

# INDIA'S FOOD BASKET MUST BE ENLARGED

Relevant for: Developmental Issues | Topic: Poverty & Hunger and related issues

Heart floral design on dark background with angelica, basil, juniper, hypericum, rosemary, turmeric stock illustration

India is ranked 102 in the Global Hunger Index (GHI) out of 117 qualified countries. Hunger is defined by caloric deprivation; protein hunger; hidden hunger by deficiency of micronutrients. Nearly 47 million or four out of 10 children in India do not meet their potential because of chronic undernutrition or stunting. This leads to diminished learning capacity, increased chronic diseases, low birth-weight infants from malnourished parents. The global nutrition report pegs 614 million women and more than half the women in India aged 15-49 as being anaemic.

Recently, the Ministry of Human Resources Development brought out school 'nutrition garden' guidelines encouraging eco-club students to identify fruits and vegetables best suited to topography, soil and climate. These gardens can give students lifelong social, numerical and presentation skills, care for living organisms and team work, besides being used in the noon-meal scheme. Students also learn to cultivate fruits and vegetables in their homes and this could address micronutrient deficiencies.

Agrobiodiversity — relating to diversity of crops and varieties — is crucial in food security, nutrition, health and essential in agricultural landscapes. Out of 2,50,000 globally identified plant species, about 7,000 have historically been used in human diets. Today, only 30 crops form the basis of the world's agriculture and just three species of maize, rice and wheat supply more than half the world's daily calories.

Genetic diversity of crops, livestock and their wild relatives, are fundamental to improve crop varieties and livestock breeds. We would not have thousands of crop varieties and animal breeds without the rich genetic pool. India is a centre of origin of rice, brinjal, citrus, banana, cucumber species.

Across the world, 37 sites are designated as Globally Important Agricultural Heritage Systems (GIAHS), of which three are Indian — Kashmir (saffron), Koraput (traditional agriculture) and Kuttanad (below sea-level farming). In India, over 811 cultivated plants and 902 of their wild relatives have been documented. Our promising genetic resources include rice from Tamil Nadu (Konamani), Assam (Agni bora) and Kerala (Pokkali), Bhalia Wheat and mushroom (Guchhi) from Himachal Pradesh and rich farm animal native breeds — cattle (42), buffaloes (15), goat (34), sheep (43) and chicken (19). Agrobiodiversity helps nutrition-sensitive farming and bio-fortified foods. For instance, moringa (drumstick) has micro nutrients and sweet potato is rich in Vitamin A. There are varieties of pearl millet and sorghum rich in iron and zinc.

The UN Sustainable Development Goal 2 advocates for Zero Hunger and the Aichi Biodiversity Target focuses on countries conserving genetic diversity of plants, farm livestock and wild relatives. It emphasises that countries develop strategies and action plans to halt biodiversity loss and reduce direct pressure on biodiversity.

The Centre for Biodiversity Policy and Law (CEBPOL), a policy advocacy unit of the National Biodiversity Authority, came out with recommendations to increase India's agrobiodiversity in 2019. These include a comprehensive policy on 'ecological agriculture' to enhance native pest and pollinator population providing ecosystem services for the agricultural landscape. It suggested promotion of the bio-village concept of the M.S. Swaminathan Research Foundation

(MSSRF) for ecologically sensitive farming; conserving crop wild relatives of cereals, millets, oilseeds, fibres, forages, fruits and nuts, vegetables, spices etc. for crop genetic diversity healthier food; providing incentives for farmers cultivating native landrace varieties and those conserving indigenous breeds of livestock and poultry varieties.

The recommendations also include encouraging community seed banks in each agro-climatic zone so that regional biotic properties are saved and used by new generation farmers; preparing an agrobiodiversity index, documenting traditional practices through People's Biodiversity Registers, identifying Biodiversity Heritage Sites under provisions of the Biological Diversity Act, 2002; and strengthening Biodiversity Management Committees to conserve agrobiodiversity and traditional knowledge. Developing a national level invasive alien species policy is required to identify pathways, mapping, monitoring, managing, controlling and eradicating the invasive species and prioritising problematic species based on risk assessment studies.

Loss of crop genetic resources is mainly a result of adopting new crop varieties without conserving traditional varieties. Similarly, there are concerns on high output breeds for production of meat, milk and egg. The consumption pattern and culinary diversity must be enlarged to increase India's food basket. To conserve indigenous crop, livestock and poultry breeds, it is recommended to mainstream biodiversity into agricultural policies, schemes, programmes and projects to achieve India's food and nutrition security and minimise genetic erosion.

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