Impact of
Climate Change & Environmental Sustainability
on nutrition

June 2024

I. Background: The climate crisis is here and now

The ongoing climate change crisis increasingly impacts the nutritional status of children worldwide. According to UNICEF's Children's Climate Risk Index (CCRI) report[1], almost every child globally is exposed to at least one major climate-related hazard like heatwaves, floods, cyclones, and droughts, and their catastrophic effects on children's nutrition, health, education, and other essential services and rights.

Children living in low- and middle-income countries are the most vulnerable, with more than 1 billion children at 'extreme high risk' to the short- and long-term negative impact of climate change. The same report states that India ranks 26th out of 163 countries with children most exposed and vulnerable to climate shocks and vulnerabilities.

II. Climate change & environmental sustainability (CCES) in UNICEF

CCES remains a high priority in UNICEF, globally and in India. Ensuring that every child lives in a safe and sustainable climate and environment is a key global strategic priority affirmed in UNICEF's 2022-2025 Strategic Plan[2]. UNICEF's global actions in CCES is guided by the 'Sustainability and Climate Change Action Plan 2023-2030[3]', which aims to align global commitment towards to ensure a sustainable world and to protect the most vulnerable children from the worst impacts of climate change.

In India, UNICEF's Country Programme document 2023- 2027[4] lists CCES as one of the six main sectoral programme priorities in India. UNICEF's mandate in India prioritises actions to address CCES for the realisation of every child's rights.

III. How does climate change affect nutrition?

Climate change negatively impacts the nutritional status of children, adolescents, and women in the following broad ways:

i. **Food systems, socio-economic determinants & diets[5]:** Climate change negatively affects food systems by directly impacting soil fertility, rain patterns, crop yields, food production, food-nutrient composition, and nutrient bioavailability. This directly worsens the main underlying causes of malnutrition like food security, dietary diversity, nutrient

[1] UNICEF-climate-crisis-child-rights-crisis.pdf
[2] Strategic Plan 2022-2025 publication English.pdf (unicef.org)
[3] UNICEF SCAP 2023-2030.pdf
[4] Country Programme Document 2023-2027 .pdf (unicef.org)
[5] Climate change and child health: a scoping review and an expanded conceptual framework (thelancet.com)

quality, livelihoods, household income, infrastructure, etc. These factors combined lead to increased instances of malnutrition among children and women[6]. However, the relationship between food systems and climate change is bi-directional, where food systems also affect climate change. Food systems are responsible for one-third of global greenhouse gas emissions (GHG), where the food we produce and eat affects the environment vastly. By 2030, the diet-related cost of greenhouse gases is estimated to increase by US$1.7 trillion per year. Therefore, sustainable, healthy diets is recommended, and it is estimated that this would help reduce health and climate change costs by up to US$1.3 trillion[7].

ii. **Climate-related disasters:** Climate change causes extreme weather events and disasters like flooding and droughts, which in turn results in disrupted access to adequate diets, nutrition and healthcare services and water and sanitation services. This also leads to the increase in the risk of diseases which directly impact the nutritional status of children. Climate change-induced weather events like heatwaves can also directly restrict and reduce outdoor physical activities (like walking, jogging or biking) contributing to sedentary lifestyles, which are risk factors for overweight/ obesity and non-communicable diseases.

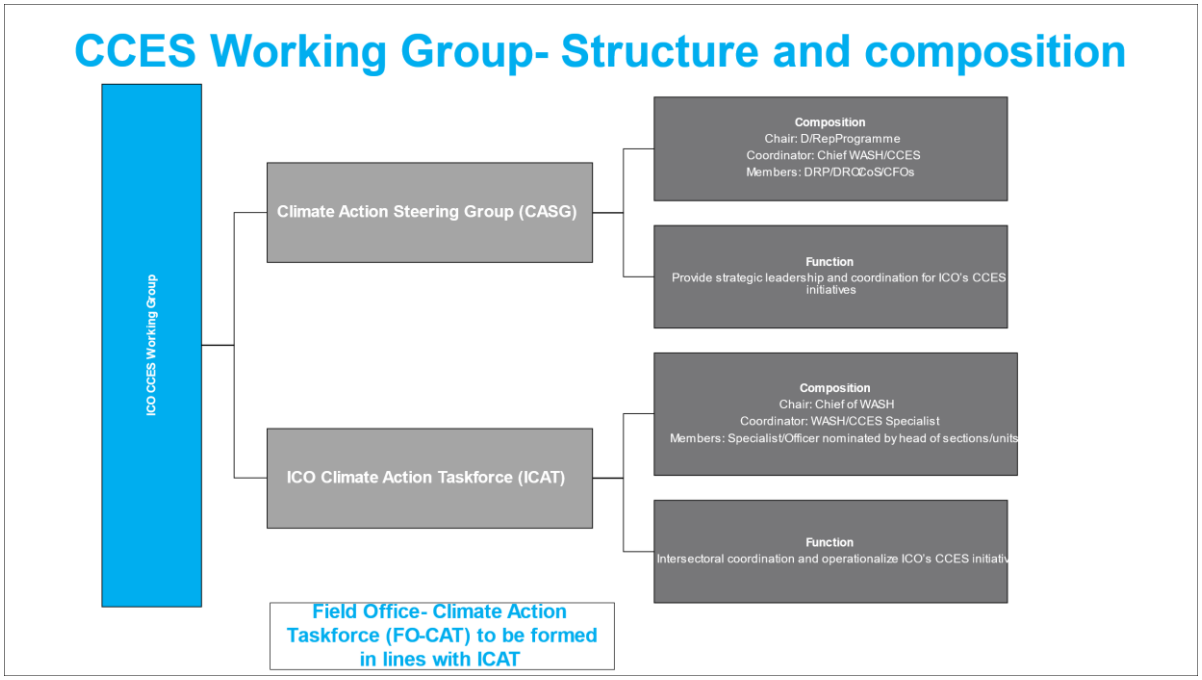
iii. **Water and sanitation (WASH):** Climate change declines equitable access to adequate WASH services for children worldwide. UNICEF's landmark CCRI report[1] states that as of 2022, 739 million children were exposed to high or extremely high-water scarcity, 436 million children lived in areas with high or extremely high-water vulnerability and 470 million children faced high or extremely high drought risk globally. The lack of adequate WASH services leads to an increase in the risk of diseases which directly impact the nutritional status of children and women.

iv. **Gender, a critically important factor:** Evidence from all over the globe on gender, climate change and health suggest that the nutrition and health impacts of climate change will be different for women and men. These differences arise from a combination of biological and sociocultural factors (e.g., gender norms, roles, and relations), and differences in access to and control over resources[8]. Changing weather patterns also increases certain vector-borne diseases and makes pregnant women more vulnerable to malaria infection, increasing the risk of spontaneous abortion, premature delivery, stillbirths, and low birthweight[8].

IV. CCES in UNICEF India

UNICEF's India Country Programme document 2023- 2027 give precedence to CCES as one of the six main sectoral programme priorities in India. To achieve CCES goals at the national level, actions are being led by the *ICO Climate Action Working Group*, comprising of members of the *ICO Climate Action Taskforce* (ICAT), the *Climate Action Steering Group* (CASG) and, at field office level, members of the *Field Office Climate Action Taskforce (FO-CAT)* – See structure in the figure below.

[6] Frontiers | The impact of climate change on food systems, diet quality, nutrition, and health outcomes: A narrative review (frontiersin.org)
[7] https://www.un.org/en/climatechange/science/climate-issues/food
[8] 1350 PHE Mainstreaming Gender Climate 231112.indd (who.int)



The nutrition section is working towards integrating realities of CCES in its nutrition programming in the following ways:

i. **System strengthening**: Ensuring essential health and nutrition service continuity during climate-induced disasters and emergencies in collaboration with the health and WASH sections. The objective of this action pillar is to make nutrition and health service delivery platforms shock-responsive, climate-resilient, and environmentally sustainable for children in India.

ii. **Social & behavioural change** (SBC): Promoting the consumption of local, seasonal and diverse diets and raising awareness on CCES & emergencies and disaster risk reduction (E/DRR). This is to make communities resilient to climate emergencies by increasing awareness on disasters and emergencies and appropriate nutrition, health, and WASH behaviours to adopt.

iii. **Advocacy on healthy diets**: Advocating for promoting the consumption of local and seasonal foods and discouraging the consumption of ultra-processed foods. The double-fold long term objectives of this is to promote the consumption of sustainable healthy diets for good nutrition outcomes and to contribute towards the reduction of the carbon footprint of food systems on the environment.

iv. **Disaster risk reduction**: Nutrition, health, WASH and E/DRR sections are collaborating with the National Centre for Disease Control (NCDC), a national Centre of Excellence for the control of communicable diseases in India. Under the Ministry of Health and Family Welfare's National Programme on Climate Change and Human Health (NPCCHH), UNICEF provides technical assistance to the Government to shape the health system's response to climate change. The objective is to strengthen the health system to prevent and treat communicable diseases, including climate change-induced vector-borne diseases among Indian children.

v. **Early warning systems**: Exploring how to set-up a real-time nutrition surveillance mechanism, based on existing nutrition information systems. The objective is to detect early any deterioration of the nutrition status of children and provide the appropriate support and assistance during times of climate-induced emergencies.

V. Areas for integrating CCES in UNICEF India's nutrition programme.

CCES may be integrated within the UNICEF ICO nutrition programme via the intervention strategies already stated in the nutrition programme Theory of Change. These strategies are, but not limited to, the following:

- ✓ Influencing leadership and governance for nutrition policy development,
- ✓ Focusing on disadvantaged (or the most vulnerable populations),
- ✓ Supporting development of service delivery programmes using information technology,
- ✓ Human resources strengthening via capacity building,
- ✓ Demand generation and community mobilisation using community platforms, and
- ✓ Engaging the private sector in promoting nutrition literacy.

The suggested list of interventions to integrate CCES in nutrition programmes are as follow:

1. **Systems strengthening to ensure nutrition service resilience and continuity.**

Since short- and long-term effects of climate change threaten the uninterrupted delivery of nutrition services, it is essential to strengthen existing systems for preparedness to climate shocks. Suggested areas of support:

i. Assess risks of climate change to nutrition service delivery systems and advocate for the allocation of resources towards the establishment of climate-resilient health facilities and Anganwadi centres, safeguarding the uninterrupted delivery of essential health and nutrition services amidst climate-induced disasters.

ii. Advocate for and provide technical assistance to enhance the existing Poshan Tracker system to evolve into a real-time nutrition surveillance system or an early warning mechanism, enabling proactive intervention and mitigation efforts. Additionally, research on linking existing weather-related data systems to assess how it can affect malnutrition rates could contribute towards localised, adapted-to-the-context and timely delivery of nutrition interventions for disaster affected children, adolescents, and women.

iii. In collaboration with the Social Policy and Social Protection (SPSP) section, engineer mechanisms to ensure the adaptability of social protection schemes, ensuring they swiftly respond to shocks, safeguarding resilience capacities, and maintaining food and nutrition security for the most vulnerable populations.

Potential collaboration with: Sections: DRR, Health, WASH, SPSP | **Government:** National Disaster Management Authority (NDMA), MoWCD, MoFHW, Niti Aayog | **Development partners**: UNSDCF Outcome Group 2, Development Partners Group (DPG).

2. **Capacity building of decision makers and climate, nutrition, and health experts[8].**

There is a need to build the capacity of public health and nutrition practitioners and key decision makers to acquire the knowledge, confidence, and motivation to make nutrition programmes sustainable and climate resilient.

i. Build the capacity of public health and nutrition practitioners and key decision makers on the urgency to integrate CCES in nutrition programming (to include CCES-sensitive results/ indicators; in budgets, workplans, etc.).

Potential collaboration with: Sections: WASH, health, E/DRR | **Government:** NDMA, MoHFW, MoCWD, Niti Aayog | **Development partners:** UNSDCF Outcome Group 2, Development Partners Group (DPG).

3. **Integrate gender equity throughout climate-sensitive nutrition programming.**

Acknowledging that the short term and long-term effects of climate change will be more devastating for women, there is an urgent need to address gender equity while planning for climate-sensitive nutrition programmes in India. This can include implementing available tools in global guidance documents like the WHO's Mainstreaming gender in health adaptation to climate change programmes. Possible entry points are:

i. Adapt and use available checklists in global guidance documents (like the one proposed above) for gender mainstreaming in nutrition adaptation to climate change programmes. The checklists include practical recommendations on how to mainstream gender for each of the phases of the programme cycle, namely needs assessment, identification, formulation and design, implementation and monitoring and evaluation.

ii. Collaborate with other sections like DRR and social protection to revise the national Disaster Management Authority (NDMA) guidelines. This can include actions to ensure the continuity of health and nutrition service delivery to children, adolescents and women, increasing anticipatory direct cash transfers to women, making norms of assistance more inclusive in national and state disaster risk funds, involving women's Self-Help Groups in providing nutrition-related relief work post climate disasters, etc.

Potential collaboration with: Sections: DRR, social protection, health, SBC | **Government:** MoWCD, MoHFW, MoRD | **Development partners:** UNSDCF Outcome Group 2, Development Partners Group (DPG).

4. **SBC around consumption of climate-resilient, seasonal and local healthy diets.**

An opportunity area to integrate CCES within nutrition programmes is to integrate CCES related messages in our existing SBC activities, including:

i. SBC to increase knowledge and practices around consuming sustainable, local, seasonal, and climate-resilient healthy diets. This means promoting sustainable healthy diets that are climate-resilient, high in whole grains, pulses, a variety of fruits and vegetables, and

nuts and seeds; and low in high-greenhouse gases emission-intensive foods (such as ultra-processed manufactured foods)[9].

ii. Increase awareness about climate change related emergencies, its effects on food production and diets and promote sustainable, local, seasonal, and climate-resilient food consumption behaviours and practices. The SBC section has already integrated simple messages on CCES with its partners. (e.g., deforestation, using water efficiently, etc.).

Potential collaboration with: **Sections:** CAP, SBC | **Government:** Ministry of Women and Child Development (MoWCD), Ministry of Education (MoE), Ministry of Health and Family Welfare (MoHFW), Ministry of Rural Development (MoRD), Ministry of Tribal Affairs (MoTA) | **Development partners:**

5. Increase nutrition literacy on healthy diets in "in and out-of-school" children and adolescents.

Leverage all possible platforms to promote the consumption of sustainable, local and seasonal healthy diets in children and adolescents. Here, UNICEF can work with schools, ICDS programme, SRLM and communities to:

i. Embed comprehensive nutrition education into school curricula and teacher training programmes, including eating local and seasonal foods, saying no to ultra-processed foods and foods HSSF[10], purchasing products with minimum packaging, recycling, and reducing energy and water consumption[11], etc.; Empower educators with the knowledge and skills necessary to effectively deliver nutrition education in schools.

ii. Empower frontline workers (Anganwadi Workers, ASHAs, MMNs) and SHGs with the knowledge and skills necessary to effectively deliver healthy diets counselling across the life cycle.

Potential collaboration with: **Sections:** Education, health, SBC | **Government:** MoE, MoWCD, MoHFW | **Development partners:** UNSDCF Outcome Group 2, Development Partners Group (DPG).

6. Advocate and provide technical assistance to the Government on regulations and guidelines for healthy and sustainable diets[12].

Diets and food systems affect climate change and vice versa. Thus, there is an urgent need and opportunity to influence the government towards building more environmentally sustainable food systems[13] (from production to consumption) that could mitigate the effects of climate change in the long term. Here UNICEF can:

[9] Ultra processed foods are greenhouse gases emission-intensive foods which cause pollution and environmental harm in both their production and consumption.
[10] Building and managing sustainable schools: The case of food waste - ScienceDirect
[11] Sustainability | Free Full-Text | Environmental, Social and Economic Sustainability Indicators Applied to Food Services: A Systematic Review (mdpi.com)
[12] Nutrition from a climate change perspective | Proceedings of the Nutrition Society | Cambridge Core
[13] Sustainable food systems: Concept and framework (fao.org)

i. Provide technical assistance to the government for food regulations that are aimed at protecting children from aggressive ultra-processed food marketing.[14] Additionally, advocate for food pricing policies that subsidise unprocessed or minimally processed local foods while taxing ultra-processed foods and foods high in salt, sugar and/or fat (HSSF). These activities would achieve the triple objective of promoting the consumption of environmentally sustainable 'healthy diets', decreasing the consumption of 'junk foods' and discourage an environmentally unsustainable food production system with high greenhouse gases emissions in India.

ii. Build alliance with partner organisations like the Food and Agricultural Organization (FAO) to support actions towards transforming food systems into an environmentally sustainable one.

Potential collaboration with: Section: CAP | **Government:** FSSAI, MoHFW, MoWCD | **Development partners:** Outcome Group 2, Development Partners Group (DPG).

VI. Conclusion

Climate change is intricately linked to the nutritional outcomes of children, adolescents, and women globally, including in India. To ensure that our target beneficiaries reap the benefits of existing nutrition programmes, as well as have improved access to them during times of climate change-induced emergencies, it is the need of the hour to make all nutrition programmes climate sensitive. Because nutrition spans the purview of multiple ministries and sections, the work on climate-sensitive nutrition programmes must be inter-sectoral and inter-sectional and led with a collaborative approach. Future country work plans may essentially need to include multi-sectional nutrition-sensitive interventions to truly and thoroughly address the need to link climate change in nutrition programmes in India.

[14] Interlinkages between Climate Change and Food Systems: The Impact on Child Malnutrition—Narrative Review - PMC (nih.gov)