

Swaminathan's Fifty Years of Contribution to the Conservation of Plant Genetic Resources and their Sustainable and Equitable Use



- 1949-55 Carried out research on the genetic resources of tuber-bearing Solanum species at the Agricultural University, Wageningen, and the University of Cambridge, UK. Assisted the University of Wisconsin and the USDA in establishing an Inter-Regional Potato Introduction Station at Sturgeon Bay, Wisconsin, USA. Developed methods of distant hybridisation, leading to novel and economically valuable genetic combinations
- 1955-72 Built up the wheat and rice germplasm collections at IARI, New Delhi. Helped collect over 7000 rice strains from the north-east region of India (Assam Rice Collection), a veritable mine of valuable genes.
- 1970-80 As Vice-Chairman, Technical Advisory Committee to the CGIAR, Rome, proposed and prepared the project proposal for the establishment of an International Board for Plant Genetic Resources (IBPGR), now called the International Plant Genetic Resources Institute (IPGRI). Sir Otto Frankel, in his history of IBPGR referred to the pivotal role played by Swaminathan in bringing into existence this organization dedicated to the conservation of agro-biodiversity. As Director-General, ICAR, New Delhi, established the National Bureau of Plant, Animal, and Fish Genetic Resources in India. As Principal Secretary in the Ministry of Agriculture, Government of India, transformed the Pre-investment Forest Survey Programme into the Forest Survey of India.
- 1981-85 As Independent Chairman, FAO Council, Rome, played a significant role in getting a Commission on Plant Genetic Resources established in November, 1983. Helped to develop the concept of Farmers' Rights and the text of the International Undertaking on Plant Genetic Resources (IUPGR). As President of the International Congress of Genetics held in 1983 at New Delhi, introduced the focal theme: "Genetic Resources Conservation: Microbes to Man."
- 1982-88 As Director General, IRRI, organised the International Rice Germplasm Centre (IRGC) with an international advisory board. Launched special expeditions to collect wild rices from "hot spot" locations. Organised a one year Associateship of IRRI course in genetic resources conservation.
- 1984-90 As President of the International Union for Conservation of Nature and Natural Resources (IUCN), played a critical role in the development of the draft on the Convention on Biological Diversity (CBD).

Chaired the IUCN General Assembly at San Jose, Costa Rica, where the draft was discussed and finalised. This became the basic document from which the Convention on Biological Diversity adopted at Rio de Janeiro in 1992 was developed.
- 1986-99 Helped to shape the style and content of the World Resources Report of the World Resources Institute, Washington, as the Chairman of its editorial advisory board.
- 1988-91 As Chairman of the International Steering Committee of the Keystone International Dialogue on Plant Genetic Resources, guided the work of this Dialogue at Keystone Centre (1988), Madras (1990), and Uppsala and Oslo (1991). It is widely recognised that Swaminathan's chairmanship of the Keystone Dialogue series was a primary factor in the development of

consensus among all the stakeholders in relation to both conservation and sharing of benefits.

- 1988-96 As President, World Wide Fund–India (WWF-I), organised the Indira Gandhi Conservation Monitoring Centre to monitor and chronicle India's biodiversity wealth and a Community Conservation Corps of young professionals to prevent genetic erosion, and established an Environmental Law Centre for promoting legal steps in the area of conservation. Promoted the organisation of the Community Biodiversity Conservation Programme to revitalise the in situ on-farm conservation traditions of rural and tribal families.
- 1988-99 As Chairman, Commonwealth Expert Group and Board of Trustees, planned and organised the Iwokrama International Centre for Rainforest Conservation and Development, for the sustainable and equitable management of tropical rainforests in Guyana. This is the world's largest programme in the area of sustainable management of rainforests (the project covers 1 million acres). The late Dr. Cheddi Jagan, then President of Guyana wrote in 1994 that "there would have been no Iwokrama without Swaminathan."
- 1990 Helped to establish an International Society for Mangrove Ecosystems (ISME), with headquarters at Okinawa, Japan and served as its Founder – President during 1990-93. Was instrumental in getting a charter for Mangroves prepared. Established at Pichavaram, Tamil Nadu, a Genetic Resource Centre for Adaptation to Sea Level Rise and helped to organize a network of mangrove genetic resources conservation centers in the Asia-Pacific region.
- 1988-98 Chaired various committees of the Government of India to prepare draft legislations relating to biodiversity (Biodiversity Act) and breeders' and farmers' rights (Protection of Plant Varieties and Farmers' Rights Act), as well as the draft policy statements relating to environment and population.
- 1994 Established a Technical Resource Centre at MSSRF for the implementation of the equity provisions of CBD as well as FAO's Farmers' Rights.
- As Chairman of the Commission on Genetic Diversity of the World Humanity Action Trust, helped to develop a set of policy guidelines for governance of biodiversity- related matters.
- 1994 onwards As Chairman of the Genetic Resources Policy Committee of the CGIAR (GRPC), he continued to play a key role in the development of policies for the management of the ex situ collections of IARCs. Convened a meeting on behalf of GRPC to include minor or underutilized crops in the programmes of the IARCs. This led to the initiation of a global programme in 2002 with financial support from IFAD.
- 1999 Introduced the concept of managing biosphere reserves through a trusteeship mode, where all the stakeholders hold such unique biological treasures in trust for future generations. Helped to operationalise this concept in the Gulf of Mannar Biosphere Trust, with financial support from the Global Environment Facility (GEF).
- 2001 Serving as Chairman of the Regional Steering Committee for the India – Bangladesh joint Project on Biodiversity Management in the Sunderbans World Heritage Sites, funded by the UN Foundation and UNDP.

Due to Swaminathan's conviction that institutional structures are vital for operationalising concepts and programmes, the following national and global institutions he helped to design and develop will always stand as evidence of his vision and confidence, expressed in his dictum: " If conservation of natural resources goes wrong, nothing else will have a chance to go right."

National

- National Bureaus of Plant, Animal, and Fish Genetic Resources of ICAR
- National Forest Survey of India
- National Bureau of Soil Survey and Land Use Planning of ICAR
- Genetic Resources Centre for Adaptation to Climate Change and Sea Level Rise

Regional

- India – Bangladesh Cooperative Project for the Conservation of the Sunderbans Mangrove ecosystem

Global

- International Bureau of Plant Genetic Resources (IBPGR) of CGIAR (now IPGRI) at Rome
- Iwokrama International Centre for Rainforest Research and Management, Guyana
- International Society for Mangrove Ecosystems

Sir Otto Frankel

Genetic Resources : The Founding Years (Part III)
Diversity, 1989. 5:2-3, 59-60

For the Record

The Long Road to the International Board

“Dr M S Swaminathan, then Director of the Indian Agricultural Research Institute at New Delhi, a member of CGIAR’s Technical Advisory Committee (TAC), who had been connected with the genetic resources movement from its beginnings, took the initiative to promote TAC and CGIAR support for genetic conservation. Swaminathan obtained TAC approval for a Conference of Experts to be held at Beltsville, USA, March 20-25, 1972.

The report of this conference was considered by TAC, which felt that the proposal needed to be phased in gradually over a period of years. Dr Swaminathan redrafted the programme accordingly. TAC reviewed the proposal drafted by Dr Swaminathan in July-August 1973. In the revised proposal, the Governing Body was to be a Committee or Board with a secretariat based at FAO and a Trust Fund. “This proposal was adopted, thanks to Dr Swaminathan’s continuing effort in sponsoring modifications which made the proposal acceptable to TAC”. TAC recommended the proposal for the approval of CGIAR in 1973. Dr Swaminathan’s title, International Board for Plant Genetic Resources (IBPGR) was accepted by CGIAR in February, 1974 and the first meeting of the IBPGR Board was held in June 1974.

In the Review of Policies and Activities 1974-78 and of Prospects for the Future (IBPGR Secretariat, 1979), FAO is given the sole credit for all the initiatives and developments in the ten years from 1965 to 1974, when all those involved know, the momentum came largely from scientists associated with the International Biological Programme. Another major inaccuracy is “FAO, not Dr Swaminathan, is alleged to have proposed the genetic resources network to TAC”. Sir Otto Frankel thus expressed his great sorrow that the contributions of the prime mover for the establishment of IBPGR, namely Dr Swaminathan, were ignored in the IBPGR publication. In fact, between 1972 and 1974, Dr Swaminathan worked concurrently for the establishment of the IBPGR at the international level and the National Bureau of Plant Genetic Resources (NBPGR) at the national level.

[Home](#)

[Photo
Gallery](#)

[Articles](#)

[News](#)

[Biography](#)

[Contact](#)