

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

**INDIA**

28/01/2019

## **FIRST COUNTRY REPORT ON COMPLIANCE - ITPGRFA**

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Institution:ICAR-NBPGR, New Delhi

Country: India

Date of submission:January 28, 2019

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### *ANNEX 2*

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#### ***STANDARD REPORTING FORMAT PURSUANT TO SECTION V.1 OF THE PROCEDURES AND OPERATIONAL MECHANISMS TO PROMOTE COMPLIANCE AND ADDRESS ISSUES OF NON-COMPLIANCE***

#### **International Treaty on Plant Genetic Resources for Food and Agriculture**

#### **Draft**

#### **Standard Voluntary Reporting Format**

#### **Introduction**

1. Pursuant to Article 21 of the Treaty, the Governing Body has adopted a resolution that includes, amongst others, provisions on monitoring and reporting (Resolution 2/2011). Pursuant to this Resolution, 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 in one of the six languages of the United Nations (Section V.1).
2. The first report is to be submitted within three years from the approval of this standard format. The Governing Body approved this standard format at its Fifth Session.
3. This standard format has been developed to facilitate reporting and monitoring of the implementation of the Treaty. The use of this standard format is voluntary. A Contracting Party may use another reporting format if it so wishes.

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### Article 4: General Obligations

1. Are there any laws, regulations procedures or policies in place in your country that implement the Treaty?

Yes

No

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 17<sup>th</sup> 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?

Yes

No

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.nbgr.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<sup>1</sup> to ensure conformity with the obligations as provided in the Treaty?

Yes

No

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<sup>1</sup> For the purpose of this report, a Contracting Party may choose whichever term (adjusted or harmonized) is appropriate in relation to their legal systems.

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?

Yes

No

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

Yes

No

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 agri-horticultural 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

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:

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6. Has any threat to PGRFA in your country been identified?

Yes

No

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:

Both crop replacement as well as genetic erosion within the crop occur at an everincreasing pace. Job's tears (*Coix lacryma-jobi*), a native crop of significance in NEH region, is almost completely replaced; now found extremely rare in cultivation (that too only as border crop in maize fields). Similarly crops like soh-phlong (*Flemingia vestita*; tuber crop) in Khasi Hills of Meghalaya, and *Cleome icosandra* (oilseed value) in Uttarakhand are largely at risk. In case of well-known crops, landraces from areas with assured irrigation and better soil conditions, especially in plains, are increasingly vulnerable owing to the imposition of high-yielding varieties. Some endemic and niche-specific crop wild relatives, whose populations are under threat are *Abelmochus tuberculatus* subsp. *tuberculatus*, *A. t.* subsp. *deltoideifolius*, *Cajanus albicans*, *C. cajanifolius*, *C. lineatus*, *C. sericeus*, *C. trinervius*, *Corchorus urticifolius*, *Cucumis muriculatus*, *C. setosus*, *Fagopyrum tataricum* subsp. *potanini*, *Luffa graveolens*, *Macrotyloma uniflorum* var. *stenocarpum*, *Momordica sahyadrica*, *Moringa concanensis*, *Sesamum indicum* subsp. *malabaricum*, *S. prostratum*, *Solanum multiflorum*, *Trichosanthes cucumerina* subsp. *sublobata*, *T. c.* subsp. *villosula*, *Vigna angularis* var. *nipponensis*, *V. indica*, *V. konkanica*, *V. nepalensis*, *V. sahyadriana*, *V. subramaniana* and *V. trinervia* var. *bourneae*. Over-exploitation of high-value medicinal and aromatic plants from wild is another serious threat.

Causes of these threats in case of crops include large scale promotion of high-yielding varieties and high-value crops (like vegetables and cash/plantation crops), change in food habits. For wild species of PGR value, shrinking habitat and fragmentation owing to urbanization, hydroelectric projects, slash and burn cultivation (in NEH region), and changing climate (esp. in transition zone between subtropical and temperate zones) are the major threats identified.

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 landraces/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 km<sup>2</sup>, 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

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?

Yes

No

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.

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8. Have farmers and local communities' efforts to manage and conserve PGRFA on-farm been promoted or supported in your country?

Yes

No

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](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?

Yes

No

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.

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 socio-economic 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

10. Are there any *ex situ* collections of PGRFA in your country?

Yes

No

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, 2018 National Gene bank holds a total of 439717 accessions in its exsitu collection (PGR Portal [\)\(http://www.nbpgr.ernet.in:8080/PGRPortal/\(S\(dp4xdx55pcq1z2e4m03jca2y\)\)/default.aspx\)](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?

Yes

No



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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](http://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 monitored in your country?

Yes

No

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](http://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?

Yes

No

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 other Treaty mechanisms) and, where possible, details of any relevant projects:

Establishing SAARC Regional Seed Bank for conservation of varieties of regional varieties 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 and practice. RBG, Kew, UK and ICAR0-NBPGR organized specialized two-week course.

International 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<sup>2</sup> in place in your country that promote the sustainable use of PGRFA?

Yes

No

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;

<sup>2</sup> For the purpose of this report, legal measures may include regulations.

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√ Reviewing and adjusting breeding strategies and regulations concerning variety release and seed distribution.

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

### 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 agriculture and rural development programmes and policies?

Yes     

No       

If your answer is 'yes', please provide details of the integration of such activities into the agriculture and rural development programmes and policies:

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](http://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?

Yes

No

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.

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

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**Article 8: Technical 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?

Yes   
No

If your answer is 'yes', please provide details of the measures taken:

18. Has your country received technical assistance with the objective of facilitating the implementation of the Treaty?

Yes   
No

If your answer is 'yes', please provide details of such technical assistance:

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

**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?

Yes   
No

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 benefits 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.

If such measures were taken, please provide details of the measures taken and any difficulties encountered in implementing them:

#### Article 11: Coverage of the Multilateral System

20. Has your country included in the Multilateral System of Access and Benefit-Sharing (MLS) all PGRFA listed in Annex I to the Treaty that are under the management and control of your Government and in the public domain?

- All
- Partially
- None

If your answer is 'all', please provide details of any difficulties encountered in including Annex I PGRFA in the MLS:

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

- The extent to which Annex I PGRFA have been included in the MLS;
- The crops that have been included in the MLS; and
- The difficulties encountered in including Annex I PGRFA in the MLS:

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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\(irlh44y2chexfljaecceol2k\)\)/MLSSimpleSearch.aspx](http://www.nbpgr.ernet.in:8080/PGRPortal/(S(irlh44y2chexfljaecceol2k))/MLSSimpleSearch.aspx) and website of Treaty

If your answer is 'none', please provide details of the difficulties encountered in including Annex I PGRFA in the MLS:

21. Has your country taken measures to encourage natural and legal persons within your jurisdiction who hold Annex I PGRFA to include those resources in the MLS?

Yes   
No

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

- The natural or legal persons within your jurisdiction that included Annex I 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 I PGRFA in the MLS:

If your answer is 'no' please provide details, in particular details of any difficulties encountered in encouraging these persons to include Annex I PGRFA in 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 I PGRFA, in accordance with the conditions set out in Article 12.4 of the Treaty?

Yes

No

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>)

If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex I PGRFA:

23. Has facilitated access been provided in your country to Annex I PGRFA pursuant to the standard material transfer agreement (SMTA)?

Yes

No

If your answer is 'yes', please provide the number of SMTAs entered into:

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.

If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex I PGRFA pursuant to the SMTA:



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24. Has the SMTA been used voluntarily in your country to provide access to non-Annex I PGRFA?

Yes

No

If your answer is 'yes', please indicate the number of such SMTAs entered into:

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?

Yes

No

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?

Yes

No

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 I PGRFA for the purpose of contributing to the re-establishment of agricultural systems?

Yes

No

If your answer is 'yes', please provide details of such emergency disaster situations and the Annex I 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?

Yes

No

If your answer is 'yes', please provide details of any information made available regarding Annex I PGRFA (e.g. catalogues and inventories, information on technologies, results of scientific and socio-economic research, including characterisation, evaluation and utilisation):

Information on Indian accessions designated under the MLS of the Treaty, available for exchange under the MLS of ITPGRFA available at  
[http://www.nbgr.ernet.in:8080/PGRPortal/\(S\(wypebjfvr3pcjrke1qj2x2e\)\)/MLSSimpleSearch.aspx](http://www.nbgr.ernet.in:8080/PGRPortal/(S(wypebjfvr3pcjrke1qj2x2e))/MLSSimpleSearch.aspx)  
and Treaty website

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

Yes

No

If your answer is 'yes', please indicate whether your country:

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- 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.

If access to technologies was provided, please provide details of the access provided:

ICAR-NBPGR is designated as Centre of Excellence for undertaking international training programmes on Invitro Conservation and cryopreservation of PGR. Established in 2006, it has been undertaking specialized trainings annually on advanced biotechnological techniques of PGR conservation.

30. Has your country provided for and/or benefitted from capacity building measures in respect of Annex I PGRFA?<sup>3</sup>

Yes

No

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.

If your country provided for and/or benefitted from such measures, please provide details:

Replied under question 18

**Article 14: Global Plan of Action**

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<sup>3</sup> Please note that this question differs from question 15 as it only concerns Annex I PGRFA and is more specific.

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?

Yes

No

If your answer is 'yes', please indicate whether the implementation of the plan was promoted through:

National actions;

International cooperation;

If the implementation of the plan was promoted, please provide details:

National Action Plan for Genetic Resources Management redefined  
(<http://www.nbpg.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?

Yes

No

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

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If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex I 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?

Yes

No

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:

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

## 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?

Yes

No

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 and/or received financial resources for the implementation of the Treaty through bilateral, regional or multilateral channels?

Yes

No

If your answer is 'yes', , where possible, please provide details of such channels and the amount of the financial resources involved:

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

Yes

No

If your answer is 'yes', please provide details of such national activities and the amount of the financial resources involved:

**About this reporting format**

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

Yes

No

If your answer is 'yes', please provide details on such difficulties:

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

Few questions are repetitive in nature or partially answered in other questions. It is suggested to integrate this reporting format with the GPA reporting as many of the activities are overlapping (in situ, ex situ, capacity buliding)

**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:

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.