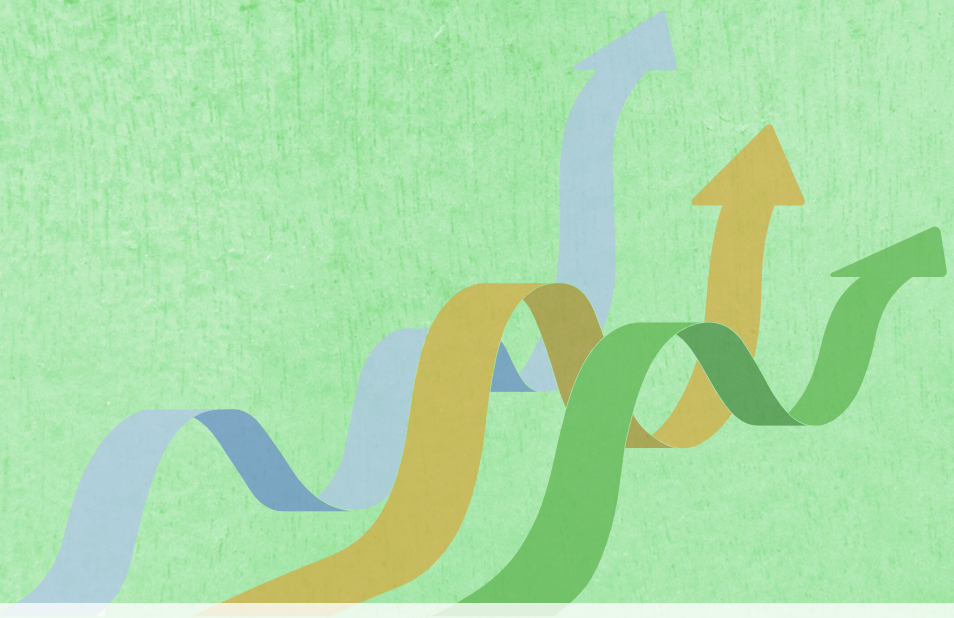
2025

FINAL REPORT

I-CAN: LANDSCAPING ANALYSIS ON CLIMATE AND NUTRITION POLICIES AND STAKEHOLDERS IN CAMBODIA



I-CAN

gain
Global Alliance for Improved Nutrition

Irish Aid
An Roinn Gnóthaí Eachtracha agus Trádála
Department of Foreign Affairs and Trade

ACKNOWLEDGEMENTS

Initiative on Climate Action and Nutrition (I-CAN): The Initiative on Climate Action and Nutrition (I-CAN) is a multistakeholder initiative that aims to advance action to address the critical nexus of climate change and nutrition. Launched by the Government of Egypt, as COP27 President and hosted by WHO, core partners include FAO, GAIN, the SUN Movement, and UNEP.

Global Alliance for Improved Nutrition (GAIN): The Global Alliance for Improved Nutrition (GAIN) is a Swiss based foundation launched at the UN in 2002 to tackle the human suffering caused by malnutrition. Working with governments, businesses and civil society, we aim to transform food systems so that they deliver healthier diets for all people, especially the most vulnerable, from more sustainable food systems.

Three Stones International (TSI): Three Stones International (TSI) is a research, management, and development firm established in Rwanda in 2012 with the goal of supporting and building the capacity of local organizations. Registered as an international firm in the United States in 2017, TSI has since conducted more than 100 assessments, evaluations, and social research assignments, as well as over 30 strategic and action plans for local and international organizations.

Citation: I-CAN (2025). I-CAN: Landscaping Analysis on Climate and Nutrition Policies and Stakeholders in Cambodia, Global Alliance for Improved Nutrition (GAIN).

Authors:

Silvia Silvestri (TSI)
Amelia Giancarlo (TSI)
Mak Sithirith (TSI)
Samantha Diouf (TSI)
Sarah LaHaye (GAIN)
Oliver Camp (GAIN)
Antony Ogolla (GAIN)

Contact: Antony Ogolla (GAIN) aogolla@gainhealth.org

Acknowledgements

Our thanks are extended to the members of the wider GAIN team, for their time and effort to guide the development of the report including Stella Nordhagen, Jamie Morrison, Sharada Keats and Jessica Colston.

Immense gratitude is also extended to the broader Three Stones International team – including Silvia Silvestri, Amelia Giancarlo, Mak Sithirith, and Samantha Diouf– whose collective efforts were instrumental to the successful completion of this work.

We would also like to extend our gratitude to Irish Aid for their support for I-CAN and the development of this report.

This report was prepared by GAIN and published as a technical contribution to I- CAN. It does not necessarily reflect the views of Irish Aid or constitute an endorsement by each of the I-CAN partners.

TABLE OF CONTENTS

ACRONYMS

ADB	Asian Development Bank
ASF	Animal-Sourced Foods
ASDP	Agricultural Sector Strategic Development Plan
CARD	Council for Agricultural and Rural Development
CCCA	Cambodia Climate Change Alliance
CCCSP	Cambodia Climate Change Strategic Plan
CCPAP	Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector
CDRI	Cambodia Development Resource Institute
CEDAC	Cambodian Center for Study and Development in Agriculture
CFis	Community Fisheries
CFRs	Community Fish Refuges
CSA	Climate Smart Agriculture
CSDGs	Cambodia's Sustainable Development Goals
DHS	Demographic Health Survey
FAO	Food and Agriculture Organisation
FBDGs	Food-Based Dietary Guidelines
GAIN	Global Alliance for Improved Nutrition
GHG	Greenhouse Gas
GIZ	German Society for International Cooperation
I-CAN	Initiative on Climate Action and Nutrition
IFReDI	Inland Fishery Research and Development Institute
IIRR	International Institution of Rural Reconstruction
IRRI	International Rice Research Institute
KIIs	Key Informant Interviews
MAFF	Ministry of Agriculture, Forestry and Fisheries
MOH	Ministry of Health

MoE	Ministry of Environment
MoEYS	Ministry of Education, Youth and Sport
MoP	Ministry of Planning
MRD	Ministry of Rural Development
MOWRAM	Ministry of Water Resources and Meteorology
NAP	National Adaptation Plan
NCCAPPH	National Climate Change Action Plan for Public Health
NCDs	Noncommunicable Diseases
NCDD	National Committee for Sub-National Democratic Development
NCDM	National Committee for Disaster Management
NCSD	National Council for Sustainable Development
NDC	Nationally Determined Contribution
NGO	Non-Governmental Institutional
NIS	National Institute of Statistics
NSDP	National Strategic Development Plan
NSFSN	The Third National Strategy for Food Security and Nutrition
NNP	National Nutrition Program
RGC	Royal Government of Cambodia
SFFSN	Strategic Framework for Food Security and Nutrition in Cambodia
SME	Small and Medium Enterprise
SUN	Scaling Up Nutrition
TSI	Three Stones International
TWG-FSN	Technical Working Group - Food Security Nutrition
UNFCCC	United Nations Framework Convention on Climate Change
UN	United Nations
WFP	World Food Programme
WHO	World Health Organisation

EXECUTIVE SUMMARY

This report summarises key findings of the policy landscaping analysis and stakeholders mapping analysis and provides recommendations for better policy integration in Cambodia in support of the Initiative on Climate Action and Nutrition (I-CAN).

The key findings of this report were drawn from a policy landscaping analysis which consisted of a content review of 32 policies, encompassing policies that are active, inactive, and at the draft stage. The policies reviewed cover the thematic categories of nutrition and health, climate and environment, food systems and agriculture, and general development, and each policy was classified based on its level of climate and nutrition integration using the 2023 I-CAN Baseline Report classification system[1].

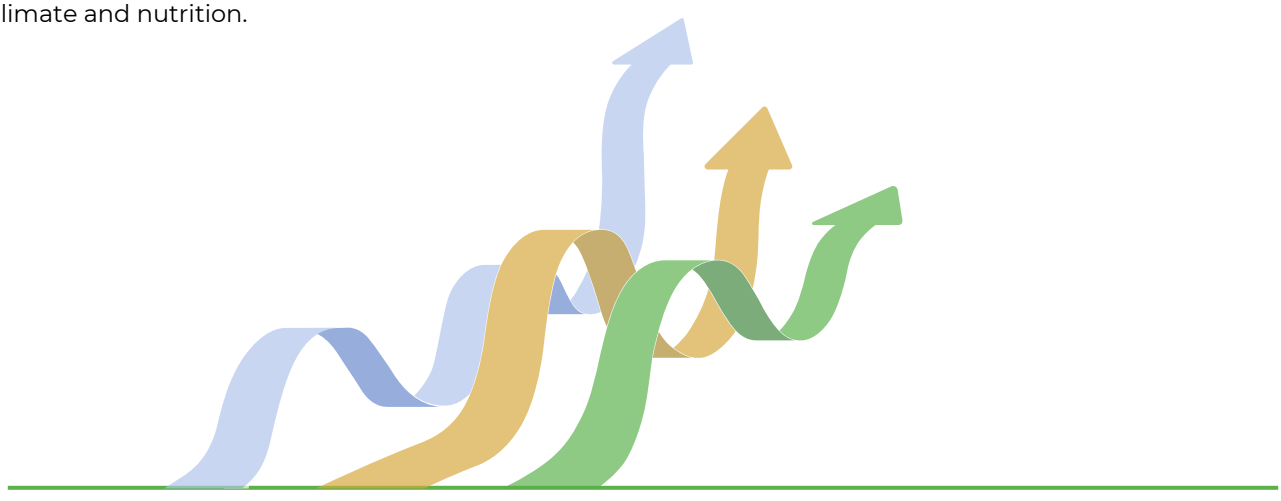
The desk review findings were complemented by key informant interviews (KIIs) held with 15 Cambodian nutrition and climate stakeholders, ranging from government actors to academics. KIIs also informed a stakeholder mapping, which allowed for the capture not only institutional roles and mandates, but also informal influence, coalition behavior, catalytic actors, and leverage points within and between sectors (for example, health, agriculture, climate, and finance).

With the exception of the National Climate Change Action Plan for Public Health (NCCAPPH) 2020-2024 and the Third National Strategy for Food Security and Nutrition (NSFSN) 2024 - 2028, which were both classified as Level 4, most of the policies reviewed fell under the categories 1 and 2, reflecting either no or limited connection between climate and nutrition.

Updated policies present a more explicit integration of climate and nutrition and concrete proposed measures to promote the integration, with several proposed interventions that present nutrition co-benefits. This shows a gradual increase in climate and nutrition integration in the Cambodian policy landscape. However, key policies, such as the Draft Nationally Determined Contribution 3.0 (NDC 3.0) and the Nutrition Action Plan (NAP), fail to include concrete nutrition targets or specific plans and budget to fund their stated intention to mobilise resources for climate and nutrition integration.

From an **institutional coordination** point of view, 'joint priorities', or alignment across sectors and across policies, was a successful feature of Level 4 policies. However, challenges persist due to weak local capacity and community awareness, limited policy integration, faint strategic vision, and fragmented institutional coordination. Recommendations to enhance institutional coordination are:

- Extend the mandate of the Council for Agricultural and Rural Development (CARD) to cover nutrition and climate change to further enhance institutional coordination.
- Develop a clear policy and institutional framework for the integration of climate and nutrition.
- Establish a District Technical Working group on Food, Nutrition and Climate Change.



[1] Policies were classified into one of 4 Levels based on their climate and nutrition integration status, from Level 1: no intentional connectedness between climate and nutrition; Level 2, some intention to connect climate and nutrition; Level 3: intention to mobilise resources to connect climate and nutrition; to Level 4: commitment to mobilising resources and with distinct plans to take action.

For **financing,** only a few national policies present an associated budget, highlighting that overall inadequate funding and resource allocation persists across policies. In turn, weak or absent integration of climate change and nutrition is closely linked to lack of financial resources. We recommend that The Royal Government of Cambodia (RGC):

- Allocate part of the national budget to finance the integration of climate change and nutrition policies.
- Facilitate access to finance for agri-food system actors, particularly small and medium enterprises (SMEs), agribusinesses, and farmer cooperatives, by expanding concessional credit lines or blended finance mechanisms that prioritise investments with demonstrated nutrition and climate co-benefits.
- Allocate financial support for the scale up of climate-smart, nutrition-sensitive agriculture, and to strategic investments in sustainable water systems.

In terms of **monitoring, evaluation, and learning,** despite growing implementation, many programs lack robust evidence of true climate-nutrition integration. We recommend that the CARD, in collaboration with the Ministry of Planning (MoP), the National Institute of Statistics (NIS), relevant line ministries, and development partners:

- Document and disseminate best practices on integrating climate change and nutrition across sectors.
- Measure progress toward national climate-nutrition targets on a regular cycle (every 3–5 years) to inform evidence-based policy adjustments.
- Establish and maintain a centralized database on nutrition and climate change indicators within the NIS to strengthen data sharing and policy monitoring.

With reference to **stakeholder engagement,** there is the need to further strengthen coordination mechanisms and cross-sector dialogue by:

- Strengthening the role of sub-national actors through the National Committee for Sub-National Democratic Development (NCDD) and provide them with technical resources, data, and funding
- Engaging high-level leaders such as the Prime Minister, the First Lady, or the King to champion climate-nutrition integration as a national development priority, by publicly endorsing cross-sectoral initiatives, mobilizing resources, and promoting policy coherence across ministries.

In conclusion, while Cambodia has made notable strides in integrating climate and nutrition within select high-level policies, significant gaps remain in institutional coordination, financing, implementation, and monitoring; targeted investments, stronger cross-sector alignment, and empowered sub-national engagement are essential to accelerate progress toward a truly integrated climate-nutrition policy landscape.

INTRODUCTION

Background, Rationale, and Objectives

Cambodia is a predominantly agrarian country, with agriculture employing approximately 36% of the labor force and contributing to 22% of national gross domestic product (World Bank 2021a; Tong et al. 2021). Furthermore, Cambodia is placed among the world's most climate-vulnerable nations: it was ranked 36th most vulnerable and 33rd least ready to adapt to climate change in the 2019 Notre Dame Global Adaptation Initiative index due to rising temperatures (+0.18 °C/decade since the 1960s) and increasingly intense floods and droughts that directly undermine food and nutrition security (World Bank 2021b; Ministry of Health Cambodia 2019). These climate shocks have direct consequences on nutritional outcomes. Systematic reviews across low- and middle-income contexts, including Bangladesh, India, and Cambodia, show that flooding and drought increase child wasting, underweight, and long-term stunting by undermining food supply, childcare, and disease management (Agabiirwe et al. 2022).

Cambodia's climate-nutrition nexus is characterised by: i) high exposure to climate hazards including floods, droughts, heat stress, amplifying food system fragility (Davies et al. 2015); ii) disrupted agricultural production and food availability, leading to dietary imbalances (Ngin et al. 2024); iii) elevated infection risks, especially waterborne diseases, which contribute to malnutrition (McIver et al. 2016); and iv) intersecting vulnerabilities, including rural poverty, sanitation gaps, and low adaptive capacity, which necessitate multisectoral policy responses (Karpati et al. 2020).

Recognising these challenges in Cambodia and elsewhere, the Initiative for Climate Action and Nutrition (I-CAN) was launched in 2022 by the Government of Egypt during COP27, in partnership with the World Health Organisation (WHO), Food and Agriculture Organisation (FAO), Global Alliance for Improved Nutrition (GAIN), and the Scaling Up Nutrition (SUN) Movement. I-CAN is a global, multi-stakeholder initiative that aims to accelerate transformative action at the intersection of climate and nutrition. By 2030, I-CAN envisions a world in which climate and nutrition agendas are fully integrated in policy, financing, research, and implementation. The initiative focuses on five strategic pillars, the first of which is to support national-level integration by strengthening policy coherence in countries facing both climate vulnerability and high burdens of malnutrition. Specifically, I-CAN targets four key outcomes by 2030:

1. Policy coherence: Greater integration of climate and nutrition across national policies, including NDCs, National Adaptation Plans (NAPs), National Biodiversity Strategies and Action Plans (NBSAPs), national nutrition plans, food-based dietary guidelines, and public food procurement standards.

2. Scaled-up action: Accelerated implementation of climate and nutrition interventions.

3. Increased financing: Mobilisation of new and existing resources for integrated climate and nutrition agendas.

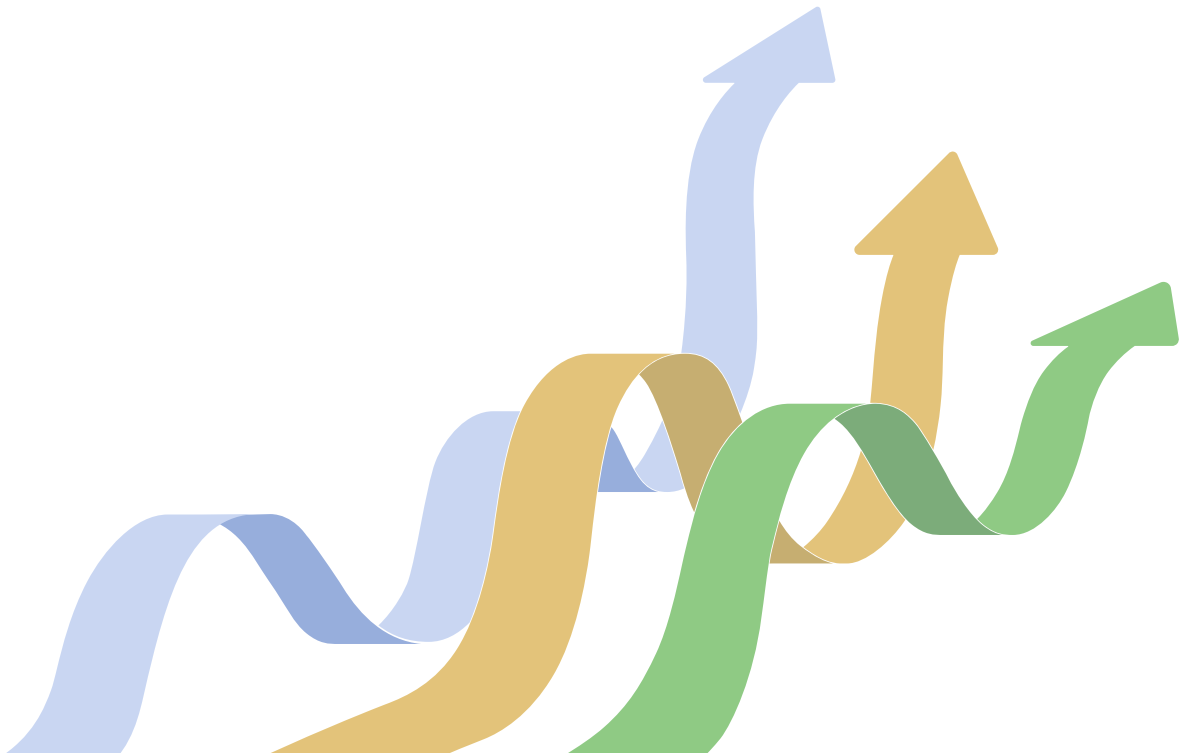
4. Cross-sectoral integration: Enhanced alignment of research, advocacy, and policy to advance both nutrition and environmental goals.

The work presented here contributes to I-CAN's first pillar[2]: targeted support to strengthen national policies for integrated country action. Elucidating the nutrition-climate policy and stakeholder landscape in Cambodia is crucial to understanding what opportunities exist in Cambodia's specific context and what opportunities may be mirrored in other national settings. Specifically, this report consolidates the results from two complementary light-touch analyses conducted in support of I-CAN's objectives: first, a national-level policy landscaping and second, a stakeholder mapping analysis, both conducted between May and June 2025.

[2] I-CAN's five pillars include: 1) Policy Coherence and Governance, 2) Financing and Investment, 3) Research, Innovation, and Data, 4) Capacity and Knowledge Sharing, and 5) Locally Led and Inclusive Action.

The policy landscaping analysis results assess the extent to which climate and nutrition are integrated within Cambodia's national policy architecture. By systematically reviewing policies across sectors (including climate change and environment, nutrition and health, agriculture and food systems, and development and social protection), the study sought to highlight best practices, identify gaps, and provide insights to inform more coordinated and synergistic policymaking. In parallel, a national-level stakeholder mapping and analysis was conducted to identify, categorise, and prioritise stakeholders across government, the private sector, civil society , academia, and development partners which are essential to advancing integrated climate and nutrition action in Cambodia.

Through a presentation of results stemming from both the policy landscaping and stakeholder mapping, this report aims to provide a clearer understanding of existing thematic and programmatic efforts, highlight opportunities for collaboration, and inform strategic engagement to support I-CAN's goal of integrating and aligning efforts toward increased climate resilience and improved nutrition outcomes.



METHODOLOGY

This study was completed in two distinct yet intertwined phases: first, a policy landscaping analysis and second, a stakeholder mapping exercise.

Policy Landscaping Analysis

The policy landscaping analysis drew from the content of 32 policies, encompassing policies that are active, inactive, and at the draft stage. Although some of the policies reviewed were technically inactive or had reached the end of their stated implementation period, they were intentionally included in the analysis. This decision was based on two main considerations. First, in several cases, no replacement or updated policy had been issued, meaning these documents continue to shape ongoing practice and institutional frameworks despite their official timelines having expired. As such, they remain de facto reference points for current policy direction, particularly in areas where mandates, coordination mechanisms, or program structures have not fundamentally changed. Second, many of these policies still contain substantive provisions and frameworks relevant to understanding the current state of climate–nutrition integration in Cambodia. Excluding them would have risked omitting important insights into how the policy environment has evolved and how existing strategies continue to reflect earlier priorities and institutional linkages.The policies reviewed cover the thematic categories of: nutrition and health, climate and environment, food systems and agriculture, and general development (see **Annex A** for a full list of policies).

The desk review findings were complemented by the themes drawn from key informant interviews (KIIs) held with 15 Cambodian nutrition and climate stakeholders, ranging from government actors to academics (a full list of stakeholders consulted can be found in **Annex B**). A full list of questions explored during interviews can be found in **Annex E.**

These interviews served two purposes: to inform and add nuance to the policy landscaping analysis and to map the relevant stakeholder ecosystem. The 15 key informants were selected in consultation with GAIN team members to represent the breadth of actors influencing or implementing climate–nutrition policies and programs in Kenya. The goal was to capture perspectives from policy formulation, research and academia, development partners, and implementation agencies, ensuring a holistic understanding of how climate and nutrition are being integrated across sectors. The key-informants were contacted via email and invited to participate in either an in-person or virtual interview with one of TSI's Cambodia-based consultants. All interviews were recorded with informed consent and transcribed by the interviewer after. Interviews were then coded by hand to identify themes among responses to each question across respondents.

To assess the level of nutrition and climate integration in each of the reviewed policies, TSI followed the methodology outlined in the 2023 I-CAN Baseline Assessment. A comprehensive keyword search was completed using Python, a high-level computer programming language. Documents were run through the same Python code used in the 2023 I-CAN Baseline Assessment (with a few changes to ensure comprehensive keyword screening, please refer to **Annex C** for the specific Python code used). All policies reviewed were English originals or English versions of Khmer originals. The keywords used for screening were also based on the 2023 I-CAN Baseline Assessment methodology, encompassing a grouping of nutrition keywords and a grouping of climate keywords. Below is an illustration of the specific keywords that each policy was screened against:

Climate Keywords	Nutrition Keywords
Group 1 - General Climate: Climate, Climate Change, Climate Crisis, Greenhouse Gas(es), CO2, GHG, Emissions, Extreme Weather, Methane, Sea Level(s), Global Warming, Temperature, Biodiverse(ity), Mitigation(s), Adaptation(s), Net Zero	**Group 1 - General Nutrition:** Nutrition, Nutritional, Nutrient(s), Malnutrition, Undernutrition, Overnutrition, Nutritious, Nutritious Foods, Food Systems
Group 2 - Energy: Carbon, Fossil Fuel(s), Oil, Coal, Energy Efficient, Renewable Energy	**Group 2 - Diet-related:** Diet(s), Balanced Diet, Healthy Diet, Unhealthy Diet, Affordable Diet, Accessible Diet, Available Diet, Diet Diversity, Plant-Based, Vegan, Vegetarian
Group 3 - Sustainability: Sustainable, Sustainability, Recycle(ing), Reduce(ing), Reuse(ing), Single-Use Plastic, Compost(ing), Biodegrade(able), Package(ing)	**Group 3 - NCDs and Human Health:** Obesity, Overweight, Underweight, Weight Loss, Weight Gain, Anemia, Anaemia, Diabetes, Blood Pressure, Hypertension, Blood Sugar, Cholesterol, Cardiovascular Disease, Blood Iron, Stunting, Wasting
Group 4 - Food: Food Loss(es), Food Waste(s), Overproduce(ing), Shelf Life, Portion Size, Local(ly), Regional(ly), Season(al)	**Group 4 - Food Safety:** Food Label, Food Safety, Food Control, Food Quality
Group 5 - ESG: Fairtrade, Animal Welfare, Free Range, Water Use, Land Use, UNFCCC, ESG	**Group 5 - Food Groups and Types:** Vegetable(s), Fruit(s), Meat, Red Meat, White Meat, Fish, Starch, Dairy, Protein, Fat, Fats, Oil, Oils, Grain, Grains, Wheat, Rice, Maize, Nuts, Eggs, Milk, Pulses, Animal-Sourced Foods / ASF
Group 6 - Agriculture: Intensive Farming, Overfarming, Crop Diversity, Overgrazing, Monoculture, Indigenous Crops, Organic, Bio, Nature-Based Solutions, Neglected- Underutilised Species, Agroecology, Ecology	**Group 6 - Nutritional Content:** Vitamin, Micronutrient(s), Mineral, Fiber, Fibre, Calcium, Gluten,Calorie, Caloric, Carbohydrate, Sodium, Salt, Sugar, MSG, Iron, Zinc, Fortified, Biofortified, Fortification, Biofortification

In line with the 2023 I-CAN Baseline Methodology, the keyword search performed through Python, was then informed by manual policy reviews. With the identified keywords as a guide, each policy was manually reviewed by the same reviewer to ensure consistency. For policies where the classification was deemed to be not straightforward, a second reviewer examined them and a common agreement was reached for the classification, upon discussion.

The level of nutrition and climate integration of each policy was then evaluated using the Baseline Assessment criteria:

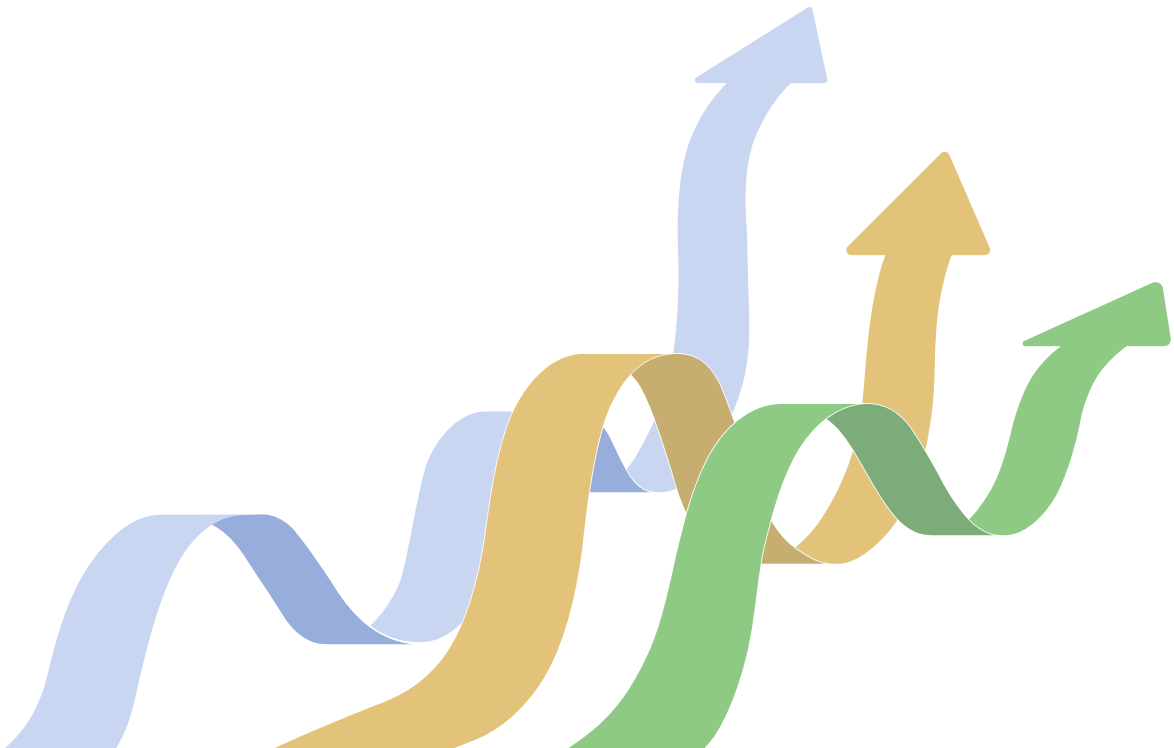
Level 1: No intentional connectedness between climate and nutrition

Level 2: Some intention to connect climate and nutrition

Level 3: Intention to mobilise resources to connect climate and nutrition

Level 4: Commitment to mobilising resources and with distinct plans to take action to connect climate and nutrition

In **Annex D** we provide a full list of each policy's nutrition and climate integration classification level.



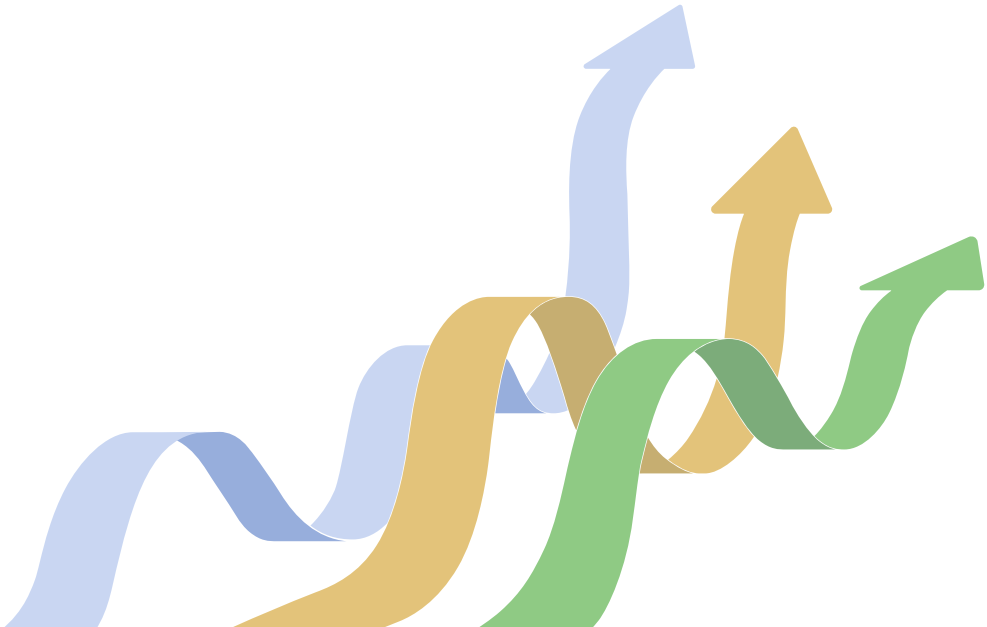
Stakeholder Mapping and Analysis

The stakeholder mapping was based on the aforementioned KIIs. The findings based on the perspectives of the key informants have been incorporated into this policy landscaping analysis as well as its companion stakeholder mapping and analysis.

These consultations captured not only institutional roles and mandates, but also informal influence, coalition behavior, catalytic actors, and leverage points within and between sectors (e.g., health, agriculture, climate, finance). This approach enabled the identification of areas where alignment and integration already have momentum, where institutional friction exists, and where dormant capacity could be activated through appropriate policy incentives or technical support. The stakeholder mapping also highlighted multi-sectoral linkages, particularly between climate, nutrition, health, and agriculture. The analysis was layered across three key dimensions:

- **Actor Functionality:** This dimension explored each stakeholder's actual function in climate-nutrition integration, beyond their formal role. It identified who funded, convened, implemented, blocked, or translated policy into practice, and examined barriers that limited stakeholders from maximising their functionality.
- **Influence Networks:** The mapping captured both formal structures and informal power dynamics, including knowledge brokers and policy entrepreneurs who shaped real-world integration efforts. This allows for a better understanding of potential in-roads for promoting more effective integration of nutrition and climate action.
- **Strategic Engagement Pathways:** The analysis assessed each key stakeholder's openness to integration, existing capacities, opportunities and strategic entry points for increased integration, and the type of engagement (technical, advocacy, financing, coordination) needed to accelerate progress.

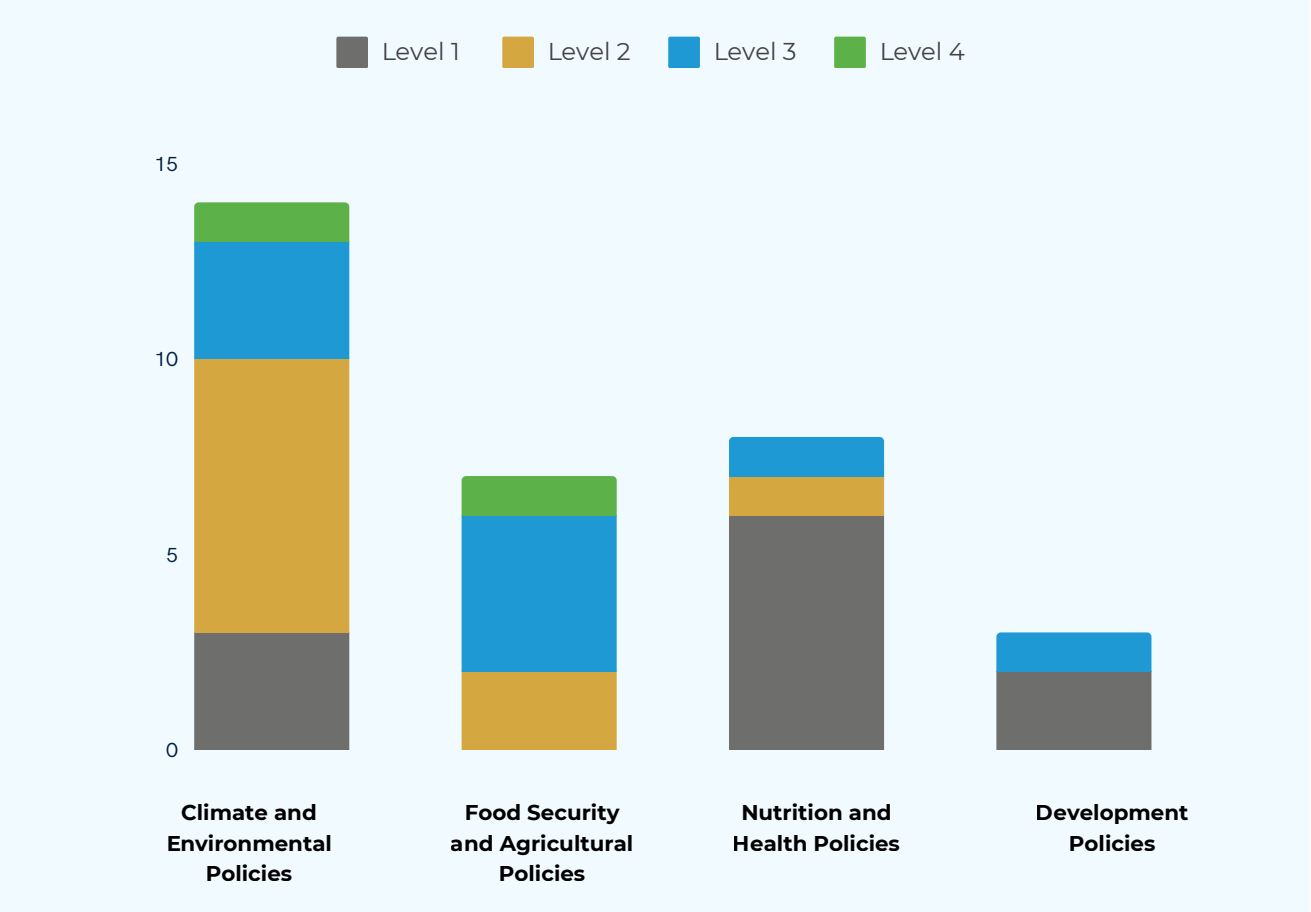
Furthermore, TSI developed two stakeholder maps based on KII findings. The first illustrates each actor's level of climate–nutrition integration alongside their influence in Cambodian policymaking; the second positions actors according to whether their primary focus is climate change, nutrition, neither, or both. An actor's level of integration was defined by the extent to which their institutional mandate, programmes, and partnerships explicitly address both climate and nutrition objectives, as identified through KIIs and document review. Influence was assessed based on stakeholder perceptions of each actor's role in shaping national policy, coordination, and financing decisions.



KEY FINDINGS AND ANALYSIS RESULTS

Out of the 32 policies reviewed, 12 (38%) were categorised as Level 1 and 9 policies (28%) were placed at Level 2. Similarly, 9 policies (28%) reached Level 3, and only 2 policies (6%) achieved Level 4. Below is an illustration of the number of policies within the four relevant themes and their integration level classification. Overall, we noticed that the bulk of level 1 policies lie within the nutrition and health related policies. There were two policies that scored at the highest level of integration (level 4) and these are: The Third National Strategy for Food Security and Nutrition (NSFSN) 2024 - 2028 and Cambodia's National Climate Change Action Plan for Public Health (NCCAPPH) (2020-2024).

Classification Distribution by Policy Theme



Updated policies present a more explicit integration of climate and nutrition and concrete proposed measures to promote the integration, with several proposed interventions that present nutrition co-benefits. This shows a gradual increase in climate and nutrition integration in the Cambodian policy landscape. However, we see that key policies, such as the NDC and the NAP, do not include targets for nutrition, and even though they state the intention to mobilise resources, they lack specific plans and budget to do so.

The next sections present best practices, challenges, and opportunities drawn from the policies that emerged as level 4 in the policy review and landscaping analysis, as well as from the 15 key informant stakeholder consultations held. The results are presented here in three sections: good practices, challenges, and opportunities that were identified across reviewed policies and through KIIs.

Best Practices

These best practices have been gleaned from the most promising features identified in the two Level 4 policies reviewed, the Third National Strategy for Food Security and Nutrition 2024 - 2028 (NSFSN) and the National Climate Change Action Plan for Public Health 2020-2024 (NCCAPPH).

Weak Cross-Sectoral Coordination and Siloed Approaches

Coordination efforts were led by the Council for Agricultural and Rural Development (CARD) within the framework of the NSFSN policy. These efforts reflect a well-organised and inclusive approach involving a wide range of partners, including government ministries, the German Federal Government, and key development actors such as FAO, UNICEF, WFP, and WHO. International non-governmental organisations (NGOs) and research institutions, such as GIZ, Helen Keller International, Nutrition International, International Institution of Rural Reconstruction (IIRR), WorldFish, World Vision, and Plan International, also play integral roles. Based on stakeholder perspectives shared, this broad coalition may have the power to strengthen policy coherence and implementation capacity across the nutrition and climate sectors. Collaborative multi-stakeholder partnerships are expected to drive nutrition and climate integration in Cambodian policy by aligning mandates across sectors, enabling joint planning, and embedding shared objectives into governance structures. By leveraging complementary expertise (from government, UN agencies, NGOs, and research institutions, etc.), collaboration could better facilitate the design, financing, and scaling of integrated interventions such as climate-resilient food systems that support healthy diets. This would have the power to continue to enhance policy coherence and accountability through harmonised monitoring frameworks and institutionalised coordination mechanisms that ensure integration is sustained beyond individual projects.

> *"The Council for Agricultural and Rural Development (CARD), under the Office of the Council of Ministers, will continue to lead the coordination, monitoring and evaluation of the implementation of the NSFSN."* — ***(NSFSN 2024–2028)***

Emphasis on Nutrition-Sensitive Approaches and Healthy Diets

The NSFSN policy places a strong emphasis on nutrition-sensitive approaches to promoting healthy diets. In particular, recognising its essential role in healthy diets, it includes fish, which are nutrient-dense and beneficial for tackling malnutrition, boosting childhood growth, and supporting cognitive development, particularly in vulnerable groups across Cambodia. This focus on fish reflects a broader food systems lens that prioritises the accessibility and consumption of diverse, nutritious foods to address both undernutrition and emerging diet-related challenges. Emphasising nutrition-sensitive approaches and healthy diets can tangibly advance nutrition and climate integration in Cambodian policy by linking food system resilience with improved health outcomes. Prioritising nutrient-rich, locally available foods like fish supports both climate adaptation (through sustainable, low-emission production) and nutrition goals, particularly for vulnerable populations. Cross-sector collaborations, which can be facilitated by collaborative multistakeholder partnerships, allow for a broader food system lens, providing guidance for climate-smart investments, and ensuring that climate responses also safeguard and enhance dietary quality and nutrition security.

> *"Food Systems Roadmap Priority Area: Resilient livelihoods and resilient food systems to protect food systems against climate change and other shocks and stresses."* — ***(NSFSN 2024–2028)***

Ambitious, Measurable Targets

The NSFSN policy articulates ambitious and measurable targets for reducing child stunting and wasting. These targets are underpinned by a commitment to multisectoral action and the development of sustainable food systems. The inclusion of specific monitoring and evaluation indicators further strengthens accountability and allows for systematic tracking of progress over time. The alignment of goals with national development priorities also reinforces the long-term vision for improved public health and nutrition outcomes.

> *"Impact indicators... include: Incidence of dengue fever, Incidence of malaria, Percentage of communes vulnerable to climate change and health."* — ***(NCCAPPH)***

Sector-Led Joint Priorities and Alignment of Core Policies

A key strength of these policies is their emphasis on 'joint priorities' and alignment between different sector strategies. By defining joint priorities across food, health, WASH, and social protection sectors, the strategies promote coordinated action and break down traditional sectoral silos. This integrated approach ensures that interventions addressing nutrition and climate change are mutually reinforcing and that care practices are improved through collective efforts, rather than isolated initiatives.

> *"The NCCAPPH is aligned with the Health Strategy Plan Three, the Cambodia Climate Change Strategic Plan 2014-2023, and other relevant national development plans."* ***(NCCAPPH)***
>
> *"This strategy aligns with national and sectoral development policies, including the National Strategic Development Plan, Agriculture Sector Master Plan, and Health Sector Strategic Plan."* ***(NSFSN 2024–2028)***

Cross-Cutting Issues and Inclusion

Cross-cutting issues such as gender equality, social inclusion, and sustainability are actively incorporated into the strategies. Recognising that climate change impacts men and women differently, particularly in the context of existing social inequalities, the policies propose targeted actions to address gender disparities. This includes adapting public health and climate responses to be more inclusive and responsive to the needs of vulnerable and marginalised groups, thereby enhancing the equity and long-term sustainability of policy outcomes. The mainstreaming of cross-cutting and equity considerations can tangibly advance nutrition and climate integration in Cambodian policy by ensuring that interventions are inclusive, context-specific, and responsive to the differentiated impacts of climate change. By addressing gender inequality and the unique vulnerabilities of marginalised groups, policies can better target resources and design climate-resilient nutrition programs that reach those most at risk. This approach strengthens the social sustainability of climate-nutrition actions, promotes equitable access to healthy diets, and ensures that no population is left behind in adaptation and resilience-building efforts.

> *"Addressing gender and communication are cross-cutting issues in the NCCAPPH."* ***(NCCAPPH)***
>
> *"Since climate change affects men and women differently... policies and programmes should address the issues in a holistic approach."* ***(NCCAPPH)***

Climate Risk Mitigation and Health Linkages

Risk mitigation measures are clearly outlined within the Level 4 policies, along with indicators designed to assess the health risks and co-benefits associated with climate change. These measures underscore the recognition of climate change as both a public health threat and an opportunity for

building resilience. Including climate risk mitigation and health linkages in Cambodian policy can tangibly advance nutrition and climate integration by making the health impacts of climate change a central consideration in both adaptation and nutrition strategies. This approach enables policies to prioritise actions, such as protecting food supply chains, reducing post-harvest losses, or safeguarding maternal and child diets during climate shocks, that simultaneously build resilience and improve health outcomes. It also supports the development of integrated monitoring systems, allowing policymakers to track how climate-related interventions contribute to nutritional well-being, thereby reinforcing evidence-based, cross-sector planning and investment. By integrating health considerations into climate adaptation and mitigation planning, the policies create space for more holistic and preventive approaches to climate-sensitive health and nutrition challenges.

"The goals of the NCCAPPH are to reduce morbidity, mortality, injuries and health vulnerability to climate variability and extreme weathers." ***(NCCAPPH)***

"Strengthen early warning systems and response mechanisms for food and nutrition insecurity related to climate and other shocks." ***(NSFSN 2024–2028)***

Effective Communication and Public Engagement

Finally, communication is leveraged as a strategic tool for behavior change and awareness-raising in Level 4 policies. Especially in the NCCAPPH, the use of health centers, public health practitioners, and mass media channels to disseminate information on the impacts of climate change on health and nutrition is emphasised. This public engagement strategy helps translate technical policy goals into actionable knowledge for communities, enhancing both responsiveness and local ownership.

Leveraging communication as a strategic tool for behavior change and awareness-raising can tangibly advance nutrition and climate integration in Cambodian policy by translating complex policy goals into actionable messages for communities and frontline workers. Through targeted outreach individuals can be informed about climate-resilient nutrition practices, such as diversifying diets or adopting sustainable farming methods. This not only builds public support for integrated policies, but also empowers households to make informed decisions that align with national climate and nutrition objectives, reinforcing the impact of policy at the grassroots level.

"Communication is an effective tool to address the impacts of climate change on public health. Three levels of communication—health centres, public health practitioners and mass-media—should be considered." ***(NCCAPPH)***

"Strengthen behavior change communication and awareness-raising on optimal maternal, infant, and young child feeding practices, hygiene, and healthy diets… Promote food and nutrition education through schools and communities to improve awareness of healthy diets." ***(NSFSN 2024–2028)***

Challenges

The challenges and policy gaps presented here are primarily drawn from the perspectives shared during key informant interviews.

Fragmented Institutional Coordination

Cambodia's climate-nutrition integration is hampered by fragmented institutional arrangements. Multiple ministries, including the Ministry of Health (MoH), Ministry of Agriculture, Forestry and Fisheries (MAFF), Ministry of Environment (MoE), and others, operate in silos with overlapping or unclear mandates. Nutrition, a cross-cutting issue, falls between health,

agriculture, and social protection, but lacks a designated lead agency. This has led to uncoordinated policy and implementation efforts. Respondents highlighted poor cross-sectoral collaboration, with limited communication channels and no central political champion to drive integration. This structural fragmentation reduces the effectiveness and coherence of national strategies aimed at linking climate resilience with improved nutrition outcomes. CARD is a key body that can help fill this gap, but it has not yet adequately integrated climate change considerations into its cross-ministerial coordination efforts.

"The establishment of CARD marked a key moment in Cambodia's agricultural and rural development efforts. It coordinates the concerned ministries in developing the country's policy, strategies and planning on food and nutrition securities. However, climate change was just recent, and its integration would add another layer of institutional framework." — ***Council for Agriculture and Rural Development (CARD)***

Limited Policy Integration and Strategic Vision

While Cambodia has made strides with national strategies like the Food Systems Roadmap and its Nationally Determined Contributions (NDCs), the integration of climate and nutrition within these frameworks remains vague and underdeveloped. Existing documents reference food systems broadly but lack explicit, actionable strategies connecting climate adaptation, mitigation and nutrition improvement. Without a strong, integrated national policy framework, efforts will remain fragmented and miss the opportunity to systematically tackle food security, climate vulnerability, and malnutrition in an aligned and unified manner.

"...The integration of climate change and nutrition remains broad in the Agricultural Sector Strategic Development Plan (ASDP), Cambodia's Roadmap for Food Systems for Sustainable Development 2030, and the Agricultural Strategy for Climate Change." — ***Inland Fishery Research and Development Institute (IFReDI)/Fishery Administration***

Weak Local Capacity and Community Awareness

At the grassroots level, the adoption of climate-smart agriculture (CSA) and nutrition-sensitive practices is hindered by limited local capacity and awareness. Many farmers, community leaders, and even district-level agriculture officers lack the knowledge, training, or tools to implement adaptive strategies that address both climate risks and nutritional goals. Awareness of healthy diets and the connection between environmental change and food quality is low, especially in rural communities. Moreover, nutrition stakeholders are rarely included in climate forums, and vice versa, leading to parallel efforts that fail to reinforce each other. Community demonstration farms and local training programs have shown promise, but scale and consistency remain significant barriers.

"Currently, there are some weaknesses in the integration of climate change and nutrition, such as the lack of mechanisms for coordinating and promoting changes in farmers' habits. To achieve this, it takes a long time because farmers still lack knowledge and resources. Knowledge and understanding are important for diversifying agriculture, using new methods, new technologies, and understanding the relationship between climate change and agricultural production." — ***Ministry of Agriculture, Forestry and Fisheries (MAFF)***

Inadequate Funding and Donor Dependence

Limited and inconsistent financing is a critical barrier to integrated climate-nutrition action. Budgets at both national and sub-national levels prioritise infrastructure and short-term development goals, leaving climate adaptation and nutrition underfunded. Sectors like fisheries—which are both nutritionally important and climate-sensitive—receive minimal budgetary support. Many integration efforts rely heavily on donor funding, raising concerns about long-term sustainability, especially as some international donors begin to scale back. Without dedicated domestic investment, national ownership of integrated programming remains weak, and progress risks being piecemeal or donor-driven rather than embedded in government systems.

> *"There [is] no available budget for integrating climate change and nutrition [in Cambodia]. CARD has coordinated roles but does not have a mandate [or] budget [to] implement [this] work. The work on climate change and nutrition [was] funded by donors. However, many donors are moving out of Cambodia."* — ***Council for Agriculture and Rural Development (CARD)***

Gaps in Data and Advisory Systems

Reliable, disaggregated data on the intersection of climate change and nutrition is sparse in Cambodia. There is a lack of real-time climate and agricultural advisory services for farmers and fishers, which limits their ability to make informed, adaptive decisions. Communities are often unaware of available disaster preparedness resources, such as those led by the National Committee for Disaster Management (NCDM). This information gap undermines both preparedness and response, especially in the context of climate-induced shocks that affect food security and nutrition. Furthermore, research on nutrition–climate linkages (particularly in critical sectors like fisheries) remains limited, constraining the development of evidence-based policies.

> *"The integration of climate change and nutrition remains weak in Cambodia [and] there is lack of climate change information about when there will be rain, when there will be no rain, and when and where there will be drought. There is a lack of digital climate advisory services for small farmers and fishers."* — ***International Institution of Rural Reconstruction (IIRR)***

Underdeveloped Social Protection for Climate-Nutrition Risks

Cambodia's existing social protection systems do not adequately address the overlapping vulnerabilities of climate risk and malnutrition. Programs like the IDPoor classification scheme help identify economically vulnerable populations but fail to consider climate exposure or dietary needs. There is a growing recognition of this gap, and climate-sensitive social protection frameworks are in development under the Ministry of Economy and Finance. However, current coverage and integration remain limited. Without social assistance mechanisms that explicitly address nutrition and climate vulnerabilities, such as through food aid, cash transfers, or emergency feeding programs, households remain highly susceptible to environmental and economic shocks.

> *"Social protection for [those most affected by] climate change has not been fully scaled or ensured by legal instrument[s]. So far, a climate change social protection procedure is under development by the Ministry of Economy and Finance."* — ***Ministry of Land Management, Urban Planning and Construction***

Private Sector and Innovation Deficits

The role of the private sector in Cambodia's climate–nutrition landscape remains underutilised. Despite recognition of the need for dietary transformation and climate-resilient agriculture, engagement with businesses, especially small and medium enterprises (SMEs), is weak. Innovation in climate-smart agriculture, nutrition-sensitive food processing, and fortified food production is limited. Private investment in CSA technologies, sustainable aquaculture, and improved value chains is minimal. A stronger enabling environment, including incentives and partnerships, is needed to harness market forces for climate and nutrition co-benefits. Without private sector involvement, many promising innovations remain in pilot stages or donor-funded programs, without scaling or sustainability.

> *"To cope with climate change, improving water governance through building ponds, rainwater harvesting, reservoirs with spill ways, and irrigation systems is essential. These [solutions] would need investments from the government on the infrastructure, technology, seeds, and organising communities. Private sector involvement is also essential, but there is still no good example and best practice of private sector involvement in addressing climate change and nutrition in Cambodia."* — ***International Institution of Rural Reconstruction (IIRR)***

Opportunities

The opportunities presented here are primarily drawn from the perspectives shared during key informant interviews.

Empower CARD to Drive Cross-Ministerial Coordination

CARD already plays a central coordinating role, but its mandate and resourcing must be elevated to enable it to fully align sectoral policies and lead the development and rollout of the upcoming Third National Strategy for Food Security and Nutrition (NSFSN 2024–2028). Strengthening Technical Working Groups, especially Food Security and Nutrition TWGs, (TWG-FSN) and enhancing collaboration between CARD, MAFF, and MoE can institutionalise climate-nutrition linkages and improve vertical and horizontal governance, especially through sub-national structures like the NCDD.

> *"So far, it is assumed that the only key potential actor that [should] champion climate-nutrition linkages is CARD. In the current context, in order to ensure the effectiveness of climate-nutrition linkages, it is recommended that CARD should work closely with MAFF and MoE."* — ***National Council for Sustainable Development (NCSD), Ministry of Environment (MoE)***

Scale Up Climate-Smart, Nutrition-Sensitive Agriculture

CSA is widely accepted in policy but underutilised in implementation. Expanding CSA alongside nutrition-sensitive approaches offers a shared operational platform to boost both resilience and dietary diversity. Efforts should focus on building farmer capacity, strengthening agricultural cooperatives, integrating CSA into extension systems, and ensuring nutrition outcomes through crop diversification, resilient seed use, and agroforestry. Partnerships with NGOs like HKI and International Rice Research Institute (IRRI), and private sector incentives for CSA adoption, are essential for nationwide scaling.

> *"Climate-smart crop production systems and value chain development, including agroecological practices, and exploring innovative financing mechanisms like carbon credits [should be among the government's priority areas in combating climate change and improving agricultural productivity]. Under the growing threats of climate change*

and improving agricultural productivity]. Under the growing threats of climate change and environmental degradation, Cambodia needs to transform its agriculture into more productive, climate-resilient, and biodiversity-friendly systems. Cambodia has strong potential and should invest in diverse food production, such as vegetables and fruits, not only to reduce imports but also to make these foods more available and affordable for domestic consumption. Investment in local processing remains low, resulting in the export of most agricultural products as raw materials and losing value addition." — ***Center for Policy Research in Agriculture and Rural Development (CPARD) Cambodia Development Resource Institute (CDRI)***

"A key example of integration of climate change and nutrition at national level is promoting climate-smart agriculture by encouraging sustainable farming practices such as agroforestry, conservation agriculture, and soil health management to improve yields while reducing environmental impact." — ***Royal University of Phnom Penh***

Prioritise Water Governance for Resilient Food Systems

Water access remains a foundational enabler of both nutrition and climate resilience. Improving small- and large-scale irrigation infrastructure, promoting rainwater harvesting, and supporting household-level storage are key priorities. Water management reforms must also be equity-focused, addressing access for smallholders and fisheries. Given the vulnerability of Cambodian agriculture and aquaculture to climate change, strategic investments in sustainable water systems can drastically improve productivity, food availability, and nutrition outcomes across seasons.

"Indeed, climate change has affected water resources [in Cambodia]. Water is a source of food production, [greatly affecting it]. Agriculture and fish are the main sources of food and they are dependent on water. Mekong River and Tonle Sap Lake are sources of water, fishery and foods. Irrigation system rehabilitation has been prioritised to improve water management for agriculture and food production. However, irrigation management remains centralised, sectoral and siloed by the Ministry of Water Resources and Meteorology (MOWRAM), while the Ministry of Agriculture, Forestry and Fisheries needs water to irrigate rice farming. Coordination among ministries around water remains weak and fragmented." — ***Worldfish Cambodia***

Leverage High-Level Political Champions

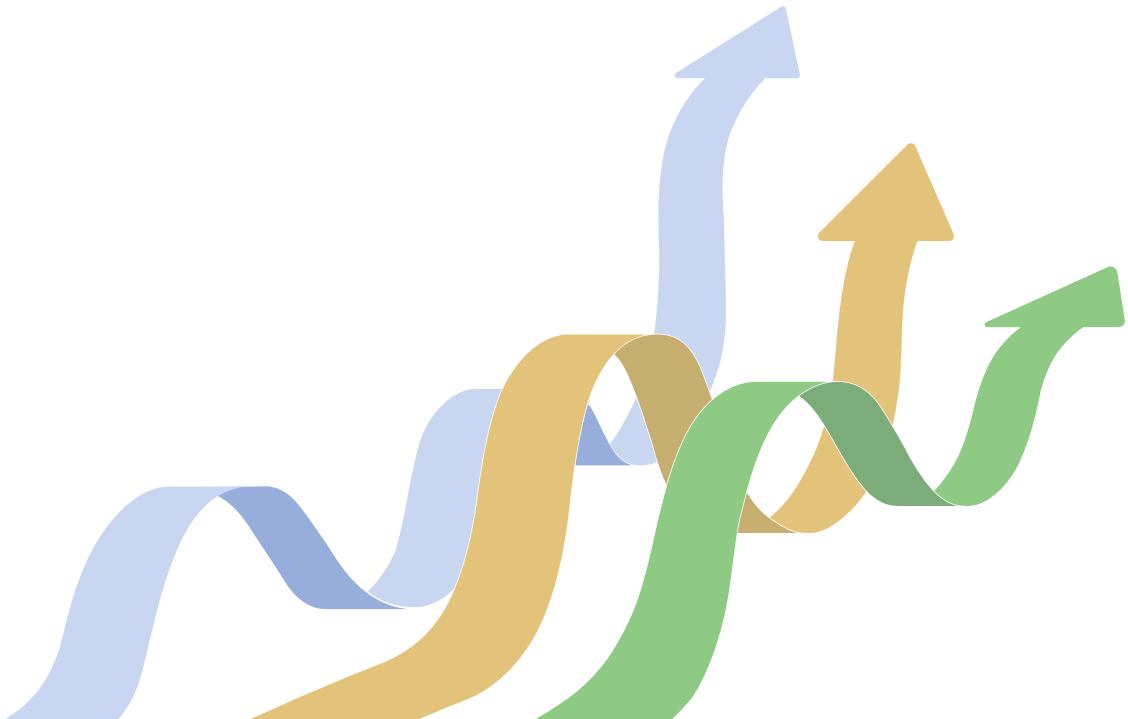
The lack of a visible political champion has weakened national momentum for integrated climate-nutrition action. Engaging high-level leaders, such as the Prime Minister, his wife, the King, other influential national figures, can elevate visibility and accountability. Equally important is cultivating champions within ministries, Parliament, and local government who can translate this vision into sustained policy and implementation momentum. These engagements may elevate visibility, generate public support, and create political accountability across ministries. Political leadership can also ensure nutrition is prioritised in climate funding and development agendas. Advocacy coalitions and civil society must play a role in identifying and mobilising these champions to drive systemic change.

"...People now look at the Ministry of Environment or Agriculture as champions, but I think that the Prime Minister and his wife should be leading the charge. They are keen on the environment and will be great champions, as well as the King — because remember he joined the Paris Climate Summit and he knows how important it is. If we can secure [the support and advocacy] of the Prime Minister and his wife, that would be a great success." — ***Helen Keller International (HKI)***

Localise Action Through Community Models and Sub-National Systems

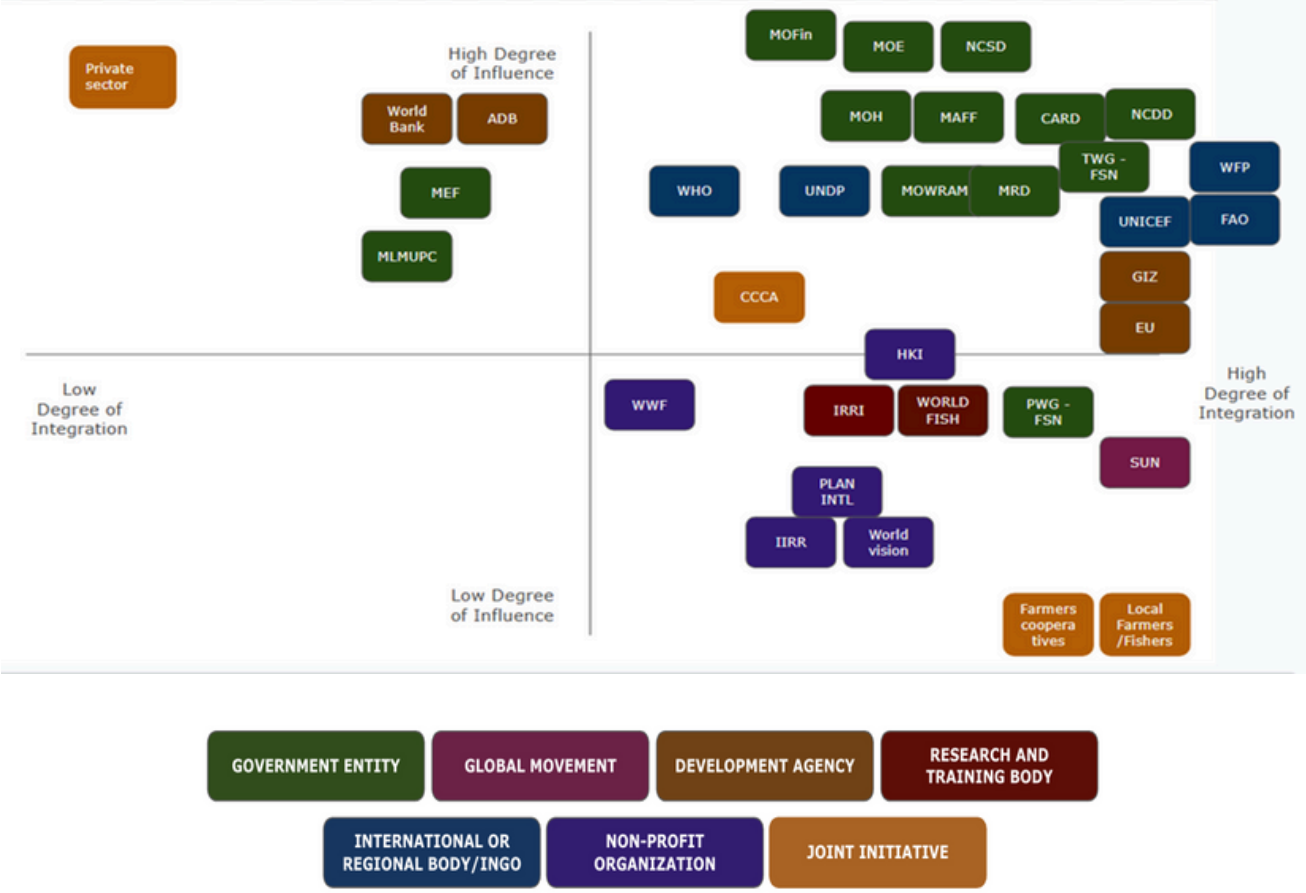
Village Model Farms, Community Fisheries (CFis), and Community Fish Refuges (CFRs) exemplify integrated, bottom-up approaches that bridge climate and nutrition goals. These community-based platforms improve access to diverse foods, offer climate-adaptive livelihoods, and enhance local governance. Strengthening the role of sub-national actors through the NCDD and providing them with technical resources, data, and funding is essential to replicate and scale these models. Localisation ensures that integration efforts are context-specific, sustainable, and equity-driven.

*"Community Fisheries and Community Fish Refuges are forms of integration of climate change and nutrition as they are both involved in the management of waterbodies. The waterbodies are habitats to fisheries and water and fish are sources of food for local communities. By organising the CFis and CFRs, the [community] also manages water. In doing so, they have the right to access it for food and income. The CFis and CFRs could provide responses to climate change, especially during the dry season, [providing water for agricultural activities such as rice farming or vegetable growing]. Local communities could access water in the CFR or CFi areas during the dry season." — **Worldfish Cambodia***



Stakeholder Maps

The Cambodian Climate-Nutrition Stakeholder Ecosystem: Influence and Integration Map



Core Actors and Influential Decision-Makers

As highlighted in the map above, Cambodia's stakeholder landscape for climate and nutrition is characterised by a dense cluster of highly influential and engaged actors positioned in the upper-right quadrant of the influence-integration map. However, these actors come from the perspective of climate or nutrition and not necessarily the nexus of both sectors.

Demonstrating the political economy of decision-making in Cambodia, the key stakeholders with the most influence are national government actors such as the MoH, MAFF, MoE, and CARD who have official government mandates in either sector. Together, they play a core role in shaping national strategies on climate resilience, food systems, and public health.

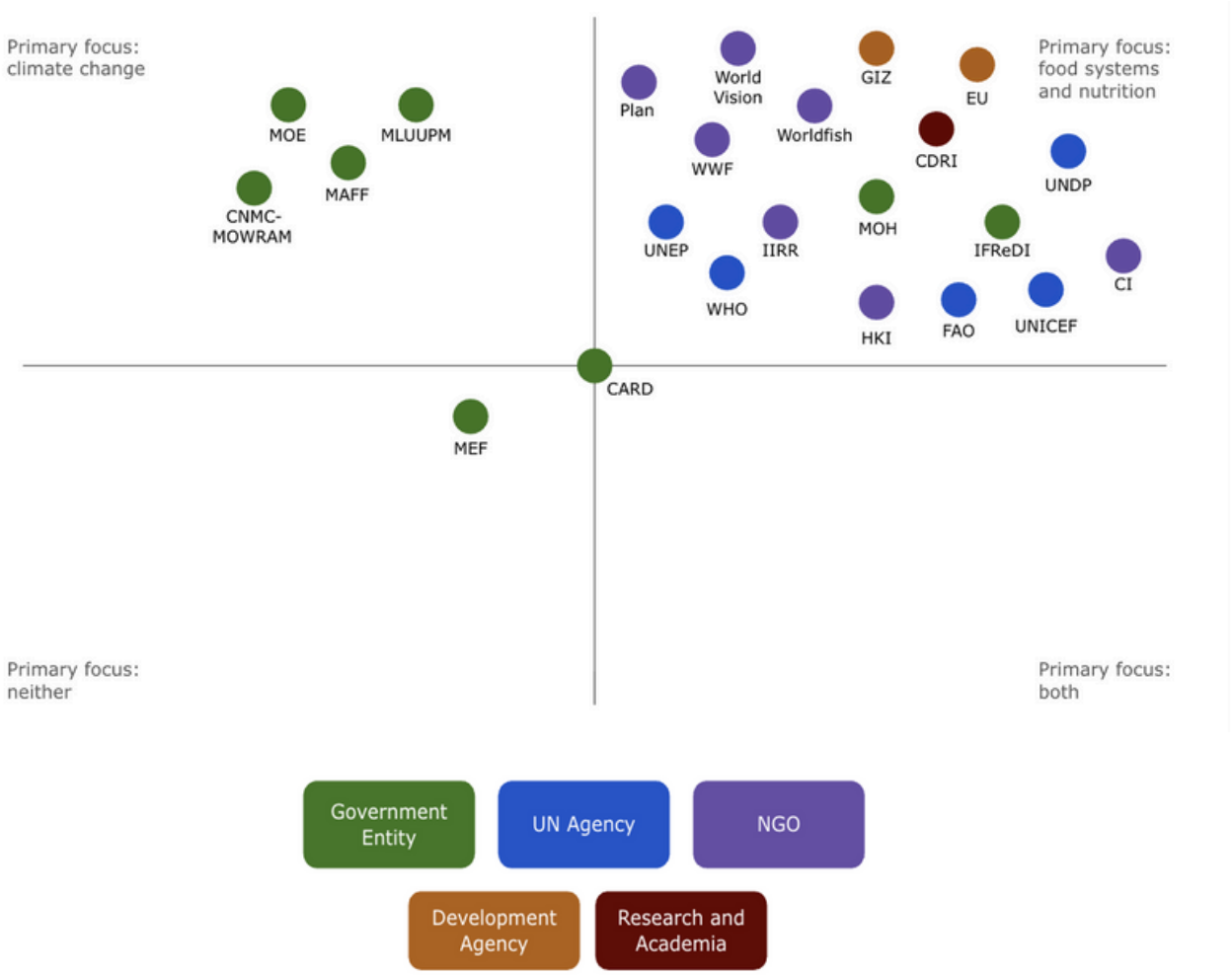
Within these stakeholders, there are also pockets of influence; for example, CARD in particular, provides strong coordination through its oversight of the Scaling Up Nutrition (SUN) movement and the Technical Working Group on Food Security and Nutrition. The key sectoral ministries are supported by major development partners, such as the World Bank, Asian Development Bank (ADB), GIZ, FAO, UNICEF, WFP, and WHO, which not only provide technical support and financing but also influence policy direction. This combination of stakeholders has the potential to drive forward the nexus of climate-nutrition governance and programming in Cambodia and is essential for any coordinated national response.

Key Actors with High Degrees of Integration but Low Decision-Making Power

At the same time, a number of actors with high degrees of integration but limited influence sit at the periphery of decision-making power and influence. These include international NGOs such as Helen Keller International, WorldFish, and Plan International, as well as research institutions such as IRRI, IIRR, and CEDAC. These organisations contribute cutting-edge technical knowledge, community-based innovations, and local implementation capacity. Also notable are platforms such as the Cambodia Climate Change Alliance (CCCA) and subnational bodies, including the Provincial Working Groups on Food Security and Nutrition and District Technical Working Groups, which serve as operational arms for localised action. Despite their relatively low political leverage, these actors offer high potential for impact if better integrated into national coordination mechanisms. Their work is often community-rooted and provides grassroots evidence, positioning them as valuable partners for piloting and scaling transformative approaches.

The Cambodian Climate-Nutrition Stakeholder Ecosystem: Sectoral Focus Map

Below is a visual interpretation of Cambodian actors' positioning in terms of their primary focus on Climate Change and Food Security/Nutrition (or neither or both).



Conclusions and Recommendations

To conclude, we have developed recommendations organised around I-CAN's strategic pillars of policy integration, institutional coordination, financing, monitoring and learning, and stakeholder engagement based on our analyses.

Institutional Coordination

Our analysis of the policy landscape and key informant interviews have demonstrated the relevance of 'joint priorities', cross-sectoral alignment and the alignment of core policies, which were successful features of Level 4 policies. However, currently, some challenges persist, due to weak local capacity and community awareness as well as limited policy integration and strategic vision and fragmented institutional coordination. Existing documents mostly reference food systems broadly but lack explicit actionable strategies connecting climate and nutrition. Without an integrated policy framework, efforts are likely to remain fragmented. There are, however, opportunities to promote climate and nutrition integration by enhancing institutional coordination. In Cambodia, CARD is coordinating the integration of food and nutrition, while the MoE is coordinating the integration of climate change into sector planning, policy and institutional frameworks. MoE, MAFF and MRD, together with other ministries, are under CARD. We recommend extending CARD's mandate to cover nutrition and climate change could further enhance institutional coordination. CARD presents however limited human resources, capacity and finance. Enhancing roles, capacities and finances for CARD are paramount to increase CARD's responsibilities.

Furthermore, embedding climate change across different sectors has been a challenging process for Cambodia. Adding a layer of nutrition and promoting integration of nutrition and climate will pose a further challenge that can be however overcome through the development of a clear policy and institutional framework for integration of climate and nutrition. Decentralised integrated food, nutrition, and climate governance at district level could contribute to promoting climate and nutrition integration at the grassroots. For this to happen, we suggest the establishment of District Technical Working Groups on Food, Nutrition and Climate Change.

Financing

Only a few of the national policies present an associated budget, highlighting inadequate funding and resource allocation. In turn, weak or absent integration of climate change and nutrition is closely linked to lack of financial resources. Cambodia currently depends on donors and development partners to fund climate change work. Donor support remains a key enabling factor, however. We suggest that the RGC allocates part of the national budget to finance the integration of climate change considerations into nutrition, health, and food system policies and programmes.

Furthermore, the private sector has a high degree of influence in the climate and nutrition arena, and there is growing interest from the private sector to bring environmentally friendly practices within their operations and their products. However, the role of the private sector in Cambodia's climate–nutrition landscape remains underutilised. Despite recognition of the need for dietary transformation and climate-resilient agriculture, engagement with businesses, especially small and medium enterprises (SMEs), is weak. Further support for the private sector with easing access to finance (through blended finance mechanisms, risk-sharing facilities, and innovation grants, for example) could promote private sector engagement into activities that are the intersection between nutrition and climate. Financial support should be given to the scale up of climate-smart, nutrition-sensitive agriculture, allowing to expand CSA alongside nutrition-sensitive approaches and generate a shared operational platform to boost both resilience and dietary diversity. Yet, strategic investments in sustainable water systems are essential to drastically improve productivity, food availability, and nutrition outcomes across seasons.

Monitoring, Evaluation, and Learning

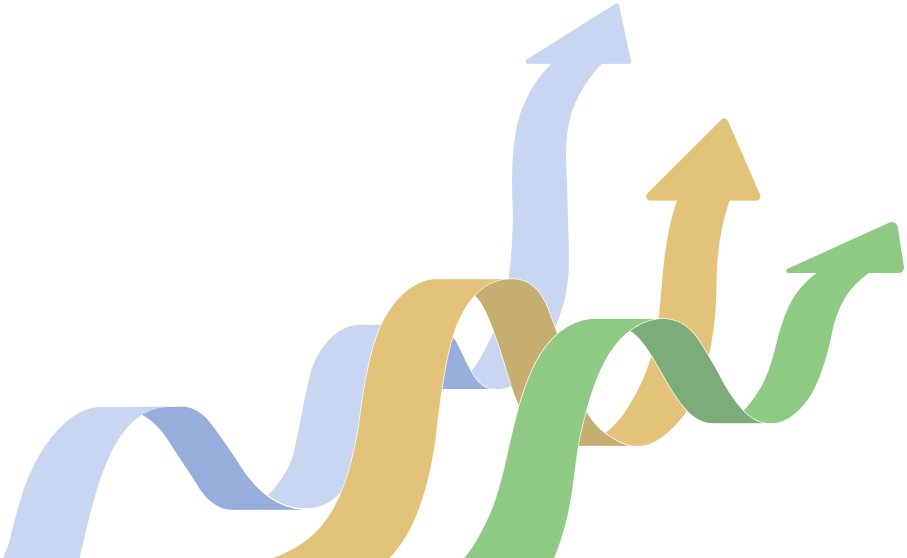
Despite growing implementation, many programs lack robust evidence of true climate-nutrition integration. Strategic investment in monitoring systems, digital advisory tools, and targeted research are needed to close this gap. Concretely, we propose to document the best practices of integration of climate change and nutrition to support policy and institutional development and to regularly measure progress toward achieving targets every 3-5 years. A database of nutrition and climate change should be established under the National Institute of Statistics (NIS). All ministries should provide data to support the integration of nutrition and climate change. Furthermore, institutions like CDRI and IFReDI should be supported to build real-time, disaggregated datasets and policy-relevant insights.

Stakeholder Engagement

Our analysis showed the need to further strengthen coordination mechanisms and cross-sector dialogue. Participation of local communities in integration of climate change and nutrition is key to ensure climate resilient food production and sustainable food consumption. Strengthening the role of sub-national actors through the NCDD and providing them with technical resources, data, and funding is essential to replicate and scale collaboration models such as for example Village Model Farms, Community Fisheries, and Community Fish Refuges.

Aside from a few examples of successful cross-sectoral and stakeholder collaboration, the various actors of the climate change and nutrition arena are still mostly operating independently. There is a need for dialogue between government, communities and research organisations to build the integration and coordination on nutrition and climate change. Engaging high-level leaders, such as the Prime Minister, his wife, or the King, can elevate visibility, generate public support, and create political accountability across ministries.

In conclusion, while Cambodia has made initial strides in integrating national responses to the food, nutrition, and climate nexus, institutional fragmentation, limited financing, and weak monitoring systems continue to hinder integrated action. Strengthening CARD's mandate and capacity, developing a clear policy and institutional framework for climate–nutrition integration, and empowering sub-national governance can provide a foundation for coordinated efforts. Sustainable financing through national budgets and greater private sector engagement is essential to reduce reliance on donors and drive locally relevant solutions. Finally, enhanced monitoring systems, inclusive stakeholder engagement, and high-level political leadership are critical to embed climate–nutrition integration into policy, practice, and public consciousness.



ANNEX A: LIST OF REVIEWED DOCUMENTS

Climate Change and Environmental Policies

- Cambodia Climate Change Strategic Plan (CCCSP) 2014–2023
- Nationally Determined Contribution (NDC) (2020)
- Nationally Determined Contribution (NDC) Cambodia NDC 3 (UNOFFICIAL DRAFT)
- Cambodia's National Climate Change Action Plan for Public Health 2020-2024
- The Climate Change and Health Vulnerability Assessment (V&A)
- Long-Term Strategy for Carbon Neutrality
- National Adaptation Plan (NAP) (2017)
- Climate Change Action Plan for Rural Development Sector 2021-2023
- National Adaptation Plan (NAP) Financing Framework and Implementation Plan
- Cambodia Climate Change Institutional Assessment
- Cambodia National Cooling Action Plan
- Cambodia's Climate Change Strategic Plan for Water Resources and Meteorology (2014-2018)
- Cambodia's National Policy and Strategic Plan for Green Growth 2013-2030
- Cambodia's Circular Strategy on Environment 2023-2028
- Cambodia’s Roadmap for Sustainable Consumption and Production (2022-2035)

Nutrition and Health Policies

- National Policy on School Health (2019)
- National Action Plan on School Health (2021 - 2030)
- National Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases 2018–2027
- National Strategy for Rural Water Supply, Sanitation and Hygiene 2011-2025
- National Strategic Plan for the Disaster Risk Management for Health (2020-2024)
- Cambodia National Nutrition Strategy 2009–2015
- Strategic Framework for Food Security and Nutrition in Cambodia 2008-2012 (SFFSN)
- Food-Based Dietary Guidelines (FBDGs) for School Aged Children (2017)

Food Systems and Agriculture Policies

- Cambodia's Roadmap for Food Systems for Sustainable Development 2030
- Agriculture Sector Master Plan 2030 (ASMP 2030)
- National Agricultural Development Policy 2022-2030
- Cambodia's Agricultural Sector Strategic Development Plan (ASDP) 2014–2018
- Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector 2014-2018
- Gender Mainstreaming Policy and Strategic Framework in Agriculture 2022-2026
- The Third National Strategy for Food Security and Nutrition 2024 - 2028

Development Policies

- National Strategic Development Plan (NSDP)
- Cambodia's Rural Development Strategy and Action Plan 2019-2023
- Cambodia's Pentagonal Strategy Phase 1

Unavailable Policies

- Cambodia Climate Change Strategic Plan (CCCSP) 2024-2034
- The National Guidelines for Rural Drinking Water Quality (2021)
- Third National Strategy for Food Security and Nutrition (2024–2028)
- Cambodia's National Agricultural Development Policy 2022-2023
- Cambodia's Five-Year Strategic Plan 2019-2023 for Agriculture Sector
- Emergency Preparedness and Response Plan on Rural WASH 2019–2023

ANNEX B: STAKEHOLDER CONSULTED

Government Entities

- Ministry of Environment (MoE)
- Department of Land Resources Management, Ministry of Agriculture, Forestry and Fisheries (MAFF)
- Council for Agricultural and Rural Development (CARD)
- Cambodia National Mekong Committee, Ministry of Water Resources and Meteorology
- Cambodia Development Resource Institute (CDRI)
- Ministry of Land Uses and Urban Planning and Management
- Inland Freshwater Research and Development Institute/Ministry of Agriculture, Forestry, and Fisheries

Non-Government Organizations

- Helen Keller International (HKI) Cambodia
- Conservation International (CI)
- International Institute of Rural Reconstruction (IIRR)
- WorldFish Cambodia
- World Wildlife Fund (not yet conducted)

Academic Institutions

- Faculty of Development Study, Royal University of Phnom Penh

United Nations Agencies

- World Food Programme (WFP) Cambodia
- Food and Agriculture Organisation (FAO) Cambodia

ANNEX C: KEYWORD SEARCH PYTHON CODE

```
import pandas as pd
from PyPDF2 import PdfReader
import re
import openpyxl

def clean_text_for_xml(text):
    if text:
        cleaned_text = "".join(char for char in text if ord(char) >= 32 or ord(char) in [9, 10, 13])
        return cleaned_text
return ""

file_names = ['']  # A comma-separated list of the documents to be analysed

keywords = ['']  # A comma-separated list of the keywords to be searched

all_keyword_results = []  # An empty list to store the results

for file_name in file_names:
    print(file_name)  # Print file name for tracking progress
    pdf = PdfReader(open(file_name, 'rb'))

    keyword_pages = {}
    keyword_count = {}
    keyword_sentences = {}

    for keyword in keywords:
        pages = []
        count = 0
        sentences = []

        for page_number in range(len(pdf.pages)):
            page = pdf.pages[page_number]
            text = page.extract_text()
            matches = re.finditer(r"\b(?:{})\b".format(keyword), text, flags=re.IGNORECASE)

            for match in matches:
                count += 1
                sentence_start = text.rfind('.', 0, match.start()) + 1
                sentence_end = text.find('.', match.end())
                sentence = text[sentence_start:sentence_end].strip()
                sentences.append(sentence)

                if page_number + 1 not in pages:
                    pages.append(page_number + 1)

        keyword_pages[keyword] = pages
        keyword_count[keyword] = count
        keyword_sentences[keyword] = sentences

    data = {'Keyword': [], 'Pages': [], 'Total Occurrences': [], 'Sentences': []}  # Convert the results to a pandas DataFrame

    for keyword, pages in keyword_pages.items():
        data['Keyword'].append(keyword)
        data['Pages'].append(', '.join(map(str, pages)) if pages else 'Not found')
        data['Total Occurrences'].append(keyword_count[keyword])
        cleaned_sentences = [clean_text_for_xml(sentence) for sentence in keyword_sentences[keyword]]  # Clean the sentences
before adding them
        data['Sentences'].append('\n'.join(cleaned_sentences))

    df = pd.DataFrame(data)
    df['File Name'] = file_name  # Add the file name as a column
    all_keyword_results.append(df)

combined_results = pd.concat(all_keyword_results, ignore_index=True)  # Concatenate the results for all files into a single
DataFrame
combined_results.to_excel('results.xlsx', index=False)  # Save the combined results to an Excel file
```

ANNEX D: DETAILED POLICY CLASSIFICATION TABLE

Policy	Thematic Classification	Integration Classification
Cambodia Climate Change Strategic Plan (CCCSP) 2014–2023	Climate Change and Environmental Policies	Level 1
Nationally Determined Contribution (NDC) 2.0 (2020)	Climate Change and Environmental Policies	Level 2
Nationally Determined Contribution (NDC) Cambodia NDC 3.0 (UNOFFICIAL DRAFT)	Climate Change and Environmental Policies	Level 3
Cambodia's National Climate Change Action Plan for Public Health (2020-2024)	Climate Change and Environmental Policies	Level 4
National Adaptation Plan (NAP) (2017)	Climate Change and Environmental Policies	Level 2
Climate Change Action Plan for Rural Development Sector 2021-2023	Climate Change and Environmental Policies	Level 1
National Adaptation Plan (NAP) Financing Framework and Implementation Plan (2017)	Climate Change and Environmental Policies	Level 3
Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector (CCPAP) 2014-2018	Climate Change and Environmental Policies	Level 3
Cambodia Climate Change Institutional Assessment	Climate Change and Environmental Policies	Level 1
Cambodia National Cooling Action Plan	Climate Change and Environmental Policies	Level 2
Cambodia's Climate Change Strategic Plan for Water Resources and Meteorology (2014-2018)	Climate Change and Environmental Policies	Level 1
Cambodia's National Policy and Strategic Plan for Green Growth 2013-2030	Climate Change and Environmental Policies	Level 2
Cambodia's Circular Strategy on Environment 2023-2028	Climate Change and Environmental Policies	Level 2
Cambodia’s Roadmap for Sustainable Consumption and Production (2022-2035)	Climate Change and Environmental Policies	Level 2
National Policy on School Health (2019)	Health and Nutrition Policies	Level 1
National Action Plan on School Health (2021 - 2030)	Health and Nutrition Policies	Level 3

National Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases 2018–2027	Health and Nutrition Policies	Level 1
National Strategy for Rural Water Supply, Sanitation and Hygiene 2011-2025	Health and Nutrition Policies	Level 1
National Strategic Plan for the Disaster Risk Management for Health (2020-2024)	Health and Nutrition Policies	Level 1
Cambodia National Nutrition Strategy 2009–2015	Health and Nutrition Policies	Level 1
Strategic Framework for Food Security and Nutrition in Cambodia 2008-2012 (SFFSN)	Health and Nutrition Policies	Level 2
Food-Based Dietary Guidelines (FBDGs) for School Aged Children (2017)	Health and Nutrition Policies	Level 1
Cambodia's Roadmap for Food Systems for Sustainable Development 2030	Food Security and Agriculture Policies	Level 3
Strategic Development Plan for Cambodian Agro-Industries 2019 - 2030	Food Security and Agriculture Policies	Level 2
National Agricultural Development Policy 2022-2030	Food Security and Agriculture Policies	Level 3
Cambodia's Agricultural Sector Strategic Development Plan (ASDP) 2014–2018	Food Security and Agriculture Policies	Level 3
Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector 2014-2018	Food Security and Agriculture Policies	Level 3
Gender Mainstreaming Policy and Strategic Framework in Agriculture 2022-2026	Food Security and Agriculture Policies	Level 2
The Third National Strategy for Food Security and Nutrition 2024 - 2028	Food Security and Agriculture Policies	Level 4
National Strategic Development Plan (NSDP)	Development Policies	Level 3
Cambodia's Rural Development Strategy and Action Plan 2019-2023	Development Policies	Level 1
Cambodia's Pentagonal Strategy Phase 1	Development Policies	Level 1

ANNEX E: KEY INFORMANT INTERVIEW GUIDE

1. What are major climate change events affecting the country (drought, floods, etc.) and how do you think they affect nutrition?

2. The climate change and health vulnerability assessment (V&A) quote that "Stunting and undernutrition are major climate-sensitive concerns in Cambodia. However regional variability in nutritional deficiencies is high." Could you elaborate around regional variability in nutritional deficiencies? What are the driving factors behind these differences?

3. What are current concerns around nutrition services for people in Cambodia? How are diets currently shifting, and how is the government seeking to impact dietary shifts?

4. What are government's priority areas in combating climate change and improve agricultural productivity (probe: water management and governance, building adaptation and resilience, promoting mitigation technologies, mainstream CC into national and sub-national budgeting processes, building capacities of sectoral and sub-national line agencies, developing legal frameworks, etc.)?

5. Where/in what areas do you think the integration of CC and nutrition is currently weak, presents some margins for improvement in Cambodia? (i.e. diversifying diets, improving water management, investing in social protection, promoting CSA, strengthening the health system, increasing resilience, reducing GHG, etc)?

6. What do you believe are the main causes of the lack/weak integration of climate and nutrition (i.e. missing or outdated policies, gaps in financing, data, or stakeholder inclusion, etc)?

7. What could be considered key examples of integration of CC and nutrition at national level (i.e. diversifying diets, improving water management, investing in social protection, promoting CSA, strengthening the health system, increasing resilience, reducing GHG, etc)?

8. Could you please name some successful stories of integration of climate and nutrition actions? Are you aware of specific districts implementing climate-smart agriculture and community-based nutrition programs in tandem? (which ones are these districts, what sort of integrated programs they implement?)

9. What are key potential actors and institutions (government bodies, donors, civil society) that champion climate-nutrition linkages? Are there specific cross-sectoral coordination mechanisms that support the integration of climate and nutrition?

10. What are opportunities for strengthening the climate and nutrition nexus (potential synergies with donor and development partner initiatives, opportunities for alignment, integration, sequencing and layering)?

11. Is your organisation involved in thematic and programmatic activities related to climate-nutrition integration? If so, could you expand on these activities (what areas do you focus on? diversifying diets, improving water management, investing in social protection, promoting CSA, strengthening the health system, increasing resilience, reducing GHG, etc)? What is the sort of support that your organisation brings to the integration of climate change and nutrition?

12. To your knowledge, to what extent is climate factored into food procurement decisions for food in public settings (e.g., school meals and school feeding, health and care facilities), as well as safety nets and emergency programmes?

ANNEX F: CITED SOURCES

Agabiirwe, C. N., P. Dambach, T. C. Methula, et al. 2022. "Impact of Floods on Undernutrition among Children under Five Years of Age in Low- and Middle-Income Countries: A Systematic Review." Environmental Health 21: 98.**https://doi.org/10.1186/s12940-022-00910-7**.

Davies, Grace I., Lachlan McIver, Yoonhee Kim, Masahiro Hashizume, Steven Iddings, and Vibol Chan. 2015. "Water-Borne Diseases and Extreme Weather Events in Cambodia: Review of Impacts and Implications of Climate Change" International Journal of Environmental Research and Public Health 12, no. 1: 191-213. **https://doi.org/10.3390/ijerph120100191**

Karpati, Judit, Chris de Neubourg, Arnaud Laillou, and Evelyne Poirot. 2020. "Improving Children's Nutritional Status in Cambodia: Multidimensional Poverty and Early Integrated Interventions." Maternal & Child Nutrition 16 (Suppl 2): e12731. **https://doi.org/10.1111/mcn.12731.**

McIver, Lachlan J., Chisato Imai, Petra G. Buettner, Paul Gager, Vibol S. Chan, Masahiro Hashizume, Steven N. Iddings, Hero Kol, Piseth P. Raingsey, and K. Lyne. 2016. "Diarrheal Diseases and Climate Change in Cambodia: Environmental Epidemiology and Opportunities for Adaptation." Asia Pacific Journal of Public Health.**https://doi.org/10.1177/1010539516660190**.

Ministry of Health Cambodia. 2019. National Climate Change Action Plan for Public Health 2019–2023. Phnom Penh: Ministry of Health Cambodia.

Ngin C., de Silva S., Sithirith M., and Sao S. 2024. "Toward an Integrated Approach to Food Security and Nutrition in Cambodia". Penang, Malaysia: WorldFish. Policy Brief.

Swift, Jonathan M., Peck, L., Dobbin, A., and Schaefer, J. 2022. "Urban climate resilience in Phnom Penh, Cambodia." Frontiers in Sustainable Cities 4:972173**. https://doi.org/10.3389/frsc.2022.972173.**

Tong, Kimsun, Bopharath Sry, and Annalisa Prizzon. 2021. Financing for Agriculture, Forestry and Fisheries in Cambodia: Opportunities to Enhance the Contribution of External Finance to the Sustainable Development Goals. Phnom Penh: Cambodia Development Resource Institute. https://odi.org/en/publications/financing-for-agriculture-forestry-and-fisheries-in-cambodia/.

World Bank. 2021a. Cambodia Economic Update: Road to Recovery. Washington, DC: World Bank Group.**https://openknowledge.worldbank.org/handle/10986/35611.**

World Bank Group. 2021b. Climate Risk Country Profile: Cambodia. Washington, DC: World Bank.