

ADVANCING SYNERGIES ACROSS NUTRITION AND CLIMATE ACTION

I-CAN ASSESSMENT 2025



Irish Aid
An Roinn Gnóthaí Eachtracha agus Trádála
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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.

Climate Focus: Climate Focus is a pioneering international advisory company and think tank that provides advice to companies, governments, multilateral, non-governmental and philanthropic organizations. We support our clients to shape and navigate international and domestic climate policies, access climate finance, engage with new climate mechanisms, and beyond. Climate Focus is recognised for its research and advisory services on climate, agriculture and food systems policies.

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GLOSSARY

ATACH	Alliance for Transformative Action on Climate and Health
CGIAR	The Consultative Group on International Agricultural Research
CO₂	Carbon Dioxide
COP	The Conference of Parties
CSOs	Civil Society Organisations
DAC	Development Assistance Committee
EIT	European Institute of Innovation and Technology
ESG	Environmental, Social and Governance
FAO	Food and Agriculture Organisation of the United Nations
FBDGs	Food-Based Dietary Guidelines
GAIN	Global Alliance for Improved Nutrition
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas(es)
GNR	Global Nutrition Report
GIIN	Global Impact Investing Network
GINA	Global Database on the Implementation of Nutrition Action
HICs	High-Income Countries
I-CAN	Initiative on Climate Action and Nutrition
IPCC	Intergovernmental Panel on Climate Change
LMICs	Low and Middle-Income Countries
N4G	Nutrition for Growth
NAF	Nutrition Accountability Framework
NAPs	National Adaptation Plans
NCDs	Non-Communicable Diseases
NDCs	Nationally Determined Contributions
NGOs	Non-Government Organisations
NNPs	National Nutrition Plans
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
R&D	Research and Development
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
SUN	Scaling Up Nutrition Movement
UNFCCC	United Nations Framework Convention on Climate Change
V&A	Vulnerability Assessments
WHO	World Health Organisation
WBA	World Benchmark Alliance

EXECUTIVE SUMMARY

Climate change and malnutrition share common drivers and consequences yet are largely treated in isolation¹. Changing temperatures combined with extreme weather events are already having profound impacts on ecosystems, agricultural production and supply chains – and consequently the accessibility and affordability of a nutritious diet for millions of people. At the same time, agriculture and food systems are a key driver of climate change and biodiversity loss – both of which will further jeopardise the availability and affordability of healthy diets, especially for vulnerable populations, including women, children and Indigenous Peoples.

Integrated approaches to tackling the climate change crisis and malnutrition in all its forms can offer win-win solutions across multiple sectors, and countries' efforts to tackle climate change moving forward will directly shape how global nutrition outcomes evolve over the next decade.

This report examines the extent to which this integration is occurring: how well is climate integrated within nutrition initiatives, and how well is nutrition integrated within climate initiatives? This is achieved through an analysis of 16 key indicators, 12 focused on policy and 4 on business and finance, across up to 198 countries. For policy indicators, a four-tiered classification system (see left) was used to assess the degree of integration between climate and nutrition. For finance indicators, the share of international climate finance that is relevant to nutrition outcomes was assessed. The same methodology applied in the 2023 I-CAN Baseline Assessment was used in order to assess progress made over the past two years.

As summarised in the figure below, the results show modest improvement in the integration of climate and nutrition since 2023—but also considerable progress left to be made.

Classification System	
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

Considering documents published under international frameworks,² National Nutrition Plans and National Adaptation Plans showed relatively strong climate-nutrition integration, with 51% and 46% of countries, respectively, attaining the highest two scores (Levels 3 and 4). In contrast, Nationally Determined Contributions (to mitigating climate change) and National Biodiversity Strategies and Action Plans showed low levels of integration, with just under two-thirds of documents demonstrating no evidence of integration (Level 1). Two of four indicators improved from 2023, though the scale of improvement was minimal (less than 6%).

1. Standing Together for Nutrition (ST4N). *The Climate Crisis and the Nutrition Crisis Are Intertwined: The need and the opportunity for policy action to address both crises simultaneously*. Policy Brief. Washington, DC: Micronutrient Forum; 2025.

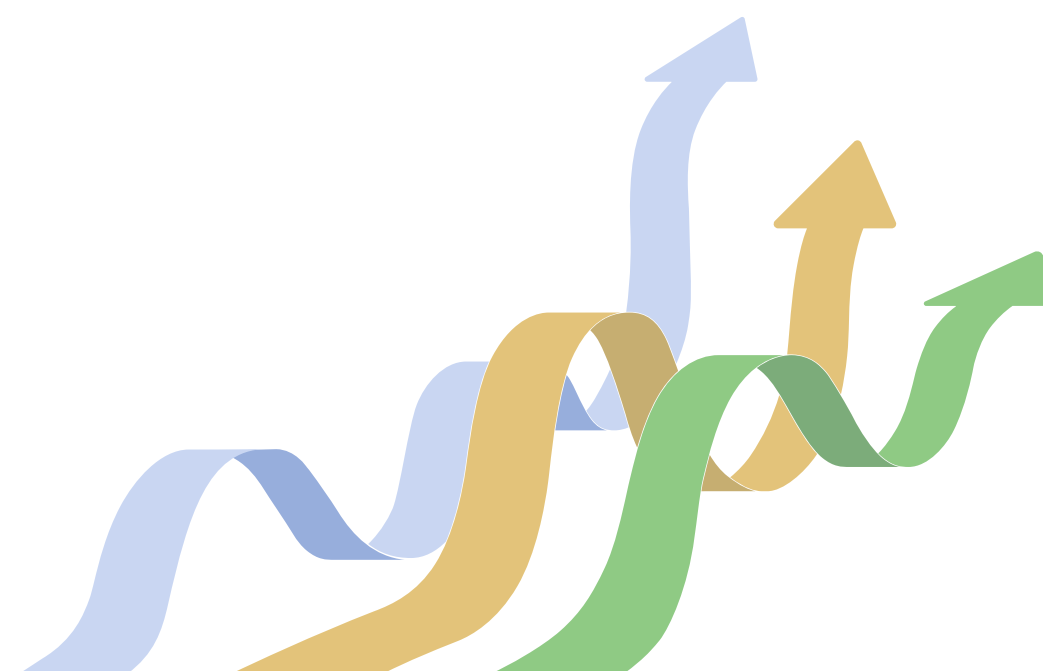
2. Nationally Determined Contributions, National Adaptation Plans, National Biodiversity Strategies and Action Plans and National Nutrition Plans

Among other thematic strategies,³ levels of integration were generally lower than in strategies published under international frameworks. The highest integration was seen in Climate Change Gender Action Plans, 69% of which showed an intention to take integrated action on climate and nutrition (Level 3 or above). However, all other indicators lagged far behind. Changes since 2023 were mixed: a large improvement was seen for Public Food Procurement Strategies, with 24% of countries now scoring at the highest two levels of integration, compared to just 7% in 2023, but integration declined in Climate Change and Health Vulnerability Assessments, from 64% scoring in the top two categories in 2023 to 38% in 2025.

Concerning investments in climate and nutrition,⁴ only a very minor share of financing provided by bilateral donors and major development banks supports dual climate and nutrition objectives. Just 1% of the USD 137 billion in annual environment-related official development assistance (ODA) supports nutrition-related objectives. For World Bank environment-related finance, the figure is 2.9% of USD 67.5 billion.

Integration also remains low within the private sector, with none of the 350 companies assessed under the World Benchmarking Alliance Food and Agriculture Benchmark scoring well on both nutrition and environmental sustainability.

Despite modest progress since 2023, the report makes clear that integration of climate and nutrition in key international and national policies and financing remains limited. This represents a missed opportunity for identifying and implementing win-win solutions that can simultaneously advance goals of ending malnutrition and fostering climate resilience. On the deadline for submission of updated Nationally Determined Contributions, and at the midpoint of a critical decade for climate and nutrition action, it is essential for decision-makers to strengthen the integration of the two intertwined topics in policy and financing and for partner organisations to improve the quality of data and evidence that enable this.



3. Such as Climate Change Gender Action Plans, Climate Change and Health Vulnerability Assessments, Health National Adaptation Plans, Food-Based Dietary Guidelines, National Food Loss and Waste Strategies, and Public Food Procurement Strategies

4. Environment- and nutrition-related official development assistance as recorded by the OECD; environment-related World Bank finance supporting nutrition objectives; investments made by Green Climate Fund that are climate and nutrition supporting and number of companies in the World Benchmark Alliance that score well on nutrition and sustainability

	Less Intergrated		More Intergrated	
				
Level of nutrition-climate integration in...	Level 1	Level 2	Level 3	Level 4
Nationally Determined Contributions	56% ↓	23% ↓	18% ↑	3%
National Adaptation Plans	19% ↓	35% ↓	27% ↑	19% ↑
National Biodiversity Strategies and Action Plans	62%	27%	7%	4%
National Nutrition Plans	23% ↓	26% ↑	21% ↓	30% ↑
National Climate Plans*	58%	32%	9%	1%
Climate Change Gender Action Plans*	6%	25%	63%	6%
Climate Change & Health Vulnerability Assessments	14% ↑	48% ↑	38% ↓	0% ↓
Health National Adaptation Plans*	31%	31%	11%	27%
Food-Based Dietary Guidelines	52% ↓	24% ↓	11% ↑	13% ↑
National Food Loss and Waste Strategies*	46%	21%	30%	3%
Public Food Procurement Strategies	46% ↓	30% ↑	16% ↑	8% ↑
Social Protection Programmes*	74%	13%	10%	3%
Private-sector agri-food companies' approaches ~	79% ↑	16% ↓	5% ↓	0%
Share of climate-related ODA that supports projects with nutrition objectives*	1% (of USD 1.5 B)			
Share of World Bank environment-related finance going to nutrition-related activities*	2.9% (of USD 1.9 B)			
Share of Green Climate Fund finance going to nutrition-related activities*	23% (of USD 292 M)			

Notes: Arrows indicate a change (upward or downward) in the share of countries at that indicator between 2023 and 2025 of 2 percentage points or more. An asterisk next to the indicator name indicates that indicator was not assessed in 2023.

~ This indicator is based on the extent to which companies score high on both the environment and nutrition benchmarks of the World Benchmarking Alliance.

INTRODUCTION

As the International Panel of Experts on Biodiversity and Ecosystem Services reported in 2024, global climate, biodiversity, and nutrition challenges are interlinked in several ways.⁵

Climate change and biodiversity loss are interdependent and produce compounding impacts which threaten both human health and nutrition. Changing temperatures combined with extreme weather events are already having profound impacts on ecosystems, agricultural production and supply chains – and consequently, the accessibility and affordability of a nutritious diet for millions of people. In 2023, it was reported that an estimated 2.3 billion people, or ~29% of the global population, did not have regular access to adequate food.⁶ The same report estimated that if current trends continue, over 500 million more people will be undernourished⁷ by the end of the decade. Other research suggests that by 2050,

climate change could lead to a 30% increase in childhood stunting by exacerbating deficiencies in key micronutrients.⁸ At the same time, agriculture and food systems are a key driver of climate change and biodiversity loss, having directly and indirectly driven 70% of all biodiversity loss and threatening most species at risk of extinction.⁹ Changing climate and loss of biodiversity will further jeopardise the availability and affordability of healthy diets for vulnerable populations, including women, children, Indigenous Peoples, and people living in poverty at higher risks. Hence, how we tackle climate change and biodiversity loss moving forward will directly affect global efforts to address nutrition challenges.

The overlapping drivers and consequences of these crises necessitate synergistic solutions.

Integrated approaches to tackling climate change and nutrition crises can offer win-win solutions across agriculture and food, water, social protection, and health sectors.¹⁰ Coherent, targeted action can help to mitigate emissions, improve water management, reduce food loss and waste, boost soil fertility, provide diversified livelihood opportunities and tackle gender equality, among other benefits. The need for integrated approaches has been recognised in international policy frameworks – including the first Global Stocktake under the Paris Agreement, the UAE Framework for Global Climate Resilience, and the COP28 UAE Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action, all of which call for climate resilient agricultural production and equitable access to food and nutrition for all. Similarly, the Kunming-Montreal Global Biodiversity Framework (GBF), in Target 10 and Target 16, explicitly underlines the role of agriculture and sustainable food consumption in biodiversity conservation and restoration. Such responses also directly contribute to several Sustainable Development Goals (SDGs) related to health, climate, biodiversity, and poverty.

National commitments such as the Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) under the UNFCCC and the National Biodiversity Strategies and Action Plans (NBSAPs) are the key mechanisms to set and communicate ambitious goals and plans that build more efficient, inclusive, resilient, and sustainable food systems that can deliver multiple benefits related to biodiversity, climate, human health, and nutritional outcomes. Ensuring alignment among national policies and planning in all sectors is crucial to deliver on these global goals and to put countries on a long-term sustainable development path. As the funding mechanisms to support the implementation of global climate, biodiversity, and sustainable development agenda, Green Climate Fund (GCF), Global Environment Facility (GEF), the World Bank, and Regional Multilateral Development Banks play a crucial role in channelling finance to projects and programmes that take an integrated approach to climate, biodiversity and food issues and objectives.

5. IPBES. (2024). *IPBES nexus assessment: summary for policymakers*.

6. FAO, IFAD, UNICEF, WFP, & WHO (2024). *The State of Food Security and Nutrition in the World 2024 – Financing to end hunger, food insecurity and malnutrition in all its forms*. FAO. Retrieved from <https://doi.org/10.4060/cd1254en>.

7. Undernourished refers here to consumption levels below the minimum dietary energy requirement. See *The State of Food Security and Nutrition in the World 2024 – Supplementary Material*.

8. Standing Together for Nutrition (ST4N)(2025) Policy Brief: The Climate Crisis and the Nutrition Crisis are Intertwined. Original source: Tigchelaar M, Selig ER, Sarhadi A, et al. *Nutrition-sensitive climate risk across food production systems*. *Environ Res Lett*. 2025;20(1):014046.

9. WWF. (2024). *Aligning the Rio Conventions for Sustainable Food Systems Transformation*. Retrieved from <https://climatefocus.com/publications/aligning-the-rio-conventions-for-sustainable-food-systems-transformation/>.

10. FAO. 2023. *Climate action and nutrition – Pathways to impact*. Rome.

ABOUT I-CAN

I-CAN aims to foster collaboration to accelerate transformative action addressing the critical nexus of climate change and nutrition. I-CAN was launched in 2022 during COP27 by the Presidency of Egypt, hosted by WHO with core partners including GAIN, FAO, UNEP and the SUN Movement. Over the past three years I-CAN has worked to advance integrated action across several pillars of work including national-level policy analysis and technical support in 13 countries. I-CAN is an active part of the wider Alliance for Transformative Action on Climate and Health (ATACH) and connects to many other existing initiatives, coalitions and networks to strengthen the integration of nutrition into climate, food, and health action.

The 2023 & 2024 I-CAN Baseline Assessments

The 2023 I-CAN report, 'Accelerating Action and Opening Opportunities: A Closer Integration of Climate and Nutrition', led by GAIN, provided a baseline assessment of current levels of climate and nutrition integration, identifying weaknesses, strengths, and opportunities within climate and nutrition policies, strategies, plans, and financing. As the first systematic effort to measure the degree of alignment between national climate and nutrition policies across multiple sectors and countries, the I-CAN Baseline Assessment created a starting point for benchmarking and tracking progress toward integrated action.

The report showed that NDCs had the lowest levels of climate-nutrition integration overall, with only 2% of 166 assessed NDCs scoring at the highest level of integration and 60% of NDCs with no intentional connectedness between climate and nutrition.¹¹ While other national strategies like NAPs and National Nutrition Plans (NNPs) showed higher level of integration, overall climate and nutrition integration remained low across policies and strategies targeting climate, food security, and health.

Building upon the Baseline Assessment and recognizing the deep interlinkages between

biodiversity loss, the drivers and consequences of the climate crisis, and nutrition, I-CAN published "Biodiversity and Nutrition Synergies: Evaluating National Biodiversity Strategies and Actions Plans for Integration (NBSAPs)" ahead of CBD COP16 in 2024. This report builds directly on the Baseline Assessment, analysing nutrition-biodiversity linkages across 192 NBSAPs. The majority of NBSAPs assessed demonstrated a considerable lack of integration between biodiversity and nutrition, with only 4% showing a commitment to mobilise resources and implement distinct actions to connect biodiversity and nutrition.

Purpose of the 2025 I-CAN Baseline Report

Two years on, coinciding with the due date for countries' NDCs 3.0, I-CAN has conducted an update to assess progress made in the last two years. The analysis expands on the original policy analysis to consider a range of additional policies, strategies and financing portfolios. The outcomes of this assessment will continue to advance I-CAN's goals to advocate for greater integration between climate and nutrition action.

Assessment approach

Sixteen indicators were selected for this assessment, building on the I-CAN Baseline Assessment in 2023 and the 'Biodiversity and Nutrition Synergies' report in 2024. In line with the 2023 and 2024 assessments, the 2025 analysis applied a four-level classification system to assess the degree of integration between climate and nutrition, and biodiversity and nutrition across all policy indicators. Each data point (document or strategy) assessed under each policy indicator has been classified as one of four levels ranging from no integration (Level 1) to strong integration with concrete plans for action (Level 4). For the finance indicators, the assessment involved identifying the share of total finance provided by each financial entity that is considered relevant to nutrition outcomes.

11. GAIN and I-CAN (2023). Accelerating Action and Opening Opportunities: A Closer Integration of Climate and Nutrition. 2023 I-CAN Baseline Assessment

Updates to the 2023 and 2024 assessments

In comparison to the prior assessments, additional indicators were selected to address gaps and broaden the thematic scope of the original report. These included indicators focused on countries' high-level climate plans, climate change and gender action plans (ccGAPs), health-related national adaptation plans (HNAPs), food loss and waste policies, and social protection programmes. The assessment also takes a closer look at climate and nutrition integration in international financing – examining trends in finance commitments made by the Green Climate Fund (GCF), Global Environment Facility (GEF), Asian Development Bank (ADB) and African Development Bank (AfDB) as well as by philanthropic donors.

Several indicators included in the 2023 assessment were unable to be assessed due to challenges in defining an appropriate measurement approach or a lack of available data. These are excluded from this assessment. For the assessment of Climate and Change Health and Vulnerability Assessments (V&As) it was only possible to conduct secondary analysis in 2023 as the policy documents were not available. However the primary documents are analysed directly in this update. The source used for food procurement policies, the Global database on the Implementation of Food and Nutrition Action (GIFNA), has been upgraded since the 2023 assessment which used the prior version of the Global database on the Implementation of Nutrition Action (GINA).

Minor updates were made to the methodology, including the addition of further keywords to increase the comprehensiveness of the analysis in areas such as food safety, set out in further detail in the Annex to this report.

FINDINGS

This chapter presents findings from the analysis of 16 indicators that measure the level of integration among climate, nutrition, and biodiversity strategies, and their implementation and financing. Overarching findings and key themes are presented before a detailed breakdown of results per indicator. These results reflect the most up to date documents available under each indicator, as of mid-September 2025.

This includes all documents published since the Baseline Assessment, and, where no updated document is available, the document analysed under the Baseline Assessment. **Table 2** presents an overview of all indicators and results, including original scores for all indicators analysed under the Baseline Assessment, presented in grey.

Table 2. Overview of all indicators and results

Indicator		Indicator type	No. countries or records analysed	Results			
				Level 1	Level 2	Level 3	Level 4
National Strategies under International Policy Frameworks							
1.1	Level of climate-nutrition integration in Nationally Determined Contributions (NDCs)	Policy	167	94	39	29	5
				56%	23%	18%	3%
	Baseline Assessment		166	60%	25%	14%	2%
1.2	Level of climate-nutrition integration in National Adaptation Plans (NAPs)	Policy	63	12	22	17	12
				19%	35%	27%	19%
	Baseline Assessment		43	23%	37%	23%	16%
1.3	Level of climate-nutrition integration in National Biodiversity Strategies and Action Plans (NBSAPs)	Policy	198	122	53	15	8
				62%	27%	7%	4%
	NBSAP Assessment		192	62%	27%	7%	4%
1.4	Level of climate-nutrition integration in National Nutrition Plans (NNPs)	Policy	53	12	14	11	16
				23%	26%	21%	30%
	Baseline Assessment		50	28%	22%	26%	24%

Indicator		Indicator type	No. countries or records analysed	Results			
				Level 1	Level 2	Level 3	Level 4
National Strategies under International Policy Frameworks							
2.1	Level of climate-nutrition integration in National Climate Plans	Policy	163	95	53	14	1
				58%	32%	9%	1%
	New indicator						
2.2	Level of climate-nutrition integration in Climate Change Gender Action Plans	Policy	16	1	4	10	1
				6%	25%	63%	6%
	New indicator						
2.3	Level of climate-nutrition integration in Climate Change and Health Vulnerability Assessments	Policy	29	4	14	11	0
				14%	48%	38%	0%
	Baseline Assessment		42	5%	31%	55%	10%
2.4	Level of climate-nutrition integration in Health National Adaptation Plans (HNAPs)	Policy	33	10	10	4	9
				31%	31%	11%	27%
	New indicator						
2.5	Level of climate-nutrition integration in Food-Based Dietary Guidelines (FBDGs)	Policy	71	37	17	8	9
				52%	24%	11%	13%
	Baseline Assessment		70	54%	26%	9%	11%
2.6	Level of climate-nutrition integration in National Food Loss and Waste Strategies	Policy	33	15	7	10	1
				46%	21%	30%	3%
	New indicator						
2.7	Level of climate-nutrition integration in Public Food Procurement Strategies	Policy	119	54	36	19	10
				46%	30%	16%	8%
	Baseline Assessment		93	83%	10%	4%	3%
2.8	Level of climate-nutrition integration in Social Protection Programmes	Policy	30	22	4	3	1
				74%	13%	10%	3%
	New indicator						

Indicator		Indicator type	No. countries or records analysed	Results			
				Level 1	Level 2	Level 3	Level 4
Finance commitments							
3.1	Value of ODA to climate-related projects that support nutrition objectives (2022-2023)	Finance	63,644	1% of climate-related ODA goes to activities that explicitly mention nutrition at a total value of USD 1.5 billion (annual average, 2022-2023)			
	Baseline Assessment (2019-2021)		65,080	1% of climate-related ODA goes to activities that explicitly mention nutrition at a total value of USD 1.2 billion (annual average, 2019-2021)			
3.2	Value and number of World Bank projects that are nutrition and climate supporting (2023-2024)	Finance	720	2.9% of World Bank environment-related finance going to nutrition-related activities at an average total value of USD 1.9 billion (annual average, 2023-2024)			
3.3	Value and number of Green Climate Fund projects that are nutrition and climate supporting (2024)	Finance	14	USD 35M in 2024 (3%)	USD 257M in 2024 (20%)	USD 741M in 2024 (58%)	USD 236M in 2024 (19%)
	Baseline Assessment (2021-2022)		51	USD 1,320M in 2021 (45%), USD 958M in 2022 (66%)	USD 711M in 2021 (45%), USD 273M in 2022 (19%)	USD 795M in 2021 (27%), USD 167M in 2022 (12%)	USD 76M in 2021 (3%), USD 43M in 2022 (3%)
3.4	Number of companies in the World Benchmark Alliance that score well on nutrition and sustainability	Finance	350	278	56	16	0
				79%	16%	5%	0%
	Baseline Assessment		350	72%	18%	10%	0%

KEY FINDINGS AND EMERGING OPPORTUNITIES

Overarching signs of modest progress

Overall, results suggest modest improvement in the integration of climate and nutrition since the 2023 Baseline Assessment. The highest levels of climate and nutrition integration were observed in ccGAPs, NNPs and NAPs, for which 69%, 51% and 46% of countries, respectively, scored at the highest two levels of integration (Level 3 or 4). When comparing results to the 2023 Assessment, the most notable improvement is observed in Public Food Procurement Strategies, in which over 24% of documents now score at the highest two levels of integration, compared to just 7% in 2023. Positive trends are also observed in finance flowing to climate- and nutrition-related activities. While the share of finance committed to such activities by the World Bank or via ODA remains minimal – with neither providing more than 3% of annual climate-related finance to nutrition-supporting activities – finance committed by environment- and regionally focused development banks appears to show far better levels of integration. A high-level assessment of the AfDB suggests that just under half (48%) of all finance committed by the Bank in 2024 was considered climate- and nutrition-related, with smaller but significant shares of nutrition-related finance commitments found in the GCF (23%), ADB (19%), and GEF (15%) portfolios.

Sub-Saharan Africa and Latin America & the Caribbean take centre stage

In line with the findings from the Baseline Assessment, Sub-Saharan Africa and Latin America & the Caribbean host the countries with the highest level of climate and nutrition integration across all indicators. This finding is perhaps unsurprising. Both parts of the world are highly climate vulnerable, and at the same time, have significant levels of mal- and undernutrition. Agriculture makes up a large share of both economies, making climate-resilient, nutrient-sensitive agricultural interventions a win-win development solution. It may also be the case that the development agendas and climate strategies of the countries in question are somewhat shaped by the funders and other international actors that support their development. Sub-Saharan Africa and

Latin America & the Caribbean also receive by far the largest share of financing from funders with a global focus (OECD countries, WB, GCF and GEF). Given the prevalence of malnutrition and food insecurity, interventions in sub-Saharan Africa and Latin America & the Caribbean are likely to have an outsized impact on tackling hunger – and provide associated benefits relating education, food security and economic outcomes – hence their prioritisation by funders.

Stronger integration at the nexus of gender, nutrition and climate change

Of the new indicators for this report, ccGAPs showed the greatest climate and nutrition integration of all policy indicators with 69% scoring at the highest two levels (Level 3 or 4). Women are disproportionately affected by both climate change and malnutrition and a strong consideration of gender is essential to integrated action on these interlinked issues. The strong levels of integration in ccGAPs is promising, especially as these cover a diverse set of countries across several regions and may offer insights which can be incorporated into other climate policies such as NDCs and NAPs.

Indigenous and traditional food knowledge for climate resilience

An emerging theme – observed most prominently in ccGAPs but also in NBSAPs and NAPs – was the promotion of local, traditional and medicinal foods to improve climate resilience. Indigenous agricultural and ecological practices typically support ecosystem health and biodiversity while emphasising the consumption of native, nutrient-rich foods. In some countries, the preservation and promotion of this knowledge – especially by women – is considered essential for the development of food systems that are nutritious, sustainable and adaptive to the growing impacts of climate change. Many ccGAPs emphasised the key role of women and Indigenous peoples in preserving this knowledge and the need to scale up knowledge sharing opportunities.

Signs of stagnation and opportunities for progress

Of the core policy indicators assessed in the 2023 report, the share of policies scoring at each level of climate and nutrition integration remains largely unchanged. None of the overarching scores for the NDC, NAP, NNP, NBSAP or FBDG indicators rose more than 6% above their original score.

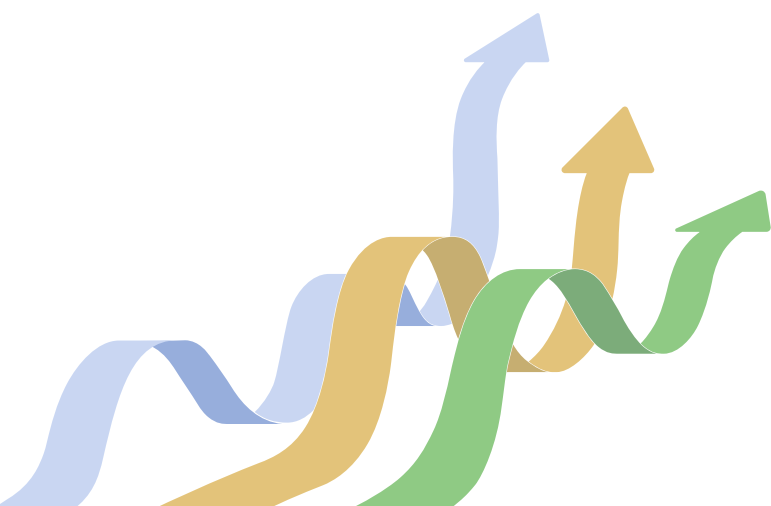
Particularly notable are the low levels of climate and nutrition observed in countries' NDCs. While the NDC 3.0 submission deadline was September 2025, as most Parties to the Paris Agreement are yet to submit their renewed NDCs, there is a pivotal opportunity for countries to increase the scope, ambition and detail of their climate mitigation and adaptation plans – and with it, improve the cohesion of action across their different sustainable development objectives. However, the majority of NDCs still show low levels of climate and nutrition integration, with 79% of all assessed documents scoring Level 2 or below, like the Baseline Assessment. NDCs have historically been more mitigation-focused – emphasizing measures designed primarily to reduce GHG emissions rather than to adapt to the impacts of climate change – and thus have been less likely to focus on, for instance, agriculture-related adaptation interventions that benefit nutrition. Nonetheless, with the impacts of climate change already tangible across most continents, the need for adaptation responses – in addition to strong mitigation plans – is essential, not only for the most climate vulnerable countries. All countries should prioritise the inclusion of adaptation actions – on topics including food, health and nutrition – to their climate plans and strategies, making sure to align objectives across strategies to maximise positive outcomes.

The missing link to nutrition

In policy documents across all indicators, interventions focused on improving the volume and climate resilience of the national food supply were common. Yet, these interventions were often not linked to any nutrition-related outcome indicators, even when nutrition-related issues were emphasised as a critical problem or national priority. This missing link is a missed opportunity for impact: by including nutrition objectives and sub-activities into such interventions, countries can build resilience of their food systems as a whole and deliver on multiple SDGs. For example, agriculture-focused interventions can be accompanied by education programmes which promote healthy diets and the cultivation of nutrient-rich foods; gender-focused programmes which empower women in agriculture; and value chain support which strengthens supply chains for nutrient-rich foods.

A lack of consistency in reporting continues to hinder a full assessment of progress

Among finance indicators, there remains little consistency in the reporting frameworks used to measure the impact of finance commitments. Not all funds and reporting platforms apply thematic tags to finance commitments and among those that do, concepts and definitions are not consistent. This makes it difficult to determine the true volume of finance going to climate- and nutrition-related activities. For some financial institutions, sourcing appropriate project information also remains labour intensive and complex. To facilitate better progress tracking across climate and nutrition-related action areas, financial institutions, development agencies and other funders should pursue alignment in their financial reporting to enable more accurate evaluations of progress. This includes technical alignment – such as standardised terminology and thematic tags for activities considered climate- and nutrition- supporting – as well as institutional alignment, which could involve the creation of aggregated funding platforms with comprehensive, publicly accessible data on financed activities.



1. NATIONAL STRATEGIES UNDER INTERNATIONAL POLICY FRAMEWORKS

1.1 Level of climate-nutrition integration in Nationally Determined Contributions (NDCs)

Nationally Determined Contributions (NDCs) are national climate action plans submitted by countries under the Paris Agreement. NDCs outline countries' specific commitments to reduce greenhouse gas (GHG) emissions and adapt to the impacts of climate change. They are the platform for Parties to the Paris Agreement to communicate their climate targets and actions in support of the Agreement's goal to limit global temperature rise to 1.5°C above pre-industrial levels. To enhance ambition over time, the Paris Agreement requires that each updated NDC – required every five years – must demonstrate progress compared to the previous one and reflect the country's highest possible level of ambition.

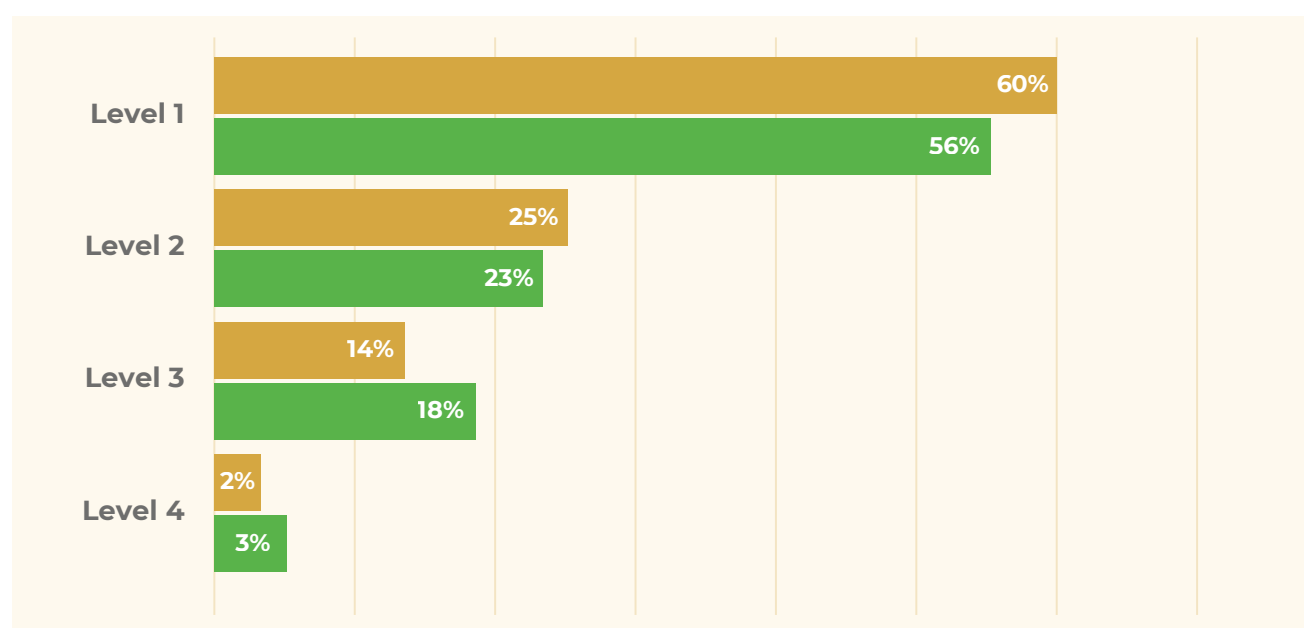
Climate mitigation and adaptation measures can significantly impact nutritional outcomes, making it essential for countries to consider nutrition within their NDCs. NDCs help countries to define ambitious policies and, for low- and middle-income

countries (LMICs) in particular, help to highlight priority needs for financial and technical support. The most recent round of updated NDCs – so-called NDCs 3.0, submitted by September 2025 – are a key opportunity for countries to improve consideration of nutrition in their climate policies and measures.

The vast majority of NDCs show little integration of climate and nutrition (See Figure 1).

- Just over half (56%) of all NDCs assessed indicate no awareness or intention to connect the two issues (Level 1);
- A smaller share (23%) shows some awareness of the climate-nutrition link, but no clear plans to act on it (Level 2); and
- Around one fifth of NDCs (21%) demonstrate a clear intention to address climate and nutrition issues in tandem, with just 3% of these, 5 NDCs in total, presenting clear resources and budgets with which to implement their plans.

Figure 1. Level of climate-nutrition integration in Nationally Determined Contributions (NDCs) in 2023 (n=166) and 2025 (n=167)



Source: Data from UNFCCC NDC Registry

2023 2025

Changes since 2023 Baseline Assessment

Of the 166 countries assessed in the Baseline Assessment, 64 published updated NDCs in advance of the September 2025 deadline; the remaining 102 did not. There was one new addition: Holy See, which published its first NDC in 2023, bringing the total number of countries assessed to 167. Of the countries with an updated NDC, 20 received an improved classification level - most moving from Level 1 to 2, or Level 2 to 3¹² - and 37 did not change. Seven NDCs declined in score, the largest share moving from Level 2 to 1.¹³

Best practice: Cambodia's NDC (Level 4)

In Cambodia's NDC 3.0 (2025), food systems and nutrition are recognised for their integral role in building resilience against climate impacts and are highlighted as a priority area for adaptation.

The NDC proposes a variety of mitigation and adaptation actions considered to have direct and indirect benefits for nutrition outcomes. Among the proposed adaptation measures, there is a dedicated action to 'Shift food consumption towards more nutritious, healthier and more sustainable diets' with targets based on the WHO Healthy Diet Guidelines, the EAT - Lancet Planetary Health Diet, and a recent study undertaken by the World Bank and World Food Programme on Healthy & Sustainable Diets in Cambodia. Other targets relating to food systems with potential to generate indirect benefits for nutrition outcomes include increasing the adoption of **nutrient management and sustainable agricultural practices; reducing, reusing and adding value to food waste;** strengthening **climate-smart aquaculture and rice-field biodiversity resilience;** and **increasing the climate resilience of agri-food processing and storage systems.** Measures are presented with details on lead ministries, relevant available technologies, associated costs, co-benefits, and impacted SDGs.

NDCs from most regions show limited integration of climate and nutrition. NDCs from the Middle East and North Africa, North America and East Asia and Pacific show the weakest levels of integration, with 87%, 67% and 67% scoring a Level 1, respectively. NDCs from Latin America and the Caribbean show slightly better levels of integration, though over half of the assessed documents also fall under Level 1. Sub-Saharan Africa shows the most promise, with the highest proportion of documents indicating plans to act on connecting climate and nutrition issues (37%). Overall, while some regions are beginning to acknowledge the climate-nutrition nexus, few have progressed toward concrete action.

Most NDCs present national climate concerns and priorities at a high level, meaning that detailed analysis of linkages between climate change and

nutrition is often lacking. NDCs have historically been more mitigation-focused – emphasising measures designed primarily to reduce GHG emissions rather than to adapt to the impacts of climate change. Many nutrition-related interventions – often focused on agriculture or food and health policy and infrastructure – provide more adaptation than mitigation benefits and thus have been a more common feature of NAPs than NDCs to date. For countries where the impacts of climate change are already being felt, however – such as Caribbean sub-Saharan African countries – adaptation measures related to food, water and health are an increasingly central component of NDCs. Among those scoring highly in this assessment, enhancing food security through climate-resilient agriculture and fisheries was a common theme.

¹². Of the 20 countries whose NDCs improved in score, 8 moved from L1 to L2, 4 from L2 to L3, 6 from L2 to L3, 1 from L2 to L4 and 1 from L3 to L4.

¹³. Of the 7 NDCs that declined in score, 4 moved from L2 to L1, 2 from L2 to L1, and 1 from L3 to L2.

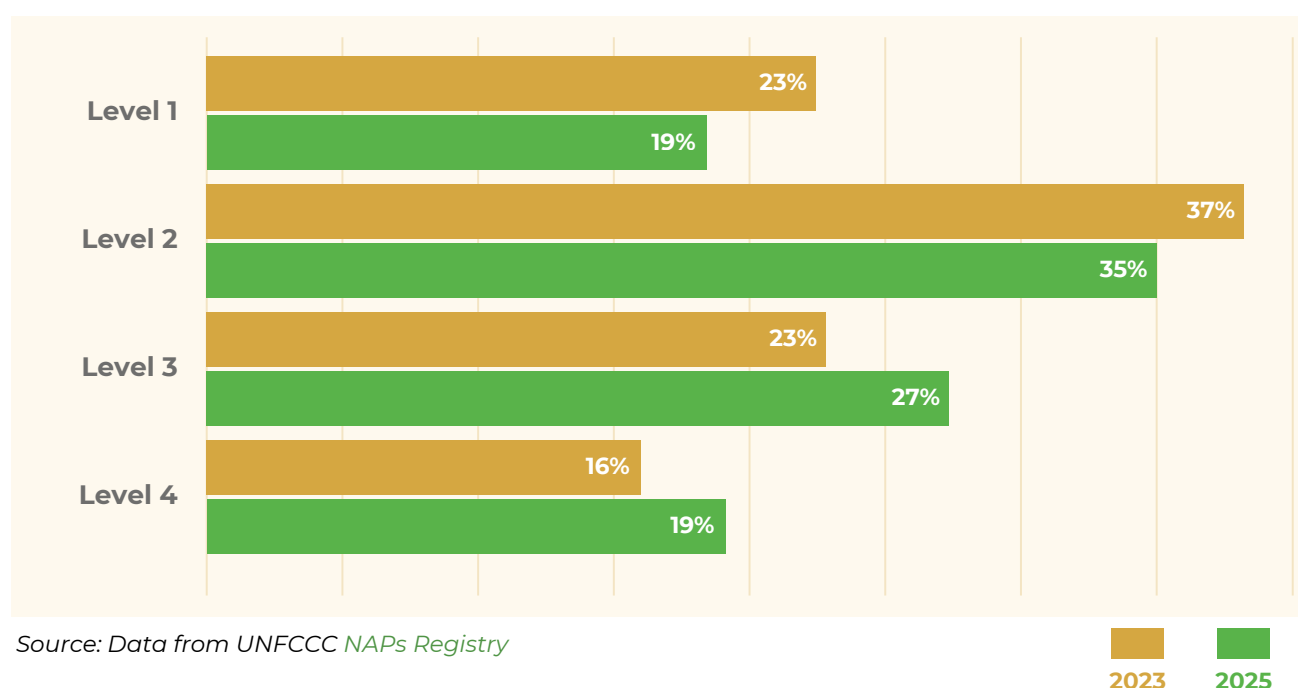
1.2 Level of climate-nutrition integration in Nationally Adaptation Plans (NAPs)

National Adaptation Plans (NAPs) are a key planning tool for addressing climate change impacts. NAPs seek to reduce climate vulnerability by building adaptive capacity and resilience. They facilitate the integration of climate change adaptation into relevant policies, programmes, and activities – in particular, the development of planning processes and strategies across sectors and at different levels.¹⁴ This makes NAPs a crucial vehicle for aligning action on climate with nutrition, health and biodiversity priorities.¹⁵

The majority (81%) of 63 assessed NAPs demonstrate some level of climate and nutrition integration while only about a fifth lack any explicit integration of adaptation action with nutrition priorities (See Figure 2):

- Almost a fifth (19%) show a clear commitment to mobilise resources and distinct plans to connect climate and nutrition (Level 4)
- More than a quarter (27%) show an intention to mobilise resources to connect climate and nutrition (Level 3).
- More than a third (35%) include some, albeit weak, connection between climate and nutrition.

Figure 2. Level of climate-nutrition integration in National Adaptation Plans (NAPs) in 2023 (n=43) and 2025 (n=63)



¹⁴. See decision 5/CP.17 at https://unfccc.int/files/adaptation/cancun_adaptation_framework/national_adaptation_plans/application/pdf/decision_5_cp_17.pdf

¹⁵. IPCC (2023). AR6 Synthesis Report: Climate Change 2023. Intergovernmental Panel on Climate Change. Retrieved from https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.

NAPs show a slightly more encouraging picture than NDCs with regards to climate-nutrition integration. Sub-Saharan Africa stands out, with over 50% of assessed NAPs scoring above a Level 3. Latin America and the Caribbean also shows good levels of integration, with around 7% achieving Level 4. The weakest overall scores are observed in Europe and Central Asia, for which over two-thirds (67%) of assessed documents showed no integration of climate and nutrition (Level 1). Results across the remaining regions are mixed.

Overall, NAPs appear to reflect a stronger and more intentional integration of nutrition into climate adaptation planning than NDCs, particularly in Sub-Saharan Africa and Latin America.

Food security is a key theme across NAPs. All but one NAP reference food security and centre it as a core objective of national climate adaptation efforts. Other recurring themes include climate-resilient agriculture, enhancing public health infrastructure, and raising public awareness of nutrition-related illnesses.

Changes since 2023 Baseline Assessment

Since the Baseline Assessment, only two countries published updated NAPs; the remaining 42 did not. An additional 19 countries not previously included in the analysis were assessed. The two countries which updated their NAPs in the interim – Burkina Faso and Burundi – showed no change in score, achieving Level 3 and Level 4, respectively.

Best practice: Burundi's NAP (Level 4)

Burundi's National Adaptation Plan (2023) recognises the direct link between climate change and malnutrition, highlighting how the population's dependence on rain-fed, subsistence agriculture makes it particularly vulnerable to nutrition-related health impacts.

The NAP presents a variety of overarching programmes and strategies relevant to climate action including Burundi's National Contingency Plan (2021), which was developed to help the country prepare and respond to the impacts of drought, including impacts on food and nutritional insecurity. Among the proposed adaptation measures, those with an explicit consideration of nutrition include one to **evaluate new food crop varieties with high yield, nutritional potential and resilience to climate change**; an "Integrated Food and Nutrition" programme designed to **integrate climate considerations into national food and nutrition strategies**; and a "Support for Sustainable Agricultural Production and Improved Food Security and Climate Resilience" programme, which aims to expand **resilient and improved production systems for food security and sustainable nutrition** across three provinces. Measures are presented with details on lead ministries and associated costs.

1.3 Level of climate-nutrition integration in National Biodiversity Strategies and Action Plans (NBSAPs)

NBSAPs provide national-level strategic guidance on the protection and management of biodiversity within a country and are the main tool guiding implementation of the GBF at the national level. Each CBD Party is expected to review or update its NBSAP to align it with the Kunming-Montreal Global Biodiversity Framework (GBF) Targets adopted in 2022. The Goals and Targets set out in the GBF formulate the efforts that are required globally to halt and reverse nature loss by 2030. As most implementation of the GBF will happen at the national level, NBSAPs should reflect the highest possible level of ambition permitted by national circumstances.

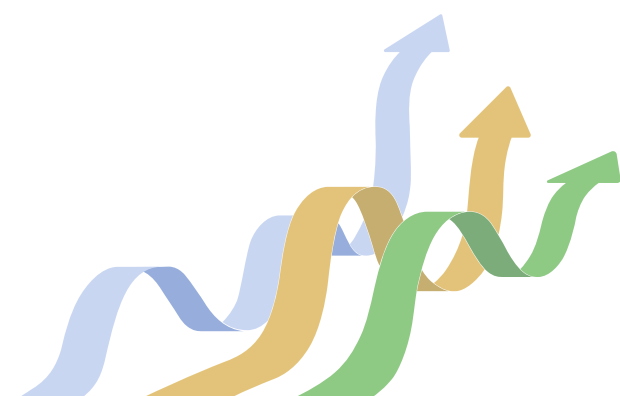
NBSAPs are important avenues for mainstreaming intersectoral collaboration to improve biodiversity management. Improving food security, nutrition, and overall quality of diets are key to enhance biodiversity in agriculture under GBF Target 10 and address unsustainable consumption patterns as outlined in GBF Target 16.¹⁶ Policy measures related to nutrition promote all dimensions of individuals' health and well-being; have low environmental pressure and impact; are accessible, affordable, safe, and equitable; and are culturally acceptable making them important levers of change under NBSAPs.

Despite the explicit linkages between action on nutrition and biodiversity, most of the 198 assessed NBSAPs miss the opportunity to adequately integrate nutrition in their targets and measures:

- The majority of NBSAPs (89%) show either a weak or no intentional integration of nutrition-related actions (Level 1 or 2);
- A small share (7%) shows an intention to connect biodiversity and nutrition through actions (Level 3); and
- Only 4% indicate a commitment to mobilise resources and implement distinct actions connecting biodiversity and nutrition (Level 4).

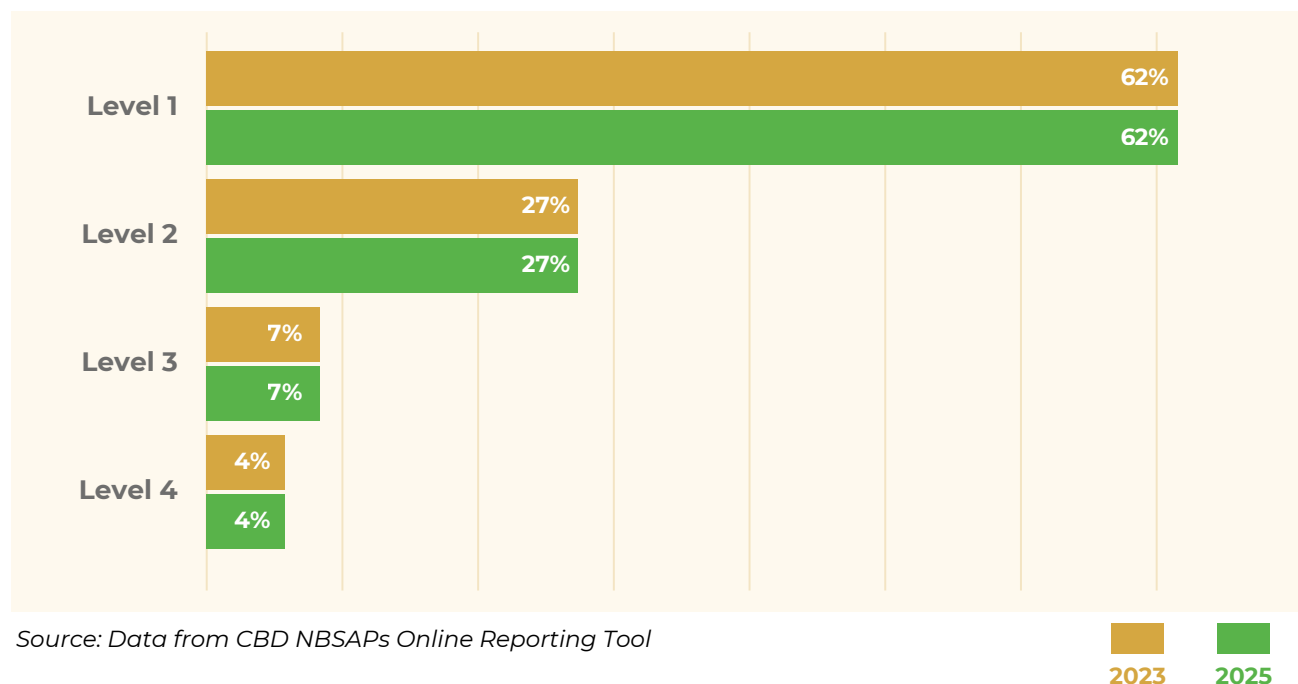
Across geographic regions, NBSAPs in Sub-Saharan Africa and East Asia and Pacific show the strongest integration of nutrition-related actions while Middle East and North Africa and Europe and Central Asia regions show the weakest level of integration. In these two regions, the majority (more than 75%) of NBSAPs scored Level 1 (showing no intentional connections between biodiversity and nutrition). See **Figure 3** below.

Among NBSAPs, there is an equal prevalence of references to food security and nutrition. The few NBSAPs with some level of climate-nutrition integration acknowledge the role of biodiversity, ecosystems, and ecosystem services for food security and nutrition, focusing target actions on agroecological or other sustainable agricultural practices.



16. Köppen, S., Brasil, B., Braslavsky, C. C., Carcamo, R., Clark, G., Coscieme, L., et al. (2024). Implementing GBF Target 16: Addressing biodiversity impacts of food consumption. Retrieved from <https://bfn.bsz-bw.de/frontdoor/deliver/index/docId/1805/file/pol244en.pdf>.

Figure 3. Level of climate-nutrition integration in National Biodiversity Strategies and Action Plans (NBSAPs) in 2023 (n=192) and 2025 (n=198)



Changes since 2024 Assessment

Of the 192 CBD parties (i.e., countries) included in the 2024 NBSAP Assessment, 37 have since submitted an updated NBSAP. An additional 6 countries submitted NBSAPs that were not part of the 2024 Assessment, bringing the total number assessed to 198. Of the 9 countries that improved the integration of nutrition in their updated NBSAP, the majority moved from Level 1 to Level 2.¹⁷ Of the remaining countries that were reassessed, 20 NBSAPs showed no change, while the integration of nutrition declined in 7 NBSAPs.¹⁸ None of the newly assessed NBSAPs scored higher than a Level 3. For further examples of NBSAPs demonstrating high levels of climate and nutrition integration, see the 2024 I-CAN Biodiversity and Nutrition Synergies report.¹⁹

Best Practice: Germany's NBSAP (Level 3)

Germany's National Biodiversity Strategy 2030 acknowledges the wide array of benefits provided by biodiversity, including supporting human nutrition. It draws an explicit link between the decline in global biodiversity and food security, and the significance of ecosystem restoration for human health. It highlights the pressing need to shift global eating habits towards a more plant forward diet, as recommended by the EAT-Lancet commission.

Specific targets presented that are relevant to nutrition include **increasing the availability of vegetables, fruit and legumes** for sustainable and healthy nutrition, with a focus on minimally processed, seasonal and regional foods; advancing **climate-adaptive food production**; **halving food waste**; and **reducing the use of chemical pesticides on crops**.

¹⁷. Of the countries whose NBSAPs improved in score, 5 moved from L1 to L2, 2 from L2 to L3 and 1 from L2 to L3.

¹⁸. Of the countries whose NBSAP declined in score, 5 moved from L2 to L1, and 2 from L3 to L1.

¹⁹. See I-CAN (2024) *Biodiversity and Nutrition Synergies: Evaluating National Biodiversity Strategies and Actions Plans for Integration*.

1.4 Level of climate-nutrition integration in National Nutrition Plans (NNPs)

National Nutrition Plans (NNPs) are national-level documents which outline intended goals and actions to improve the nutritional status of a population. NNPs are typically multi-sectoral and identify long-term strategies to incorporate action across the domains of agriculture, health and social protection. NNPs vary in format, encompassing a range of policy documents, frameworks, strategies and action plans.

As the key national nutrition policy plan, NNPs are important tools to align nutrition and climate planning. Of the 53 NNPs assessed, the majority (77%) show at least some intention to integrate action on climate and nutrition (see **Figure 4**):

- About a third (30%) integrate a commitment to mobilise resources and include distinct plans to take action to connect climate and nutrition (Level 4);
- A fifth (21%) show an intention to mobilise resources to connect climate and nutrition (Level 3); and
- More than a quarter (26%) show some intention to connect nutrition with climate action (Level 2).

These findings suggest that NNPs are more aligned with climate priorities than climate strategies – such as NDCs and NAPs – are aligned with nutrition priorities (see indicators 1.1 and 1.2 above).

Across regions, most NNPs indicate some recognition of the link between climate and nutrition (Level 2), but no concrete plans for action. Sub-Saharan Africa hosts the largest share of high-scoring plans, with 34% containing tangible action strategies (Level 4). Europe, Central Asia, and North America show the lowest levels of integration, with less than 5% moving beyond basic recognition of climate-nutrition links.

Target action areas across NNPs are varied but leveraging sustainable and climate-smart agriculture to achieve positive outcomes for both climate action and nutrition is a priority for several countries. Many others emphasise the benefits of sustainable agricultural practices for strengthening climate resilience of communities.

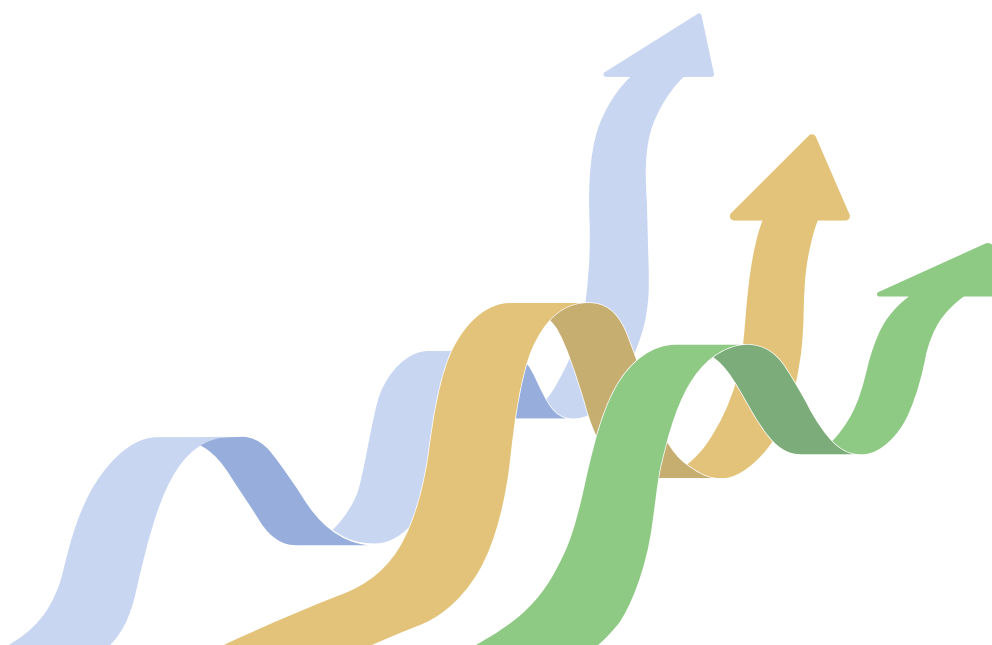
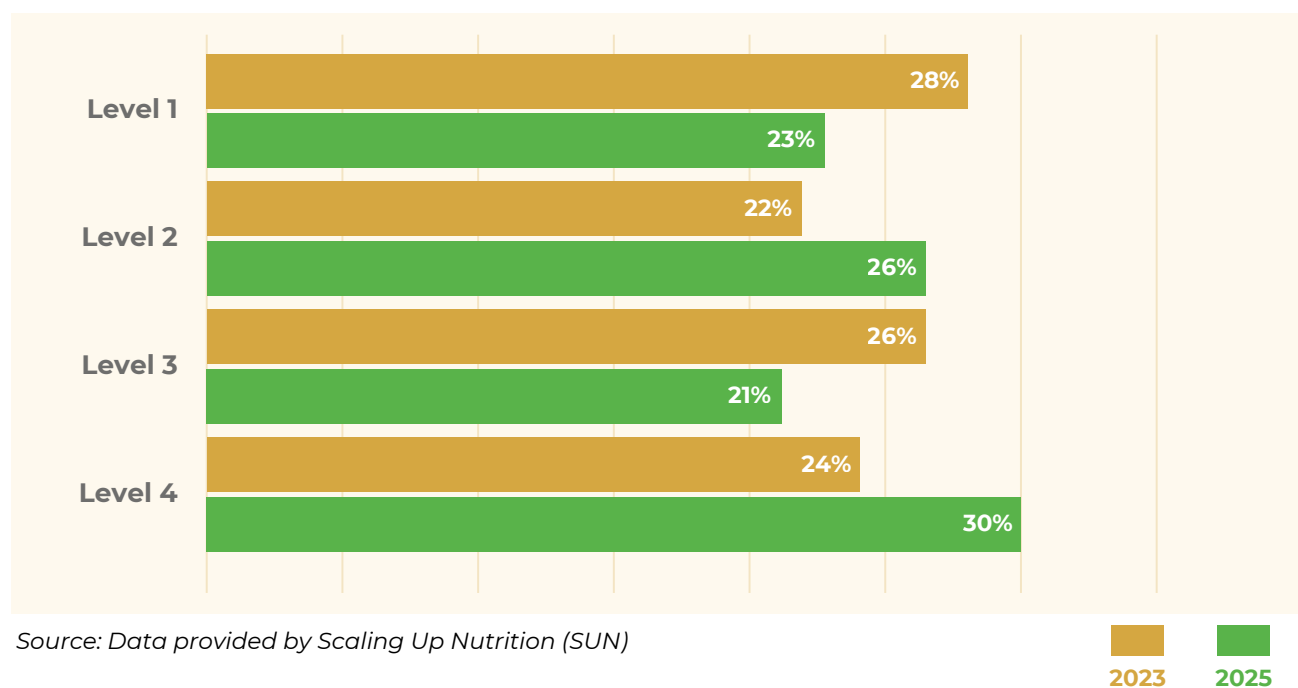


Figure 4. Level of climate-nutrition integration in National Nutrition Plans (NNPs) in 2023 (n=50) and 2025 (n=53)



Changes since 2023 Baseline Assessment

Since the Baseline Assessment which included 50 NNPs, 10 countries published new NNPs. Three of these countries were assessed for the first time. Of the countries that were previously assessed, 5 showed an improved level of climate-nutrition integration,²⁰ 4 did not change, and one — Cambodia — declined, notably moving from Level 4 to Level 1.

Best Practice: Malawi's NNP (Level 4)

Malawi's National Multisectoral Nutrition Strategic Plan (2025-2030) makes explicit references to the impacts of climate change on weather cycles and, as a result, food systems and human nutrition. The strategy is intended to address the impact of climate change on nutrition using a food systems approach across the value chain while adapting to and mitigating climate shocks.

Issues factored into the development of the NNP included opportunities for developing climate-smart nutrition, nutrition-sensitive social protection, food systems transformation, alignment with the SUN Movement and the SDGs. The NNP includes an explicit objective to promote and advocate for sustainable food systems and climate change resilience, to improve nutritional status. Specific action areas include improving governance for nutrition in sustainable food systems; promoting food safety, reducing food waste, and value addition within the food system; and promoting the adoption of innovative climate resilience approaches for optimal nutrition. Specific measures proposed under the latter include conducting **advocacy for the production, multiplication and planting of improved fruit**

20. Of the countries whose NNP improved in score, 1 moved from L1 to L2, 1 from L1 to L4, 1 from L2 to L3, 1 from L2 to L4, and 1 from L3 to L4.

trees for optimal nutrition and climate change mitigation; increasing **community awareness on the production of climate resilient crops**; and pursuing the **creation of seed banks for climate resilient and nutritious local crop varieties**; and creating **awareness campaigns on the production and consumption of underutilised and climate resilient crops and livestock**. Measures are presented with details on lead ministries, associated costs and co-benefits.

Increasing focus on climate change in nutrition advocacy - outcomes from the 2025 Nutrition for Growth (N4G) Summit

In the 2023 Baseline Assessment, I-CAN analysed the commitments recorded by the Global Nutrition Report made under the Nutrition Accountability Framework (NAF), which guides public and private sector organisations on developing SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) objectives targeting nutrition improvement. The assessment found that 95% of commitments made from 2021 - 2022 made no connection to climate change and highlighted the opportunity to address this at the next N4G summit held in France in 2025.

In the preparation for the 2025 N4G Summit, a much greater focus was placed on climate with one of three core areas focused on developing commitments on nutrition, transition to sustainable food systems and climate. The final statement of the summit noted the wide range of commitments made to integrate nutrition into other sectors, including climate and environment.

At the time of this assessment, no new commitments had been published on the Nutrition Accountability Framework (NAF) platform. Commitments made in 2025 were, however, published in the Statement Annex of the Nutrition for Growth (N4G) 2025 Summit. The 2025 N4G Summit Statement Annex outlines 517 nutrition-related commitments by 127 commitment makers across 66 countries. Around half of these commitments were considered to contain some link to climate, indicating a significant increase in the consideration of climate in nutrition commitments compared to the 2023 Baseline Assessment.

It is important to note, however, that the data available for each N4G commitment was less than one page of text, limiting the depth of this analysis. The full list of commitments has since been published and an analysis of the integration of climate is underway with the intention to publish as part of the upcoming Global Nutrition Report.

2. OTHER THEMATIC STRATEGIES

2.1 Level of climate-nutrition integration in National Climate Plans

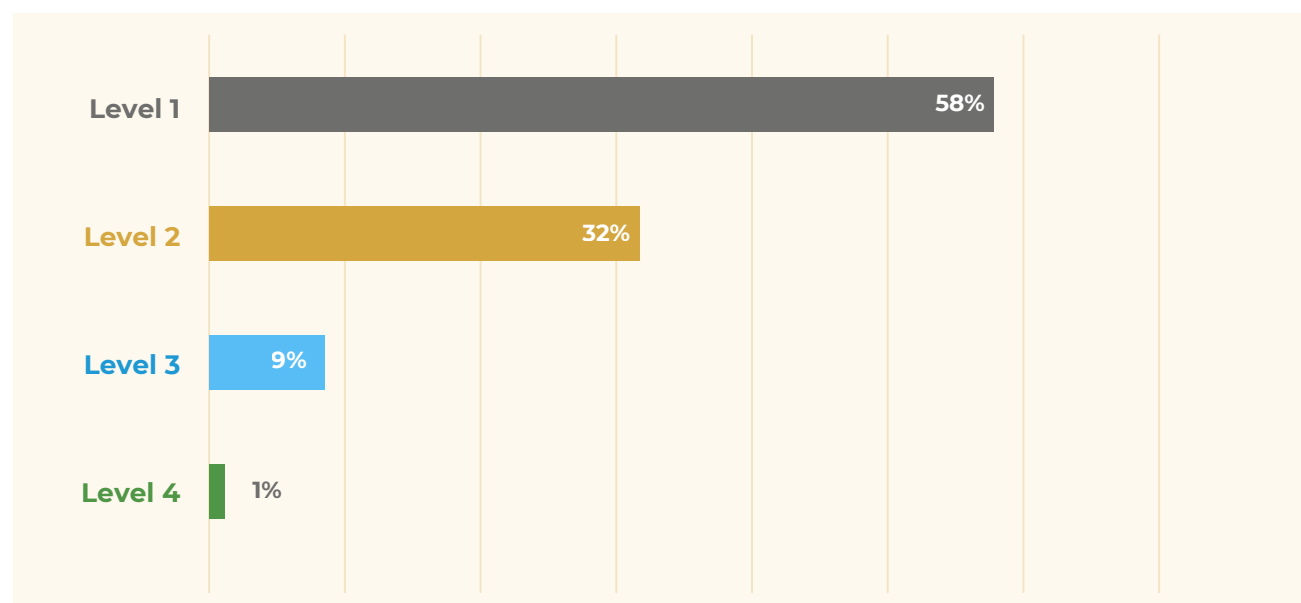
National climate plans are strategic documents that support the implementation of climate mitigation and adaptation targets under NDCs and NAPs and put countries on a long-term sustainable development path. This is a new indicator added to the I-CAN assessment in 2025 to gauge the mainstreaming of nutrition in climate policy making and implementation. National Climate Plans are not mandated by any overarching framework, but rather encompass any national policies, plans, and strategies published by countries to support the reduction of GHG emissions, build climate resilience, and ensure low-emission and sustainable development.

The findings from a review of 163 national climate plans show a significant gap in mainstreaming nutrition in climate plans (See Figure 5):

- More than half (58%) included no intentional links between climate and nutrition (Level 1).
- A third (32%) showed some intent to connect climate and nutrition (Level 2).
- A minority (9%) indicated an intention to mobilise resources to connect climate and nutrition (Level 3 and 4).

Across most regions, high-level climate plans lack evidence of climate and nutrition integration. The majority of plans from East Asia and Pacific, Europe and Central Asia, and Latin America & Caribbean show no link to nutrition, scoring over 60%, respectively. Only one plan from Europe and Central Asia scores above a Level 2. Only documents from Sub-Saharan Africa show any concrete plans for action (Level 4), but these account for just under 3% of the regional total. Across all regions, less than 7% demonstrate clear awareness, intention and concrete plans for action (Levels 3 or 4).

Figure 5. Level of climate-nutrition integration in National Climate Plans in 2025 (n=163)



Source: Data from Climate Policy Database

Best Practice: Kenya's high-level climate plan (Level 4)

Kenya's National Climate Change Action Plan (2023-2027) contains a clear strategic objective to address food and nutrition security. It highlights a variety of climate risks facing the country, including the impact of droughts on national nutrition levels. It also explores the linkages between climate-induced conflict and undernutrition, and the increased risk of malnutrition that women and children face in these environments.

Strategic objectives relevant to nutrition include enhancing the productivity and resilience of the agricultural sector; enhancing the resilience of the blue economy; and mainstreaming climate change adaptation into the health sector. Specific target actions include **enhancing the uptake of climate-smart agriculture and improving farmer productivity to support food and nutrition security**; and **enhancing the contribution of youth to nutrition security through the creation of 'agri-hubs'**, among other things. Actions under the pillar 'Mainstreaming climate adaptation into the health sector' are also considered to have positive, indirect implications for nutrition outcomes. Measures are presented with details on lead ministries, associated costs, target groups and outcome indicators.

2.2 Level of climate-nutrition integration in Climate Change Gender Action Plans

Climate Change Gender Action Plans (ccGAPs) build on a country's national development and climate change strategies by identifying gender-specific issues in each priority sector. ccGAPs represent a country's intention to empower and respond to the needs of women in the context of climate change.²¹ They are a key policy vehicle to link gender with national and global goals in a concrete and holistic manner. Women are both disproportionately affected by climate change and key agents in the development of climate resilience – by integrating women into climate mitigation and adaptation approaches, ccGAPs have potential to enhance the effectiveness of climate responses.

Findings from the review of the 16 ccGAPs shows good levels of nutrition integration (See Figure 6):

- One quarter (25%) acknowledged a link between climate and nutrition; (Level 2)
- Just over two thirds (63%) outlined plans for action to connect climate and nutrition; (Level 3)
- However, only 6% - just one country - provided high-level details on how these plans would be implemented. (Level 4)

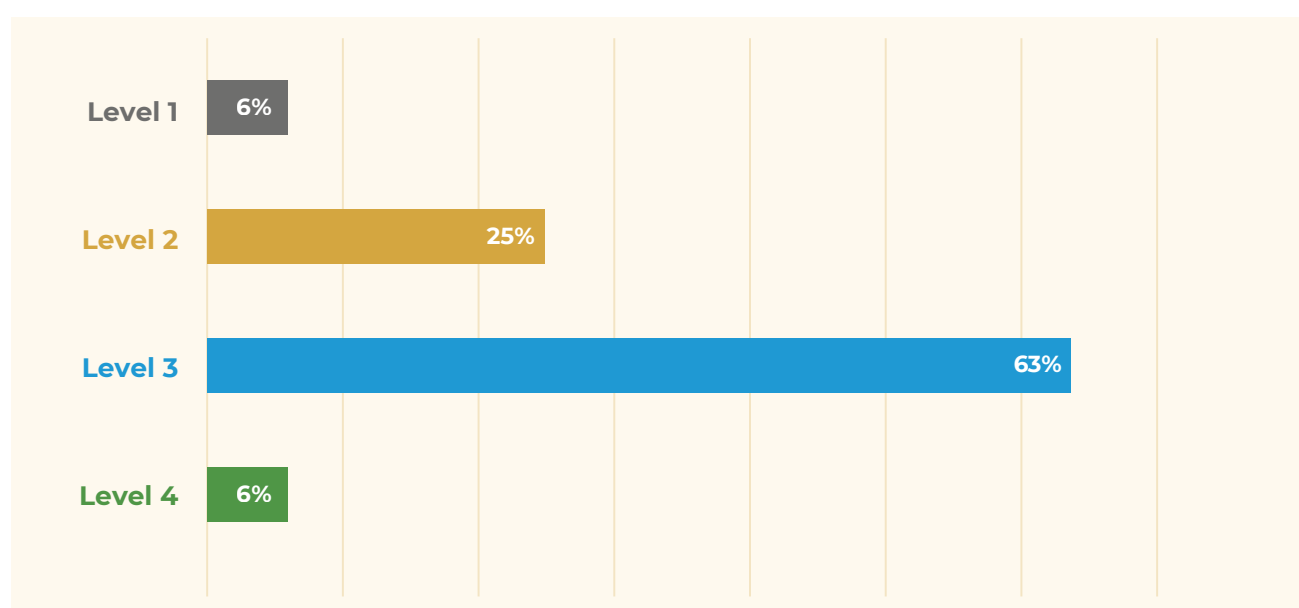
A regional analysis of ccGAPs indicates that those from Sub-Saharan Africa demonstrate the highest levels of climate-nutrition integration, with 75% scoring a Level 3. This region was also the only one with a ccGAP demonstrating concrete resource mobilisation plans (Level 4). Results from North America, the Middle East and North Africa and South Asia were spread across Levels 2 and 3, while the sole ccGAP from Latin America and Caribbean scored a Level 1. No ccGAPs were available for East Asia and Pacific and Europe and Central Asia.

21. See [IUCN: Climate Change Gender Action Plans](#).

A strong theme emerging from the ccGAP assessment was the promotion of local, traditional and medicinal foods. Many ccGAPs emphasised the important role of women and Indigenous peoples in carrying essential knowledge relating to the cultivation of agriculture. Indigenous agricultural and ecological practices typically support ecosystem health and biodiversity, while emphasising the consumption of native, nutrient-rich foods. In some countries, the preservation and promotion of this knowledge – especially by women

– is considered critical for developing food systems that are nutritious, sustainable and climate resilient. Of the ccGAPs assessed, measures ranged from direct agricultural practices – including the promotion of native and traditional seeds, diversified cropping and traditional food preservation methods – to more knowledge-based actions, such as incorporating Indigenous foods into nutrition guidelines and food-related public knowledge hubs.

Figure 6. Level of climate-nutrition integration in Climate Change Gender Action Plans. (n=16)



Source: Data from IUCN ccGAPs portal

Best Practice: Zambia's ccGAP (Level 4)

Zambia's Climate Change Gender Adaptation Plan (2018) highlights how the impacts of climate change – such as droughts, floods, and saline water intrusion – undermine the country's efforts to address food insecurity and malnutrition.

The plan highlights a variety of overarching government strategies that are nutrition-supporting, including Zambia's National Climate Change Adaptation and Mitigation Strategy (2023), which contains a dedicated action area on agriculture, fisheries, and food security and nutrition. The country has also developed a targeted Food and Nutrition Strategic Plan (2011–2015), designed to achieve food and nutrition security with women and girls as a specific focus area. Target actions presented in the ccGAP include promoting **gender-responsive, climate-smart agricultural technologies**, including improved soil and land use; **building a knowledge base on health, gender and climate change linkages**, including traditional medicinal practices; and **promoting sustainable (environmental, social and nutritional) public health interventions**. Measures are presented with details on lead ministries and associated cost.

2.3 Level of climate-nutrition integration in Climate Change and Health Vulnerability Assessments

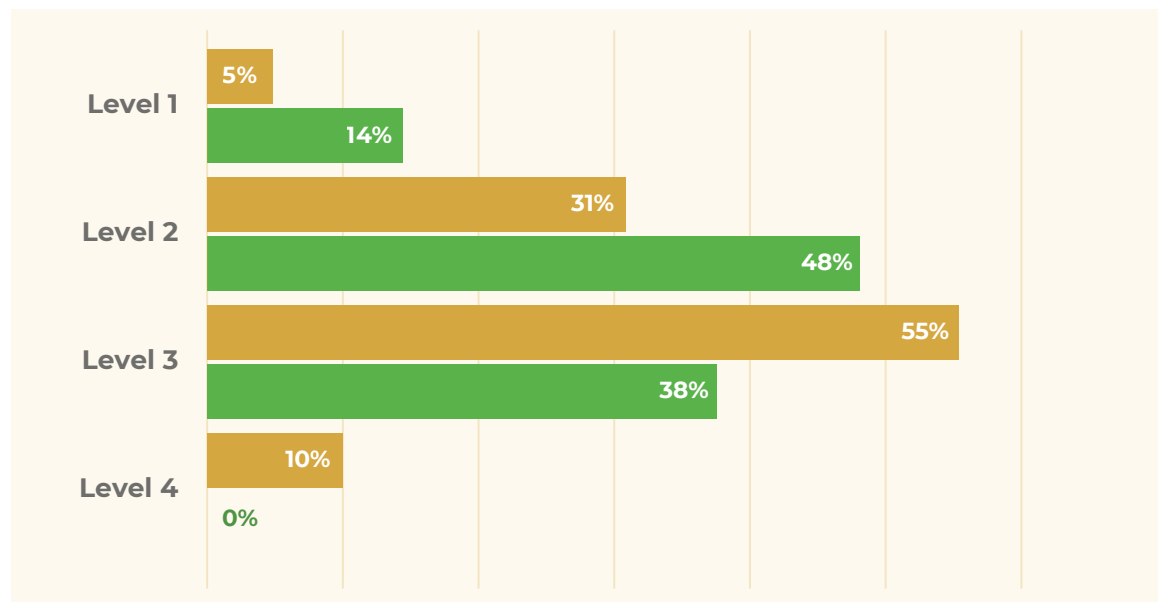
Climate change and Health Vulnerability Assessments (V&As) are surveys completed by national health authorities, in collaboration with other relevant ministries, providing updated information on the health implications of climate change within a country. They contain key information in areas spanning governance, emergency preparedness, disease resilience, adaptation and mitigation measures, climate, and health finance.

An assessment of 29 V&As shows significant integration of climate and nutrition (See Figure 7):

- Almost half (48%) of all documents assessed demonstrated at least some intention to connect climate and nutrition (Level 2); and
- Over one third (38%) showed an intention to mobilise resources to connect climate and nutrition (Level 3).

A strong theme in many V&As is recognition of the prevalence of malnutrition, especially among vulnerable population groups, due to climate-related extreme weather events and associated impacts on food availability and affordability. Another recurring focus area – to a lesser extent – is food safety and climate-related changes in the incidence of food-borne diseases.

Figure 7. Level of climate-nutrition integration in Climate Change and Health Vulnerability Assessments in 2023 (n=42) and 2025 (n=29)



Source: Data from ATACH Resource repository

2023 2025

The V&As revealed significant regional variations in the levels of climate-nutrition integration. Sub-Saharan Africa demonstrates the highest overall scores, with 54% of those assessed scoring a Level 3 and 38% a Level 2. Results from North America and East Asia and Pacific were split across Levels 2 and

3. No concrete plans for action (Level 4) were identified in V&As from any region, suggesting that implementation of action on climate and nutrition remains aspirational. Notably, no V&As from Latin America and Caribbean were available for analysis.

Changes since 2023 Baseline Assessment

The 2025 assessment of V&As cannot be directly compared to the results of the Baseline Assessment, since the original analysis drew on insights from the [2021 WHO Health and Climate Change Survey Report](#) and applied a different methodology. Simply comparing the share of countries scoring at each classification level, however, we observe lower scores across the board: 36% of countries in the 2025 assessment score at Level 3, and none the highest level of integration (Level 4), compared to 65% of countries in the Baseline Assessment scoring a Level 3 or above. Fourteen percent of those assessed in 2025 demonstrated no integration between climate and nutrition, compared to just 5% in the Baseline Assessment.

Best Practice: Sierra Leone's Climate Health V&A (Level 3)

Nutrition is a core component of Sierra Leone's Climate and Health Vulnerability Assessment (2023), identified as one of six climate-related health risk categories. The assessment explores the nutritional status of the population, highlighting disparities in nutrient deficiencies and dietary patterns across different regions. It also explores in detail the growing impacts of weather and climate changes on agricultural productivity throughout the country, and the additional influencing role of legislation, conflict, food losses and food safety on food and nutrition security.

The assessment contains a range of recommendations highly relevant to both climate and nutrition, which target different sectors and governance levels. Measures include **incorporating climate change risks into food security and nutrition strategic plans**, including sustainable agriculture efforts; **incorporating educational materials on climate change impacts on food security and nutrition into health worker training**; and conducting an **assessment into the nutritional benefits of climate-smart agricultural interventions**.

2.4 Level of climate-nutrition integration in Health National Adaptation Plans (HNAPs)

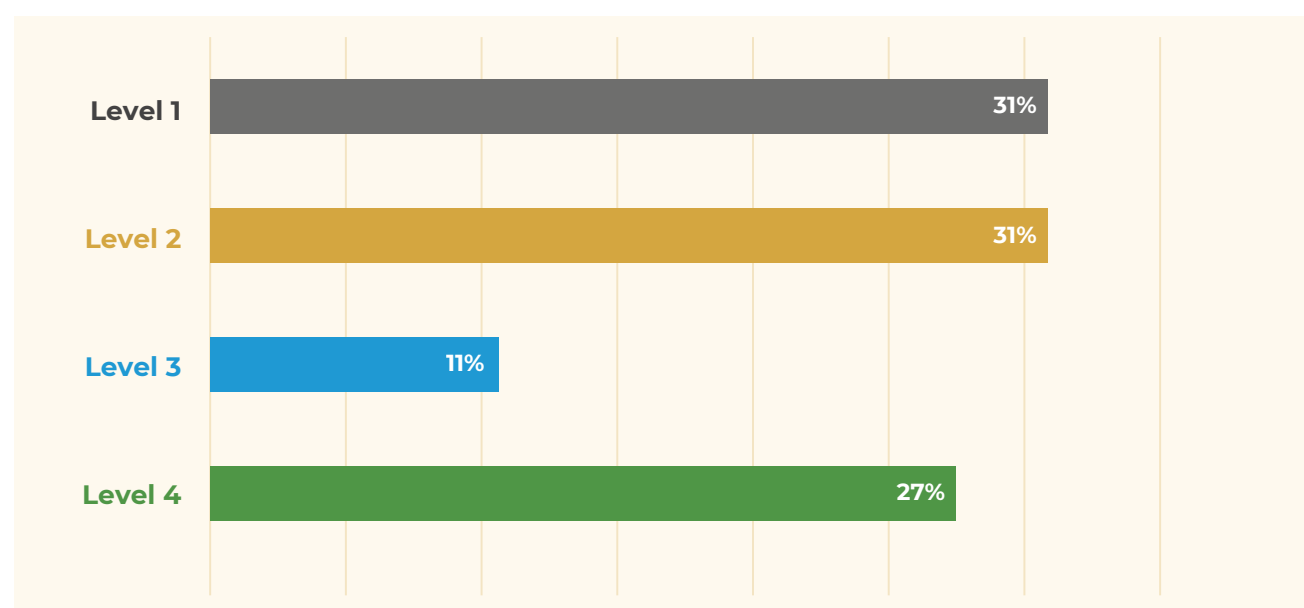
As part of adaptation efforts to respond to the threats posed by climate change, Health National Adaptation Plans (HNAPs) embody the policy process to build resilience to climate change in the health sector at the national level over the medium and longer term. The HNAP process includes both a diagnostic of health systems vulnerabilities and opportunities for action and actions to address the health impacts of climate change, as part of the national adaptation process. With climate change increasingly threatening food security and diet quality and exposing vulnerable populations to multiple forms of malnutrition, integrating nutrition-related action in the HNAP process to build resilience is imperative.

Despite this recognition, HNAPs do not consistently integrate issues relating to nutrition and climate change adaptation and resilience. Of the 33 HNAPs assessed, there is significant variation in the degree of integration (See Figure 8):

- Just over one quarter (27%) indicate a commitment to mobilising resources with distinct plans to take action to connect climate and nutrition as part of climate change adaptation plans (Level 4);
- A further 11% show an intention to mobilise resources to connect climate and nutrition (Level 3);
- Two-thirds (62%) show limited intent to link nutrition and climate, or no connectedness between the two (Level 2 and Level 1).

There is no standout theme observed across the assessed HNAPs, though many discuss the impacts of climate-related extreme weather events on levels of malnutrition. Many HNAPs also highlight the acute vulnerability of certain populations such as women, children, or Indigenous peoples to these extreme events.

Figure 8. Level of climate-nutrition integration in Health National Adaptation Plans (HNAPs) in 2025 (n=33)



Source: Data from ATACH Resource repository

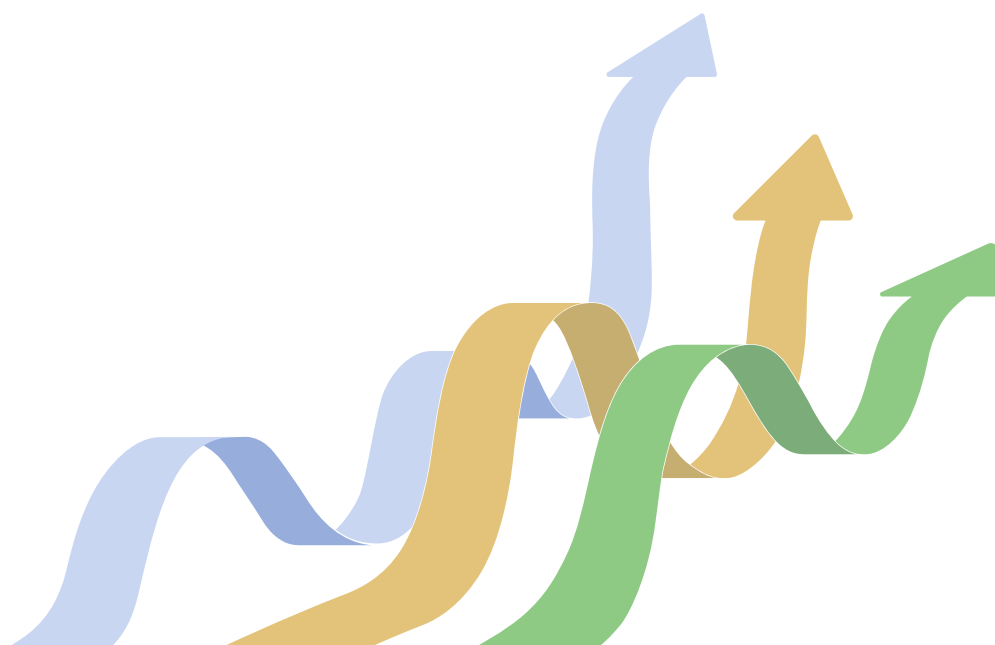
A regional analysis of the assessed HNAPs indicates a wide range of integration levels. Europe and Central Asia contained the highest share of plans scoring a Level 1 (71%). At the same time, most other regions – Middle East and North Africa, East Asia

and Pacific and North America, Sub-Saharan Africa and South Asia – all included HNAPs demonstrating the highest level of climate-nutrition integration (Level 4).

Best Practice: Ethiopia's HNAP (Level 4)

Ethiopia's HNAP (2024-2028) identifies undernutrition as one of the major health impacts of climate change, noting that extreme shifts in seasonal rainfall are already considerably impacting levels of malnutrition in the country, while other extreme weather events are reducing both the quality and quantity of available food. The HNAP contains a dedicated section on the link between climate change and growing incidences of NCDs.

The objective of the HNAP is to support the development of a climate-resilient health system. Overarching objectives include developing the capacity of health and non-health sectors to adapt, anticipate and mitigate impacts of climate change on health; mainstreaming climate change in all health-related programmes; and strengthening community engagement about climate change and its effect on health. Specific targets relevant to nutrition include **conducting sub-national Vulnerability and Adaptation Assessments in the most climate-vulnerable regions with a specific focus on nutrition risks**; and creating **standard operating procedures to enhance climate resilience in health programmes relating to nutrition and NCD control**. Target activities also include social **behaviour change communications to enhance public awareness of linkages between climate change and health**, considered to have indirect, positive implications for nutrition outcomes. Measures are presented with details on lead ministries, associated costs, timelines and outcome indicators.



2.5 Level of climate-nutrition integration in Food-Based Dietary Guidelines (FBDGs)

National dietary guidelines aim to improve consumers' nutrition and overall health by making recommendations about the foods, food groups, and dietary patterns that meet human nutrition requirements.²² In addition to giving dietary advice to citizens, they guide decision-making on health and nutrition policies and public food procurement.²³ In recent years, many countries have started to publish food-based dietary guidelines (FBDGs), which take a more holistic approach to food consumption, considering food combinations, eating modalities, food safety considerations, lifestyle factors, and environmental sustainability.²⁴

Evidence shows that diets that prioritise foods with low environmental impacts can be consistent with good nutrition and health. FBDGs have huge potential to promote relevant dietary habits, thus delivering both environmental and health benefits. Data suggest that following existing FBDGs could reduce GHG emissions by approximately 13% and premature mortality by 15%.²⁵ There is evidence to suggest that their positive climate impact could be tripled by strengthening how FBDGs consider environmental sustainability.²⁶ FBDGs can help to tackle poverty and under- and malnutrition and foster the resilience of food systems and livelihoods against climate shocks, especially in low- and middle-income countries.²⁷

A clear recognition and explicit integration of the nutrition and climate benefits of diets in FBDGs is important for guiding policymaking and implementation, but this is missing in most of the 71 assessed FBDGs (See Figure 9):

- Over half (52%) of assessed FBDGs did not acknowledge any link between climate and nutrition (Level 1).
- Around one quarter (24%) indicated an intention to act (Level 2) while just 13% provided high-level details on resource mobilisation to connect climate and nutrition action. (Level 4)

Environmental sustainability is a guiding theme in most FBDGs, although the level of detail in which it is explored varies across countries. In those FBDGs with a high level of detail, reducing meat intake, increasing consumption of plant-based foods, ideally sourced locally and seasonally, and avoiding food waste are mentioned.

22. FAO (n.a). Food Systems-based Dietary Guidelines: an overview. Retrieved from <https://openknowledge.fao.org/server/api/core/bitstreams/20b9fd77-47f5-46f0-bdd9-94f798620368/content>.

23. Klapp, A.-L., Feil, N., & Risius, A. (2022). A Global Analysis of National Dietary Guidelines on Plant-Based Diets and Substitutions for Animal-Based Foods. *Current Developments in Nutrition*, Volume 6, Issue 11, nza144

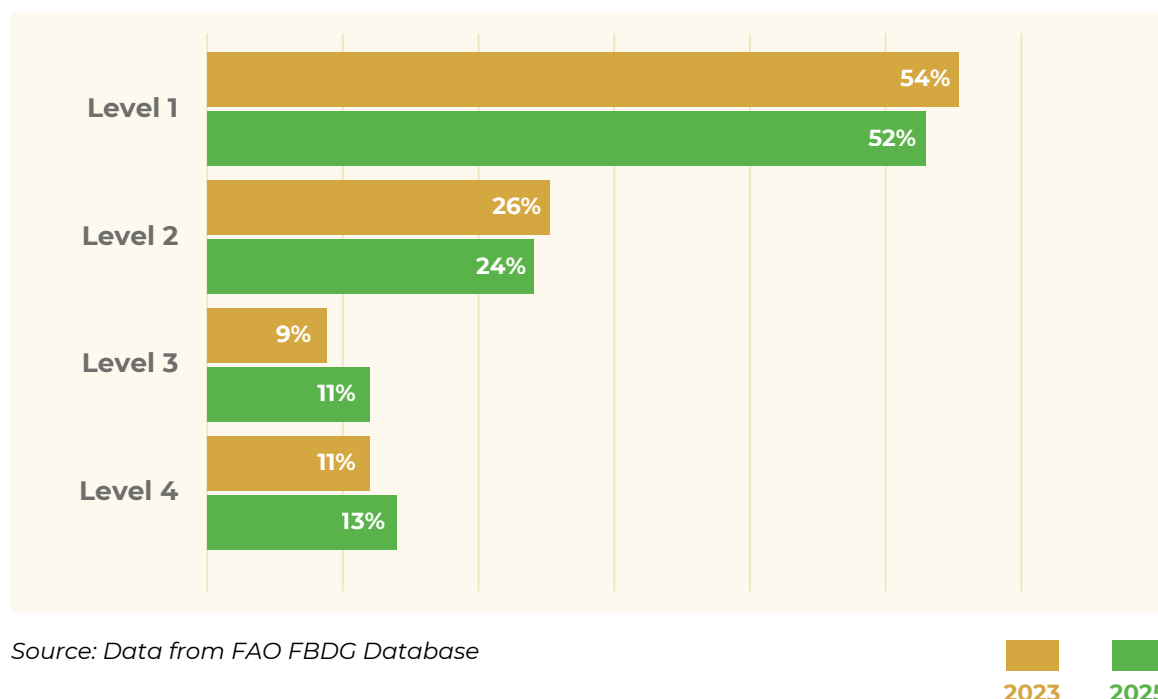
24. FAO (n.a). Food Systems-based Dietary Guidelines: an overview. <https://openknowledge.fao.org/server/api/core/bitstreams/20b9fd77-47f5-46f0-bdd9-94f798620368/content>

25. Springmann, M., Spajic, L., Clark, M. A., Poore, J., Herforth, A., Webb, P., et al. (2020). The healthiness and sustainability of national and global food based dietary guidelines: modelling study. *bmj*, 370.

26. UN-Nutrition. (2024, November 11). Dietary guidelines: the next generation takes on sustainability. UN-Nutrition. Retrieved from <https://www.unnnutrition.org/news/dietary-guidelines-next-generation-takes-sustainability>.

27. Fischer, C. G., & Garnett, T. (2016). Plates, pyramids, and planets. Developments in national healthy and sustainable dietary guidelines: a state of play assessment. FAO. Retrieved from <https://www.fao.org/sustainable-food-value-chains/library/details/jp/c/415611/>.

Figure 9. Level of climate-nutrition integration in Food-Based Dietary Guidelines (FBDGs) in 2023 (n=70) and 2025 (n=71)



At the regional level, the Middle East and North Africa region demonstrates the lowest overall integration of climate and nutrition, with 80% of all assessed FBDGs scoring a Level 1. At the other end of the spectrum, concrete plans for action (Level 4),

are highest within guidelines from Europe and Central Asia at (29%). The majority of FBDGs from countries in Sub-Saharan Africa and Latin America and Caribbean score between Levels 2 and 3.

Changes since 2023 Baseline Assessment

Since the 2023 Baseline Assessment which included 70 FBDGs, five were updated. Of the five FBDGs assessed in this round, two improved their classification score: Austria showed the largest increase, moving from Level 1 to Level 4, while Germany advanced from Level 1 to Level 3. Two FBDGs, Finland and Ghana, maintained their rankings, while one, Estonia, declined. A large number of documents (30) remain unassessed, as in the Baseline Assessment, due to a lack of suitable information.

Best Practice: Finland's FBDG (Level 4)

Promoting sustainable and healthy diets is the core objective of Finland's National Nutritional Recommendations (2024). The guidelines explore the broad environmental impacts of Finnish food consumption both domestically and abroad, and highlight the need for diets to be ecologically, socially and economically sustainable – making explicit reference to reducing climate load and biodiversity loss – while also promoting human health and providing adequate nutrition for all.

Shifting towards more plant-based eating patterns to reduce the environmental footprint of Finnish diets is a central theme promoted throughout the recommendations. The nutritional and environmental characteristics of a range of foods are explored, with the guidelines promoting the consumption of root vegetables, fruits, legumes, nuts and seeds, and a reduction in consumption of meat and foods high in fat, salt and sugar. The guidelines recommend a number of measures for accelerating positive shifts in food consumption, including improving **food education on foods which support both health and sustainability** by schools, municipalities and the media; encouraging **public and private food services to adopt nutritional recommendations** contained in the FBDC; and pursuing the **creation of policies which support the production of plant proteins for human consumption**.

2.6 Level of climate-nutrition integration in National Food Loss and Waste Strategies

National food loss and waste strategies outline a country's plan of action for achieving an overall prevention and reduction of food loss and waste within national borders. These strategies usually include a range of policies, programmes, or other measures to influence the actions of businesses, consumers, farmers, and political bodies to achieve the reduction target. A national strategy can help align public policies with private sector actions, farmer practices, and consumer behaviour toward the shared goal. Improving the consideration of nutrition and climate impacts in national food loss and waste strategies can contribute to meeting the goals of the Paris Agreement, sustainably feeding the global population, and achieving SDG 12.3 to cut global food waste per capita in half and reduce food losses along production and supply chains by 2030.²⁸

Several countries have clearly recognised nutrition benefits of addressing food waste and loss as outlined in their FLW policies, but there is significant room for improvement (See Figure 10):

- Just under half (46%) of the assessed FLWs showed no integration of climate and nutrition issues (Level 1);

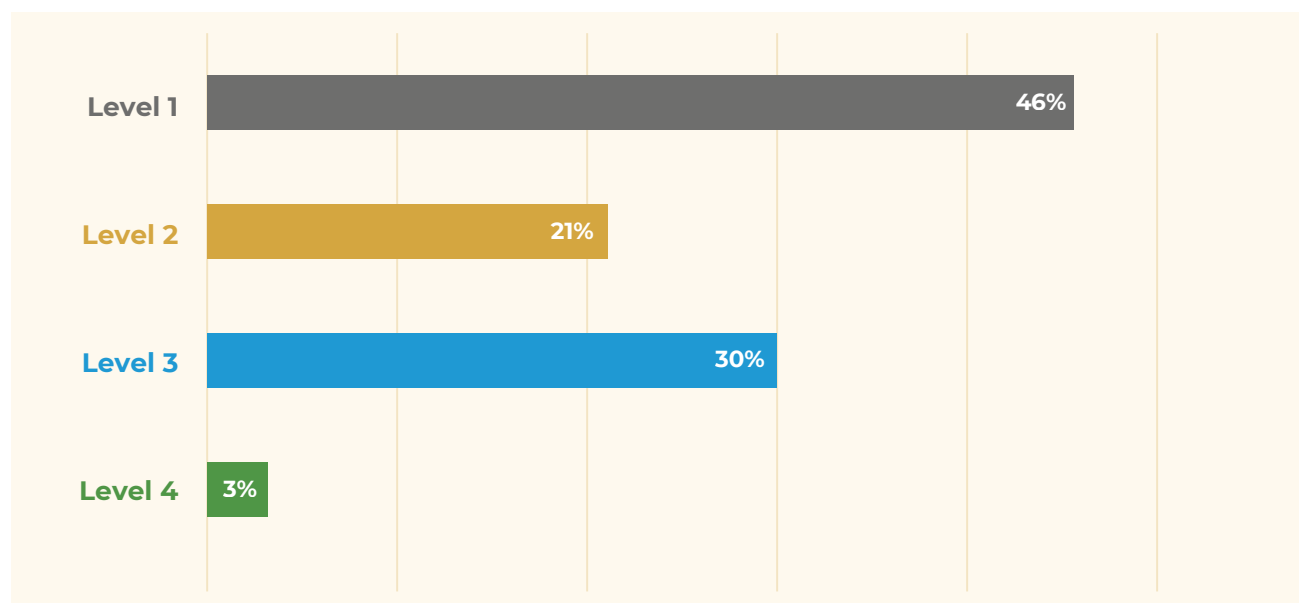
- A further 51% demonstrated some level of integration between climate and nutrition (Level 2 and Level 3); and
- Just 3% outlined clear, resourced action plans for integrated action on climate and nutrition (Level 4).

A regional analysis shows Sub-Saharan Africa to demonstrate the highest overall commitment to action, with two-thirds of all assessed FLW strategies scoring a Level 3, and the remaining third a Level 2. The Latin America and Caribbean region also shows strong integration of climate and nutrition, with 50% of strategies scoring a Level 3. No strategies from the Middle East and North Africa, and North America score above a Level 1. Notably, no concrete plans for action (Level 4) are reported in any of the assessed strategies.

FLW strategies vary broadly in focus. Some are centred strongly around waste – including packaging production and disposal, supply chains and infrastructure – while others focus more on health, nutrition and social dimensions, such as the redistribution of excess food to communities in need of food assistance. The environmental footprint and mitigation opportunity – in terms of GHG emissions – of food loss and waste is mentioned in most strategies.

²⁸ Hanson, C., Flanagan, K., Robertson, K., Axmann, H., Bos-Brouwers, H., Broeze, J., et al. (2019). Reducing Food Loss and Waste: Ten Interventions to Scale Impact. World Resources Institute. Retrieved from <https://www.wri.org/reducing-food-loss-and-waste-ten-interventions-scale-impact>.

Figure 10. Level of climate-nutrition integration in National Food Loss and Waste Strategies in 2025 (n=33)



Source: Data from FAOLEX Database

Linking Climate, Food and Nutrition Security, and Waste Management - Brazil's Alimenta Cidades Strategy and Intersectoral Strategy on Food Loss and Waste

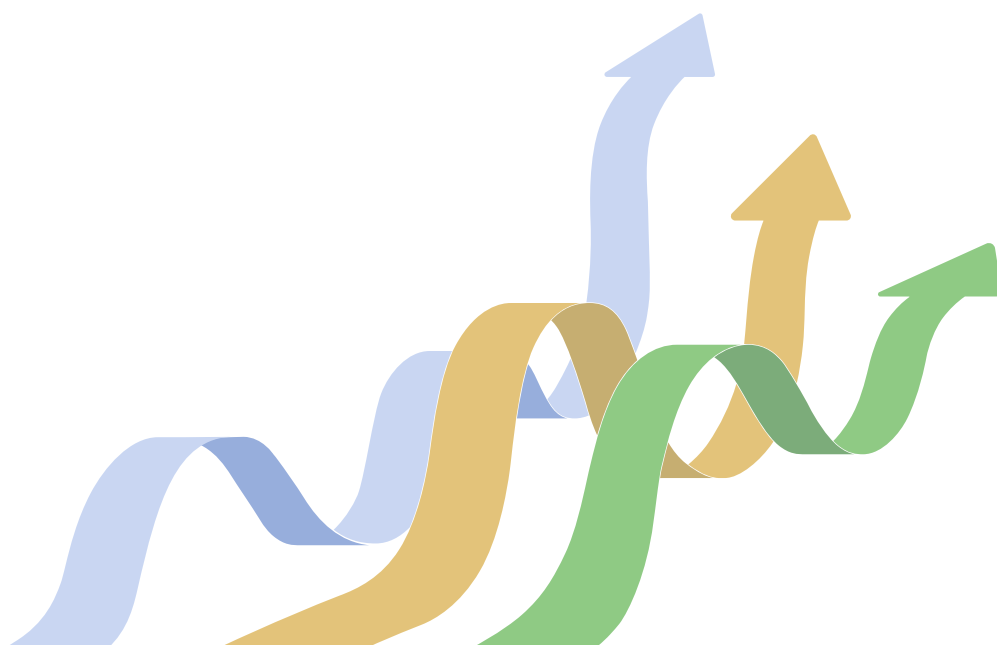
FLW reduction is gaining momentum in Brazil as part of its broader climate, food and nutrition security, and waste management agendas. In recent years, Brazil has advanced a set of integrated policies, including an updated Intersectoral Strategy for Food Loss and Waste Reduction, which addresses inefficiencies across supply chains, and the National Plan for the Reduction and Recycling of Urban Organic Waste (PLANARO), which sets targets for food waste prevention, composting, and biogas generation. Together with the National Food and Nutrition Security Policy (PNSAN) and the National School Feeding Programme (PNAE), which serves over 40 million students daily with nutritious, locally sourced meals, these initiatives highlight Brazil's strong commitment to linking climate action, circular economy, and healthier diets.

At the local level, however, FLW reduction remains underdeveloped. A 2023 baseline study in Rio de Janeiro, Brazil's second most populous city, revealed that food waste represents 62% of total household waste, averaging 77kg of food wasted per person per year, close to the global average of 79kg. The study also found that fruit and vegetables make up the majority of discarded food in households, a vital loss of nutrients in a city challenged by food insecurity. Yet less than 2% of organic waste is currently recycled, underscoring the opportunity for food waste prevention and the need for scaled-up organic waste management solutions, including targeted campaigns, separate collection, and composting systems.

This gap is now being directly addressed by the Alimenta Cidades Strategy, established by Decree No. 11.822/2023. The strategy aims to expand access to healthy food in cities, prioritising vulnerable urban populations while embedding the principles of circular food systems: reducing food waste, maximising the use of food, and reintegrating organic residues into productive cycles. It also strengthens territorial markets and short supply chains that benefit family farmers and urban consumers alike. By fostering urban and peri-urban agriculture, healthy food environments, and integrated waste management, Alimenta Cidades positions cities as central actors in the fight against hunger, climate change, and inequality. With adequate resources for implementation, the programme has the potential to become a flagship initiative, empowering municipalities to reduce food and nutrition insecurity, cut methane emissions, generate green jobs, and contribute to Brazil's commitments under the Global Methane Pledge and the Sustainable Development Goals.

In September 2025, Brazil further reinforced its commitment to tackling food loss and waste through the approval of the II Intersectoral Strategy for the Reduction of Food Loss and Waste in Brazil, under Resolution CAISAN/MDS No. 16. This new strategy, aimed at reinforcing national efforts to reduce food waste, includes the establishment of a dedicated Steering Committee to oversee its implementation. The strategy emphasises intersectoral collaboration and focuses on comprehensive action across ministries, local governments, and various sectors, including agriculture, environmental management, and nutrition.

Through this strategy, Brazil aims to ensure that the reduction of food waste becomes a coordinated national effort, addressing not only the environmental impacts but also the socio-economic dimensions of food insecurity and inequality. The creation of the Steering Committee, composed of representatives from key governmental bodies, will allow for targeted action and oversight, ensuring that the country's ambitious goals for food waste reduction are met, while reinforcing its commitment to food and nutrition security, sustainable development, and climate resilience.



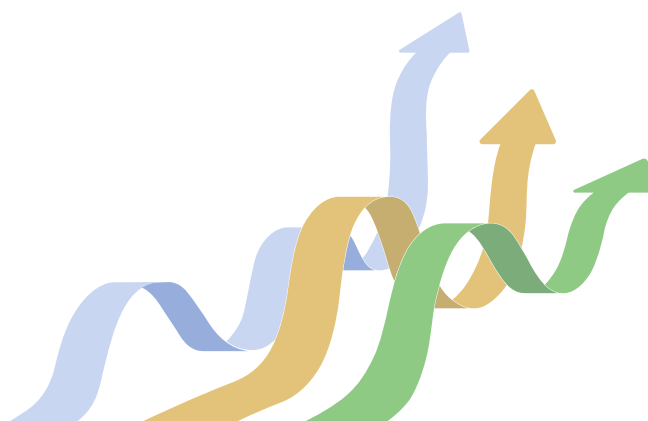
2.7 Level of climate-nutrition integration in Public Food Procurement Policies

Public food procurement, i.e., purchasing of food for public institutions such as schools, hospitals, universities, prisons, or social services, has a huge impact on the nutritional status of people who benefit from food services in public settings (e.g., schoolchildren or hospital patients). Including procurement criteria that consider environmental, social, and health goals in purchasing decisions (e.g., animal welfare; organic and agroecological food production; fair trade; support for small and medium enterprises and smallholder and family farmers) can support sustainable food production by creating structural demand for foods that are produced sustainably.^{29,30} From a climate perspective, such integration can deliver significant benefits for both mitigation and adaptation. Some countries formally acknowledged the transformative potential of public food procurement by identifying it as a key action area for food system transformation at the 2021 United Nations Food Systems Summit.³¹

- Public food procurement policies from the majority (76%) of countries were considered to contain no integration of climate and nutrition (Level 1) or a limited link between the two (Level 2);
- A small share (16%) of countries had documents that contain some link between the two (Level 3); and
- Just 8% of countries were considered to have documents that contain integrated action on climate and nutrition (Level 4).

A regional summary for PFPs shows the lowest levels of climate-nutrition integration in PFP policies in countries from South Asia and the Middle East and North Africa, with no countries scoring above a Level 2. Policies from countries in Europe and Central Asia demonstrate the strongest links between climate and nutrition, with 41% of countries scoring a Level 3 or above.

PFPs from a total of 119 countries were classified by WHO's Global database on the Implementation of Food and Nutrition Action (GIFNA) and assigned to the I-CAN classification levels (see Figure 11, and Annex for methodology).

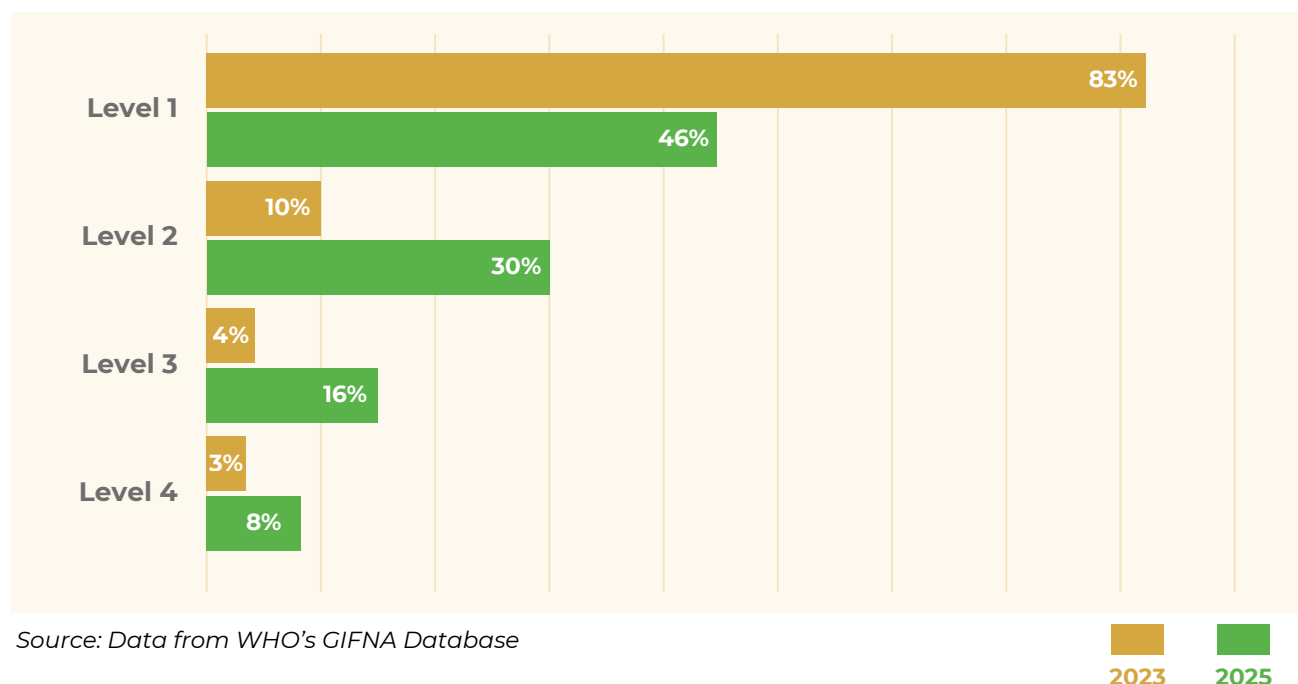


29. EU Food Policy Coalition. (2021). Policy Recommendations: Using procurement for a systemic food transformation. Retrieved from <https://epha.org/policy-recommendations-using-procurement-for-a-systemic-food-transformation/>.

30. Rimmington, M., Carlton Smith, J., & Hawkins, R. (2006). Corporate social responsibility and sustainable food procurement. *British Food Journal*, 108(10), 824–837.

31. FAO, Alliance of Bioversity International and CIAT, & Editora da UFRGS. (2021). Public food procurement for sustainable food systems and healthy diets - Volume 1. Retrieved from <http://www.fao.org/documents/card/en/c/cb7960en>.

Figure 11. Level of climate-nutrition integration in countries' Public Food Procurement Strategies in 2023 (n=93) and 2025 (n=119)



Changes since 2023 Baseline Assessment

Since the Baseline Assessment which included policies from 93 countries, 26 new countries were added to the analysis, bringing the total to 119. Of the countries that were reassessed, over one third (37%) retained the same classification level, and a similar share (39%) improved their score.³² Only two countries, Finland and Germany, declined in score, both moving from Level 4 to Level 3. This may be explained by changes made to the GIFNA methodology, which now requires PFP policies to be mandatory for countries to receive the highest score. The GIFNA database used for this analysis was launched in 2024. It represents the third update of the WHO nutrition policy database (previously GINA), containing improvements in data accessibility and an increased focus on policies to improve food systems for better nutrition and health.

³². Of the countries whose policies improved in score, the majority - 25 - moved from L1 to L2, 3 from L1 to L3, 6 from L1 to L4, 7 from L2 to L3, 1 from L2 to L4, and 1 from L3 to L4.

2.8 Level of climate-nutrition integration in Social Protection Programmes

Social protection programmes are policies and initiatives designed to safeguard individuals and families - particularly the most vulnerable - against poverty, hunger and social exclusion. They include a variety of measures designed to provide a 'safety net', including financial services - such as cash benefits, insurance, and pensions - and family, health and education support. Social protection programmes vary from country to country, influenced by levels of socioeconomic development, political priorities, social structures, among other factors. When designed holistically, they can help to mitigate malnutrition and food security while helping people develop resilience to the growing impacts of climate change.

Of the 30 social protection programmes assessed (see Figure 12):

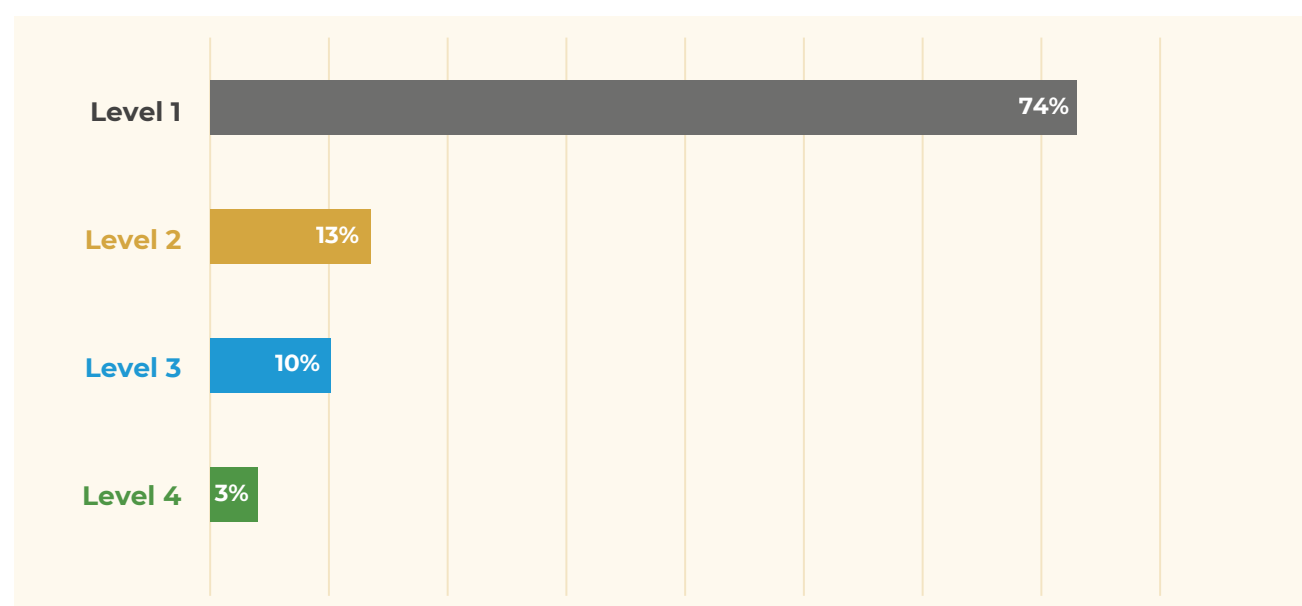
- The vast majority (74%) showed no evidence of climate and nutrition integration (Level 1);

- A small share (13%, or 4 programmes) showed some connection between the two; and

- The same number (13%) showed evidence of both integration and action (Level 3 and 4).

The majority of programmes assessed included poverty mitigation as a core objective, but in only a small number of cases was this issue explicitly linked to climate or nutrition. Target activities ranged from cash subsidies for food or energy to the enhancement of education and health services for rural populations. The low scores observed under this indicator may be attributed to the variation in type of document used for each policy programme: for some, little information beyond the core characteristics and programme implementation information is made available by the government, whereas for others, full evaluation reports containing context, baseline and impact data are available, enabling a more thorough evaluation.

Figure 12. Level of climate-nutrition integration in Social Protection Programmes (n=30)

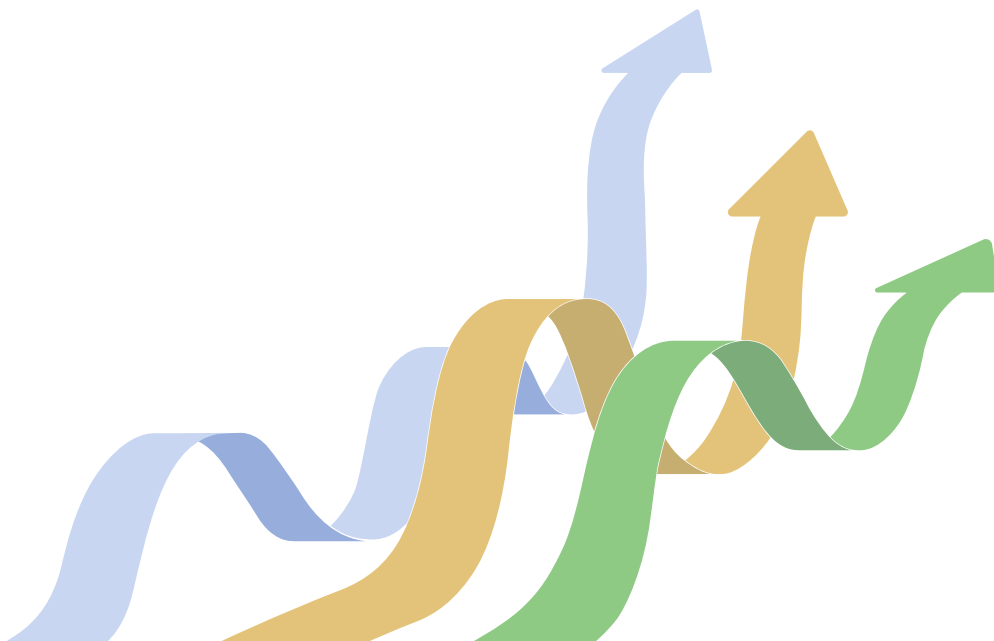


Source: Initial dataset from Costella, C., et al. (2024), supplemented with authors' own research on government portals and websites.

Best practice: Ethiopia's Productive Safety Net Programme (Level 4)

Ethiopia's Productive Safety Net Programme (PSNP) is designed to reduce food insecurity and vulnerability in rural populations, particularly those most vulnerable to climate risks such as drought. While its primary objective is poverty mitigation, it provides clear benefits for both nutrition and climate resilience.

The PSNP is presented as contributing to sustainable development, disaster risk management, climate resilience, food security and malnutrition. The fifth iteration of the programme (PNSP5), which ran from 2021-2025, was specifically designed to fit within a sustainable financing envelope and is intended to contribute to the country's overall effort of achieving zero stunting by 2030. The programme provides periodic transfers of cash and food, as well as the delivery of **nutritional feeding programmes**, to help chronically food insecure people survive food deficit periods. It also supports the **development of public works** in response to community livelihood needs, including in the context of climate mitigation and adaptation. **Gender, nutrition and social development considerations** are embedded into all activity implementation processes.



3. FINANCE COMMITMENTS

3.1 Value of ODA to climate that is linked to nutrition

Official development assistance (ODA) is government aid used specifically to support the economic development and welfare of LMICs. The OECD provides the most comprehensive dataset of bilateral and multilateral development finance, offering public, activity-level data on the funding provided by different actors to environment- and climate-related activities in LMICs.³³

Between 2022-2023, OECD recorded a total of 63,644 finance commitments made by bilateral and multilateral donors towards climate change and other environmental objectives, with a total value of USD 274 billion, or an average of USD 137 billion per year (See Table 3). Of these, 1,798 commitments explicitly mention the word nutrition in their title or description, representing a total value of just over 3 billion USD, or an annual average of USD 1.5 billion. These nutrition-related commitments account for just 1% of all ODA committed to all environment-related projects between 2022 and 2023.

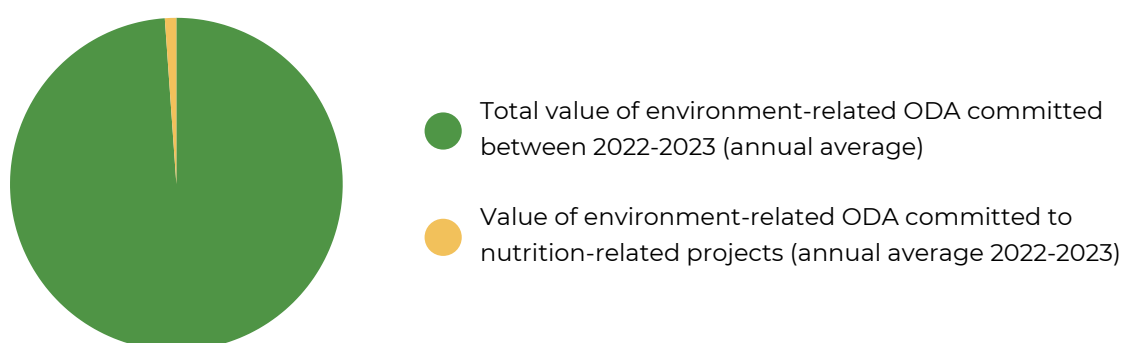
Of the commitments explicitly containing the word 'nutrition', the largest share of finance was provided to projects in Africa, South of Sahara (64%). The next largest share went to Asia (6%), while no other region received more than 4% of the total. The recipient region for 9% of commitments was unspecified. The majority (80%) of finance commitments were tagged with an adaptation objective (80% significant, 16% principal), compared to just one third tagged with a mitigation objective (32% significant, 3% principal). The largest providers of nutrition-related finance were the United States (19%), EU Institutions (17%), Germany (11%) and the Netherlands (9%); with the remaining providers each accounting for less than 6% of the total.

When the analysis is expanded to include a broader set of nutrition-related keywords, including diet types, NCDs, food groups and others (see detailed methodology in Annex), the total rises to 5,254 commitments. This larger share accounts for approximately 4% of all ODA committed to environment-related projects between 2022 and 2023.

Table 3. Value of ODA that is climate- and nutrition-supporting

Indicator	Result
Total value of environment-related ODA committed between 2022-2023 (annual average)	USD 137,454,496,800
Value of environment-related ODA committed to nutrition-related projects (annual average 2022-2023)	USD 1,542,635,460
% of environment-related ODA committed to nutrition-related projects (annual average, 2022-2023)	1%

Source: Data from OECD Database



33. See [OECD: Development finance for climate and environment](#).

Changes since 2023 Baseline Assessment

This update shows similar trends in ODA financing to those observed in the Baseline Assessment. The original assessment found that an annual average USD 1.6 billion in climate-related ODA finance was committed to nutrition-related activities between the years 2019 and 2021. This represented approximately 1% of all climate-related ODA committed over these years - the same proportion considered to be nutrition-related in this update assessment, for the years 2022-2023.

Philanthropy for Nutrition-Climate Integration: A Growing but Concentrated Field

Additional analysis of the OECD database on Private Philanthropy for Development (2022-2023) shows similar overall levels of climate and nutrition integration in funding from philanthropic donors and foundations as for ODA. Project titles and descriptions were searched for mentions of relevant nutrition and climate keywords to identify whether these could be considered nutrition or climate-related. Philanthropic donors disbursed an annual average of \$11.7B between 2022 and 2023 with an annual average of only \$125 million related to both nutrition and climate-representing 1% of total disbursements.

The data demonstrates both momentum and fragility. Three donors accounted for more than 70% of integrated funding between 2022-2023: the Mastercard Foundation, Wellcome Trust, and the Gates Foundation. Integrated commitments increased from \$135 million (2022) to \$315 million (2023), however this was primarily driven by new investments by these three donors, such as the launch of the Wellcome Trust Climate Impact Awards. Sectoral allocations concentrate heavily in the upstream agricultural interventions-research, policy development, financial services, and vocational training-with missed opportunities to realise co-benefits in other sectors such as health, education, and infrastructure. Geographically, Sub-Saharan Africa dominates allocations (Ethiopia, Nigeria, Kenya), with encouraging but limited expansion into South and Southeast Asia (Bangladesh, India, Nepal, Sri Lanka, Vietnam, Thailand) and Latin America (Brazil).

Realising the potential of philanthropy to support integrated nutrition and climate action requires geographic and programmatic diversification as well as expanding funding from a larger number of donors to build the resilience and sustainability necessary for long-term impact. This takes on added significance as ODA faces uncertainty amid shifting political landscapes in major donor countries. Other philanthropic funders could recognise the nutrition-climate nexus as a strategic opportunity within their existing portfolios-whether focused on health, education, agriculture, or development-where integrated approaches could unlock significant co-benefits and amplify impact.

3.2 Value and number of World Bank loans that are nutrition and climate supporting

The World Bank finances a wide range of development-focused projects in low- and middle-income countries, including those supporting health and environment objectives. The Bank tags all recorded finance commitments with themes that correspond to their development objective – including climate and nutrition. This includes tagging overarching themes that apply to an entire project, and sub-themes which apply to project sub-activities and the finance share associated with these activities.

Between 2022 and 2023, there were 720 active projects tagged with an environment theme, representing a total value of USD 135 billion, or an annual average of USD 67.5 billion (see Table 4). Of these, 69% were tagged with a specific climate objective, compared to just 11% with a specific nutrition or food security objective (see detailed methodology in Annex).

It is not currently possible to determine the volume of finance supporting integrated climate and

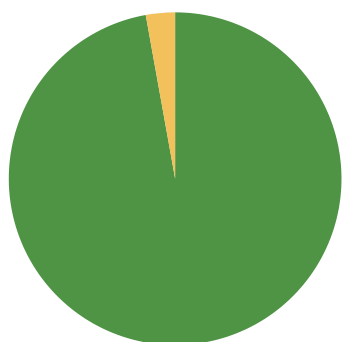
nutrition activities, because the data available does not show the extent to which finance tagged with a climate objective overlaps with finance tagged with a nutrition objective. In the absence of more granular data, in this assessment we consider instead the share of finance within environment-related projects that is tagged with an explicit nutrition objective (whether or not this share overlaps with the climate component of the project). Fifty projects recorded between 2022 and 2023 contain such a tag. The nutrition-tagged share of these projects has a total value of USD 3.9 billion, an average of USD 1.9 billion per year. This is just under 3% of the total finance committed by the World Bank to all environment-related projects each year.

Of the finance share tagged with an explicit nutrition objective, the largest share was provided to Latin America and the Caribbean (34%), followed by Western and Central Africa (21%), Eastern and Southern Africa (20%), Middle East, North Africa, Afghanistan, and Pakistan (13%), South Asia (8%), and East Asia and Pacific (4%). Less than 1% of finance was channelled to Europe and Central Asia.

Table 4. Number and value of World Bank loans that are climate- and nutrition-supporting

Indicator	Result
Total value of World Bank finance committed to environment-related projects between 2023 and 2024 (annual average)	USD 67,522,646,194
Number of World Bank projects that are nutrition- and climate- supporting	50
Value share of environment-related projects that explicitly supports nutrition objectives	USD 1,966,324,038
% share of environment-related projects that explicitly supports nutrition objectives	2.9%

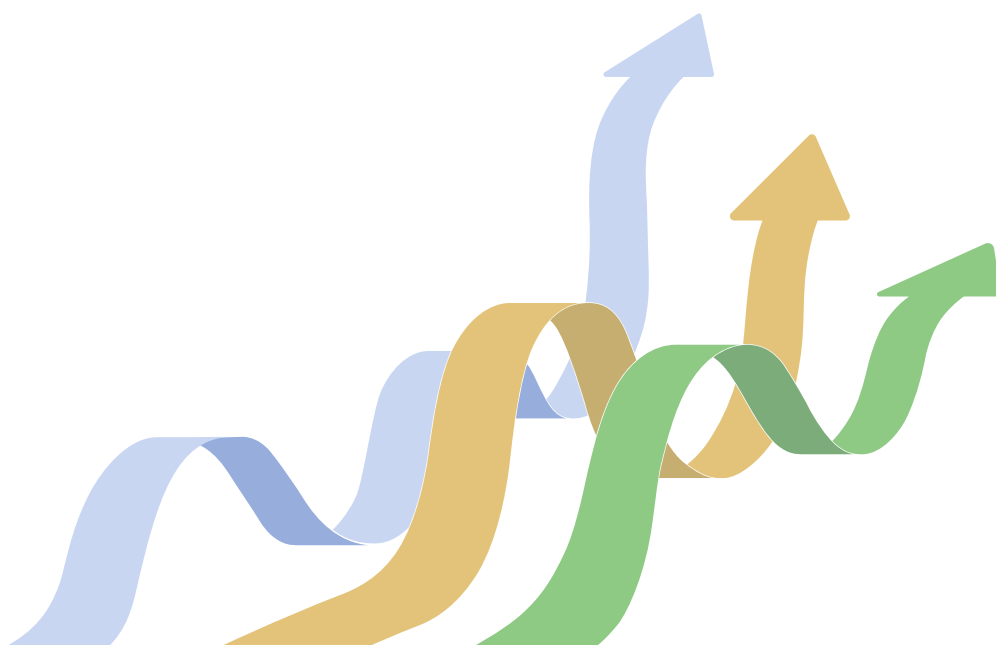
Source: Data from World Bank Project Portfolio



- Total value of World Bank finance committed to environment-related projects between 2023 and 2024 (annual average)
- Value share of environment-related projects that supports nutrition objectives

Changes since 2023 Baseline Assessment

The approach used to assess World Bank financing is not directly comparable to that used in the Baseline Assessment. See detailed methodology in Annex for further information.



3.3 Value and number of Green Climate Fund initiatives that include nutrition considerations

The Green Climate Fund (GCF) was created to support LMICs achieve low-emission, climate-resilient development pathways, as well as build resilience to the growing impacts of climate change. GCF is mandated to invest half of all its resources in the most climate vulnerable countries – SIDS, LDCs and African States. It prioritises country-led interventions, providing a combination of grants, concessional finance, and blended finance arrangements to help countries achieve their sustainable development ambitions.³⁴

There were 14 GCF projects approved in 2024. In contrast to the other finance indicators presented in this section, this small sample size enabled the manual document review to be conducted in addition to the Python keyword search (see detailed methodology in Annex):

- The majority (71%) of projects showed little integration of climate and nutrition. 14% scored

a Level 1, representing a total value of USD 236 million, and 57% scored a Level 2, representing a total value of USD 741 million.

- Three projects (21%) showed some connection between the two (Level 3), representing a total value of USD 257 million; and
- Just one project showed evidence of integration and action on the issues of climate and nutrition (Level 4), at a total value of USD 35 million.

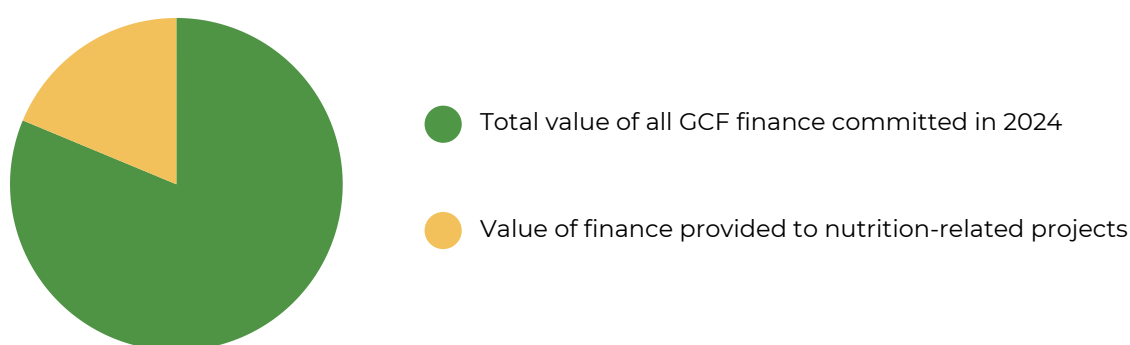
The four projects scoring Level 3 or above – those considered ‘nutrition-related’ under this assessment – account for approximately USD 292 million in financing, representing 23% of all financing (USD 1.27 billion) approved by GCF in 2024 (see Table 5).

Of the four highest scoring projects, 69% of financing went to Africa and 31% to Asia-Pacific. Of the 10 projects scoring below a level 3, almost all make explicit references to the link between climate change and food security or nutrition, but none contain activities considered to directly benefit nutrition.

Table 5. Value and number of GCF grants and loans that are climate and nutrition supporting

Indicator	Result
Total value of all GCF finance committed in 2024	USD 1,270,734,856
Value of GCF finance committed to nutrition-related projects	USD 292,808,707
% of all finance committed in 2024 that supports nutrition-related projects	23%

Source: Data from GCF Project Portfolio



34. See GCF: About GCF.

Changes since 2023 Baseline Assessment

The levels of climate and nutrition integration in finance committed by GCF in 2024 show notable improvement when compared to the findings of the Baseline Assessment. In the original assessment, over 80% of finance committed in the years 2021 and 2022 showed no or limited integration of climate and nutrition (Level 1 or Level 2). This update finds that the vast majority of commitments from 2024 show some meaningful connection between the two - with 77% of commitments scoring at the highest levels of integration (Level 3 or Level 4).

High-level analysis of climate finance institutions and regional development banks

While the integration of climate and nutrition in ODA and World Bank finance appears to remain minimal, a high-level assessment of other climate- and regional development banks shows some positive signs of progress. Project documents of finance commitments made by the Global Environment Facility (GEF), Asian Development Bank (ADB) and African Development Bank (AfDB) in 2024 were analysed for links to climate and nutrition. Projects with keyword mentions across multiple groups of nutrition and climate keywords were considered to have a high likelihood of relevance to both climate and nutrition.

GEF – which supports LMICs to meet their environmental commitments, including through the scale up of sustainable food systems – showed a moderate level of climate and nutrition relevance within its funded projects. Of the total USD 1.46 billion in financing approved in 2024, 15%, or USD 215 million, was provided to projects with a nutrition-related component. The ADB – whose focus areas include tackling the interlinked crises of climate change, poverty and malnutrition – showed similar results.

Approximately 19%, or USD 4 billion, of the USD 22 billion committed by ADB in 2024 went to projects with climate- and nutrition-related components.

Notably, the assessment of AfDB financing showed much higher levels of climate and nutrition relevance. The AfDB funds socio-economic development projects across all sectors in Africa, including those focused on agriculture, health and nutrition. The high-level assessment showed that of the total USD 5 billion in financing committed in 2024, almost half (48%) – around USD 2.7 billion – went to projects with climate- and nutrition-related components.

These findings suggest greater climate and nutrition relevance in projects supported by bilateral and multilateral funders than observed in ODA and World Bank financing. It should be noted, however, that finance commitments made by GEF, ADB and AfDB were not reviewed in detail for this analysis and can only be considered climate- and nutrition-related. This is also true of ODA commitments, though the threshold for what is considered 'nutrition-related' is higher (see detailed methodology in Annex). In addition, for all financial institutions assessed apart from the WB, the nutrition-related share of finance represents the total value of projects with climate and nutrition components, rather than the specific financing share supporting climate and nutrition-related objectives. This limitation is due to the type and quality of data made available by the assessed institutions (see Annex for further information).

3.4 Number of companies in World Benchmarking Alliance that score well on nutrition and sustainability

The World Benchmarking Alliance (WBA) develops benchmarks to compare companies' contributions to the Sustainable Development Goals (SDGs). The private sector plays a vital role in improving access to healthy, affordable, and sustainably produced food. Private investment is required for improving the efficiency of our food systems, the scale up of sustainable agriculture, and the commercialisation of healthy and sustainable food products. Through

these channels, private finance can directly and indirectly impact nutritional outcomes, globally.

The WBA Food and Agriculture Benchmark measures 350 of the world's most influential food and agriculture companies on key issues relating to food systems transformation, and the SDGs. The Benchmark contains two dedicated measurement areas relating to Environment (MA2) and Nutrition (MA3). In the Benchmark, each MA has a maximum score of 100. This framework has been mapped onto the I-CAN Assessment classification levels, as presented in **Table 6**.

Table 6. Benchmark scores required for each classification level

Indicator	MA3 score 0-33	MA3 score 34-66	MA3 score 67-100
MA2 score 0-33	Level 1	Level 2	Level 2
MA2 score 34-66	Level 2	Level 3	Level 3
MA2 score 67-100	Level 2	Level 3	Level 4

Of the 350 companies assessed, no company scored at the highest level of climate and nutrition integration (Level 4), and just a small share – 16 companies, or 5% – demonstrated some intention to mobilise resources to connect climate and

nutrition (Level 3). The vast majority of companies showed no or very little connectedness between climate and nutrition; with 16% of companies scoring Level 2, and 79% at Level 1 (see **Figure 14**).

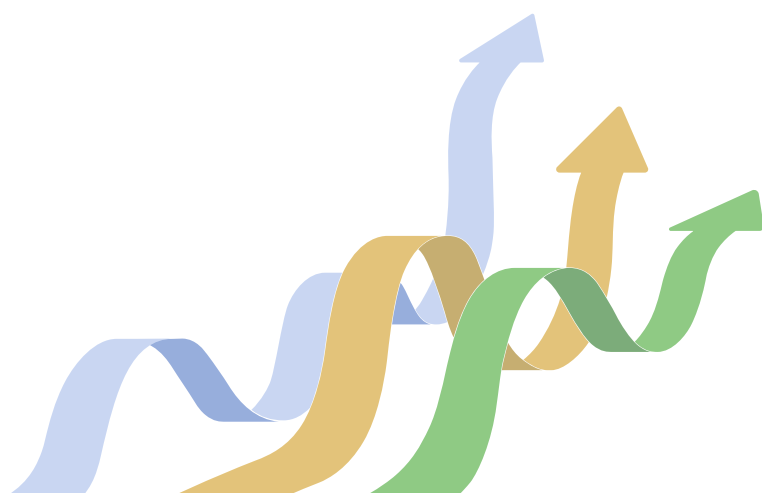
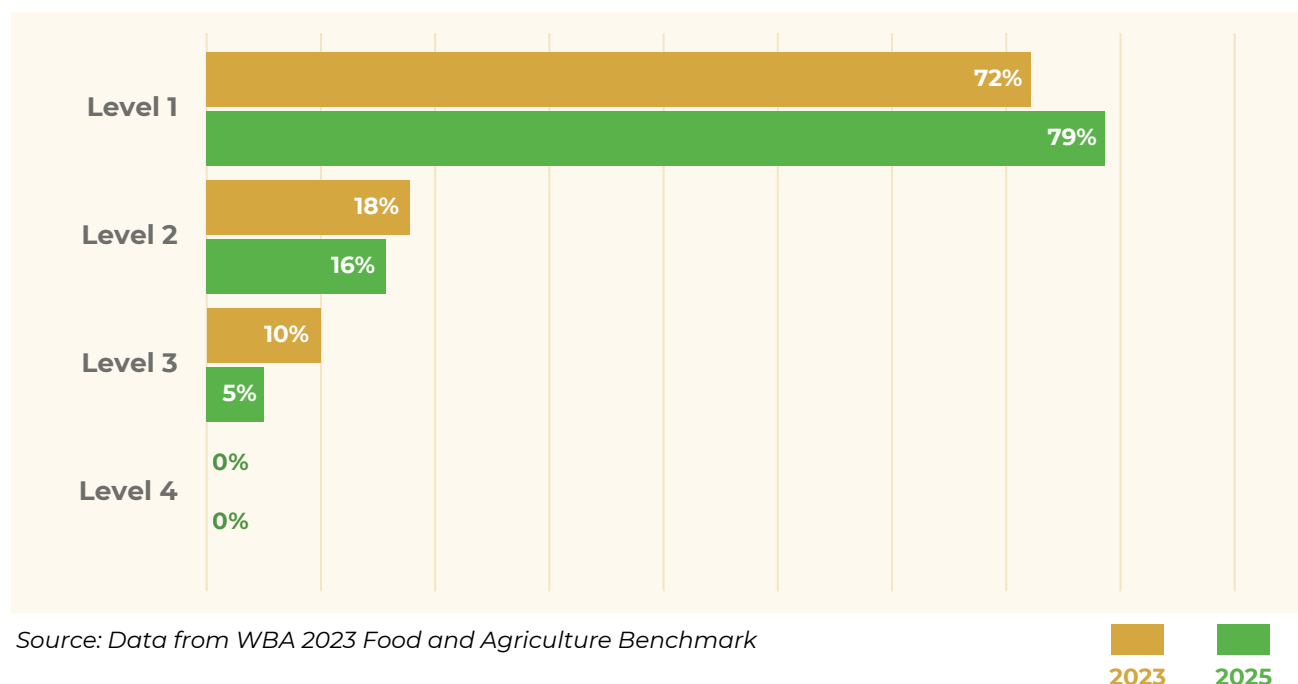


Figure 14. Level of climate-nutrition integration in companies assessed by the World Benchmarking Alliance (n=350)



Changes since 2023 Baseline Assessment

This assessment is based on the second iteration of the WBA's Food and Agriculture Benchmark, originally launched in 2021 alongside the UN Food Systems Summit. The updated Benchmark assessed the same 350 influential companies using an updated methodology, which included the addition of a new indicator on corporate lobbying practices as well as the introduction of separate scores per indicator element.³⁵ The updated results show notably lower levels of climate and nutrition integration than those observed in the Baseline Assessment. As in the Baseline Assessment, no companies reach the highest level of integration (Level 4) and 5% less score at Level 3. The share of companies scoring at the lowest level of integration (Level 1) has also increased by 6%.

35. See WBA (2022) Methodology for the 2023 Food and Agriculture Benchmark.

CONCLUSIONS

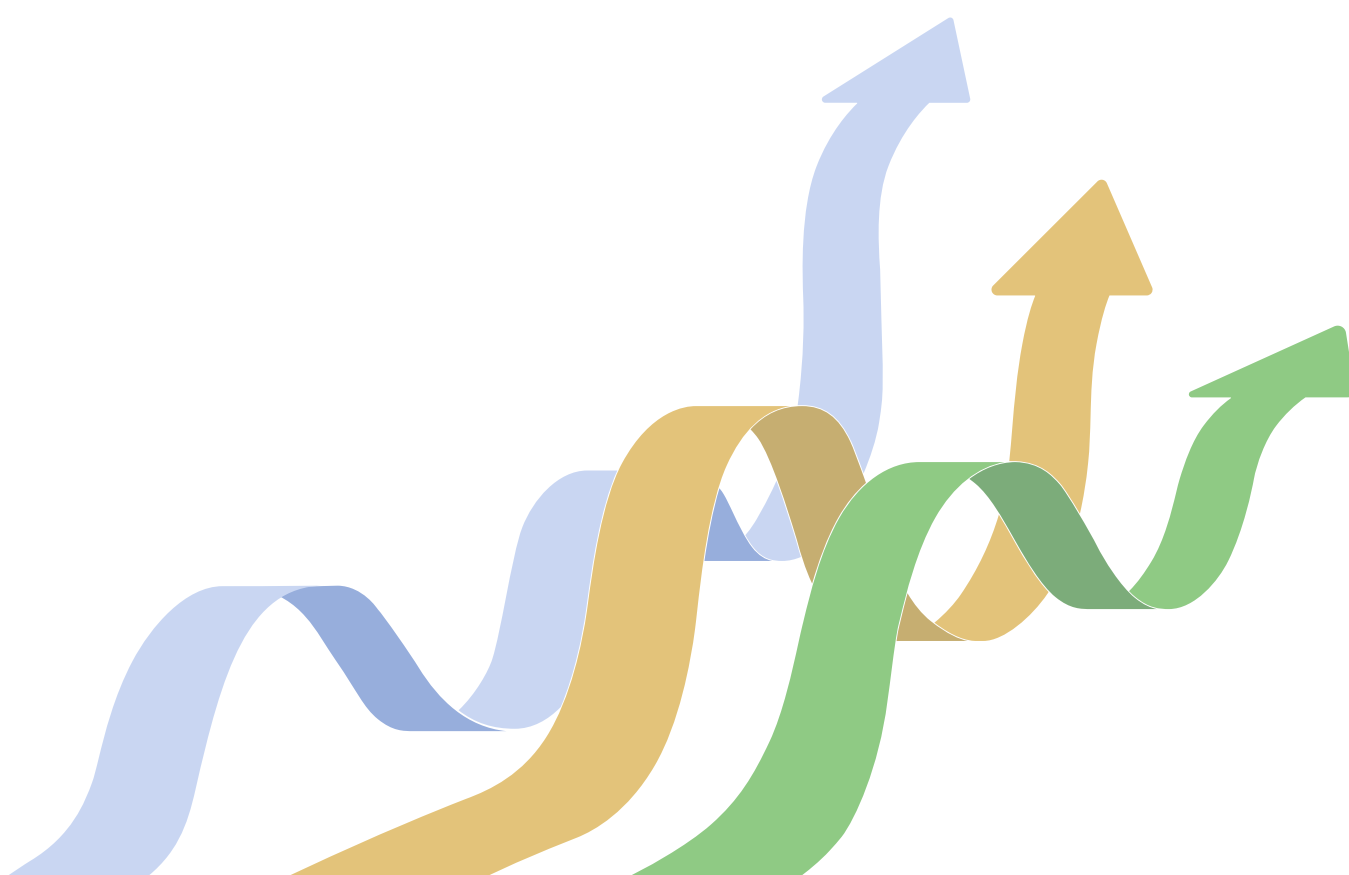
This report provides an essential update on how governments and funders around the world are approaching the issues of climate and nutrition. While the results do not show huge improvements in integration of the two issues since the Baseline Assessment in 2023, they do help to highlight priority areas for action as we progress into the second half of this critical decade for climate action.

At the national level, climate commitments, strategies and action plans must embed nutrition as a priority target area and outline clear, climate-sensitive and coordinated action plans. Overall, NDCs, NAPs and NBSAPs continue to show low integration of nutrition as well as poor in-country consistency of targets within this domain. Explicitly including nutrition as a priority in high-level climate plans can help to mainstream its inclusion into lower-level, sectoral action – such as approaches to public food procurement, food loss and waste strategies, and social protection programmes.

The volume of finance being channelled to activities with dual climate- and nutrition- objectives by

major donors remains just a small share of their total annual financing. While the approach applied under this assessment remains imperfect – the quality of available data prevents us determining the exact value reaching these kinds of intervention – the results suggest the proportion is low when compared to other kinds of development intervention. It is crucial for funders to recognise the multiple social, environmental and economic development wins offered by activities at the nexus of climate and nutrition and rapidly scale up their financing.

Sourcing, obtaining and analysing data to assess the degree of climate and nutrition integration in policy and finance remains labour intensive and complex. The process could be greatly accelerated by improved and better coordinated reporting by organisations – particularly financial institutions and donors – and the creation of aggregated public data platforms.



ANNEXES

Detailed methodology

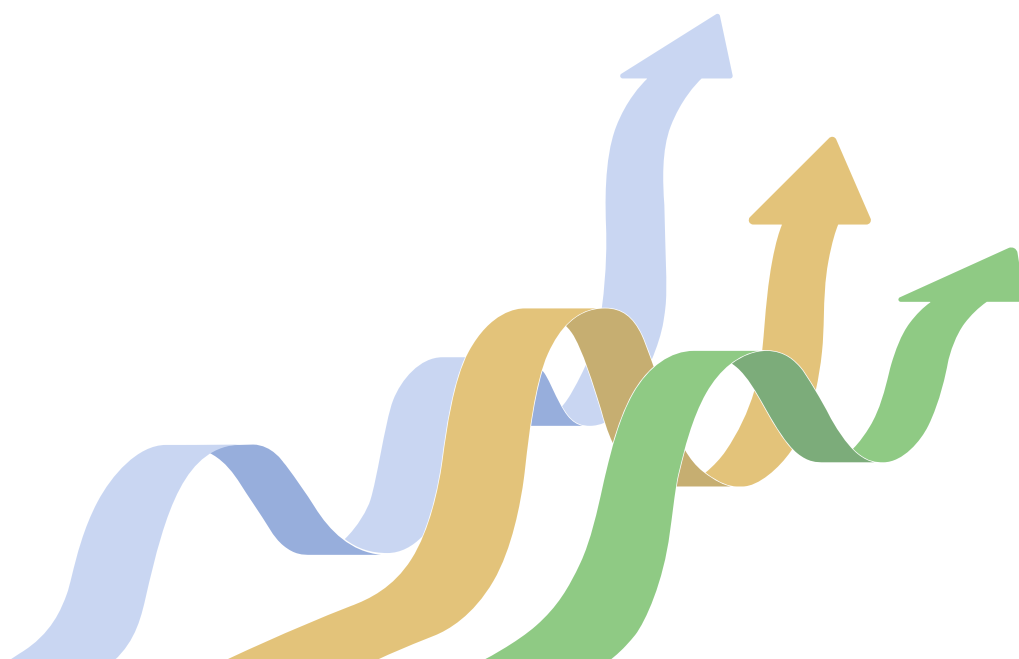
Data sources

Most source documents were obtained from public websites, platforms, and databases by Climate Focus and GAIN. **Table 7** below presents the full list of indicators and document sources.

Table 7. List of all data sources used under this assessment, by indicator

Indicator		Source	No. of documents or records analysed
National strategies under international policy frameworks			
1.1	Level of climate-nutrition integration in Nationally Determined Contributions (NDCs)	UNFCCC NDC Registry	167
1.2	Level of climate-nutrition integration in National Adaptation Plans (NAPs)	UNFCCC Submitted NAPs Registry	63
1.3	Level of climate-nutrition integration in National Biodiversity Strategies and Action Plans (NBSAPs)	CBD NBSAPs Online Reporting Tool	198
1.4	Level of climate-nutrition integration in National Nutrition Plans (NNPs)	Provided by Scaling Up Nutrition (SUN)	53
Other thematic strategies			
2.1	Level of climate-nutrition integration in National Climate Plans	Climate Policy Database and Climate Change Laws of the World: Law and Policy Search	163
2.2	Level of climate-nutrition integration in Climate Change Gender Action Plans (ccGAPs)	IUCN ccGAPs portal	16
2.3	Level of climate-nutrition integration in Climate Change and Health Vulnerability Assessments	ATACH Resource repository	29
2.4	Level of climate-nutrition integration in Health National Adaptation Plans (HNAPs)	ATACH Resource repository	33
2.5	Level of climate-nutrition integration in Food-Based Dietary Guidelines (FBDGs)	FAO FBDG Database	71
2.6	Level of climate-nutrition integration in National Food Loss and Waste Strategies	FAOLEX Database	33
2.7	Level of climate-nutrition integration in Public Food Procurement Strategies	WHO's GIFNA Database	119
2.8	Level of climate-nutrition integration in Social Protection Programmes	socialprotection.org	30

Indicator		Source	No. of documents or records analysed
Finance commitments			
3.1	Value of ODA to climate-related projects that supports nutrition objectives	OECD Database	63,644
3.2	Value and number of World Bank projects that are nutrition and climate supporting	World Bank Project Portfolio	720
3.3	Value and number of Green Climate Fund projects that are nutrition and climate supporting	GCF Project Portfolio	14
3.4	Number of companies in World Benchmark Alliance that score well on nutrition and sustainability	WBA 2023 Food and Agriculture Benchmark	350



Two different assessment approaches were used: one for the qualitative indicators, and another for the quantitative indicators.

QUALITATIVE ASSESSMENTS

Python and manual keyword search

A qualitative approach was used to assess the occurrence of keywords relating to climate and nutrition across a large share of source documents. This approach was applied to most policy documents (NDCs, NAPs, NNPs, NBSAPs, National Climate Plans, ccGAPs, Climate Change and Health Vulnerability Assessments, HNAPs, Food Loss and Waste Strategies, FBDGs, and Social Protection Programmes). This approach involved multiple rounds of document review, both automated and manual, as summarised in the steps below.

1. The first assessment round was conducted using Python code. A code was developed to capture which keywords appear in each document. All non-English documents were first translated to English using DeepL before being run through Python.

The output from this review included a new version of each source document with keywords highlighted and an Excel file presenting the count of keywords (per keyword group) found in each document. The full Python code used for this review is presented later in **Table 9**.

2. The second and third assessment rounds were conducted manually. The highlighted versions of each source document were reviewed by a ‘first reviewer’ who evaluated the relevance of each

highlighted keyword to climate and/or nutrition, depending on the source document and context. The reviewer determined an overall classification level (Levels 1-4) for each document reflecting the degree to which it showed integrated action on climate and nutrition (**see Table 10 later in the Annex**).

3. Step 2 was repeated by a ‘second reviewer’ to obtain a second classification level for each source document.

4. Lastly, a ‘third reviewer’ determined a final classification level for each document by comparing the results of reviewers one and two. If they were in agreement, this result was taken as final. In the case of a discrepancy, the third reviewer revisited the source documents and made a balanced judgement based on the justification provided by reviewers one and two.

5. Once final classification levels were assigned, the data was analysed against the identified themes and aggregated to form data visuals.

Analysis of Public Food Procurement Strategies

Data on public food procurement strategies was sourced from WHO’s Global Database on the implementation of Nutrition Action (GIFNA), which categorises strategies at levels that overlap with the I-CAN Assessment classification levels. Data is up to date as of 1st October 2025. **Table 8** presents the GIFNA categories alongside the I-CAN classification level to which they were assigned.

Table 8. Mapping GIFNA categories onto I-CAN classification levels

GIFNA category	I-CAN classification level
Public food procurement and service policies without climate objective or criteria	Level 1
Public food procurement and service policies with climate criteria but without climate objective	Level 2
Voluntary public food procurement and service policies with climate objective and criteria Mandatory public food procurement and service policies with climate objective and one criteria	Level 3
Mandatory public food procurement and service policies with climate objective and multiple criteria	Level 4

Below we present a list of all keywords used in the qualitative assessment. The lists are taken directly from the Baseline Assessment, with a few new additions, highlighted in bold below. These new keywords were added to capture recurring nutrition-related topics identified in the previous assessment. Since the appearance of keywords alone was not sufficient to evaluate links to nutrition or climate respectively, the sentence and context in which the keywords were used were also reviewed. This helped to ensure that no subtleties in the text were missed.

Nutrition Keywords

Group 1 – Food Security: Food Security

Group 2 – General Nutrition: Nutrition, Nutritional, Nutrient(s), Malnutrition, Undernutrition, Overnutrition, Nutritious, Nutritious Foods, Food Systems

Group 3 – Diet-related: Diet(s), Balanced Diet, Healthy Diet, Unhealthy Diet, Affordable Diet, Accessible Diet, Available Diet, Diet Diversity, Plant-Based, Vegan, Vegetarian

Group 4 – 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 5 – Food Safety: Food Label, Food Safety, Food Control, Food Quality, **Foodborne Disease(s), Waterborne Disease(s), Foodborne Illness(es), Foodborne Outbreak(s), Food Poisoning, Food Contamination, Foodborne Pathogens, Mycotoxin, Aflatoxin, Spoilage, Food Control System, INFOSAN**

Group 6 – 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 7 – Nutritional Content: Vitamin, Micronutrient(s), Mineral, Fiber, Fibre, Calcium, Gluten, Calorie, Caloric, Carbohydrate, Sodium, Salt, Sugar, MSG, Iron, Zinc, Fortified, Biofortified, Fortification, Biofortification

Climate 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 2 – Energy: Carbon, Fossil Fuel(s), Oil, Coal, Energy Efficient, Renewable Energy

Group 3 – Sustainability: Sustainable, Sustainability, Recycle(ing), Reduce(ing), Reuse(ing), Single-Use Plastic, Compost(ing), Biodegrade(able), Package(ing)

Group 4 – Food: Food Loss(es), Food Waste(s), Overproduce(ing), Shelf Life, Portion Size, Local(ly), Regional(ly), Season(al)

Group 5 – ESG: Fairtrade, Animal Welfare, Free Range, Water Use, Land Use, UNFCCC, ESG

Group 6 – Agriculture: Intensive Farming, Overfarming, Crop Diversity, Overgrazing, Monoculture, Indigenous Crops, Organic, Bio, Nature-Based Solutions, Neglected- Underutilised Species, Agroecology, Ecology

Table 9. Python and R code used for keyword analysis

```

import re
from pathlib import Path

import pandas as pd
from loguru import logger
import fitz # PyMuPDF

# =====
# Setting
doc_type = "[Insert here the document type to be analysed]" # e.g. NDC

# =====
# Path to Excel file containing the list of keywords to be searched for
doctype_file = Path("resources/document_types.xlsx")
# Format of document_types.xlsx
# Document_type  Area
# -----
# NDC           Food security, Nutrition
# NAP           Food security, Nutrition
# NNPClimate Climate

# Read Excel file into dataframe
doctype_df = pd.read_excel(doctype_file)
# Convert Areas into a list
doctype_df["Area_list"] = doctype_df["Area"].str.split(", ")
# Subset by document type
doctype_df = doctype_df[doctype_df["Document_type"] == doc_type]
#print(doctype_df)

# =====
# Get keywords

# Path to Excel file containing the list of keywords to be searched for
keywords_file = Path("resources/keywords_list.xlsx")
# Read Excel file into dataframe
df = pd.read_excel(keywords_file)
# Convert Keywords into a list for each group
df["Keywords_list"] = df["Keywords"].str.split(", ")
# Subset to keep only keywords of relevant Areas (i.e., Nutrition and/or Climate)
df = df[df["Area"].isin(doctype_df["Area_list"].explode())]

#print(df)

# Create a list of tuples
groups_and_keywords = df.apply(
    lambda row: (
        row["Area"],
        row["Group_id"],
        row["Group_name"],
        row["Keywords_list"],
        row["Highlight_color"]),
    axis=1
)
#print(groups_and_keywords)

# =====

```

```

# Get PDF documents

# Note: if you are reading PDF files from DropBox, remember to make them available offline.
if doc_type == "NDC":
    parent_dir = Path("[Include path to NDC documents folder]")
elif doc_type == "[Include other document type]":
    parent_dir = Path("[Include path to other document types folder]")
else:
    print("doc_type NOT FOUND!")

print(parent_dir)
print("-----")

# PDF documents directory
if doc_type == "NDC":
    doc_dir = Path(parent_dir, "NDC subfolder")
elif doc_type == "NAP":
    doc_dir = Path(parent_dir, "Other documents subfolder")
else:
    print("doc_dir NOT FOUND!")

print(parent_dir)
print(doc_dir)

# Read all PDFs in doc_dir (not in any existing subfolders)
file_names = list(doc_dir.glob("*.pdf"))

print("\t", *(f.name for f in file_names), sep="\n\t")

# # =====

all_results = []

# Loop through PDFs
for file_name in file_names:
    logger.info(f"Processing file: {file_name.name}")

# Open PDF
pdf = fitz.open(file_name)

file_hits = 0 # counter per PDF
# Loop through group names, keywords and highlighting colors
for area, group_id, group_name, keywords_list, color_str in groups_and_keywords:
    print(f"Group: {group_name}")

    # Convert color string from "(1.0, 0.5, 0.0)" to (1.0, 0.5, 0.0)
    cc = color_str.lstrip("(").rstrip(")").split(",")
    highlight_color = tuple(map(float, cc))
    print(type(highlight_color))

# Loop thorough keywords
for keyword in keywords_list:

    pages, count, sentences = [], 0, []

    # Loop through PDF pages
    for page_number, page in enumerate(pdf):
        text = page.get_text()

```

```

# Find keywords in page with regular expression
pattern = r"\b{}\b(?:[.,;:]?)".format(
    re.escape(keyword).replace(r"\ ", r"[\s-]*")
)
for match in re.finditer(pattern, text, flags=re.IGNORECASE):
    count += 1
    file_hits += 1

# Extract sentence
start = text.rfind(' ', 0, match.start()) + 1
end = text.find(' ', match.end())
sentences.append(text[start:end].strip())
if (page_number + 1) not in pages:
    pages.append(page_number + 1)

# Highlight the keyword in the PDF occurrence with the colour associated to its group (see keywords_list table)
text_instances = page.search_for(match.group(0))

for inst in text_instances:
    highlight = page.add_highlight_annot(inst)
    highlight.set_colors(stroke=highlight_color) # Set color
    highlight.update() # Apply the color

# Append results
all_results.append({
    'File Name': file_name.name,
    'Keyword_area': area,
    'Keyword_group_id': group_id,
    'Keyword_group': group_name,
    'Keyword': keyword,
    'Pages': ', '.join(map(str, pages)) if pages else 'Not found',
    'Total Occurrences': count,
    'Sentences': '\n'.join(sentences)
})

if file_hits > 0:
    # Save highlighted PDF
    # Create a new filename with "highlight_" before the filename
    new_file_name = "highlight_" + file_name.name # just prefix the original name

    # Build the full output path
    output_path = Path(parent_dir, doc_type + "_highlighted", new_file_name)

    # Ensure folder exists
    output_path.parent.mkdir(parents=True, exist_ok=True)

    # Save PDF
    pdf.save(str(output_path))
else:
    print("No keywords found, not saving PDF")

combined_results = pd.DataFrame(all_results)
logger.info(f"Combined results:\n{combined_results}")

# Save the combined results to an Excel file
output_excel_file = parent_dir / 'keyword_search_results.xlsx'
combined_results.to_excel(output_excel_file, index=False)
logger.info(f"Results saved to {output_excel_file}")

```

The table 'keywords_list.xlsx' read by the python script:

Area	Group_id	Group_name	Keywords	Highlight_color	Color
Food security	1	Food security	Food security	(0.8, 0.0, 0.0)	maroon
Nutrition	1	General Nutrition	Nutrition, Nutritional, Nutrient, Nutrients, Malnutrition, Undernutrition, Overnutrition, Nutritious, Nutritious Foods, Food Systems	(1.0, 0.0, 0.0)	red
Nutrition	2	Diet-related	Diet, Diets, Balanced Diet, Healthy Diet, Unhealthy Diet, Affordable Diet, Accessible Diet, Available Diet, Diet Diversity, Plant-Based, Vegan, Vegetarian	(1.0, 0.5, 0.0)	orange
Nutrition	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	(1.0, 0.7, 0.0)	amber
Nutrition	4	Food Safety	Food Label, Food Safety, Food Control, Food Quality, Foodborne Disease, Foodborne Diseases, Waterborne Disease, Waterborne Diseases, Foodborne Illness, Foodborne Illnesses, Foodborne Outbreak, Foodborne Outbreaks, Food Poisoning, Food Contamination, Foodborne Pathogens, Mycotoxin, Aflatoxin, Spoilage, Food Control System, INFOSAN	(1.0, 1.0, 0.0)	yellow
Nutrition	5	Food Groups and Types	Vegetable, Vegetables, Fruit, Fruits, 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	(1.0, 0.6, 0.6)	pink
Nutrition	6	Nutritional Content	Vitamin, Micronutrient, Micronutrients, Mineral, Fiber, Fibre, Calcium, Gluten, Calorie, Caloric, Carbohydrate, Sodium, Salt, Sugar, MSG, Iron, Zinc, Fortified, Biofortified, Fortification, Biofortification	(0.9, 0.4, 0.2)	burnt orange

The table 'keywords_list.xlsx' read by the python script:

Area	Group_id	Group_name	Keywords	Highlight_color	Color
Climate	1	General Climate	Climate, Climate Change, Climate Crisis, Greenhouse Gas, Greenhouse Gases, CO2, GHG, Emissions, Extreme Weather, Methane, Sea Level, Sea Levels, Global Warming, Temperature, Biodiverse, Biodiversity, Mitigation, Mitigations, Adaptation, Adaptations, Net Zero	(0.0, 0.0, 1.0)	blue
Climate	2	Energy	Carbon, Fossil Fuel, Fossil Fuels, Oil, Coal, Energy Efficient, Renewable Energy	(0.0, 0.5, 1.0)	sky blue
Climate	3	Sustainability	Sustainable, Sustainability, Recycle, Recycling, Reduce, Reducing, Reuse, Reusing, Single-Use Plastic, Compost, Composting, Biodegrade, Biodegradable, Package, Packaging	(0.0, 1.0, 1.0)	cyan
Climate	4	Food	Food Loss, Food Losses, Food Waste, Food Wastes, Overproduce, Overproducing, Shelf Life, Portion Size, Local, Locally, Regional, Regionally, Season, Seasonal	(0.0, 1.0, 0.5)	turquoise
Climate	5	ESG	Fairtrade, Animal Welfare, Free Range, Water Use, Land Use, UNFCCC, ESG	(0.0, 1.0, 0.0)	gree
Climate	6	Agriculture	Intensive Farming, Overfarming, Crop Diversity, Overgrazing, Monoculture, Indigenous Crops, Organic, Bio, Nature-Based Solutions, Neglected-Underutilised Species, Agroecology, Ecology	(0.5, 0.0, 1.0)	purple

The R script used to process the Python script output:

```
# This script reads into the output excel table generated by the python script
# search_keywords_highlight.py and it summarizes the results by counting the
# keyword hits per document (rows) and per group of keyword (columns).

rm(list = ls())
gc()

library(readxl)
library(dplyr)
library(tidyr)

# Set paths
dbdir <- "[Insert project directory]"
ddir1 <- "[Insert output directory]"

# =====
# Setting
doc_type = "NDC"

if (doc_type == "NDC") {
  doc_type_dir <- paste0(dbdir, "[Insert path to NDC docs]")
} else if (doc_type == "[Insert other document types]") {
  doc_type_dir <- paste0(dbdir, "[Insert path to other document types directory]")
} else {
  print("doc_type NOT FOUND!")
}

fname1 <- paste0(doc_type_dir, "keyword_search_results.xlsx")
file.exists(fname1)

rawdat <- readxl::read_excel(fname1)
kw_dat <- readxl::read_excel("resources/keywords_list.xlsx")

x <- rawdat %>%
  group_by(`File Name`, Keyword_area, Keyword_group, Keyword_group_id) %>%
  summarise(keyword_count = sum(`Total Occurrences`, na.rm = TRUE)) %>%
  mutate(
    doc_type = doc_type, # Add document type column
    Keyword_group = factor(Keyword_group, levels = kw_dat$Group_name) # Reorder factors
  ) %>%
  arrange(Keyword_group) # Reorder keyword groups
x

# Convert table from long to wide to have each row a country and each column an indicator
x2 <- x %>%
  select(`File Name`, Keyword_area, Keyword_group, keyword_count) %>%
  pivot_wider(names_from = Keyword_group, values_from = keyword_count) %>%
  mutate(total_keywords_count = rowSums(across(where(is.numeric)), na.rm = TRUE))
x2

length(x2$total_keywords_count[x2$total_keywords_count > 0])

# Save
fname2 <- paste0(ddir1, "keywords_count_per_group-", doc_type, ".csv")
write.csv(x2, fname2, row.names = FALSE)
```

Table 10 presents the detailed methodology used to apply the level classification system to each indicator. The table specifies whether each indicator was assessed for levels of nutrition integration (the documents are climate related), climate integration (the documents are health/nutrition related), or both (the documents are climate and health/nutrition related).

Table 10. Detailed coding table for assigning classification levels for qualitative indicators

Indicator		Assessed for	Level 1	Level 2	Level 3	Level 4
1.1	Level of climate-nutrition integration in Nationally Determined Contributions (NDCs)	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the NDC	Mentions of relevant nutrition keywords and concepts in the NDC AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/risks) to climate and vice versa AND Nutrition improvement is an objective within the NDC with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the NDC with clear actions outlined and distinct plans on policy/program design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.
1.2	Level of climate-nutrition integration in National Adaptation Plans (NAPs)	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the NAP	Mentions of relevant nutrition keywords and concepts in the NAP AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/risks) to climate and vice versa AND Nutrition improvement is an objective within the NAP with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the NAP with clear actions outlined and distinct plans on policy/programme design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.
1.3	Level of climate-nutrition integration in National Biodiversity Strategies and Action Plans (NBSAPs)	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the NBSAP	Mentions of relevant nutrition keywords and concepts in the NBSAP AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/risks) to climate and vice versa AND Nutrition improvement is an objective within the NBSAP with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the NBSAP with clear actions outlined and distinct plans on policy/programme design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.

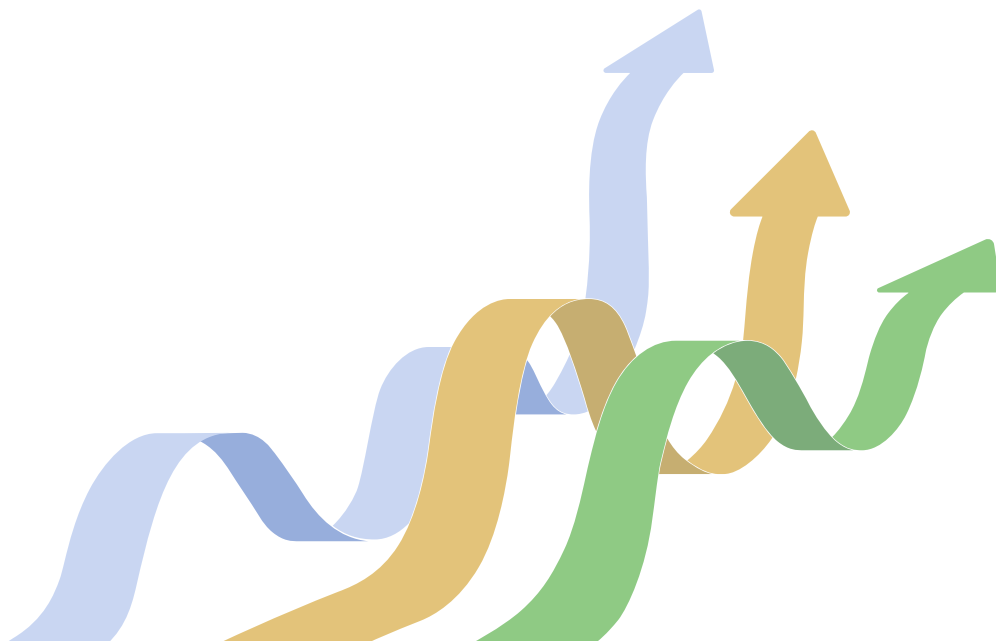
Indicator		Assessed for	Level 1	Level 2	Level 3	Level 4
1.4	Level of climate-nutrition integration in National Nutrition Plans (NNPs)	Climate integration	No mentions of relevant climate keywords and concepts in the NNP	Mentions of relevant climate keywords and concepts in the NNP AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/ risks) to climate and vice versa AND Nutrition improvement is an objective within the NNP with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the NNP with clear actions outlined and distinct plans on policy/program design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.
2.1	Level of climate-nutrition integration in National Climate Plans	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the document	Mentions of relevant nutrition keywords and concepts in the document AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/ risks) to climate and vice versa AND Nutrition improvement is an objective within the document with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the document with clear actions outlined and distinct plans on policy/programme design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.
2.2	Level of climate-nutrition integration in Climate Change Gender Action Plans (ccGAPs)	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the document	Mentions of relevant nutrition keywords and concepts in the document AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/ risks) to climate and vice versa AND Nutrition improvement is an objective within the document with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the document with clear actions outlined and distinct plans on policy/programme design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.

Indicator		Assessed for	Level 1	Level 2	Level 3	Level 4
2.3	Level of climate-nutrition integration in Climate Change and Health Vulnerability Assessments	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the V&A	Mentions of relevant nutrition keywords and concepts in the V&A AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/ risks) to climate and vice versa AND Nutrition improvement is an objective within the V&A with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the V&A with clear actions outlined and distinct plans on policy/programme design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.
2.4	Level of climate-nutrition integration in Health National Adaptation Plans (HNAPs)	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the document	Mentions of relevant nutrition keywords and concepts in the document AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/ risks) to climate and vice versa AND Nutrition improvement is an objective within the document with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the document with clear actions outlined and distinct plans on policy/program design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.
2.5	Level of climate-nutrition integration in Food-Based Dietary Guidelines (FBDGs)	Climate integration	No mentions of relevant climate keywords and concepts in the FBDG	Mentions of relevant climate keywords and concepts in the FBDG AND Some analysis conducted into linkages between nutrition and climate. This includes recognition of at least one linkage	Level 2 is met, with deeper analysis on climate implications within the FBDG AND Recommends population to eat foods from more sustainable sources	Level 3 is met, with in-depth analysis of climate implications within the FBDGs AND at least one of the following: Climate frameworks systemically integrated into the FBDG design OR Recommends population to eat foods from more sustainable sources with clear advice on how to do so. A non-exhaustive list of recommendations can be found on the discussion of the incorporation of sustainability into FBDGs from FAO2

Indicator		Assessed for	Level 1	Level 2	Level 3	Level 4
2.6	Level of climate-nutrition integration in National Food Loss and Waste Strategies	Climate and nutrition integration	No mentions of relevant nutrition keywords and concepts in the document	Mentions of relevant nutrition keywords and concepts in the document AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/ risks) to climate and vice versa AND Nutrition improvement is an objective within the document with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the document with clear actions outlined and distinct plans on policy/program design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.
2.7	Level of climate-nutrition integration in Public Food Procurement Strategies	Climate integration	No mention of relevant key words and/or concepts relating to climate topics	The food procurement policy contains climate and food/nutrition considerations and/or analyses AND/OR The food procurement policy includes voluntary climate criteria for food purchased, served or sold	The food procurement policy includes at least one mandatory climate criteria for food purchased, served or sold	The food procurement policy includes multiple mandatory criteria (e.g. categories of criteria topic) for food purchased, served or sold
2.8	Level of climate-nutrition integration in Social Protection Policies	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the document	Mentions of relevant nutrition keywords and concepts in the document AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/ risks) to climate and vice versa AND Nutrition improvement is an objective within the document with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the document with clear actions outlined and distinct plans on policy/program design e.g., timeline, funding, regions, baselines and targets, lead agencies etc.

Indicator		Assessed for	Level 1	Level 2	Level 3	Level 4
3.1	Value of ODA to climate-related projects that support nutrition objectives	Nutrition integration	Not applicable – see quantitative methodology section			
3.2	Value and number of World Bank projects that are nutrition and climate supporting	Climate and nutrition integration	Not applicable – see quantitative methodology section			
	Value and number of Green Climate Fund projects that are nutrition and climate supporting	Nutrition integration	No mentions of relevant nutrition keywords and concepts in the approved funding proposal and/or other relevant documents	Mentions of relevant nutrition keywords and concepts in the approved funding proposal and/or other relevant documents AND Some analysis conducted into linkages between nutrition and climate	Level 2 is met, with deeper analysis on nutritional linkages (opportunities/risks) to climate and vice versa AND Nutrition improvement is an objective within the approved funding proposal and/or other relevant documents with some initial plans on measures to be taken to achieve this	Level 3 is met, with in-depth analysis on nutritional linkages to climate and vice versa AND Nutrition improvement is targeted within the approved funding proposal and/or other relevant documents with clear actions outlined and distinct plans on policy/program design e.g., timeline, funding amounts, regions, baselines and targets, lead agencies etc.
3.3	Value and number of Global Environment Fund projects that are nutrition and climate supporting	Nutrition integration	Not applicable – see quantitative methodology section			
3.4	Value and number of Asian Development Bank loans that are nutrition and climate supporting	Climate and nutrition integration	Not applicable – see quantitative methodology section			
3.5	Value and number of African Development Bank loans that are nutrition and climate supporting	Climate and nutrition integration	Not applicable – see quantitative methodology section			

Indicator		Assessed for	Level 1	Level 2	Level 3	Level 4
3.6	Number of companies in World Benchmark Alliance that score well on nutrition and sustainability Under the 2023 Food and Agriculture Benchmark, there are scores on MA2 (Measurement Area) on Environment and MA3 on Nutrition - both are ranked out of a total score of 30. Scores are provided by the WBA up to 1 decimal point and have been rounded to the nearest whole number in our analysis.	Climate and nutrition integration	MA2 score is between 0-33, and MA3 score is between 0-33	MA2 score is between 0-33 and MA3 score is between 34-66 OR MA2 score is between 0-33 and MA3 score is between 67-100 OR MA2 score is between 34-66 and MA3 score is between 0-33 OR MA2 score is between 67-100 and MA3 score is between 0-33	MA2 score is between 34-66 and MA3 score is between 34-66 OR MA2 score is between 34-66 and MA3 score is between 67-100 OR MA2 score is between 67-100 and MA3 score is between 34-66	MA2 score is between 67-100 and MA3 score is between 67-100



QUANTITATIVE ASSESSMENT

Quantitative approaches were used to assess all finance-related indicators (GCF, GEF, World Bank, ADB, AfDB, ODA and WBA). These approaches involved fewer rounds of document review and analysis to account for the much larger number of source documents and records analysed under each indicator. By nature, all quantitative assessment approaches were less robust than the qualitative approaches because they did not involve manual review of each record.

World Bank analysis

The core dataset used for this analysis was the World Bank's [Project Database](#), filtered to show only active projects between the years 2023-2024 with the tag Environment, Infrastructure and Natural Resource Management. The World Bank Group has a dedicated Central Coding Team which estimates the % of funding (of the total project

finance commitment) that supports various development themes. Climate is listed as a sub-theme under 'Environment and Natural Resource Management', and Nutrition and Food Security are listed as sub-themes under 'Human Development'.

As mentioned in the indicator results section, (indicator section 3.2), it is not currently possible to determine the volume of finance supporting integrated climate and nutrition activities, because the data available does not show the extent to which finance tagged with a climate objective overlaps with finance tagged with a nutrition objective. In the absence of more granular data, in this assessment we consider instead the share of finance within environment-related projects that is tagged with an explicit nutrition objective. The specific data filtering exercise for each component of the analysis is presented in [Table 11](#).

Table 11. Methodology for assessing World Bank financing

Component	Methodology
Total value of all projects with an environment component	Total value of all 721 environment-related projects approved in 2023 & 2024
Total value of projects tagged with an environment theme (i.e. % of (1))	Value of projects tagged with an environment-related Theme 2: Access to Climate Finance, Circular Economy, Climate Change, Climate Change Policies and Institutions, Climate-Smart Agriculture, Ecosystem Management, Environmental Management, Environmental Health, Environmental Policies and Institutions, Food Loss and Waste, FY17-Climate Change, FY17-Environmental Health and Pollution Management, FY17-Environmental Policies and Institutions, FY17-Renewable Natural Resources Asset Management, Low Carbon Cities, Nationally Determined Contributions (NDCs) and Long-Term Strategies (LTSS), Pollution Management; Theme 3: 'blank'.
Total value of projects with an environment component that also have a nutrition component	Value of environment-related projects tagged with an nutrition-related Theme 2: 'Nutrition', 'FY17 Nutrition and Food Security'; Theme 3 'blank'
Value share of nutrition component of all environment-related projects	Value share of (all 721) environment-related projects tagged with a specific nutrition-related Theme 3: 'Nutrition' or 'FY17 - Nutrition'.
Proportion of spend on all projects with an environment component that also goes to nutrition	% of cell above of total value of all 721 environment-related projects supported in 2023 & 2024

ODA analysis

The OECD offers the most comprehensive dataset of bilateral and multilateral development finance for environment-related activities. The portal [Development finance and climate for environment](#) was used to identify and download all project records for the years 2022 and 2023 – the latest years for which complete data is available. The steps of analysis were as follows:

1. Within the downloadable Excel dataset, a keyword search was conducted on all 63,644 project titles and descriptions. Only nutrition keywords were applied because the chosen database contains only environment-related projects. A different search tool – DuckDB – was used to enable the keyword search to be conducted in Excel. DuckDB is an in-process analytical database system which can be used to perform rapid keyword searches and quantitative analysis. The output was a list of keywords against each indicator, where they occurred.
2. The resulting records were reviewed to determine which could be considered truly nutrition related. Only those explicitly containing the keyword 'nutrition' were counted for the final score – i.e. the number and value of ODA loans that are climate and nutrition supporting.

Python keyword search

A simplified version of the qualitative approach was applied to all indicators for which individual project documents were available. This included GCF, GEF, ADB and AfDB. The methodology used for these indicators was considerably less conservative – and susceptible to inaccuracies – than those used for other indicators (see #3 below).

1. WiA target assessment timeframe was defined for each indicator, depending on the availability and volume of available documents. For all the above indicators, this was the latest year for which a full set of project information was available: 2024. Public project databases were used to identify the list of projects approved in 2024, and the corresponding PDF documents were downloaded for analysis. The databases and document type used for each indicator are presented in [Table 12](#).

Table 12. Document types used in the finance analysis

Indicator	Source	Document Type
GCF	GCF project portfolio	Funding Proposal
GEF	GEF project database	Project Identification Form (PIF), CEO Approval Document when PIF was unavailable
ADB	ADB Climate Change Financing database	Report to the President of the Board of Directors, Project Overview Sheet when Report to the President was unavailable
AfDB	AfDB MapAfrica database	Project Appraisal Report

2. The original Python code was then applied to each project document to capture which keywords appear in each document. Only nutrition keywords were applied to GCF and GEF documents because these projects have an inherent climate objective, while both climate and nutrition keywords were applied to ADB and AfDB documents, because these projects are not inherently climate-related. Again, all non-English documents were first translated to English using DeepL before being run through Python. In a few cases, a document could not be translated due to size or format and was omitted from the analysis.

The output from this review included a new version of each source document with keywords highlighted and an Excel file presenting the count of keywords (per keyword group) found in each document.

3. The keyword occurrences were used to determine the number and value of projects/loans under each indicator that can truly be considered as climate and nutrition supporting. Only documents containing keywords from 3+ climate keyword groups and 3+ nutrition keyword groups were considered to contain strong levels of integration and thus counted in the final 'score' for each indicator – i.e. the total number and value of grants and loans that are nutrition and climate supporting. Except for the GCF (see indicator section 3.3), manual reviews were not possible for the finance indicators given the sheer number of documents assessed. It is worth noting that this methodology may have enabled 'false positives' – the inclusion of keywords that were not truly relevant to the objective of the finance commitment but were counted in the result.

