

Scarascia Mugnozza Community Genetic Resource Centre and Gene Bank

Mission Statement

To revitalize the agrobiodiversity conservation and enhancement ethos of tribal and rural families by helping to accord both social prestige and economic reward for their invaluable contributions to nutrition and health security

Agrobiodiversity manifests the plant selection skill and the underlying intellectual property of farmers. Promotion of traditional farmer participatory conservation and enrichment of agrobiodiversity, particularly at centers of crop genetic diversity, is important for the global agriculture, now and in future. These practices are becoming increasingly challenging with the spread of improved modern crop varieties and under the economic pressure to produce more from shrinking land and farm holding. Hence focused national and international policies with reward and recognition and benefit sharing assume greater importance for safeguarding adequate genetic variability for future agriculture.

Community Conservation

Conservation of genetic resources is an area dear to M. S. Swaminathan Research Foundation (MSSRF). Since its inception, MSSRF has been undertaking and advocating conservation, particularly in parts of India notable for high agrobiodiversity and rapid genetic erosion. It has been actively engaged in conservation of genetic diversity of rice in Jeypore tract of Orissa, which is a major center of rice genetic diversity, the nutritious millets in Kolli Hills of Tamil Nadu and the medicinal plants including rice varieties of medicinal value in Wayanad area of Western Ghats in Kerala. The conservation approach practiced and advocated by MSSRF includes *in-situ* on-farm and *ex-situ* gene bank conservation.

The tribal communities associated with the conservation are the Malayalis in Kolli Hills, Amanatya, Bhatra, Bhumia, Didayi, Dora, Gadaba, Gond, Halva, Kandha, Kandhadar, Kolar, Koya, Kutia, Kuvi, Langia soura, Paroja, Pentia, Sabarkandha Soura, and in Jeypore and Kurchiya, Kurmba, Mullukurumba, Paniya and Kattunayakkan in Wayanad.

***In-situ* – Participatory Conservation**

An important feature of on farm *in-situ* conservation under SMCGRC is involvement of traditional conservers, integration of conservation with a community gene-seed-grain bank continuum and establishment of economic stake in conservation using participatory plant selection, value addition and market linkages. *In-situ* conservation is made sustainable when communities are able to link conservation with economic cultural stakes as well as to their way of living. The knowledge system established and the genetic enrichment achieved under *In-situ* conservation are of profound significance to future agriculture.

Unlike the conservation undertaken by public institutions at public costs, the conservation practiced by tribal and rural communities is at private cost. The *in-situ* on farm conservation involves high opportunity cost due to the low economic potential of many traditional varieties in comparison with modern high yielding varieties. Similarly conservation of wild species demands precious land space under decreasing availability of community land for common good. Equity and larger interest of future agriculture hence demand compensation by the global community for this conservation, apart from granting the recognition, reward and benefit sharing.

***Ex-situ* – Community Gene Bank**

The *ex-situ* conservation under SMCGRC is distinct on few counts from the widely practiced *ex-situ* conservation. Accessions in the *ex-situ* gene bank are deposited by farming communities, who had evolved and conserved these accessions, with trusteeship entrusted with MSSRF. This gene bank is a medium

storage facility maintained at 4°C and 25% RH. A duplicate sample of each accession is also stored in the long-term storage at the National Gene Bank as an additional safeguard. The accessions belonging to major food crops are notable for agronomic potential under different biotic and abiotic stresses. They are accessible, subject to Indian laws by any party with prior informed consent of the holder community. MSSRF facilitates such access through mutually agreed terms and material transfer agreement.

Accessions have detailed digitalized database called Farmers' Right Information System (FRIS). This includes the traditional knowledge associated with each accession, their passport data and nationally and internationally accepted scientific descriptors. This database is devised to establish the intellectual property rights of farmers on their variety.

Recognition and Reward

While engaged in conservation and empowering communities at grass root level, MSSRF takes proactive actions in influencing national and global policies on conservation and rights of communities. Back in 1990, prior to the conclusion of the Convention on Biological Diversity (CBD), MSSRF through a Keystone Dialogue held in Chennai developed a framework for recognizing and rewarding farmers and traditional communities engaged in conservation through benefit sharing and other means. These concepts were taken forward by the CBD through its Articles 8(j), 15 and 16.

Article 15 recognizes the sovereign rights of States over their natural resources, their right to enact legislation there upon and authority to determine access to genetic resources with prior informed consent and on mutually agreed terms for fair and equitable sharing of the results of research and development and the benefits arising from the commercial and other utilization of genetic resources.

Article 8(j) mandates the States to respect, preserve and maintain knowledge, innovation and practices of indigenous and local communities and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from such utilization.

Article 16 seeks to provide and/or facilitate access for and transfer to other States of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources without causing significant damage to the environment. In conformity with CBD, India enacted Biological Diversity Act 2002 to promote conservation and sustainable use of its biological resources and to facilitate access and benefit sharing.

Equator Initiative Award

The Community Conservation being undertaken by the MSSRF at Jeypore in Orissa was adjudged for the first equator initiative award instituted by the UNDP. The community of farmers undertaking these conservation activities was honoured by this award at the World Summit for Sustainable Development, Johannesburg in 2002.

Taking benefits of National Legislation to the Communities

The concept of Farmers' Right in relation to Plant Breeders Right was introduced in 1980's by Food and Agriculture Organization (FAO) Council then chaired by Prof. M. S. Swaminathan. The concept was developed further by the FAO Commission on Plant Genetic Resources. The Farmers' Right recognizes the rights of farmers arising from their past, present and future contributions in conserving, improving and making available plant genetic resources, which are the feedstock for the modern plant breeding and plant biotechnology. The recent International Treaty on Plant Genetic Resources for food and Agriculture concluded under the auspices of FAO established legal recognition to Farmers' Rights.

India while responding to its obligation to provide sui generis protection to plant variety under the Trade Related aspects of Intellectual Property Rights (TRIPS), allowed Farmers' Rights along with Plant Breeders' Rights in its recent legislation, the Protection of Plant Varieties and Farmers' Rights Act 2001. This act recognizes farmer as cultivator, conserver and breeder. Accordingly it allows farmers the right to register farmers' variety, right to receive benefit sharing from a new commercial variety developed by using farmers' variety and right to re-sow, exchange, share or sell farm saved seeds. The FIRS database in the gene bank of SMCGRRC empowers and facilitates farmers in different ways. This includes facilitating registration of farmers' variety under Indian Plant Variety Act, entitling communities conserving agrobiodiversity for reward and recognition and empowering farmers to access benefit sharing when a commercial variety is bred by using farmers' variety.