Food and Agriculture Organization of the United Nations

The International Treaty ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Second Reporting Cycle

Report on the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

INDIA

(08 June 2023)

ONLINE REPORTING SYSTEM

Second Report on Compliance of ITPGRFA

Online Reporting System on Compliance of the International Treaty on Plant Genetic Resources for Food and Agriculture

Pursuant to Article 21 of the Treaty, the Governing Body approved, at its Fourth Session, the Compliance Procedures that include, among others, provisions on monitoring and reporting: Resolution 2/2011.

According to the Compliance Procedures, each Contracting Party is to submit to the Compliance Committee, through the Secretary, a report on the measures it has taken to implement its obligations under the Treaty. This Online Reporting Systems facilitates the submission of such information in electronic format.

Should you need any additional information regarding the reporting on compliance or the use of the online system, please visit the Treaty's Website or contact the Secretariat at PGRFA-Treaty@fao.org.

Additional Reporting Information

Name and contact of the reporting officer

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Institution(s) of affiliation

››› ICAR-NBPGR, New Delhi

Article 4: General Obligations

1. Are there any laws, regulations procedures or policies in place in your country that implement the Treaty?
Please select only one option
☑ Yes
☐ No

1A. If your answer is 'yes', please provide details of such laws, regulations, procedures or policies:
››› Exemption of Crops listed in Annex 1 of ITPGRFA from seeking approval of National Biodiversity Authority (Gazette notification S.O.3232 E dated 17th December 2014) (http://agricoop.nic.in/sites/default/files/Facilitate%20exchange%207.11.2017.pdf

2. Are there any other laws, regulations, procedures or policies in place in your country that apply to plant genetic resources?
Please select only one option
☑ Yes
☐ No

2A. If your answer is 'yes', please provide details of such laws, regulations, procedures or policies:
››› The Biological Diversity Act, 2002 and Biological Diversity Rules , 2004
National Action Plan (http://www.nbpgr.ernet.in/Downloadfile.aspx?EntryId=6025)

3. Is there any law, regulation, procedure or policy in place in your country that needs to be adjusted / harmonized to ensure conformity with the obligations as provided in the Treaty?
Please select only one option
☐ Yes
☑ No

3A. If your answer is 'yes', please provide details of such adjustments and any plans to make those adjustments:
›››

Article 5: Conservation, Exploration, Collection, Characterisation, Evaluation and Documentation of Plant Genetic Resources for Food and Agriculture

4. Has an integrated approach to the exploration, conservation and sustainable use of plant genetic resources for food and agriculture (PGRFA) been promoted in your country?
Please select only one option
☑ Yes
☐ No

5. Have PGRFA been surveyed and inventoried in your country?

Please select only one option
☑ Yes
☐ No

5A. If your answer is 'yes', please provide details of your findings, specifying species, sub-species and /or varieties, including those that are of potential use.
››› Since 2004, Bureau has undertaken 610 explorations across the country and collected 39,202 germplasm accessions (till Dec. 2017). This includes about 1,000 taxa of agrihorticultural importance, including those that are of potential use such as crop wild relatives and minor economically important plant species. Systematic augmentation of genepool diversity in crops belonging to the genera - Abelmoschus, Amaranthus, Citrus, Corchorus, Hordeum, Elymus, Leymus, Luffa, Momordica, Oryza, Sesamum, Solanum, Trichosanthes, Vigna - and minor fruits was made. This resulted in discovery of eight new taxa of PGR value, besides reports of new distribution to India. During this period, explorations were made in almost all the states, however with a special focus on under-explored pockets in Eastern Ghats, Jammu & Kashmir, North-Eastern Hill Region (NEH), Andaman & Nicobar Islands
Various agro-biodiversity rich regions holding germplasm of PGRFA has been identified (Nayar, 2009). In India, five year plan for conducing exploration and germplasm collection are developed. The exploration missions are planned on the basis of gap analysis. The unexplored remote and tribal dominated areas are the potential locations for germplasm collection and conservation of landraces, crop wild relatives, and wild economic species.
Ref.
Nayar, M.P., Singh, A.K. and Nair, K.N. (2009) Agrobiodiversity Hotspots in India: Conservation and Benefit Sharing, Volume II. PPV and FR Authority: New Delhi, 217-307

5B. If your answer is 'no', please indicate:

Any difficulties encountered in surveying or inventorying PGRFA;
Any action plans to survey and inventory PGRFA;
The most important PGRFA that should be surveyed and inventoried
›››

6. Has any threat to PGRFA in your country been identified?
Please select only one option
☑ Yes
☐ No

6A. If your answer is 'yes', please indicate:

The species, subspecies and/or varieties subject to such threats;
The sources (causes) of these threats;
Any steps taken to minimise or eliminate these threats;
Any difficulties encountered in implementing such steps;
››› Replacement of land races by high yielding uniform improved varieties is the main cause of genetic erosion of PGRFA. Urbanization, climate change and change in food habit are other threats to the agro-biodiveristy. Area under potential crops such as Fagopyrum tataricum, Chenopodium album, Coix lacryma-jobi, Perilla frutescens, Vigna angularis, V. umbellata etc. is decreasing. Coix-lacryma-jobi, once cultivated in North East Indian region, is now about to disappear from cultivation. Similarly, Soh-phlong (Flemingia vestita) and Clemoe viscosa, cultivated in Meghalaya and Uttarakhand respectively, are now rarely cultivated. Populations of crop wild relatives such as Abelmochus tuberculatus subsp. tuberculatus, A. tuberculatus subsp. deltoidefolius, Cajanus albicans, C. cajanifolius, C. lineatus, Corchorus urticifolius, Cucumis muriculatus, C. setosus, Fagopyrum tataricum subsp. potanini, Luffa graveolens, Macrotyloma uniflorum var. stenocarpum,

Momordica sahyadrica, Moringa concanensis, Solanum multiflorum, Trichosanthes cucumerina subsp. villosula, Vigna angularis var. nipponensis, V. indica, V. konkanensis, V. nepalensis, V. sahyadriana, V. subramaniana and V. trinervia var. bourneae is becoming rare. Harvesting of high value medicinal plants such as Rauvolfia serpentina, Coptis teeta, Aconitum heterophyullum, Picrorhiza kurroa, Gentiana kurroo, Swertia chirayita, Dactlylorhiza hatagirea, chlorophytum borivilianum, Gymnema sylvestre etc. for meeting the ever increasing demand for herbal industry has also posed serious threat to available diversity in the wild habitat. Habitat destruction, habitat fragmentation, urbanization, developmental projects and climate change are the other serious threats of biodiversity available in wild.
Regarding steps taken to minimise these threats:
• Identifying priority areas/localities facing threat, and focusing their ex situ conservation in National Genebank, Field Genebanks and National Active Germplasm Sites
• Conducting PGR awareness creation programmes (about 10 per year) in tribal areas under Tribal Sub-project. Awareness is also created during survey and collection missions. Approximately 30 exploration missions are undertaken every year. Also workshops are conducted in north-east India to have an exchange of information and strengthening linkage with different stakeholders to facilitate germplasm augmentation for ex situ conservation, documentation of plant genetic resources (PGR) wealth from these insufficiently-explored areas, generating database on custodian farmers, and exploring feasibility of on-farm management of crop diversity and community seed bank.
• Implementation of GEF-funded project on “Mainstreaming agricultural biodiversity conservation and utilization in agricultural sector to ensure ecosystem services and reduce vulnerability” in four agroecological zones (24 sites) with an expected outcome of adaptive management of crop diversity for resilient agriculture and improved livelihoods; strategies and policies for sustainable conservation and use of crop diversity including access and benefit sharing; improved agricultural support systems, institutional frameworks and partnerships that support crop diversity on farm.
• NGOs and state governments are promoting organic farming and cultivation of unique landrces/farmer’s varieties in Sikkim, tribal areas in Madhya Pradesh, Chhattisgarh, Jharkhand, and cultivation of traditional crops like millets have been promoted in parts of Tamil Nadu, Andhra Pradesh, Telangana and Karnataka.
• Strengthening the in situ conservation efforts (in case of wild species) through notifying protected areas. At present, there are about 764 protected areas (National Parks-103; Wildlife Sanctuaries-543; Conservation Reserves-73; Community Reserves-45), spanning over an area of 1,62,024.69 km2, accounting for 4.93% area in India.
Some difficulties encountered in implementing such steps include resource constraints, need of implementation of massive programmes at national level involving various stakeholders (agriculture, forestry, commerce/industry). Threat assessment of CWR should form priority here, as it is not the priority of IUCN. Scarcity of taxonomic expertise is also an increasing concern, particularly in CWR germplasm collection and survey/monitoring in protected areas.
Steps taken to minimise these threats:
• Explorations missions for conserving the available diversity have been carried out and germplasm of potential crops, crop wild relatives, and rare species of medicinal and aromatic plants and diverse land races of cultivated crops have been collected and conserved in the National Gene Bank, ICAR-NBPGR New Delhi.
• More than 50 PGR awareness programmes and workshops have been conducted to generate awareness among the farmers and local community for conserving available diversity of agri-horticultural crops.
• Efforts are going on for adaptive management of crop diversity for resilient agriculture and improved livelihoods; strategies and policies for sustainable conservation and use of crop diversity including access and benefit sharing; improved agricultural support systems, institutional frameworks and partnerships that support crop diversity on farm. These efforts are supported by UNEP-GEF funded project on “Mainstreaming agricultural biodiversity conservation and utilization in agricultural sector to ensure ecosystem services and reduce vulnerability”.
Any difficulties encountered in implementing such steps
• In-situ conservation of crop wild relatives and commercially important medicinal plants involves various stakeholders and funds. Scarcity of funded is one of the main constraints in managing and monitoring in-situ conservation sites.
• Lack of experts in in-situ conservation and plant taxonomy especially of CWR and wild species are other difficulties for implementing in-situ conservation activities at National level.

7. Has the collection of PGRFA and relevant associated information on those plant genetic resources that are under threat or are of potential use been promoted in your country?
Please select only one option
☑ Yes
☐ No

7A. If your answer is 'yes', please provide details of the measures taken:
››› Areas/ecosystems that are under threat, i.e., fragile ecosystems such as Himalayas, coastal ecosystems, dam-construction sites, etc. are always given priority to collect PGR, which are under threat. Gap analysis using GIS tools followed by focussed exploration missions for ex situ conservation is the mandatory activity of the Bureau. Collecting CWR and minor fruits, which are under threat or are of potential use; and trait-specific germplasm collection are being given adequate focus in National Exploration Plans for the past 14 years. Several National Exploration Missions have been executed to collect PGRFA and associated traditional knowledge related to PGRFA. During the reporting period viz. Jan 2018 to Dec. 2022, a total of 150 explorations have been undertaken and more than 8000 accessions of various agri-horticultural crops including their CWR have been collected and conserved. The germplasm of CWR, minor fruits and rare and endangered species have given priority during the period. The traditional uses of various plants and their products have been documented. Traditional knowledge associated with the useful plants documented during the period, are listed below.
• Abelmoschus manihot var. tetraphyllus locally known as ‘Sukhlai”, a wild species being cultivated in Uttarakhand and Uttar Pradesh for organic clearant in small scale jaggary Industry.
• Aaho rice landrace and foxtail millet used for preparing a traditional beverage “Jumin” by Nocte tribes.
• Tupistra clarkei locally known as “Nakima’, its unopened flower buds along with inflorescence form an important local ingredients of vegetable and pickle.
• Dioscorea esculenta locally known as ‘Suthni’ was reported for use in religious ceremony.
• Blumea lacera locally known as ‘Kalhar’ reported from South Gujarat for preparation of a traditional cuisine ‘umbadiyu’.
• Post-harvest processing for retaining green colour and aroma in dried seed of Kumbhra, a local land race of green coriander (Coriander sativum) - used in beverage industry, was reported.
• Allium negianum locally known as ‘Pharan’ and Allium prezwanskianum locally known as ‘Jangli pyaj,’ are used as seasoning spice and condiments by Bhotiya tribe.
• Herpetospermum operculatum locally known as ‘Chai-patta” used as leafy vegetable.
• Marsdenia macrophylla locally known as “An-kha-pui” used as vegetable in North East Region of India.
• Flowers of Crotolaria tetragona locally known as tunthang are used for garnishing the non-vegetation food.
• Leaves of Bidens pilosa are used in the preparation of Ladakhi tea ‘Saja’.

8. Have farmers and local communities' efforts to manage and conserve PGRFA on-farm been promoted or supported in your country?
Please select only one option
☑ Yes
☐ No

8A. If your answer is 'yes', please provide details of the measures taken:
››› http://www.plantauthority.gov.in/
http://www.plantauthority.gov.in/PGSFA.htm
http://www.plantauthority.gov.in/List_of_Certificates.htm (check for applicant category Farmer)

9. Has in situ conservation of wild crop relatives and wild plants for food production been promoted in your country?
Please select only one option
☑ Yes
☐ No

9A. If your answer is 'yes', please indicate whether any measures have been taken to:
☐ Promote in situ conservation in protected areas
☐ Support the efforts of indigenous and local communities

9B. If such measures have been taken, please provide details of the measures taken:
››› The Investigations pertaining to the establishment of a citrus Gene Sanctuary in Meghalaya were initiated in 1978 at Shillong. It is about the preservation of the native habitat of the wild orange (Citrus indica) a progenitor of the mandarin orange.
A committee of experts headed by Dr. B.P. Pal, F.R.S. Chairman, National Committee on Environmental Planning and Coordination, approved the proposal based on exploratory and ecological survey for the establishment of a citrus Gene Sanctuary in Meghalaya. Subsequently, in 1980, the ICAR constituted a Task Force under the Chairmanship of Shri J.C. Nampui, I.A.S., Chief Secretary, Government of Meghalaya. The gene sanctuary is a Mechanism to preserve the genetic diversity of endangered species by protecting the ecosystem in which it occurs naturally. Hence, it was envisaged to preserve the pockets of habitat where considerable genetic variability occurs in the endangered species of Citrus e.g. Citrus indica. It was considered as a National Park with a Core zone and a surrounding
Buffer Zone in the Garo Hills of Meghalaya. Citrus indica is very prevalent in hilly tracts east of Tura town and village Sastgiri. Other species found in the region are C. assamensis, C. ichangensis, C. latipes, C. macroptera.

Besides possibly, C. megaloxycarpa, C. aurantinum and one variety of C. reticulata.
(Ref; Bhag Singh (1981) Establishment of First Gene Sanctuary in India for Citrus in Garo hills.Concept Publishing Company New Delhi. Pp 182.)
Extensive survey and explorations were undertaken in northeast India and collections of wild and semi-wild species made have been documented. Traditional usage of species and their socioeconomic importance has also been compiled. The collected germplasm has also been characterized using standard International descriptors. Efforts were made to conserve seeds of all collected species at NBPGR under cryo-banking facilities, as Citrus species are difficult to store as seeds due to high moisture levels. Field Gene-banks of collected species are being maintained at ICAR –National Research Centre for Citrus at Nagpur and its nine collaborating
centers located in different parts of the country, as a complimentary conservation.
The in-situ conservation of Citrus species in the Nokrek Biosphere Reserve spread over east, west and south Garo hills of Meghalaya was also revisited during this period and it is observed that part of buffer zone where the species are growing are still safe, however natural regeneration of the species due to increased human activities and tourism a concern. Efforts to reintroduce the species conserved in field gene banks is suggested along with in-situ on farm conservation of the diversity with the involvement of local population.
• Significant populations of O. rufipogon (wild rice) are found in Sonitpur and Udalguri districts of Assam. One site has been selected in the village Borjuli, Assam for in-situ conservation of O. rufipogon. In 2022, the identified site has been notified by Govt. of Assam as Wild Rice Biodiversity Heritage Site for conservation of wild rice population.
• Similarly site of conservation of Cajanus cajanifolius, a close relative of pigeon pea, has been identified in Bailladila hill range of Dantewada district of Chhattisgarh. The germplasm has been collected and conserved in National Gene Bank. However, due to scarcity of funds, in-situ conservation efforts have not yet been initiated.
• Custodian farmers conserving agro-biodiversity on farm have been identified in six states of India in UNEP-GEF funded project “Mainstreaming agricultural biodiversity conservation and utilization in agricultural sector to ensure ecosystem services and reduce vulnerability”.

10. Are there any ex situ collections of PGRFA in your country?
Please select only one option
☑ Yes
☐ No

10 A. If your answer is 'yes', please provide information on the holder and content of such collections:
››› Holder is the National Gene bank (IND01) functioning at the Headquarters of National Bureau of Plant Genetic Resources, New Delhi. As on Dec 31, 2022 National Gene bank holds a total of 463130 accessions in its exsitu collectio (PGR Portal)(http://www.nbpgr.ernet.in:8080/PGRPortal/(S(dp4xdx55pcq1z2e4m03jca2y))/default.aspx)

11. Has the development of an efficient and sustainable system of ex situ conservation of PGRFA been promoted in your country?
Please select only one option
☑ Yes
☐ No

11A. If your answer is 'yes', please indicate the measures taken to promote ex situ conservation, in particular any measures to promote the development and transfer of technologies for this purpose:
››› Ex situ conservation activities in India are institutionalized through ICAR-NBPGR. The Bureau has seed genebank, in vitro and cryo bank (details of activities/ technologies development/ implemented /protocols may be accessed through www.nbpgr.ernet.in).

12. Has the maintenance of the viability, degree of variation, and the genetic integrity of ex situ collections of PGRFA been monitoring in your country?
Please select only one option
☑ Yes
☐ No

12A. If your answer is 'yes', please provide details of the main conclusions of these monitoring activities
››› The genebank accessions are monitored once in every ten years for their viability status. Any accession that loses its viability below 85% of its initial value, is marked for regeneration. Genebank operational details may be accessed at www.nbpgr.ernet.in

13. Has your country cooperated with other Contracting Parties, through bilateral or regional channels, in the conservation, exploration, collection, characterization, evaluation or documentation of PGRFA?
Please select only one option

☑ Yes
☐ No

13A. If your answer is 'yes', please indicate the other Contracting Parties with whom the cooperation was undertaken (where additional to cooperation through the Governing Body or Treaty mechanisms) and, where possible, details of any relevant projects:

››› Establishing SAARC Regional Seed Bank for conservation of varieties of regional varities as a back up for supply to Member countries for emergency/ disaster situations.
ICAR-NBPGR designated as Centre of Excellence (CoE) for imparting training in capacity building and conservation. Seven training programmes under CoE were imparted in 2006, 2007, 2008, 2009, 2010, 2011, 2014.
MoU between ICAR and Royal Botanic Garden, Kew was signed to enhance the capacity of both institutions in research on conservation science. One International training course on “plant conservation biology: science amd practice. RBG, Kew, UK and ICAR0-NBPGR organized specialized two-week course.
Internation training programmes were organized in year 2000 and 2002 for invitro conservation and cryopreservation of PGR.
Assistance provided in Drafting of Protection of Plant Variety Act of Nepal.

Article 6: Sustainable Use of Plant Genetic Resources for Food and Agriculture

14. Are there any policy and legal measures in place in your country that promote the sustainable use of PGRFA

Please select only one option

☑ Yes
☐ No

14A. If your answer is 'yes', please indicate whether such policy and legal measures include:

☑ Pursuing fair agricultural policies that promote the development and maintenance of diverse farming systems that enhance the sustainable use of agricultural biological diversity and other natural resources;
☑ Strengthening research that enhances and conserves biological diversity by maximizing intra- and inter-specific variation for the benefit of farmers;
☑ Promoting plant breeding efforts, with the participation of farmers, that strengthen the capacity to develop varieties particularly adapted to social, economic and ecological conditions, including in marginal areas;
☑ Broadening the genetic base of crops and increasing the range of genetic diversity available to farmers
☑ Promoting the expanded use of local and locally adapted crops, varieties and underutilised species
☑ Supporting the wider use of diversity of varieties and species in on-farm management, conservation and sustainable use of crops and creating strong links to plant breeding and agricultural development
☑ Reviewing and adjusting breeding strategies and regulations concerning variety release and seed distribution

14B. If such policy and legal measures are in place, please provide details of the measures taken and any difficulties encountered in implementing them:

››› No major difficulties encountered

Article 7: National Commitments and international Cooperation

15. Has the conservation, exploration, collection, characterization, evaluation, documentation and sustainable use of PGRFA been integrated into your country's programmes and policies?
Please select only one option
☑ Yes
☐ No

15A. If your answer is 'yes', please provide details of the integration of such activities:
☑ Conservation
☑ Exploration
☑ Collection
☑ Characterization
☑ Evaluation
☑ Documentation
☑ Sustainable Use

Please indicate into which type of programmes and policies:
☑ Agriculture and rural development
☐ Food security
☑ Biodiversity conservation
☐ Climate change
☐ Other

Additional details:
››› The conservation, exploration, collection, characterization, evaluation, documentation and sustainable use of PGRFA has been integrated in programmes and policies namely Biological Diversity Act, 2002.
Under the provisions of Act, every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.
The local Biodiversity Fund shall be used for conservation and promotion of biodiversity in the areas falling within the jurisdiction of the concerned local body and for the benefit of the community in so far such use is consistent with conservation of biodiversity (www.nbaindia.org)
Protection of Plant Variety and Farmers Rights Act, 2001
The PPV&FR Act, 2001 enacted to grant intellectual property rights to plant breeders, researchers and farmers who have developed any new or extant plant varieties. The Intellectual Property Right granted under PPV&FR Act, 2001 is a dual right – one is for the variety and the other is for the denomination assigned to it by the breeder. The rights granted under this Act are heritable and assignable and only registration of a plant variety confers the right. Essentially Derived Varieties (EDV) can also be registered under this Act and it may be new or extant. Farmers are entitled to save, use, sow, re-sow, exchange or sell their farm produce including seed of a registered variety in an unbranded manner. Farmers' varieties are eligible for registration and farmers are totally exempted from payment of any fee in any proceedings under this Act. Farmers can claim for compensation if the registered variety fails to provide expected performance under given conditions. The rights granted under this Act are exclusive right to produce, sell, market, distribute, import and export the variety. Civil and criminal remedies are provided for enforcement of breeders' rights and provisions relating to benefit sharing and compulsory licence in case registered variety is not made available to the public at reasonable price are provided.
(http://www.plantauthority.gov.in/)

16. Has your country cooperated with other Contracting Parties, through bilateral or regional channels, in the conservation and sustainable use of PGRFA?
Please select only one option
☑ Yes
☐ No

16A. If your answer is 'yes', please indicate whether the aim of such cooperation is to:
☑ Strengthen the capability of developing countries and countries with economies in transition with respect to conservation and sustainable use of PGRFA
☑ Enhance international activities to promote conservation, evaluation, documentation, genetic enhancement, plant breeding, seed multiplication, and sharing, providing access to and exchanging PGRFA and appropriate information and technology, in conformity with the Multilateral System of Access and Benefit-Sharing under the Treaty

16B. If, in addition to cooperation through the Governing Body or other Treaty mechanisms, your country has cooperated with other Contracting Parties directly or through FAO and other relevant international

organizations, please indicate such other Contracting Parties and, where possible, details of any relevant projects:
››› Already replied under question 13

Article 8: Techical Assistance

17. Has your country promoted the provision of technical assistance to developing countries and countries with economies in transition, with the objective of facilitating the implementation of the Treaty?
Please select only one option
☐ Yes
☑ No
☐ Not applicable

17A. If your answer is 'yes', please provide details of the measures taken
☐ Exchange of information
☐ Access to and transfer of technology
☐ Capacity building

Please explain:
›››

18. Has your country received technical assistance with the objective of facilitating the implementation of the Treaty?
Please select only one option
☑ Yes
☐ No
☐ Not applicable

18 A. If your answer is 'yes', please provide details of such technical assistance:
☑ Exchange of information
☑ Access to and transfer of technology
☑ Capacity building

Please explain:
››› Workshop on Strategies for implementing the International Treat’s multilateral system of access and benefit-sharing in India, New Delhi, 23-25 January, 2012. Technical assistance provided by CGIAR (Bioversity), Treaty Secretariat
Two Asian Regional Workshop organized for
1. Preparation of the National Reports on the Implementation of the International Treaty (11-13 December 2018)
Delegates from 12 countries and officials from the Treaty Secretariat participated
2. Asia Regional Preparatory Meeting for the GB8 of ITPGRFA (8 -10 Oct. 2019).
Delegates from 13 countries and two from the Treaty Secretariat participated
India hosted 9th Session of GB of ITPGRFA with full technical support and assistance from ITPGRFA Secretariat from 18-24th September 2022.

Article 9: Farmers' Rights

19. Subject to national law, as appropriate, have any measures been taken to protect and promote farmers' rights in your country?
Please select only one option
☑ Yes
☐ No

19 A. If your answer is 'yes', please indicate whether such measures were related to:
☑ Recognition of the enormous contribution that local and indigenous communities and farmers of all regions of the world have made and will continue to make for the conservation and development of plant genetic resources;
☑ The protection of traditional knowledge relevant to PGRFA
☑ The right to equitably participate in sharing benefit arising from the utilisation of PGRFA
☑ The right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of PGRFA
☑ Any rights that farmers have to save, use, exchange, and sell farm-saved seed/propagating material

19B. If such measures were taken, please provide details of the measures taken and any difficulties encountered in implementing them:
››› No difficulties encountered

Article 11: Coverage of the Multilateral System

20. Has your country notified all PGRFA listed in Annex I to the Treaty that are under the management and control of your Government and in the public domain as included in the Multilateral System of Access and Benefit-Sharing (MLS)?
Please select only one option
☐ All
☑ Partially
☐ None

20A. If your answer is 'all', please provide details of any difficulties encountered in including Annex 1 PGRFA in the MLS:
›››

20B. If your answer is 'partially', please provide details of:

The extend to which Annex 1 PGRFA have been included in the MLS
The crops that have been included in the MLS; and
The difficulties encountered in including Annex 1 PGRFA in the MLS:
››› 26, 563 accessions belonging to 9 crops are designated under the MLS of the Treaty. List available at http://www.nbpgr.ernet.in:8080/PGRPortal/(S(irlh44y2chexf1jaecceol2k))/MLSSimpleSearch.aspx and website of Treaty

20C. If your answer is 'none', please provide details of the difficulties encountered in including Annex 1 PGRFA in the MLS:
☐ Lack of guidelines for the identification and inclusion of material;
☐ There is no national genebank;
☐ Lack of catalogue of PGRFA in the country;
☐ Lack of specialised human resources;
☐ Limited economic resources and the need for capacity building;

Other, please explain:
›››

21. Has your country taken measures to encourage natural and legal persons within your jurisdiction who hold Annex 1 PGRFA to include those resources in the MLS?
Please select only one option
☐ Yes
☑ No

21A. If your answer is 'yes', please provide details of:

The natural or legal persons within your jurisdiction that included Annex 1 PGRFA in the MLS;
The crops that have been included in the MLS by these persons; and
Any difficulties these persons encountered in including Annex 1 PGRFA in the MLS:
›››

21B. If your answer is 'no', please provide details, in particular details of any difficulties encountered in encouraging these persons to include Annex 1 PGRFA in the MLS:
››› Most of the seed companies are still hesitant to include their collections into the MLS

Article 12: Facilitated access to plant genetic resources for food and agriculture within the Multilateral System

22. Has your country taken measures to provide facilitated access to Annex 1 PGRFA, in accordance with the conditions set out in Article 12.4 of the Treaty?
Please select only one option
☑ Yes
☐ No

22A. If your answer is 'yes', please provide details of such measures:
››› Facilitated access to Annex I PGRFA, in accordance with the conditions set out in Article 12.4 of the Treaty of collections held by ICRISAT from 2016 onwards. Guidelines to facilitate the exchange of Plant Genetic Resources under the Multilateral System of ITPGRFA (http://agricoop.nic.in/guidelines/seeds)

22B. If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex 1 PGRFA:
›››

23. Has facilitated access been provided in your country to Annex 1 PGRFA using the Standard Material Transfer Agreement (SMTA)?
Please select only one option
☑ Yes
☐ No

23B. If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex 1 PGRFA using the SMTA:
›››

24. Has the SMTA been used voluntarily in your country to provide access to non-Annex 1 PGRFA?
Please select only one option
☐ Yes
☐ No
☑ No, but the issue is under consideration

25. Does the legal system of your country provide an opportunity for parties to material transfer agreements (MTAs) to seek recourse in case of contractual disputes arising under such agreements?
Please select only one option
☑ Yes
☐ No

25A. If your answer is 'yes', please provide details of the relevant laws, regulations or procedures:
››› Guidelines to facilitate the exchange of Plant Genetic Resources under the Multilateral System of ITPGRFA (http://agricoop.nic.in/guidelines/seeds)

26. Does the legal system of your country provide for the enforcement of arbitral decisions related to disputes arising under the SMTA?
Please select only one option
☐ Yes
☑ No

26A. If your answer is 'yes', please provide details of the relevant laws, regulations or procedures:
›››

27. Have there been any emergency disaster situations in respect of which your country has provided facilitated access to Annex 1 PGRFA for the purpose of contributing to the re-establishment of agricultural systems?
Please select only one option
☐ Yes
☑ No

27A. If your answer is 'yes', please provide details of such emergency disaster situations and the Annex 1 PGRFA to which access was provided:
›››

Article 13: Benefit-sharing in the Multilateral System

28. Has your country made any information available regarding Annex I PGRFA?

Please select only one option
☑ Yes
☐ No

28A. If your answer is 'yes', please provide details of any information made available regarding Annex 1 PGRFA:
☑ Catalogues and inventories
☐ Information on technologies
☐ Results of scientific and socio-economic research, including characterisation, evaluation and utilisation
☐ Other

29. Has your country provided or facilitated access to technologies for the conservation, characterisation, evaluation and use of Annex I PGRFA?

Please select only one option
☑ Yes
☐ No

29A. If your answer is 'yes', please indicate whether your country:
☐ Has established or participated in crop-based thematic groups on utilisation of PGRFA
☐ Is aware of any partnerships in your country in research and development and in commercial joint ventures relating to the material received through the MLS, human resource development and effective access to research facilities.

Please provide details:
››› ICAR-NBPGR designated as Centre of Excellence (CoE) for imparting international training for capacity building on “In Vitro Conservation and Cryopreservation of PGR” under the work plan between ICAR and Bioversity International since year 2006. Eight training programmes under CoE were imparted in 2006, 2007, 2008, 2009, 2010, 2011, 2014 and 2019:
Over 70 participants from developing and developed countries were trained during these eight programmes

30. Has your country provided for and/or benefitted from capacity building measures in respect of Annex 1 PGRFA?

Please note that this question differs from question 15 as it only concerns Annex I PGRFA and is more specific.
Please select only one option
☑ Yes
☐ No

30A. If your answer is 'yes', please indicate whether such measures were related to:
☑ Establishing and/or strengthening programmes for scientific and technical education and training in conservation and sustainable use of PGRFA;
☑ Developing and strengthening facilities for conservation and sustainable use of PGRFA;
☑ Carrying out scientific research and developing capacity for such research.

30B. If your country provided for and/or benefitted from such measures, please provide details:
››› Replied under question 18

Article 14: Global Plan of Action

31. Has your country promoted the implementation of the Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture?

Please select only one option
☑ Yes
☐ No

31A. If your answer is 'yes', please indicate whether the implementation of the plan was promoted through:
☑ National actions
☐ International cooperation
☐ Other actions

Please provide details:
››› National Action Plan for Genetic Resources Management redefined (http://www.nbpgr.ernet.in/Downloadfile.aspx?EntryId=6025)

Article 15: Ex Situ Collections of Plant Genetic Resources for Food and Agriculture held by the International Agricultural Research Centres of the Consultative Group on International Agricultural Research and other International Institutions

32. Has facilitated access to Annex I PGRFA been provided in your country to the International Agricultural Research Centres of the Consultative Group on International Agricultural Research (IARCs) or other international institutions that have signed agreements with the Governing Body of the Treaty?
Please select only one option
☑ Yes
☐ No

32A. If your answer is 'yes', please indicate:

To which IARCs or other international institutions facilitated access was provided;
The number of SMTAs entered into with each IARC or other international institution:
››› IRRI, Philippines; ICARDA, Morocco; CIMMYT, Mexico

32B. If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex 1 PGRFA to IARCs and other international institutions that have signed agreements with the Governing Body of the Treaty
›››

33. Has access to non-Annex I PGRFA been provided in your country to IARCs or other international institutions that have signed agreements with the Governing Body of the Treaty?
Please select only one option
☐ Yes
☑ No

33A. If your answer is 'yes', please indicate:

To which IARCs or other international institutions access was provided;
The number of MTAs entered into with each IARC or other international institution:
›››

33B. If your answer is 'no', please provide details of any difficulties encountered in providing access to non-Annex 1 PGRFA to IARCs and other international institutions that have signed agreements with the Governing Body of the Treaty:
››› No request received

Article 16: International Plant Genetic Resources Networks

34. Has your country undertaken any activities to encourage government, private, non- governmental, research, breeding and other institutions to participate in the international plant genetic resources networks?

Please select only one option
☑ Yes
☐ No

34A. If your answer is 'yes', please provide details of such activities:
››› COGENET (Coconut Genetic Resources Network)
SANPGR (South Asia Network on Plant Genetic Resources)

Article 18: Financial Resources

35. Has your country provided financial resources for national activities for the conservation and sustainable use of PGRFA?

Please select only one option
☐ Yes
☑ No

35A. If your answer is 'yes', please provide the estimated amount of funds provided during the last five years, including government resources:
›››

35B. Please indicate if your country has developed a strategy or other measures to enhance the availability, transparency, efficiency and effectiveness of the provision of financial resources to implement the International Treaty:
›››

36. Has your country provided financial resources for the implementation of the International Treaty?
Please select only one option
☐ Yes
☑ No

36A. If your answer is 'yes', where possible, please provide details of such channels and the amount of the financial resources involved during the last 5 years::
›››

36B Channel:
☐ Bilateral
☐ Regional
☐ Multilateral

36C. Please provide details:
›››

37. Has your country received financial resources for the implementation of the International Treaty?
Please select only one option
☐ Yes
☑ No

37A. If your answer is 'yes', where possible, please provide details of such channels and the amount of the financial resources involved during the last 5 years:
›››

37B. Channel:
☐ Bilateral
☐ Regional
☐ Multilateral

37C. Please provide details:
›››

General remarks on the implementation of the ITPGRFA

38. You may use this box to share any advice you may have arising from your country´s experience with implementation of the Treaty:

››› Few of the questions in the reporting format are common with the SOW-PGRFA reporting format. It is suggested to develop such linkage so that the answers could be generated together e.g. Questions of Article 5 and 7

39. You may use this box to share any additional information that may be useful to provide a broader perspective of difficulties in implementation of the Treaty:

››› At times it is difficult to convince policy makers at Governmental level to commit to implementation of the Treaty as there are no direct benefits to the provider institutions and their network of institutions involved in maintaining and providing PGRFA.

40. You may use this box to share any additional information that may be useful to provide a broader perspective of measures that could help to promote compliance:

››› The holders of private collections of PGRFA are generally reluctant to come forward and include these resources in the MLS. The public sector institutions on the other hand are not able to track the material accessed from MLS . Lot of awareness about changed positions on access to MLS in “notified SMTA” (as and when it becomes effective), would be required.

About this reporting

41. Have you encountered any difficulties in completing this reporting format?

Please select only one option
☐ Yes
☑ No

41A. If your answer is 'yes', please provide details on such difficulties:
›››

41B. If you have suggestions for improvement of this reporting format, please share them:

›››