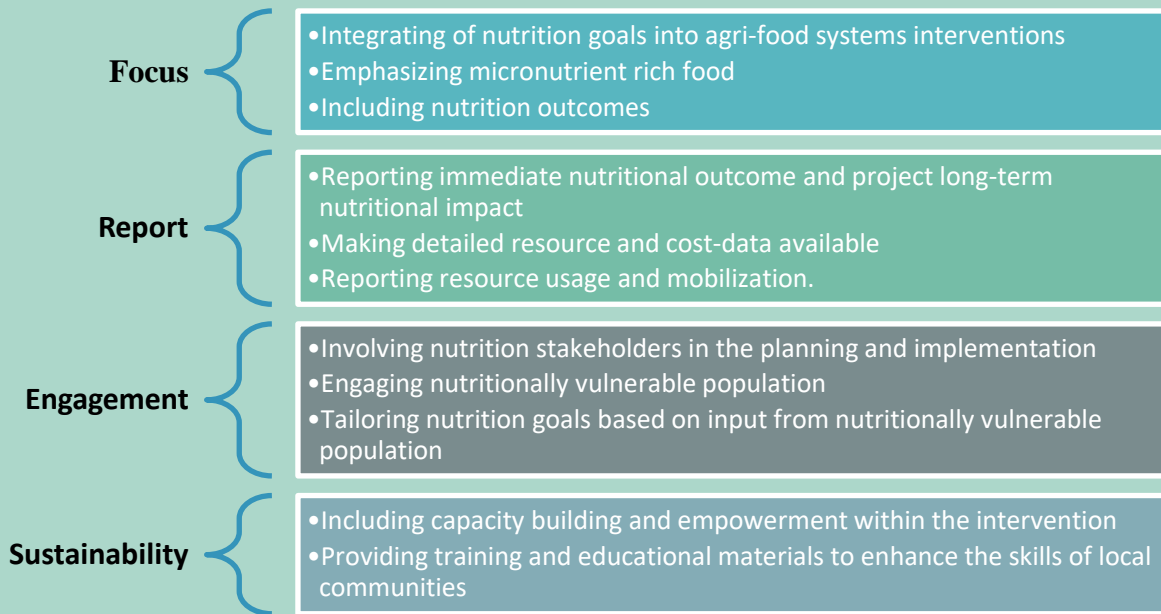
Following the drafting of the guideline, a validation workshop was organized to ensure the guideline's clarity, relevance, and applicability. The validation process followed the **AGREE II** (Appraisal of Guidelines for Research & Evaluation II) instrument, which is a widely used tool for assessing the quality and robustness of guidelines. The AGREE II instrument evaluates guidelines

across multiple dimensions, including the scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence. This process is crucial for ensuring that the guideline is not only scientifically sound but also practical and actionable in real-world settings. The workshop brought together a diverse group of stakeholders, including representatives from governmental agencies, non-governmental organizations, and local community leaders. Participants used a **Validation Matrix** based on the AGREE II criteria to assess the guideline’s recommendations. Key criteria in the matrix included relevance to local contexts, clarity of the interventions, feasibility of implementation, and the scalability of proposed actions. The matrix allowed for a structured, systematic review of the guideline, ensuring that it addressed the nutritional needs of vulnerable populations while remaining adaptable to diverse contexts across --Bangladesh.

Feedback from the workshop was integrated into the final guideline, refining the recommendations to improve clarity and ensure alignment with stakeholder priorities. We considered a 70% agreement cutoff for each recommendation validated by stakeholders to discard any recommendation from the draft. The final guideline was standardized using the AGREE II tool, which ensured that the recommendations were based on a transparent, methodologically rigorous process, and that the guidelines were applicable and unbiased. This approach is consistent with the broader principles of guideline development, ensuring that interventions are both evidence-based and tailored to specific population needs.



What Matters for Nutrition-sensitivity?



Broader Focus for Nutrition Sensitive Actions

For agri-food systems interventions to be truly nutrition-sensitive and have the potential for scaling up, it is crucial to adopt a broader focus on nutrition. This means not only targeting agricultural productivity but also ensuring comprehensive evaluations and integrating nutritional goals into the design and implementation of interventions.

Our findings indicate that interventions should prioritize thorough contextual and process evaluations for nutritional impact before developing agri-food products. This involves assessing the specific nutritional needs of the target population, understanding the local context, and ensuring that the process of intervention design actively involves the community and stakeholders.

Additionally, the focus should extend beyond merely improving agricultural yields to include nutritional outcomes.

Interventions must measure and report nutritional metrics across households, ensuring that

Case Study: Teknaf–Cox’s Bazar Fishing Communities

One of our reviewed projects in the Teknaf–Cox’s Bazar region exemplifies best practices in broader focus for nutrition-sensitive interventions. Apart from a focus on larger fisheries development in the region, it also included thorough analysis of what new species of fish in the local food systems would mean for the locals. These efforts ensured a sustainable and affordable supply of high-quality protein sources, significantly improving the nutritional outcomes for the community.

improvements in food production translate into better nutrition and health outcomes for the community.

Steps

1. **Thorough Contextual Evaluation:**
 - Conduct comprehensive assessments of the nutritional needs and challenges faced by the target population.
 - Analyze local dietary patterns, nutritional deficiencies, and food security issues.
2. **Process Evaluation:**
 - Ensure active involvement of the community and stakeholders in the planning and implementation phases.
 - Regularly monitor and evaluate the intervention's progress and adjust strategies as needed.
3. **Focus on Nutritional Outcomes:**
 - Measure and report not only on agricultural yields but also on nutritional metrics such as dietary diversity, micronutrient intake, and overall nutritional status of households.

Strategies

1. **Integrated Approaches:** Combine agricultural initiatives with broader livelihood support and market linkages to ensure sustainable impacts.
2. **Adaptive Co-Management:** Introduce and institutionalize adaptive co-management practices to ensure community ownership and sustainability.
3. **Sustainable Practices:** Promote sustainable farming and fishing practices that contribute to both environmental conservation and food security.

Effective Reporting of Nutrition-Sensitive Actions

Case Study: Biofortified Crops for Improved Nutrition

A notable example of best practices in reporting nutrition-sensitive actions is a project related to development and delivery of biofortified crops. This initiative aims to improve the diets of millions of households in Africa and Asia by scaling up the production and consumption of biofortified tubers. The project provided meticulous documentation and reporting, ensuring that comprehensive data on nutritional outcomes is collected and analyzed. By maintaining detailed financial records and utilizing secure data storage solutions, the project effectively tracks progress and impacts, providing a clear picture of its benefits.

For agri-food systems interventions to succeed and scale up, effective reporting is crucial. This involves comprehensive monitoring of nutritional impacts, timely baseline and endline evaluation, report on costing and budgeting, stakeholder engagement, and systematic documentation. Our findings indicate that interventions often lack robust monitoring and evaluation mechanisms, leading to gaps in assessing the true impact on nutritional outcomes. Furthermore, many projects focus primarily on agricultural yields without adequately measuring nutritional metrics. Addressing these gaps is essential for ensuring that interventions not only improve food production but also enhance the nutritional status of the target

populations.

Several challenges were identified during our review of agri-food systems interventions. A significant issue was the delay in planning economic evaluations until later phases or after project completion, which hindered the ability to make timely adjustments and informed decisions. Additionally, we encountered a lack of proper documentation and instances of data loss due to hardware failures or software issues, compromising the analysis of intervention outcomes. Another challenge was the reluctance of program implementers to disclose financial information due to concerns over confidentiality, making it difficult to assess cost-effectiveness comprehensively.

To overcome these challenges, we recommend implementing several best practices for effective reporting:

- 1. Plan Ahead:**
 - Design a comprehensive baseline and end-line survey to assess the intervention's impact.
 - Include an economic evaluation component to measure cost-effectiveness and inform resource allocation and scaling decisions.
- 2. Detailed Documentation:**
 - Maintain thorough financial records of all project activities and outcomes.
 - Store data securely in cloud storage to prevent loss from technical failures and ensure compliance with data protection regulations.
- 3. Regular Monitoring and Evaluation:**

- Conduct continuous monitoring to track progress and make adjustments as needed.
- Ensure data is easily accessible to authorized personnel for ongoing analysis and reporting.

Strategies for Best Practices

1. **Integrated Evaluation:** Combine nutritional impact assessments with financial evaluations to understand the cost-effectiveness of interventions.
2. **Data Access:** Periodically publish detailed reports and data, and allow access of data to researchers for further research which are integral for future scale up.
3. **Data Management and Security:** Implement robust data management practices, including secure cloud storage and regular backups. Ensure compliance with data protection regulations to maintain confidentiality and data integrity.

Engaging Key Nutrition Actors

Case Study: Engagement Practices in the Integrated Program

One of the reviewed projects exemplifies best practices in engagement in integrated multisectoral settings. This program used diverse agricultural and nutrition interventions such as home gardening, homestead food production, growth monitoring among families with malnourished children under two. The program ensured robust engagement with nutrition stakeholders and the nutritionally vulnerable population through regular advocacy and social hearing sessions and also engaged the beneficiary population itself.

Engaging key nutrition stakeholders and actively reaching nutritionally vulnerable populations are crucial for the success and scalability of nutrition-sensitive interventions. Our findings underscore the importance of involving stakeholders in planning and implementation, as well as ensuring that interventions target and engage the most vulnerable groups. During our review, this is the sub-category in our framework that generally received the lowest scorings across interventions,

indicating that agri-food interventions generally overlook this factor the most.

Involving nutrition stakeholders from the outset ensures that interventions are well-aligned with broader nutritional goals and benefit from a wealth of expertise. Effective stakeholder engagement facilitates the integration of diverse perspectives, enhancing the design, implementation, and evaluation of nutrition-sensitive actions. By bringing together government agencies, NGOs, health professionals, and community leaders, interventions can leverage existing knowledge and resources, fostering a more holistic and coordinated approach to addressing malnutrition.

Reaching and engaging nutritionally vulnerable populations ensures that the benefits of interventions are felt by those who need them most. Active participation of these groups in the intervention process helps tailor solutions to their specific needs and circumstances, increasing the likelihood of success. It also empowers these communities, giving them a voice in the programs designed to improve their nutritional status and overall well-being.

Steps

1. **Identify Key Stakeholders:**
 - Engage relevant nutrition stakeholders, including government agencies, NGOs, and community leaders, early in the planning process.
 - Map out all potential stakeholders to ensure comprehensive involvement.
2. **Engage Target Communities:**
 - Actively involve nutritionally vulnerable populations in the planning and implementation phases.
 - Conduct community meetings and participatory workshops to gather input and build trust.
3. **Monitor and Adapt:**
 - Regularly monitor engagement efforts and make necessary adjustments to ensure continued relevance and effectiveness.
 - Use feedback from stakeholders and target communities to refine intervention strategies.

Strategies

1. **Collaborative Planning:** Foster collaboration between various stakeholders to integrate diverse perspectives and resources. Coordinate with local health agencies to align intervention goals with existing nutrition programs.
2. **Empowerment Through Participation:** Empower nutritionally vulnerable groups by involving them in decision-making processes.
3. **Sustained Engagement:** Maintain ongoing communication with stakeholders and target communities to ensure continued support and alignment. Facilitate regular feedback sessions and update stakeholders on progress and challenges.

Ensuring Sustainability through Planned Empowerment

Case Study: Aquaculture for Sustainable Nutrition and Empowerment

This Aquaculture project exemplifies best practices in ensuring sustainability through planned empowerment. This initiative aims to enhance the incomes, diets, and nutrition of smallholder families by focusing on the empowerment of women and the diversification of fish production systems. In Bangladesh, the project builds on engaging local service providers and private sector organizations to introduce knowledge and technologies for improving carp polyculture, not just to farmers but also the nutritional beneficiaries. This approach increases the productivity and diversity of fish production systems, including micronutrient-rich small local fish. By empowering women in these communities, the project ensures that nutritional improvements extend to their families, enhancing overall dietary diversity and nutrition.

Sustainability of interventions and their potential for scale-up are vital for long-term success in addressing malnutrition. Our findings emphasize the importance of capacity building and empowerment efforts, not only for sustainable production but also for sustainable nutrition. By focusing on these aspects, interventions can ensure that communities continue to benefit from improved nutrition and livelihoods long after the initial projects have ended.

Capacity building is essential for empowering local communities to take ownership of nutrition-sensitive interventions. This involves providing training and resources to enhance their skills and knowledge, enabling them to maintain and expand these initiatives independently. Empowerment efforts, particularly for women, are crucial for sustainable nutrition as they often play a central role in household food security and dietary practices.

Empowerment extends beyond providing resources; it includes fostering an environment where communities can make informed decisions and take collective action to improve their nutritional status. By integrating capacity building and empowerment into the core of intervention strategies, projects can achieve lasting impacts on both production and nutrition.

Steps

1. **Build Local Capacity:**
 - Provide comprehensive training and resources to enhance the skills and knowledge of local communities.
 - Foster a sense of ownership by involving community members in the planning and implementation phases.
2. **Empower Women:**
 - Focus on women's empowerment as a key pathway to improve household nutrition.
 - Encourage women's participation in decision-making processes and leadership roles.
3. **Integrate Nutrition Education:**
 - Include nutrition education components to raise awareness about the importance of dietary diversity and micronutrient intake.
 - Conduct regular workshops and training sessions on sustainable nutrition practices.

Strategies

1. **Collaborative Partnerships:** Partner with local and national governments, NGOs, and the private sector to leverage resources and expertise.
2. **Sustainable Practices:** Promote sustainable farming and aquaculture practices that contribute to long-term food security and environmental conservation. Implement systems for continuous monitoring and evaluation to ensure the sustainability of interventions.
3. **Economic Empowerment:** Develop income-generating activities that enhance the economic status of households. Provide market linkages and support for smallholder farmers to sell their produce, ensuring a stable income source.

Conclusion

To effectively address malnutrition through agri-food systems interventions, a comprehensive and multi-faceted approach is essential. Our findings emphasize the importance of adopting a broader focus on nutrition that goes beyond agricultural productivity, ensuring thorough contextual and process evaluations, and integrating nutritional goals into intervention design. Effective reporting, involving robust monitoring and documentation, is crucial for assessing the true impact of interventions and guiding future efforts. Engagement with key nutrition stakeholders and nutritionally vulnerable populations is critical for the success and scalability of these interventions. By involving these groups from the outset and ensuring their active participation, interventions can be better tailored to meet local needs, fostering a more holistic approach to tackling malnutrition. Ensuring sustainability through planned empowerment involves capacity building and empowering local communities, particularly women, to take ownership of nutrition-sensitive interventions. This approach not only promotes sustainable production but also supports lasting improvements in nutritional status and economic well-being.

By following the outlined steps and strategies, such as collaborative partnerships, sustainable practices, and economic empowerment, interventions can achieve long-term success and scalability, ultimately improving the nutrition and livelihoods of vulnerable populations. Integrating these comprehensive and multi-dimensional strategies will lead to more resilient and sustainable agri-food systems that effectively address the root causes of nutrition issues.

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Acknowledgments

The Guideline on Implementing Nutrition-sensitive Actions in the Agri-food Systems was supported by the CGIAR Initiative, Securing the food systems of Asian Mega-Deltas for climate and livelihood resilience (AMD) under Work Package 2: Nutrition sensitive deltaic agrifood systems. We would like to thank all funders who supported this research through their contributions to the CGIAR Trust Fund: www.cgiar.org/funders.

This guideline was developed by researchers from the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr.org). The authors include Sabrina Rasheed, PhD; Shehrin Shaila Mahmood, PhD; Arefin Mizan, Mohammad Wahid Ahmed, A M Rumayan Hasan, Khadija Islam Tisha, Zillur Rahman Sakin, Prantik Roy, Towhida Nasrin.

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