



Capacity development in action

World Bank–FAO Knowledge Session series on the nexus of food systems, nutrition, and climate change in India (2022)

The issue

Agrifood systems, nutrition and climate change interact and influence each other. While climate change impacts agricultural productivity and access to safe and nutritious food in a variety of ways, agrifood systems and the way we produce, process, and consume food also play a major role in climate change and environmental degradation. Agrifood systems are responsible for more than one third of global greenhouse gas emissions and exert significant pressure on the environment, while being highly dependent on it.¹

India is among the most climate-vulnerable countries, with increasing heat waves, droughts, erratic rainfall, and more extreme weather events, all of which will intensify in the coming years, affecting agricultural productivity and, more broadly, agrifood systems, nutrition, and health. There is an urgent need to enhance food security and nutrition, improve livelihoods and build resilience to climate change.

To explore the nexus between agrifood systems, nutrition and climate change, the Food and Agriculture Organization of the United Nations (FAO) and the World Bank co-organized a five-part virtual Knowledge Session series with a particular focus on India.

Quick facts on India

- In 2019, 43 percent of India's workforce is dependent on agriculture for their livelihood, contributing to nearly 17 percent of its GDP.²
- In 2021, approximately 36 percent and 19 percent of children under five are stunted and wasted, respectively.³
- In 2019–2021, 224.3 million people were undernourished in India, an increase from 189.2 million in 2017–2019 (16 and 14 percent of its total population, respectively).⁴
- In 2020, almost 71 percent of India's population could not afford a healthy diet, compared to 69 percent in 2019.⁵

¹ FAO. 2021. *Climate change, biodiversity, and nutrition nexus – Evidence and emerging policy and programming opportunities*. Rome, Italy.

<https://www.fao.org/agroecology/database/detail/en/c/1479786/>

² International Institute for Population Sciences. 2021. National Family Health Survey (NFHS-5) 2019-21. In: *National Family Health Survey, India*. Cited 10 November 2022.

http://rchiips.org/nfhs/NFHS-5_FCTS/India.pdf

³ World Bank. 2022a. Employment in agriculture (% of total employment) (modeled ILO estimate) – India. In: *World Bank Data*. Washington, DC. Cited 10 November 2022.

<https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=IN>

World Bank. 2022b. Agriculture, forestry, and fishing, value added (% of GDP) – India. In: *World Bank Data*. Washington, DC. Cited 10 November 2022.

<https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=IN>

⁴ FAO, IFAD, UNICEF, WFP & WHO. 2020. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*. Rome, FAO.

<https://www.fao.org/publications/sofi/2020/en/>

FAO, IFAD, UNICEF, WFP & WHO. 2022. *The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable*.

Rome, FAO. <https://www.fao.org/publications/sofi/2022/en/>

⁵ *ibid.*

The action

A platform was created to present the latest knowledge and experiences on how to address the nexus and learn from the best practices focusing on integrated solutions, using a **blended learning method** with two components:

- 1) **Independent remote learning** before each session on background information through recorded presentations on each sub-theme, such as neglected and underutilized species, food loss and waste, urban food agenda, public food procurement and private sector partnership, resilience, gender and more.
 - a. Three or four 7-minute videos of key experts answering specific questions for each session were uploaded onto the World Bank's Open Learning Campus (OLC), an online platform available to registered participants.
 - b. Organizers maintained a dialogue with participants to ensure videos were viewed before the sessions to come up with questions and comments based on the content.

- 2) Five 90-min **interactive virtual discussion sessions** that expand on the videos viewed before the sessions.
 - a. Active interaction between participants and experts in the virtual sessions was essential to draw out key messages and actionable solutions.
 - b. Participants prioritized **six actionable solutions** identified during the discussions from each session.
 - c. At the end of the series, the top three actionable solutions from each of the five sessions were re-ranked collectively to determine the most relevant solutions in the short- and long-term. These were subsequently included in the series' summary report as an overview of the dialogue on the nexus.

Scope

Location: India

Capacity development target groups: Government of India, the Consultative Group for International Agricultural Research and national research institutions, non-governmental organizations, the private sector, development partners and international organizations

Duration: 17 March–14 April 2022

SDG contribution: 2, 3, 12, 13, 14, 15

The results

- **Individual capacity was developed** through knowledge sharing among more than 60 participants from the Government of India, the Consultative Group for International Agricultural Research and national research institutions, non-governmental organizations, the private sector, development partners and international organizations. The participation of 19 experts over the five-week series and the great diversity of participants offered different views and perspectives on the nexus and highlighted entry points on how to address all three components simultaneously. Participants who attended at least three sessions received a certificate, underlining their commitment to better understanding the nexus and addressing the related challenges.
- **Identification and prioritization of 30 actionable solutions** linking agrifood systems, nutrition and climate change that can be applied in the short and long term in India through a participatory process. These actionable solutions coming directly from the participants and their perceptions of what is possible and feasible could serve as a roadmap for future investment and projects in India in this field.
- **Efforts to create a community of learning** by the FAO-World Bank organizing team through regular communication to share summary notes with actionable solutions, experts' responses to questions raised during the sessions and the Final Summary Report of the series at the end of the 5-week sessions.

Top five actionable solutions, as ranked by participants:

1. **Strengthen and support** small and medium enterprise development to fill gaps in nutrition-sensitive value chains and reduce food loss and waste, promoting socioenvironmental and economic benefits.
2. **Empower** women-led and farmer-led platforms, including via digitalization, to mitigate information gaps and reach last-mile markets.
3. **Consolidate and align** actions to enhance awareness among consumers as well as food service and health professionals, affordability and the regulatory environment to improve demand for healthy foods and curb demand for unhealthy foods in urban settings and beyond.
4. **Encourage** sustainable production and consumption of diverse plant-rich diets, including reintroducing neglected and underutilized species, which are often locally adapted superfoods.
5. **Preserve** South Asian diets and local foods by increasing the availability and accessibility of sustainably produced foods, promoting healthy consumption patterns with adequate quantities, and elevating healthy local cuisines as aspirational and wholesome.

Recommendations for next steps and scaling up promising practices

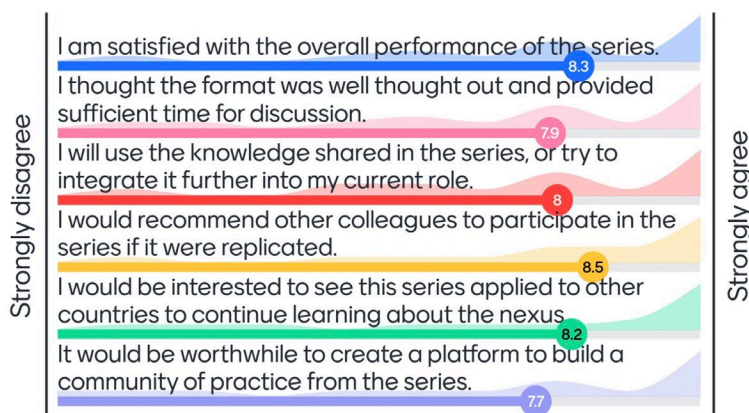
Blended learning is cost-effective, accommodates a large number of participants simultaneously and can be as effective as face-to-face learning. In particular, the format of the Knowledge Session series:

- provided participants with the same baseline information and time to reflect on any questions they may have had on specific points from the recorded presentations; and
- allowed for fully interactive, live, virtual sessions for questions and answers and discussion with subject-matter experts.

However, its success depends on several factors:

- For experts, it is more demanding to preparing a presentation in advance than present in real time, as they need to self-record following a set of guidelines, then attend a 90-minute session to answer participant questions.
- As participants, it was necessary to view the recorded videos on the OLC platform before the live sessions to understand the topics and themes discussed. Participants who viewed the videos were more actively engaged and asked insightful questions during the sessions.
- Reliable technology, namely a stable internet connection, was required to view the videos before the sessions and again during the virtual sessions to take part in the discussions.

Participants' evaluation



The following actions are recommended:

Continue to strengthen individual capacity to formulate solutions for the nexus agenda and better integrate nutrition, climate and agrifood systems actions on the ground through:

- Additional Knowledge Session series following the same approach, using new, state-specific recordings applicable to the target audience to ensure the impact and relevance of the experiences and information presented.
- Diversifying the experiences and geographical focus of the Knowledge Sessions, from global, national to state level, to examine how the nexus is currently being implemented, assessed, and measured. Identify the relevant indicators that are in place to capture these integrated solutions covering all three aspects of the nexus.
- Creation of a forum for knowledge sharing and discussion among participants using the OLC platform. This will allow the discussions initiated during the Knowledge Session series to continue beyond the end of the sessions and ultimately create a community of practice where knowledge and experiences are shared.

Considering the positive feedback from the first Knowledge Session series, and to sustain the interest in identifying integrated solutions, a second series will be held from December 2022 to June 2023. The second series will build on the discussions and outcomes of the first series but will shift from a national to state-level perspective. It will aim to advance discussions on how to better integrate and assess the nexus and apply the appropriate indicators to capture these solutions.



Partner

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Resources

FAO. 2016. Toolkit on nutrition-sensitive agriculture and food systems. In: *Nutrition*. Rome. Cited 10 November 2022. [fao.org/nutrition/policies-programmes/toolkit](https://www.fao.org/nutrition/policies-programmes/toolkit)

FAO. 2021. *Climate change, biodiversity, and nutrition nexus – Evidence and emerging policy and programming opportunities*. Rome. doi.org/10.4060/cb6701en

FAO. 2021. *FAO's work in Nutrition. Nutrition and climate change*. Rome, FAO. [fao.org/documents/card/en/c/cb6865en](https://www.fao.org/documents/card/en/c/cb6865en)