



**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)**
YEMEN

(09 January 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 System 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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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:

>>>

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:

>>>

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:

>>> Yes, and those are represented by the following:

- The Law of Agricultural Seeds and Fertilizers No. (20) of 1998, the executive regulations (by-law) of this law issued by the Prime Minister's Resolution No. (50) of 2001
- The executive regulation of the Ministry of Agriculture and Irrigation (MAI) issued by a Republican Decree No. (16) of 2008 .
- The Law No. (17) of 2011 on Plant Quarantine and its executive regulations (By-Law).
- The Republican Decree No. (156) of 1998 regarding the Reorganization of the General Authority for Agricultural Research and Extension Authority (AREA).

The agricultural legal structure lacks any laws or legal texts related to organizing, developing and protecting agricultural research and defining responsibilities for the conservation and sustainable use of agricultural crops.

There are no laws or legal texts that define the procedures, controls, and responsibilities related to the propagation of plant and animal germplasm, assets, and breeds, and define the powers and responsibilities of the concerned institutions.

The existing agricultural legislations contain no consistent and complementary provisions that define responsibilities and powers for the transfer and exchange of genetic resources within the framework of the international multilateral system of the International Treaty on Genetic Resources for Food and Agriculture.

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.

>>> Please provide details of your findings, specifying species, subspecies and or varieties including those that potential use:

- The exploratory trips to plant genetic resources in Yemen were ancient and may date back to the seventeenth century.

- Many scientists, most of whom were Europeans, collected botanical samples from Yemen and preserved them in botanical museums in Denmark, Germany, France, and Italy.

- In the 1970s exploratory surveys and collection trips were carried out through the International Genetic Resources Institute (IPGRI).

- The exploratory and collection operations continued through the different agricultural research institutions, where thousands of plant samples were collected, but these samples were not properly preserved and, thus, deteriorated or lost.

- At the beginning of the third millennium, specifically in 2002, the National Genetic Resources Center (NGRC) was established under the umbrella of the Agricultural Research and Extension Authority (AREA). The center was provided with refrigerators, materials, and equipment that facilitated conserving the accessions collected during the past thirty years.

- The NGRC organized about 30-50 collection trips of plant genetic resources in different regions of the country, and most of the governorates were covered.

- Most of the plant genetic materials that were surveyed and collected belong to cereal crops and exceeded 70% of the accessions conserved in the Gene Bank of the NGRC.

- The high- sorghum crop accessions ranked first in the list of species available in the GenBank, followed by millet, wheat, barley, and cowpea.

- The accessions of Yemeni plant genetic resources conserved outside Yemen (in the International and Regional Centers of Genetic Resources) are more than those samples preserved inside Yemen.

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;

>>> Yes, and those threats and risks can be summarized as follows:

Approximately 50-60% of the agricultural lands in Yemen are cultivated under the rain-fed production system under which the cereal crops like sorghum, millet, wheat, barley, lentils, and pea are grown. The growth and

production of those cereal crops depend on the amount of annual rainfall. Under the irrigated production system, the vegetable and fruit crops are grown. In addition, there exists a supplementary irrigation system, where rain-dependent crops are grown with the addition of supplementary irrigation from well water such as maize, wheat, legumes, vegetable, and fruit crops.

Through the observations and results of the organized plant genetic resources survey and reports, it was clear that there was a loss of, and threat to many strategic agricultural crops on which the people depend for their food (wheat and sorghum) because of several factors, including those related to diet and others related to socio-economic factors and changes. The people become increasingly dependent for their food mainly on wheat and rice. Additionally, they increasingly and regularly chew qat (*Catha edulis* = a mild stimulant plant) during their social occasions and daily gatherings. Therefore, there has been a significant expansion in qat cultivation at the expense of the strategic food crops related to food security, such as cereal and leguminous crops. The high population growth and urban expansion on agricultural lands caused a decline in the cultivation of types of grain crops, fruits, and vegetables. Moreover, the protracted conflict and war since 2011 with the resulting conditions like the fuel shortage and high prices, the high prices of food items, high cost of living, increase prices of farm inputs, displacement among other consequences, all have negatively affected the farming pattern, the farm production, biodiversity and the natural resources management.

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:

- >>> Providing financial support for collection trips carried out by the National of Genetic Resources Center
 Training staff and capacity building in the field of gene bank management
 Raising awareness of the importance of plant genetic resources.

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:

>>> Yes, to some extent, through the following:

- Providing improved seeds and guaranteed seedlings of crops' varieties and plant species through the country's institutions and facilities.
 Providing extension services to farmers and encouraging them to conserve and use the improved and local genetic resources.
 Implementation of varietal improvement projects with the participation of farmers.
 Encouraging farmers to organize themselves through associations like the seeds producers associations, the grapes associations, the coffee associations and the like.
 Enhancing the capabilities of farmers
 Raising awareness among farmers through the various media programs.

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:

>>>

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:

>>> Yes, and can be summarized as follows:

- The National Plant Genetic Resources Center (NGRC), Dhamar, conserves more than 6,000 accessions of more than 45 species, most of which are for cereal crops.
- The Plant Germplasm Center, College of Agriculture, of Sana'a University, which preserves more than 3,000 accessions, most of which are of cereal crops.
- The gene botanic reserve fields/gardens of fruit crops (palm, mango, citrus, and grapes) in the experimental farms of the regional research stations of AREA.

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:

>>> Actions to promote the improvement and transfer of technologies for this purpose:

- Supporting field surveys, collection missions and conservation, documentation, and classification of plant genetic resources
- Providing equipment and supplies for collecting and conserving plant genetic resources
- Securing alternative source of power supply for the Gene Bank through the purchase of a solar energy system and an electricity generator
- Adopting and executing programs for multiplication and renewal of accessions
- Enhancing the technical capabilities of workers in the gene bank

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

>>> Yes, and the most important finding details from monitoring activities were the following:

- There is an urgent need to adopt a program for validity tests for all the accessions preserved in the gene bank, especially with the local funding suspension of the accessions regeneration program due to war conditions.
- There is a weakness in controlling the air humidity inside the operational storage rooms.
- Monitoring genetic deterioration and variations requires high technical capabilities, and this is one of the major gaps in managing PGRs in the gene bank.

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:

>>> Yes, and this cooperation is represented through the following points:

- There was a regional cooperation between the NGRC in Yemen and the International Center for Agricultural Research in the Dry Areas (ICARDA) in the field of conservation, characterization, evaluation, and documentation of genetic resources through several projects implemented in Yemen, the latest of which was the "Rain-fed Agriculture Project".
- Yemen, through the NGRC sent hundreds of accessions of landraces as duplicates for safe preservation in ICARDA's gene bank.
- There was a cooperation between the NGRC with the Global Crop Diversity Trust (Crop Trust)which supported Yemen in implementing programs like "the regeneration of varietal accessions and the genetic variation program" during 2010-2011, and "the conservation and use of the neglected crops program" (year). Crop Trust has also offered the NGRC an emergency fund to procure a solar energy system for the gene bank (2022).
- The Benefit Sharing Fund (BFS) of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) has funded the "Participatory Conservation and Sustainable Use of Local landraces project to enhance the resilience of farmers and improve their livelihoods against climate change in Yemen".

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:

>>> Yes, and those measures are represented through the following:

The Seeds and Fertilizers Act of 1998 and its regulations (by-law), the Ministry of Agriculture and Irrigation (MAI) organizational regulations for the year 2013, and the national agricultural research strategy that was prepared in 1997 by AREA with technical support from the ICARDA, the Second National Strategy and Action Plan for Biodiversity (NBSAP2) in Yemen that was prepared by the environment protection authority (EPA) with financial and technical support from the United Nations Development Program (UNDP) in 2012. All national plans that were originated based on such strategy included, directly or indirectly, procedures and policies that encourage:

- The development and maintenance of diverse farming systems.
 The enhancement and conservation of biological diversity by maximizing intra and inter specific bio-variation.
 The plant breeding with participation of farmers.
 Expansion of using the local and adapted crops, varieties, and underutilized species.
 Reviewing and adjusting breeding strategies and regulations concerning varietal release, and seed's multiplication and distribution.
 There are also modest attempts by the directorate of plant production and the directorate of farm supplies quality control in the MAI in coordination with AREA to prepare an organizing mechanism of seed sharing and distribution as well as a formulating a procedure for varietal registration and release.
The main problem stems from the lack of clear vision by decision makers in the MAI, in addition to the persisting war and conflict conditions, and the resultant institutional weakness all impede any serious effort towards creating a clear national vision and policy on seed's production and distribution.

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:

>>> Yes, to some extent, as the activities carried out by the NGRC in the fields of conserving, characterizing, and documenting the genetic resources were integrated with the research programs of the AREA.

The activities of conserving and using the plant genetic resources were also integrated within the research and scientific programs of the faculties of Agriculture, Sciences, and Environment, as well as within the programs and plans of the EPA.

However, the national efforts in the field of genetic resources are still scattered and not unified due to the lack of a national entity that link between the various relevant units and coordinate their work and resources.

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:

>>> YES. and that some examples of the bilateral cooperation in the field of conserving and using the plant genetic resources can be mentioned prior to 2011, the starting year of the country's crisis. There was a cooperation between Yemen and the Sultanate of Oman in the field of conserving and using the genetic resources of mango and coffee crops. There was also another cooperation instance between Yemen, Egypt, Sudan and Ethiopia through the Nile Valley and the Red Sea network, with technical support from ICARDA. Several varieties were introduced from Jordan through the Arab Center for the studies of Arid Zones and Dry land (ACSAD).

The International Center for Biological Diversity implemented a project in the field of conserving and utilization of the less-used and neglected species within a network that covered several countries, including Yemen.

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?

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:

>>> Yes, especially through the following domains:

- Exchanging of information
- Access to and transfer of technology
- Capacity building

Through the Benefit Sharing Fund of the International Treaty for Plant Genetic Resources for Food and Agriculture, the NGRC received financial support to implement “the participatory conservation and sustainable use of local landraces to improve the livelihood and the resilience of farmers to climate change in Yemen”, for a period of three years 2019-2022.

The NGRC also received an emergency support from the Crop Trust to procure batteries for the solar energy system to operate the cold rooms of the gene bank.

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:

>>> - The traditional knowledge and practices of farmers in several regions have been documented under the national projects and programs, for example:

- The Agricultural Biodiversity and Climate Adaptation Project (2014).
- The Neglected and Less Used Crops Project (2005).
- The traditional seed production system improvement project (2004).

- In several Yemeni regions and through various projects such as the food security project, the farmers, especially the pioneers/innovators, were encouraged to reuse, produce, and share the seeds produced in their fields with the participation of researchers and extension workers, and sell them to other farmers. Those farmers became famous as sources of good seeds (seed-producing farmers) and sought by other farmers within the range of their surrounding agricultural environment or Agri-ecological zone.

- The emergency response projects/programs provided the seed-producing farmers with opportunities to compete for the seed's reproduction tenders they used to offer and announce for seeds supply they intend to distribute to other farmers in similar other area as part of their humanitarian assistance.

- Some of the varieties that were released and circulated among farmers bear a farmer's name in recognition of their efforts and participation in the process of varietal development with the agricultural researchers, like the improved high-yielding onion variety that can be stored for a long time "Baftaim" and the wheat "Ghoneimi". Those outstanding seed-producing farmers get monetary benefits, as they continue to produce and sell the seeds of such improved varieties to other farmers, seed dealers, or companies, and benefits from the varieties in the same manner as the research stations or the public institution do through their seeds multiplication and responding to the market's demand for crop's seeds.

- The General incorporation for Improved Seed Multiplication (GIMS) (governmental) provides seeds to farmers at promotional prices, in recognition of the farmers' right to obtain those seeds. The GIMS usually contracts with some farmers in different regions to produce seeds under the technical supervision of the GIMS's specialists. The GIMS, as an authorized entity, in turn, sells the seeds to other farmers in the same area or other similar areas, so that the seeds reach greater number of farmers at reasonable prices, who can realize higher benefit as part of the benefit sharing process.

- Farmers are involved in training courses, workshops and study tours through national, regional and international projects and programs that are implemented in Yemen and abroad (other partner state within the project's regional network), in recognition of the farmers' rights and their role in achieving the desired agricultural development and food security.

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 extent 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:

>>> Approximately 350 accessions from the samples collected, conserved, and characterized through the Benefit Sharing Fund project "the Participatory Conservation and Sustainable Use of Local Landraces project to enhance the farmer's livelihoods and improve their resilience to climate change in Yemen", were included.

Most of the materials included were from cereal crops (wheat, barley, sorghum, maize, and millet crops).

One of the most important difficulties facing Yemen in the inclusion of plant genetic resources in the multilateral system is represented in the weak capacities, the limited economic resources, the modest legislative position and the inadequate technical capabilities in the field of managing genetic resources.

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:

>>> There is still very low awareness about the importance of contributing genetic materials to the MLS.

Therefore, more work needs to be done to raise the awareness level, especially of those running the seedbanks holding significant numbers of germplasm (stated in Annex 1). The germplasms stored in the many seedbanks found in the country need to be properly documented before entering in any inclusion process could be initiated. This requires availing of sufficient financial resources and enhancing human capacities of the plant germplasms' holders on documentation or alternatively having the gene bank staff to make the documentation on their behalf.

There has been a flow of genetic resources mainly from CGIAR centers to Yemen under SMTA, but no institution in the country has exchanged plant genetic resources from Yemen under SMTA. So that the country found it necessary to put in place some measures facilitative of the transfer of genetic resources.

This was probably because the awareness on the Treaty and the MLS still very modest in Yemen. Although there has been some exchange of genetic resources from Yemen to outside the country, these not under MLS.

It is important to increase the awareness level of the Treaty's different aspect in Yemen, so that various

institutions can benefit from 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:

>>>

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

- >>> - Legislative
- Institutional
- Weak in Financial and humanitarian capabilities
- Weak in awareness among the decision makers about the Treaty.

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:

>>>

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:

>>> As part of the emergency program implemented by the United Nations in Yemen due to the war since 2015, the access to Annex I PGRFA was facilitated to the re-establishment of the agricultural systems.

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:

>>>

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:

>>> Yemen, despite the limited resources, is trying to take measures that would enhance the conservation and use of the genetic resources, including:

- Supporting the NGRC with the essential required materials, supplies and equipment.
 - Organizing local training courses in the field of conservation and use of plant genetic resources.
 - There is a great weakness in several areas related to the management of plant genetic resources relating to the limited use and application of modern technologies in the field of genetic improvement of plant species.
- There exists also in the country a weakness in the field of policies, institutional aspects and in the capabilities of detecting genetically modified crops.

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:

>>> Yemen has strengthened the implementation of the Global Action Plan through:

- Inclusion of the activities of the global action plan within the activities and projects of the national research map (2022).

- The NGRC implemented the activities of the global action plan at the national level in the field of PGRs conservation, use and capacity building.

- Partnership and cooperation with the regional and international centers and organizations in the field of plant genetic resources like the ICARDA, the Crop Diversity, the Food and Agriculture organization (FAO), and the international committee of the Red Cross (ICRC), etc.

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:

>>> Yemen sent more than 400 accessions of PGRs from the NGRC to the ICARDA in 2013. Before that, accessions were sent to the global vault in Svalbard.

In 2022, the NGRC received some PGR accessions from ICARDA under the Standard Material Transfer Agreement (SMTA).

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:

>>> The war that completed about eight years since its eruption in early 2015, and the political, economic and social effects are considered the main obstacles and problems for concluding agreements to transport materials outside the country.

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:

>>> Yemen is a member of the Regional Network for Genetic Resources for the Near East and North Africa (NENAPGRN), under the umbrella of the Agricultural Research Institutions in the Near East and North Africa (AARINENA), with the aim of enhancing cooperation and coordination for the conservation and sustainable use of 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:

>>> During the past five years, the government funding to support the activities related to the genetic resources was almost non-existent because of the war and the Corona-19 pandemic, which led to very difficult economic conditions in Yemen. Just In 2018, the government supported the NGRC with an amount not exceeding \$10,000 for the crucial needs of the center. It also provide the NPFRC staff with occasional and irregular amount as part of their unpaid salaries for several years by now.

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:

>>> During the past five years, the government funding to support the activities related to the genetic resources was almost non-existent because of the war and the Corona-19 pandemic, which led to very difficult economic conditions in Yemen. Just In 2018, the government supported the NGRC with an amount not exceeding \$10,000 for the crucial needs of the center. It also provide the NPFRC staff with occasional and irregular amount as part of their unpaid salaries for several years by now.

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:

>>> Yemen received financial support from the Benefit Sharing Fund for the 2019-2022 period for executing the project: "Participatory Conservation and Sustainable Use of the Local landraces to Improve farmers' Livelihoods and Enhancing their Resilience to climate change in Yemen", which was the only available financial support in the absence of the annual government funding that was ascribed to the war conditions, and in the absence of bilateral and multilateral project's and programs due to engagement of most donors and world's organizations in humanitarian aid and assistance.

37B. Channel:

- Bilateral
 Regional
 Multilateral

37C. Please provide details:

>>> Yemen received financial support from the Benefit Sharing Fund for the 2019-2022 period for executing the project: "Participatory Conservation and Sustainable Use of the Local landraces to Improve farmers'

Livelihoods and Enhancing their Resilience to climate change in Yemen", which was the only available financial support in the absence of the annual government funding that was ascribed to the war conditions, and in the absence of bilateral and multilateral project's and programs due to engagement of most donors and world's organizations in humanitarian aid and assistance.

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:

>>> There is a need to raise awareness of different target audiences/segments about the Treaty and its related provisions. Yemen needs assistance in the field of policies, legislative and institutional capacity building related to genetic resources access, and benefit-sharing. Yemen also needs more support from the Benefit-sharing Fund to promote the conservation and sustainable use of the plant genetic resources

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 the times of conflict, war, instability, institutional fragmentation, and critical socio-economic situation, it is difficult to persuade policy makers at the Governmental level to commit to the implementation of the Treaty as they have different urgent and priority issues in the first place. In addition, there were no tangible direct benefits to the provider institutions and their institutional network 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:

>>> Strengthening capacities in the field of policies, laws, regulations, and qualifying human resources especially in some specific disciplines or specialties relating to plant genetic resources are of high importance and priority to the present status of plant genetic resources. Also, the transfer of modern technologies used in the field of plant genetic improvement from the developed countries to the developing and under-developed countries like Yemen. The fair and equitable sharing of benefit between the provider and recipient of genetic material is one of the most important factors facilitative of compliance to the ITPGRAF.

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:

>>>