Climate and nutrition in ASEAN:

the case for integrated action in agriculture

A brief for ASEAN-CRN focal points

Introduction

Nutrition security is explicitly part of ASEAN's agricultural vision. The FAF-SP 2026-2030 commits to strengthening food and nutrition security under Strategic Thrust 3. The ASEAN-CRN framework targets the integration of climate resilience into nutrition-sensitive agriculture. And the network's own 10th anniversary vision calls for resilient agrifood systems that provide healthy and nutritious food for all in ASEAN by 2045.

This means there is a foundation for action. What is less developed is the connection between CRN's core work on climate resilience and the nutrition outcomes that these strategies point to. The purpose of this brief is to highlight some potential ways forward, and gather feedback from the ASEAN-CRN Network on priorities going forward.

Agriculture, climate and nutrition: the links

Climate change is already affecting the quality of ASEAN's core food crops, not just how much is produced, but what they contain. Rice grown under CO_2 concentrations projected for later this century shows an average 10% reduction in protein, 8% in iron, and 5% in zinc, alongside significant losses in B vitamins. For the region where rice provides the majority of daily calories, this is a production problem with a nutrition consequence built into the crop itself. Heat stress is also an important factor: livestock under thermal stress produce less milk, convert feed less efficiently, and yield lower-quality animal protein, affecting both farmer income and household nutrition through the same animal. Fig. 1 outlines some of the interactions between climate stressors, food systems impact and nutrition outcomes. Smallholder farmers sit at the intersection of these pressures, as producers, consumers, and the group with least capacity to absorb the losses.

The case for integrated action in agriculture

Agriculture plays a dual role: contributing to food security and economic development. Climate change is impacting both, often hitting rural communities and producers the hardest, affecting their livelihoods, dietary diversity and overall resilience. At the same time, development finance is shrinking, and funders are increasingly looking for investments that deliver co-benefits on multiple objectives. Programs that address climate resilience and nutrition

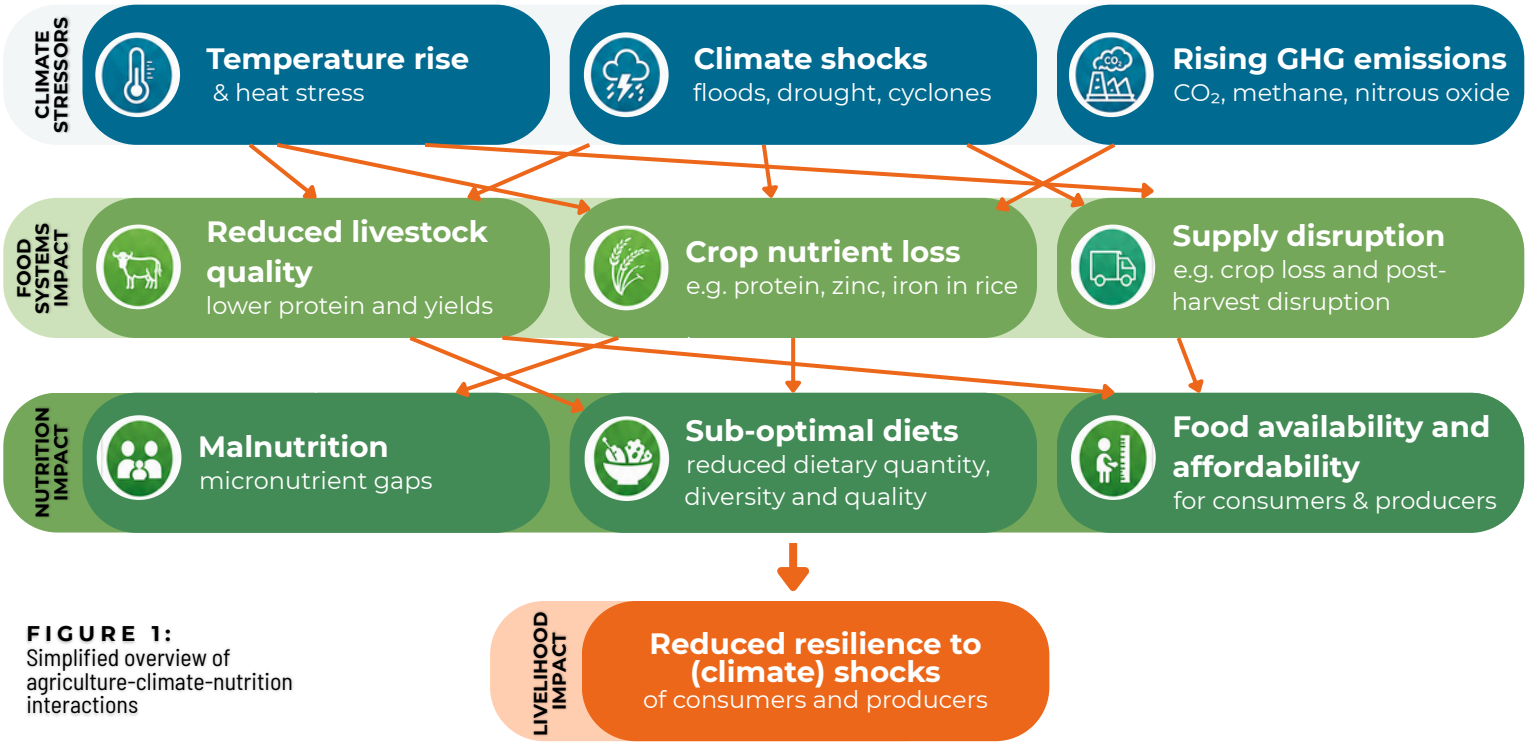

FIGURE 1:
Simplified overview of agriculture-climate-nutrition interactions

together are better positioned for financing and more effective for the populations they serve. Separate interventions working at cross-purposes are increasingly hard to justify and fund.

ASEAN's own frameworks already reflect this logic. From the ASEAN Leaders' Declaration on Strengthening Food Security and Nutrition in Response to Crises (Jakarta, September 2023), the ASEAN Climate Resilience Network (ASEAN-CRN), the cross-sectoral platform Steering Committee on Climate Change and Food Security (SCCC-FS), and the ASEAN Integrated Food Security (AIFS) Framework, to the ASEAN-CRN and Food, Agriculture & Forestry Division strategic plans:

- **FAF-SP 2026-2030: Strategic Thrust 3 |** *"Strengthening Food Security and Nutrition – Ensuring availability, access, and utilisation of safe and nutritious food through innovation, investment, and regional cooperation"*
- **ASEAN-CRN 5-year framework: Strategic pillar 1 |** *"Scale up resilience in ASEAN's agriculture sector by promoting climate-smart practices, technologies, and commodity-based models that reduce vulnerabilities, strengthen food systems, and link resilience to nutrition and livelihoods."*

The challenge: integration is difficult

Although climate resilience and nutrition are closely interconnected, institutional responsibilities often remain divided. Within government, agricultural agencies are commonly organised around production and value chain development, while nutrition is frequently coordinated through health ministries or dedicated nutrition bodies. Different mandates, monitoring systems and financing arrangements can make integrated action difficult. Climate finance also remains largely siloed: only 3% of OECD climate-related aid commitments address nutrition, and just 1% of World Bank climate projects address both climate and nutrition together (see here).

However, we see growing momentum in global fora such as UNFCCC to work towards action on climate, food and nutrition in a more integrated way. For example, the I-CAN (Initiative on Climate and Nutrition) has been championing this agenda, while multiple countries are showing leadership on elevating nutrition as a cross-cutting policy priority. ASEAN is well-placed to build on this, with strong regional institutions, an established CSA knowledge base, and aligned priorities.

ASEAN's opportunity

Climate-smart agriculture, long championed through ASEAN-CRN, provides a strong starting point. CSA approaches that promote diversified production and climate-resilient crop varieties also enhance the diversity and availability of nutrient-rich foods, without requiring separate programs or budgets. Nature-based solutions (NbS) or Ecosystem-based Approaches (EbA) such as agroforestry and agroecological water management stabilise ecosystems and support local food systems, contributing to both resilience and dietary quality. Reducing food loss and waste not only lowers emissions but ensures that nutrient-dense foods (fruits, vegetables, animal-sourced products) reach consumers rather than being lost post-harvest. Box 1 highlights some concrete examples for integrated action.

Many synergies already exist in ASEAN's agricultural systems. Making them visible, measuring them, and building on them is where ASEAN-CRN can lead. Countries can embed nutrition targets in NDCs and NAPs, strengthen public-private collaboration, and build data systems to track progress across both sectors.

The ASEAN-CRN's 2026-2030 framework provides a practical structure for taking the climate-nutrition agenda forward. The goal is to identify where nutrition can be integrated into what CRN members are already doing, at regional and country level. The infographic at the end of this brief connects each pillar to potential entry points and a concrete first step for focal points. Some are best pursued as a collective, while others depend on the national context and priorities.

BOX 1:
Opportunities for integration (Campbell, Alho, Zeppenfeldt (2024))

1. Incorporating nutrition into climate policies and vice versa

- Embed nutrition targets and indicators in local climate strategies during upcoming update cycles, moving beyond food security as calorie sufficiency toward dietary diversity metrics
- Update food-based dietary guidelines to reflect climate adaptation priorities, including promotion of diversified, locally adapted crop varieties

2. Diversifying agricultural production and reducing food loss

- Promote integrated farming systems such as rice-fish and rice-duck models, which combine climate resilience, biodiversity, and improved protein availability for farming households
- Create policy incentives for crop and livestock diversification at farm level, reducing vulnerability to single-crop climate shocks while improving dietary diversity
- Invest in post-harvest infrastructure, particularly cold storage and transport, to reduce losses of nutrient-dense foods such as vegetables, fruit, and animal-sourced products

3. Enhancing public-private cooperation and accountability

- Improve food environments so that nutritious, locally produced foods are accessible and affordable, particularly in rural and peri-urban markets
- Align private sector investment in agricultural value chains with both climate and nutrition goals, through procurement standards, labelling, and incentive frameworks

4. Building climate and nutrition resilience for vulnerable groups

- Strengthen social protection schemes for smallholder farmers and women, including climate-linked cash transfers, savings mechanisms, and access to rural credit
- Develop early warning systems that incorporate nutrition indicators alongside production and climate data, enabling faster response when shocks hit

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CLIMATE STRESSORS

- **Temperature rise** & heat stress
- **Climate shockk** floods, drought, cyclones
- **Rising GHG emissions** CO_2, methane, nitrous oxide

FOOD SYSTEMS IMPACT

- **Reduced livestock quality** lower protein and yields
- **Crop nutrient loss** e.g. protein, zinc, iron in rice
- **Supply disruption** e.g. crop loss and post-harvest disruption

NUTRITION IMPACT

- **Malnutrition** micronutrient gaps
- **Sub-optimal diets** reduced dietary quantity, diversity and quality
- **Food availability and affordability** for consumers and producers

WHY INTEGRATE?

- Better outcomes for people, farmers and communities
- Stronger case for financing and investment
- More efficient use of limited resources
- Aligned with ASEAN priorities and existing frameworks

ASEAN–CRN STRATEGIC PILLARS: ENTRY POINTS FOR INTEGRATED ACTION

ASEAN–CRN STRATEGIC PILLARS	STARTING POINTS
CLIMATESMART AND INNOVATIVE AGRICULTURE Scale up resilience in ASEAN's agriculture sector by promoting climate-smart practices, technologies, and commodity-based models that reduce vulnerabilities, strengthen food systems, and link resilience to nutrition and livelihoods.	• Repurpose existing agricultural investment to ensure they explicitly contribute to improved nutrition outcomes by incorporating nutrition objectives and indicators in program design and monitoring. • **Directly actionable:** Share examples of CSA programmes in your country that track or affect nutrition outcomes, even if not labelled as such
KNOWLEDGE, DIGITAL SYSTEMS, AND LEARNING PLATFORMS Build inclusive and evidence-based knowledge systems through digital transformation, data-driven decision-making, and cross-country learning platforms to advance regional climate resilience.	• Build a regional evidence base on climate nutrition linkages across ASEAN to inform policy and investment decision making • **Directly actionable:** Flag your interest in cross-country learning (both within ASEAN-region) and beyond.
CLIMATE FINANCE AND GREEN INVESTMENT Expand inclusive access to climate finance and mobilize green investment through innovative mechanisms that benefit smallholders, women, youth, and vulnerable communities.	• Make the case for climate-nutrition investments to national budget holders, and regional funders • **Directly actionable:** Ensure that nutrition objectives and indicators are included in national funding proposals and investment pipelines
POLICY INTEGRATION AND CLIMATE DIPLOMACY Mainstream climate resilience into ASEAN policies and strategies, while positioning ASEAN-CRN as a driver of regional and international climate action and diplomacy.	• Integrate nutrition objectives into national climate policies and planning processes. • **Directly actionable:** Signal where important climate and agriculture strategies processes are underway in your country and whether nutrition is on the agenda
MULTISTAKEHOLDER PARTNERSHIPS AND ENGAGEMENT Broaden ASEAN-CRN's reach by engaging UN agencies, academia, civil society, and the private sector to co-develop and scale inclusive, innovative solutions for climate resilience.	• Build bridges between agriculture, climate and nutrition actors at national and regional level • **Directly actionable:** Identify counterparts in health or nutrition ministries who could be connected into exchanges. Also consider important private sector actors.
INSTITUTIONAL STRENGTH AND SUSTAINABILITY Ensure ASEAN-CRN becomes a recognized, well-governed, and sustainable ASEAN mechanism with strong institutional foundations, effective coordination, and enduring visibility.	• Embed nutrition outcome tracking into CRN's monitoring and reporting • **Directly actionable:** Champion the climate-nutrition agenda within your ministry and bring concrete examples back from regional CRN exchanges to build internal support

INTEGRATED ACTION DELIVERS MULTIPLE BENEFITS

- Improved nutrition and health outcomes
- Stronger livelihoods for farmers
- Greater climate resilience
- Lower emissions and environmental impact
- More inclusive and equitable food systems

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