# Ploughing a New Channel for India's Food Systems

## What is the issue?

In an effort to spur national and regional action to deliver the UN 17 Sustainable Development Goals (SDGs) through transforming food systems, the UN Food Systems Summit called for action by governments in five areas.

## What is the status of India's food system?

- India is now self-sufficient in food grains production in the macro sense.
- But it has about a quarter of the world's food insecure people who are unable to reach the caloric target of 2,400 kcal in rural and 2,100 kcal in the urban set-up.
- Nutrition indicators have marginally improved over the years but macro- and micronutrient malnutrition is widespread, over 32% of children below five years still underweight as per the recently released fifth National Family Health Survey (2019-2021) phase 2 survey.
- India is ranked 101 out of 116 countries in the **Global Hunger Index, 2021**.
- The country faces the dual challenge of achieving nutrition security, as well as addressing declining land productivity, land degradation and loss of ecological services with change in land use.

## What is the UN Food Systems Summit call for action?

> *The UN Food Systems Summit held during the UN General Assembly in New York on September 23, set the stage for global food systems transformation to achieve the Sustainable Development Goals by 2030.*

- The Summit called for government action in five areas
  - nourish all people
  - boost nature-based solutions
  - advance equitable livelihoods, decent work and empowered communities
  - build resilience to vulnerabilities, shocks and stresses
  - accelerate the means of implementation
- Such a transformation in the Indian context would involve enhancing interfaces between the spheres of science, society and policy, focusing on sustainability, resource efficiency and circularity.

## What is the history of mix of science and policy?

- An active science-society-policy interface prevented the negative atmosphere of the 1960s at a time of inability to feed a growing population.
- **India's Green Revolution-** In 1960s, food security was achieved not only through science

and technology and the development of improved high-yielding varieties of rice and wheat but also through policy measures and development of institutional structure.
- It included a vast agricultural research and technology transfer system at the national, regional, State and local levels.
- **Training & Visit system**- The system introduced in 1970s with World Bank assistance was key to the science-society interface as it established a cadre of agriculture extension specialists at the local level.

## What is the need for transition from an isolated agriculture policy?

- There is a need for food systems for sustainability and better nutrition and embrace the range of activities in food production, aggregation, processing, distribution and consumption.
- An important takeaway from the Green Revolution-era is that for science to be relevant to societal outcomes, it has to be planned and executed within the **theory of change**.
- To intensify economic, environmental and climate challenges, the need of the hour is a good theory of transition

  - encompassing the spatial, social and scientific dimensions
  - supported by policy incentives and mechanisms
  - for achieving a sustainable, resilient and food secure agriculture

- A theory of change need to bring the focus back on sustainability, resource efficiency and circularity as the central pillars towards transforming food systems.
- The transition is necessary to correct the limitations and unintended consequences of the Green Revolution such as

  - the loss of indigenous landraces
  - soil nutrients depletion
  - groundwater stress
  - excessive use of agrochemicals and its residual presence in foods and environment
  - income gap between large, marginal and small farmers
  - the gap between irrigated and rain-fed areas

## What is the way forward?

- An agro-climatic approach to agricultural development is important for sustainability and better nutrition.
- Data compiled in the agro-climatic zones reports of the Indian Council of Agricultural Research and the erstwhile Planning Commission of India reveal enormous potential for crop diversification and precision farming.
- The focus should be on improving farmers' competitiveness, supporting business growth in the rural economy, and incentivising farmers to improve the environment.
- Strengthening food supply chains, reinforcing regional food systems, food processing, agricultural resilience and sustainability requires prioritising research and investment.
- Infrastructure and institutions supporting producers, agri-preneurs and agri micro, small and medium enterprises (MSMEs) in their production value chain are central to the transition.
- This should be aligned to the policy priorities such as the National Policy guidelines 2012 of Ministry of Agriculture for the promotion of farmer producer organisations, and the **National Resource Efficiency Policy of 2019** of Ministry of Environment, Forest and Climate Change.
- It would encourage a resource efficient and circular economy for production, processing and

storage techniques of food products through renewable energy solutions, reduction of supply chains and inputs.
- It would also ensure the efficient use of by-products, thereby creating value while using fewer inputs and generating less waste for long term and large-scale impact.

*The National Resource Efficiency Policy (NREP) envisions a future with environmentally sustainable and equitable economic growth, resource security, healthy environment, and restored ecosystems. It aims to achieve India's commitments under the UN Sustainable Development Goals by 2030.*

**References**


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