

Agrobiodiversity and Nutrition Security



Actionable Area

Addressing the negative impacts of biodiversity and restoring the losing agrobiodiversity is important since it is critical to the lives and livelihoods of small farmers, rural communities and indigenous people and inherent part of their culture and tradition.

Issues

- Monocropping systems, loss in dietary diversity, and shrinking of food plates has become a new normal in today's world. This trend has serious implications for both human and environmental health. Biodiversity loss in agriculture is a big cause of concern. Globally, food systems are now the source of 60% of terrestrial biodiversity loss, 33% of soil degradation and 61% of the depletion of commercial fish stocks.
- The situation in India is almost consistent with these global statistics. India is one of the 17 mega-diverse countries in the world. It is characterised by 20 distinct agro-ecosystems based on soil type, rainfall amount and distribution, and altitude. It is also a repository for traditional knowledge of biodiversity. India is a center of origin and diversity of crops with respect to agricultural biodiversity, with 811 cultivated plants and 902 of their wild relatives documented in 2015. India also contains a broad spectrum of native breeds of farm animals. According to the International Union for Conservation of Nature (IUCN), 758 species of plants and animals are listed as threatened.
- Agrobiodiversity is important because it is the synergy and interaction between living things, land, technology, and social systems. It is also a gene pool of crop plants, livestock, local breeds, wild relatives, landraces, bio-control agents, and those offering vital ecosystem services such as pollination and nutrient recycling.

Some of the major trends observed during the last decade are as follows:



Status

Government Initiatives

- India is committed to conserving and utilising biodiversity in general and agrobiodiversity in specific, integrating both *in situ* and *ex situ* approaches. This includes improving opportunities for mainstreaming agrobiodiversity conservation and sustainable use through the policies and collaborative actions of all relevant ministries and government departments, particularly the Ministry of Environment, Forests and Climate Change (MoEF&CC) and the Ministry of Agriculture and Farmers Welfare (MoA&FW). The enactment of the Biological Diversity Act 2002 is one of the most significant steps in that direction.

Other government initiatives include:

- Establishment of protection of Plant Varieties and Farmer's Rights Authority (PPV&FR Authority) and grant incentives to farmers in the form of "Plant Genome Savior Community Recognition" through creating National Gene Fund for conservation and development of plant genetic resources.
- Establish a multilateral system to facilitate access to Plant Genetic Resources for Food and Agriculture (PGRFA) through International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).
- National mission on sustainable Agriculture (NMSA) and its sub-programme to promote organic farming 'Paramparagat Krishi Vikas Yojna (PKVY)'.

Linkages with Sustainable Development Goals



Vision 2030

- Demonstrate and promote ecologically intensive agricultural practices.
- Internalise agrobiodiversity concerns in routine departmental activities to make them part of relevant policies.
- Capture agro-biodiversity data routinely with the required new tools and appropriate indicators along with adequate capacity building for recording the same.
- Create consumer awareness for nutrition and healthy diets, which creates awareness about the significance of agrobiodiversity and explore the scope for public-private partnerships for alternate marketing that links the rural markets to urban areas.

Pathways

POLICY



Formulate a comprehensive and cross-sectoral policy on ecological agriculture for safeguarding the country's agrobiodiversity and sustainable food production system.

Incentivise on-farm conservation of traditional and indigenous food crop varieties and establish decentralised seed/gene banks of traditional varieties. Establish food innovation funds to motivate startups to use more traditional varieties in food preparations.

Establish institutional partnerships that work both in the field and at the policy level.

Organise several routine departmental activities around agrobiodiversity concerns and ensure that they become part of relevant policies, programmes and agriculture extension institutions that deal with capacity building.

IMPLEMENTATION



Develop an action plan on conserving agrobiodiversity with specific geographical regions and map the relevant stakeholders for their involvement.

Conserve pollinators: plant native trees, herbs, climbers, and flowering plants in the farm fences, establish ecological infrastructure like hedges, small ponds and beetle banks to provide habitats for native pollinators promote honeybees and other natives agriculturally important insects under the Horticulture Mission.

Develop an understanding of how agrobiodiversity is perceived and valued by different sections of the rural community, especially women. Place its conservation in a locally relevant context and make the community partners in this crucial exercise.

Encourage private companies' role in conserving agrobiodiversity and create awareness with global buyers on the importance of different varieties.

Pathways



Recognise local capacity, and do capacity building through research and extension activities to empower stakeholders, e.g., NGOs, local communities, women seed savers etc.

Recognise the contribution of Women's participation in agrobiodiversity conservation.

Create consumer awareness via media and communication strategies for nutrition and healthy diets and the significance of agrobiodiversity (i.e. promote local varieties and its importance in dietary consumption). Explore the scope for public-private partnerships for alternate marketing that links the rural markets to urban areas.

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