

**Guidelines for the preparation
of
Country Reports
for
*The State of the World's
Forest Genetic Resources***

June 2010

COMMISSION ON
GENETIC RESOURCES
FOR FOOD AND
AGRICULTURE



**GUIDELINES FOR THE PREPARATION OF COUNTRY REPORTS FOR
*THE STATE OF THE WORLD'S FOREST GENETIC RESOURCES***

TABLE OF CONTENTS

	<i>Page</i>
<i>THE ESSENTIAL ROLE OF COUNTRY REPORTS</i>	2
I. INTRODUCTION	3
II. OBJECTIVES OF THE GUIDELINES	4
III. RECOMMENDED SCOPE, STRUCTURE AND CONTENTS OF COUNTRY REPORTS	5
IV. TIMELINE AND PROCESS	8
 <i>Annex 1: PREPARATION OF THE COUNTRY REPORT: METHODOLOGY AND GUIDANCE</i>	 11
A. Introduction	11
B. Overall methodology and guidance for preparing the Country Report	11
C. Detailed methodology and guidance by section	12
 <i>Annex 2: PROPOSED TEMPLATE FOR SPECIFIC INFORMATION THAT COULD BE INCLUDED IN THE REPORT</i>	 25

GUIDELINES FOR THE PREPARATION OF COUNTRY REPORTS FOR *THE STATE OF THE WORLD'S FOREST GENETIC RESOURCES*

THE ESSENTIAL ROLE OF COUNTRY REPORTS

The preparation of Country Reports is the most important step in the process for preparing *The Report on the State of the World's Forest Genetic Resources*. The preparatory process should be considered a strategic planning exercise and the report itself a tool for the better assessment and sustainable management of forest genetic resources in your country. Preparation of a Country Report provides an opportunity to engage and stimulate the interests of a wide range of stakeholders to reflect on the state of forest genetic resources of your country, on what has been accomplished and what remains to be done, and to identify the needs required to achieve their conservation and sustainable use.

To ensure that their Country Report provides a basis for planning the conservation, sustainable use and development of forest genetic resources at the national level and contributes to regional and global actions, countries should carefully and comprehensively assess:

- The state of forest genetic resources in the country and their roles in production systems, including associated biodiversity and the factors driving changes;
- The current contribution of forest genetic resources to sustainable forest development, and food and agriculture;
- How the contribution of forest genetic resources to sustainable forest development, and food and agriculture can be enhanced, identifying opportunities and obstacles, as well as strategies to realize the opportunities and overcome any obstacles;
- Needs and priorities for capacity building to enable the conservation, sustainable use and development of forest genetic resources.

I. INTRODUCTION

1. Genetic resources, including forest genetic resources, are among the most valuable assets that a country possesses. The Food and Agriculture Organization of the United Nations (FAO) has for many decades acknowledged the importance of forest genetic resources. In 1967, the FAO Conference recognized that forest genetic diversity was increasingly being lost and requested the establishment of the Panel of Experts on Forest Gene Resources (the Forest Gene Panel), to help plan and coordinate FAO's efforts to manage genetic resources of forest trees. FAO's activities on forest genetic resources are an integral part of the FAO Forestry Programme, and contribute to other programme components, such as national forest programmes, sustainable forest management, tree breeding and plantation development, protected areas management and global forest resources assessments.

2. For many decades, the Forest Gene Panel has guided FAO's work on forest genetic resources and reporting on progress made to the Committee on Forestry (COFO). This guidance has helped to ensure that forest biological diversity, at all levels, is conserved, managed and sustainably utilized in support of local and national forest development, including food security, poverty alleviation, environmental conservation, economic and social advancement and the maintenance of cultural and spiritual values.

3. The FAO Commission on Genetic Resources for Food and Agriculture (the Commission) is a FAO intergovernmental body, which as at 1 March 2010 has 172 members, and is the only international forum which specifically develops policies for genetic resources for food and agriculture. At its Eleventh Regular Session, the Commission acknowledged the urgency to conserve and sustainably utilize forest genetic resources to support food security, poverty alleviation and environmental sustainability; the Commission also approved the inclusion of forest genetic resources in its Multi-Year Programme of Work (MYPOW). It also agreed to the preparation of a country-driven first report on *The State of the World's Forest Genetic Resources* (SoW-FGR). The Commission recommended that COFO and the FAO Regional Forestry Commissions be fully involved in the preparation of *The State of the World's Forest Genetic Resources*, and that work be undertaken in synergy with relevant regional and global programmes and instruments, such as the Convention on Biological Diversity and the United Nations Forum on Forests. The Thirty-fourth Session of the FAO Conference welcomed the Commission's decision to undertake preparation of a report on the SoW-FGR within its MYPOW¹.

4. During its 15th Session, the Forest Gene Panel highlighted the importance of examining a number of key issues in assessing the status and trends of forest genetic resources management, including: climate change, bioenergy, poverty reduction, forestry products supply enhancement, and new and traditional methods and technologies in genetic conservation and tree breeding. As much as feasible, the impact of these issues on forest genetic resources will be examined in preparation of the SoW-FGR with several of these issues being addressed through thematic background studies. A proposed table of content for the SoW-FGR has been elaborated.

5. Recognizing the importance of forest genetic resources and the importance of their good management, the Committee on Forestry (COFO), at its Nineteenth Session, in March 2009, supported the recommendation of the Commission on Genetic Resources for Food and Agriculture and the FAO Panel of Experts on Forest Gene Resources that FAO prepare a report on *The State of World Forest Genetic Resources*, for 2013, which would serve as a reference for action at the national, regional and

¹ C/REP, paragraph 143

global levels. The Committee urged member countries to collaborate with FAO and partner organizations in producing this report.

6. At the Commission's request, FAO prepared for consideration by the Commission, at its Twelfth Regular Session, a proposal for the process of preparing *The State of the World's Forest Genetic Resources*, including an indicative outline for this first report, an indicative list of thematic studies and an indicative timetable for undertaking *The State of the World's Forest Genetic Resources*². The Commission endorsed the indicative outline, agreed on the indicative timeline provided in the Strategic Plan 2010-2017 for the implementation of the Commission's MYPOW, including the finalization of the draft guidelines for Country Reports for Forest Genetic Resources, and the process for countries to officially identify and communicate to FAO their National Focal Points for the preparation of Country Reports. The Commission also agreed to establish an Intergovernmental Technical Working Group on Forest Genetic Resources (ITWG) and agreed on its Statutes.

7. The Commission, at its Twelfth Regular Session, stressed that the process for preparing *The State of the World's Forest Genetic Resources* should be based primarily on Country Reports on Forest Genetic Resources, with support through thematic studies and reports from international organisations as well as inputs from relevant stakeholders. The *Guidelines for the preparation of Country Report for The State of the World's Forest Genetic Resources* presented in this document provide therefore essential strategic information for the preparation of the SoW-FGR and set a basis for the setting of country, regional and global priorities. FAO will assist countries on request, and as resources allow, to prepare their Country Reports, including through providing available data and information.

II. OBJECTIVES OF THESE GUIDELINES

8. These guidelines have been prepared by FAO to assist in the preparation of the *Country Reports on Forest Genetic Resources*. They constitute the main reference documentation for the country reporting process. The guidelines have been designed to underpin three important interrelated functions, to:

- Assist countries to undertake a strategic assessment of their forest genetic resources in the framework of their national forest programmes. This task is to go beyond a description of the resources. It requires a strategic analysis to report on the current state of resources and capacities to manage them, drawing upon lessons from past experiences and identifying needs and priorities. A basic and an expanded questionnaire have been provided in these guidelines to assist countries to examine the current state, past efforts and to look to the future, to assess needs, demands, trends and national capacity building requirements in all aspects of the sustainable management of forest genetic resources.
- Provide a common framework for countries to report globally on the state of their forest genetic resources, on conservation, development and sustainable use activities, needs and priorities. This common framework is crucial to facilitate regional and global analysis and synthesis, as well as to provide a background for updating and analysis, ensuring that

² *Preparation of the First Report on the State of the World's Forest Genetic Resources: Key Issues*, CGRFA-12/09/12, see: <ftp://ftp.fao.org/docrep/fao/meeting/017/k5867e.pdf>

strategic investments in forest genetic resources are directed towards national, regional and global priorities. The guidelines provide flexibility to enable countries to identify their specific differences and highlight their priority needs, while securing a common basis from which to enable the FAO global assessment preparation.

- Identify gaps and needs in national, regional and global policy-making and thus to enable policy makers to take action, as appropriate, including through the adoption of a *Global Plan of Action for Forest Genetic Resources*, should the Commission decide on the need for such a *Plan*.

III. RECOMMENDED SCOPE, STRUCTURE AND CONTENT OF COUNTRY REPORTS

The Scope of Country Reports

9. Forests provide economic production, environmental and social services and functions at the local, regional and global levels. These multiple values occur under very diverse ecological, economic and social conditions, and serve a wide-range of categories of users; which is reflected in different types of forest and tree resources management systems that exist, from natural forest management, industrial plantations to agroforestry systems, involving a very high number of forest species worldwide. The scope of the SoW-FGR will address forest genetic resources of economic, environmental, social and cultural values. The Country Report should cover genetic resources of forest species used for these different purposes and according to their corresponding management systems, recognising national specificities and the diversity of needs of user groups. The data and information and analysis provided in Country Reports will bring insight on current management practices regarding forest genetic resources, *in situ* and *ex situ* genetic conservation activities, improvement and breeding methodologies, infrastructures, implementation and international cooperation and collaboration, and current knowledge of the resources and management capacity needs. In this context, adopting a broad understanding of forest genetic resources and taking into account time and budget limitations, countries are encouraged to define their own priorities for actions for the short-, medium- and long-term, and at the local, regional and global levels.

10. It is strongly recommended that countries consider the current state of knowledge of forest genetic diversity as the basis for determining the scope, content and focus of their Country Report. The main aspects to be considered are:

- Between and within species diversity
- List of priority species; their roles and values and importance
- List of threatened/endangered species
- Threats, opportunities and challenges for the conservation, use and development of forest genetic resources.

11. It is also recommended that countries, in assessing the state of their forest genetic resources and their roles and values, attempt to describe the related aspects of forest biodiversity, the production systems and the environments in which these resources are being used, the range of products and services which they provide, the consumption patterns and socio-cultural practices associated with them, the ecosystem functions which they sustain and their roles in achieving forest sustainable management, food security and poverty alleviation.

12. It is strongly recommended that in assessing progress and recommending future actions, that the scope of activities includes actions being taken by the public, private and non-governmental sectors; and that in particular, actions, needs, priorities and the involvement of indigenous and local communities and associations of forest growers are fully taken into account.

The Structure of Country Reports

13. FAO recognizes that there are major differences among countries in many matters relevant to forest genetic resources, and that these differences must be reflected in the Country Reports. However, a common framework for preparing Country Reports is essential to enable regional and global synthesis. It is therefore strongly recommended that countries follow as closely as possible the structure for the Country reports provided in these guidelines. Not all aspects of the reports call for complete uniformity; however by following a common framework, basic information using a common set of questions will enable synthesis within Country Reports.

14. An Executive Summary is recommended, as is an Introduction to the Country section, which would provide a description of the country and its forest sector. *The Executive Summary should be prepared after completing the main parts of the Country Report.*

15. The recommended structure of the Main Body of the Country Report is as follows:

- Chapter 1: The Current State of the Forest Genetic Resources
- Chapter 2: The State of *in situ* Genetic Conservation
- Chapter 3: The State of *ex situ* Genetic Conservation
- Chapter 4: The State of Use and Sustainable Management of Forest Genetic Resources.
- Chapter 5: The State of National Programmes, Research, Education, Training and Legislation
- Chapter 6: The State of Regional and International Collaboration
- Chapter 7: Access to Forest Genetic Resources and Sharing of Benefits arising from their Use
- Chapter 8: The Contribution of Forest Genetic Resources to Food Security, Poverty Alleviation and Sustainable Development

16. Each country should add any other chapter they believe essential to identify requirements for improved efforts to conserve, use and develop forest genetic resources for sustainable forest management, as well as to identify needs and priorities.

The Suggested Content of Country Reports

17. It is essential that preparation of Country Report is done so in a comprehensive way to integrate past and current trends and to examine future trends are examined. Therefore, it is suggested that looking back about 10 years and forward 10 years would provide a perspective on where the country was, where it is now and where it is going.

18. Where practical, countries are encouraged to use any previous Country Report on Forest Genetic Resources presented to FAO as a reference point to assess trends and progress, and to provide a basis for improved policy development, planning and implementation of priority actions at all levels. Previous Country Reports are available on the FAO web site at <http://www.fao.org/forestry/fgr/50369/en/>. The use of any other available information related to forest genetic resources is highly recommended. The main information sources currently identified are: (i) the FAO global system on forest generic resources (REFORGEN), (ii) the FAO Forest Resources Assessment (FRA), (iii) national forest programmes, (iv) the information collected regularly within the framework of the FAO Regional Committees and Regional Forestry Commissions (v) the information from other sources, including the Convention on Biodiversity (CBD) country reports and (vi) the information from national reports on animal and crop genetic resources. Most of the information produced by FAO is available on the Website on forest genetic resources at: <http://www.fao.org/forestry/40146/en/>.

19. The information system, REFORGEN (<http://www.fao.org/forestry/reforgen/>) will be further developed in order to provide individual countries with information management and communication tools, which should facilitate the preparation of Country Reports. In addition to being the source of basic forest genetic characterization as obtained from FAO previous national assessments, REFORGEN will provide countries with the following facilities: a set of relevant country information pre-collated from other FAO databases; a decision support system to aid countries in planning and guiding the whole preparatory process; and data basing functionality to enable country stakeholder networks to collate supporting data and information.

20. While each country must decide on the specific content and main issues to be addressed in its Country Report, in general, it is recommended that each section and chapter:

- Provide an analysis of trends and indicate changes over the past 10 years, where feasible.
- Provide qualitative and quantitative information.
- Identify new and emerging issues and opportunities.
- Identify the mains challenges and opportunities to achieving the conservation and sustainable use of forest genetic resources.
- Provide clearly stated strategic directions of needs and priorities to achieve the conservation and sustainable use of forest genetic resources at the national, regional and global levels - This should include both immediate actions and long-term planning needs.
- Where available, provide information to assist in the development and/or consolidation of thematic studies that are being undertaken as part of preparing the Report.

21. **To assist countries to develop the content of their Country Report, Annex 1 of these guidelines provides suggestions and a comprehensive set of questions for each section and chapter of the Country Report.** It must be stressed that it is not necessary to attempt to answer every question. Rather, the questions are provided to stimulate discussion and assist countries to undertake a strategic analysis of their activities related to forest genetic resources, with a view to developing a path forward to meet each nation's goals, according to current efforts in the conservation and sustainable use of its forest genetic resources. Besides the expanded questionnaire, a basic set of questions will be also provided in these guidelines so as to cover a minimum requirement of information for each Country Report.

22. **To ease the preparation of Country Reports, Annex 2 of these guidelines provides countries with a template for specific information which could be included in different chapters.** The structure of the template follows the sections mentioned in Annex 1 under C: "Detailed methodology and guidance by section: Basic and expanded questionnaires". This template was developed by FAO in collaboration with Bioversity International and further improved by consultation of regional experts, including during regional workshops in the Latin-American Region (in Quito) and the African Region (in Brazzaville).

23. It is recommended that the Country Report be as brief as possible while addressing all of the issues. The Country Report should not exceed 50 pages. The main body of the report should be approximately 25-35 pages and should be strategic, with information provided to support the conclusions and strategic directions. No guidelines are proposed for the length of individual sections and chapters, as the emphasis may vary from country to country. Tables and annexes should be prepared for data and descriptive information, where feasible.

IV. TIMELINE AND PROCESS

Timeline

24. The draft of the first report on *The State of the World's Forest Genetic Resources* should be presented to the Commission, at its Fourteenth Regular Session (2013).

25. FAO invited countries to nominate a National Focal Point for the preparation of a Country Report on Forest Genetic Resources, preferably by 31 May 2010. FAO will assist the countries to prepare their Country Reports on request and as feasible, in collaboration with partners and regional networks, including through regional workshops for National Focal Points. Country Reports should be submitted to FAO preferably by 1st July 2011, in order for them to be used in preparing the SoW-FGR. If countries are unable to submit final Country Reports by this deadline, preliminary reports of findings should be provided to FAO to contribute to the identification of global priorities for inclusion in the first report.

Recommended Institutional Steps

26. The following steps are recommended in undertaking the preparation of the Country Report, using a participative approach:

- Each participating country should appoint one office for preparation of the Country Report as the focal point for contact between the country and FAO. Countries should, as soon as possible, provide to FAO the name and address of the National Focal Point for the Country Report process.
- Each country could establish a national committee to oversee the preparation of the Country Report. It is highly recommended that the national committee consists of as many representative stakeholders as practical, meets frequently to review progress and consults with key stakeholders.
- The national committee may find it useful to establish a working group to compile data and information for the Country Report, and to write assigned sections of the Country Report. Each member of the working group should review these guidelines.
- The national committee might request the working group to rapidly determine the scope, structure and content of the Country Report, indicating the approximate length of each section. The working group should prepare a draft outline. Once the national committee approves the outline, the working group could designate people to assemble information and prepare a first draft of each section. This work should start early in the process leaving sufficient time for reflection and analysis.
- The national committee may wish to establish *ad hoc* working groups as required, to address specific issues as they arise and to provide expert advice on various matters.
- The working group should assemble a first draft of the entire Country Report. The national committee should review it, and then provide for broader stakeholder review.
- The national committee should finalize the Country Report following the stakeholder review, and submit it to national government so that it can be officially endorsed and submitted to FAO by 1st July 2011. The Country Report will be an official government report. In order to be used as an input to the SoW-FGR, the Country Report must have been endorsed by each country's national government and officially transmitted to FAO in one of the organizations official languages.

27. Subject to the availability of financial resources, FAO will provide technical support to assist the Country Reports preparation, but only if invited by the government of the country itself as a priority activity. Some financial resources may be available to assist the Country Report preparatory process and some on-site expert assistance may also be available. Regional meetings are planned for the national Focal Points to gather regional perspectives on gaps and needs as an important input to the Country Reports, and to the SoW-FGR. FAO will also encourage the involvement of all international stakeholders in country support.

28. The involvement of individual countries in the overall SoW-FGR process, and their use of the REFORGEN information system will be strongly encouraged. This will also increase both the effectiveness and efficiency of the analysis, synthesis and Report publication processes, together with the future updating of the first report at the regional and global levels.

29. The final Country Report must be submitted as an official government document, in one of the FAO official languages.

30. The FAO contact for preparation of Country Reports is:

Mr Oudara Souvannavong
Senior Forestry Officer (Biological Diversity and Conservation)
Forest Conservation Team
Forestry Department
FAO
Viale delle Terme di Caracalla
00153 Rome, Italy
Fax: +39 0657055137
Email: SOW-FGR@fao.org

PREPARATION OF THE COUNTRY REPORT: METHODOLOGY AND GUIDANCE

A. INTRODUCTION

This annex explains the general methodology that should be applied and gives specific guidance for the completion of the sections and chapters proposed for the Country Report structure. It includes two parts: B and C.

Part B presents the overall methodology and guidance for preparing the Country Report.

Part C provides detailed methodology and guidance on a section-by-section basis, which include an expanded questionnaire to stimulate and facilitate the analysis and to support the completion of the structure. A basic questionnaire is also added so as to cover basic information requirements.

B. OVERALL METHODOLOGY AND GUIDANCE FOR PREPARING THE COUNTRY REPORT

The Country Report is intended to be a strategic tool to guide the conservation and sustainable use of forest genetic resources. Each country should keep in mind that the Country Report should as far as possible:

- Provide an analysis of trends and changes over the past 10 years, to enable consolidating the information for the corresponding chapters of the SoW-FGR.
- Describe the main driving forces affecting forest genetic resources and their management in the country and describing the nature of the impacts, positive and negative.
- Identify new and emerging issues and the main challenges to achieving goals in relation to the conservation, use and management of forest genetic resources, as well as opportunities, taking into account the context of the provisions of the *CBD*, the *International Treaty*, and as appropriate, the *Global Strategy for Plant Conservation*. Where possible, solutions to issues should be provided.
- Provide strategic directions and conclusions aimed at both the national level and at the regional/global levels that clearly articulate needs to ensure the conservation, sustainable use and management of forest genetic resources, and that enable priority setting at the national, regional and global levels.

Suggestions for the content and questions are provided to assist countries to undertake their strategic analysis and develop each section in their Country Report. It is not necessary to attempt to answer every question. They are provided to stimulate discussion and analysis and to ensure that the Country Report contains strategic directions that address priorities and needs. Each country must decide how best to address each section of their Country Report, bearing in mind the need for FAO to synthesize all input to prepare the SoW-FGR.

Where practical, countries are encouraged to use any previous Country Report presented to FAO as well as any other available information related to forest genetic resources. Previous Country Reports are available on the FAO website at <http://www.fao.org/forestry/50371/en/> and most of the information produced by FAO is available on the website on forest genetic resources at <http://www.fao.org/forestry/40146/en/>.

Countries that recently prepared a Country Report on Animal or Plant Genetic Resources should be able to use much of the background information contained in these reports.

C. DETAILED METHODOLOGY AND GUIDANCE BY SECTION: BASIC AND EXPANDED QUESTIONNAIRES

SECTION I: EXECUTIVE SUMMARY

It is recommended that the Country Report contain an executive summary of 2-3 pages, which highlights the main findings of the analysis and provides an overview of key issues, constraints and existing capacity to address the issues and challenges. The summary should indicate trends and driving forces and present an overview of the proposed strategic directions for future actions aimed at the national, regional and global levels.

SECTION II: INTRODUCTION TO THE COUNTRY AND FOREST SECTOR

The main objective of this section is to present an overview to allow a person who is unfamiliar with the country to understand the conditions and help the reader appreciate the context for the Country Report. In preparing the introduction, countries should bear in mind that this section should only present an overview. Detailed information should be provided in the main body of the Country Report, and thus, countries may wish to consider developing their introductions after completing the main body of the Country Report.

Countries that previously presented a Country Report on forest genetic resources, or recently prepared a Country Report on Animal or Plant Genetic Resources, should be able to use much of the background information contained in these reports, to prepare their introductory section. As much of the information related to this section is also already contained in the FAO Global Forest Resources Assessments (FRA, 2005, 2009). Countries should be able to easily prepare a synthesis, highlighting the aspects specifically related to forest genetic resources. The FRA homepage is <http://www.fao.org/fra/en/>.

It is recommended that the introduction provides:

1. Basic information on the size and location of the country: its main physiographic and climatic features, the human population and trends, the main data on forest and forest sector and the degree of reliance on the forest products for local use and for export.
2. A brief profile of the forest sector, including the main forest types and forest management systems, the size and nature of forest enterprises (small-scale forestry, subsistence, plantations etc.), land tenure, forest reproductive material supply, and the role of national and foreign private companies.
3. A description of recent trends in the forestry sector and the main reasons for observed changes (driving forces), including any related national strategy or plan (deforestation, climate change, land-use, etc...).
4. A map of the country, marking the places and regions mentioned in the report if necessary.
5. Countries may also wish to provide a description of the process they followed in preparing the Country Report, providing the names of the participants in an annex.

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

Describe the Forestry Sector:

1. **What are the main types of forests and tree resource management systems?**
2. **What is the distribution of forests and the forest plantations size?**
3. How important is employment in the forest sector and what is the overall economic importance of the forestry sector?
4. What is the relative importance of forests, forest products and services for domestic use and export?
5. **How is the forestry sector organized? (Forest growers, private companies, international corporations, cooperatives).**
6. **What roles do the forest genetic resources play in meeting the current demands for forest products and services in your country?**

Describe changing demands and driving forces in the Forestry Sector:

1. **What trends in forest conservation, management and production were observed over the past 10 years? What are their main driving forces?**
2. What changes are occurring in the demand for forest products and services in the country? Have there been significant changes in the types and diversity of products and services in the last 10 years? If so, what are the reasons for these changes - the main driving forces (government policies, changes in demands, land uses, environmental pressures, population growth, etc.)?

3. What changes in forest and tree resource management systems will be required to meet changing demands over the next 10 years?
4. What are the limiting factors and major constraints affecting productivity and efficiency? What are possible means to overcome these constraints.
5. **What roles will forest genetic resources play in meeting future demands for forest products and services in your country over the next 10 years?**

SECTION III: MAIN BODY OF THE COUNTRY REPORT

The following sections provide suggestions for the chapter headings and the content of each chapter, for the main body of the Country Report. In each chapter, the most relevant questions are indicated.

Chapter 1: The Current State of Forest Genetic Resources

The main objective of this chapter is to describe the current state of the forest genetic resources diversity in the country, and indicate future needs and priorities. Countries should attempt to identify the level of the intervention that is required – national, regional and/or global. Information in the following areas should be considered in developing the Country Report:

- The state of diversity between and within species
- The main value of forest genetic resources with an emphasis on advances in species priority setting and valuation
- The main factors influencing the state of forest genetic diversity with an emphasis on threatened and endangered species and resources
- The state of current and emerging technologies
- Needs and priorities for improving understanding of the state of forest genetic diversity

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

Diversity within and between forest tree species:

- 1.1. **List the main ecosystems and the main tree species in your country.**
- 1.2. **List the methods of these species characterization (ecological zonation, delimitation of provenance zones etc.).**
- 1.3. **List antecedents of intraspecific variation studies.**
- 1.4. **What methods are being employed to analyze and assess intraspecific variation in the country?**

- 1.5. What actions are being taken to survey and inventory intraspecific variation in the country?
- 1.6. Have any initiative and information systems been established on intraspecific genetic variation patterns?
- 1.7. If any, indicate the objectives and priorities for improving the understanding of intraspecific variation.
- 1.8. What are your capacity-building needs to enhance assessments and monitoring of interspecific and intraspecific variations?

The main value of forest genetic resources:

- 1.9. What are the main forest tree species actively managed for productive aims in your country?
- 1.10. Specify the type of production and its relative importance.
- 1.11. Specify if the species is native or introduced.
- 1.12. What are the main forest trees species actively managed or identified for environmental services in your country?
- 1.13. What are the main forest tree species considered as threatened in your country?
- 1.14. What is the relative importance (economic, social, and environmental) of the different tree species and their products? Are there differences in the importance of these products between different regions within the country?
- 1.15. List any documented forest tree species priority setting exercises available in your country.
- 1.16. What is the state of genetic diversity for each main species: increasing, decreasing, remaining the same or unknown?

Factors influencing the state of forest genetic diversity in your country:

- 1.17. Has the relative importance of the main forest tree species being utilized changed significantly over the past ten years? If so, what forces are driving the changes?
- 1.18. Is your country assessing genetic erosion of forest genetic resources? If so, what mechanisms or indicators are used to monitor genetic erosion?
 - List the main ecosystems and the main forest tree species which are considered threatened.
 - In the case of these species, indicate whether they are threatened at the species and/or provenance level.
 - **Specify the main threats (deforestation, change of land use, over exploitation, genetic pollution).**
 - Have any information systems on threatened species and trends in threats been established in the country?
 - **List scientific and technical approaches/mechanisms used for monitoring genetic erosion and vulnerability.**
 - **List scientific and technical approaches/mechanisms used for preventing and correcting genetic erosion and vulnerability.**
 - **List the policy tools and instruments that the country employs to address genetic erosion and vulnerability (if any).**
 - **Has the country undertaken any risk disaster analysis for forest genetic resources?**
 - Has the country established any forest genetic resources recuperation/replacement following disasters?

- What are the major constraints to establishing effective forest genetic resources disaster responses mechanisms?
- **What are the country needs and priorities to improve forest genetic resources disaster response mechanisms?**
- What is required to improve regional and international disaster response mechanisms?
- **What are the country priorities to improve monitoring of genetic erosion and vulnerability and improve the response to observed erosion and vulnerability?**

Future needs and priorities

- 1.19. **What are your priorities for improving understanding of the state of diversity of forest genetic resources, including associated biodiversity?**
- 1.20. **What are your capacity-building needs to enhance assessments of the state of diversity of forest genetic resources, including ways to better assess genetic erosion and understanding of its causes?**
- 1.21. **What are your priorities to better understand the roles and values of the diversity of forest genetic resources (economic, social, culture, ecological values?)**
- 1.22. Provide any other strategic direction relevant to improving understanding of the state of forest genetic diversity and maintaining this diversity (policy, research and management actions) at the national and regional levels.
- 1.23. **What is the level of perception of the importance of forest genetic resources?**
- 1.24. What are the needs and priorities for improving understanding of the state of forest resource genetic diversity and conservation and management?
- 1.25. What are the country priorities to better understand the roles and values of forest genetic resources (economic, social, culture and ecological values)?
- 1.26. **What is the level of the intervention required (national, regional, and/or global?)**
- 1.27. Are there any antecedents of surveying and inventorying forest genetic resources? If not, identify constraints to undertaking survey and inventory work.

Chapter 2: The State of *in situ* Genetic Conservation

The main objective of this section is to describe the current state of *in situ* conservation of forest genetic resources and the needs and priorities for improving it. Countries should attempt to identify the level of the intervention that is required – national, regional and/or global. Information in the following areas should be considered in the Country Report:

- Forest genetic resources inventories and surveys
- Conservation of forest genetic resources within and outside protected areas
- Sustainable forest management or ecosystem management for forest genetic resources conservation within and outside protected areas
- Activities on *in situ* genetic conservation
- Criteria for *in situ* genetic conservation units identification
- Use and transfer of germplasm
- Assessment of major needs for *in situ* conservation

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

- 2.1. List target species included and actively managed within *in situ* conservation programmes**
- 2.2. List the categories of *in situ* conservation areas established (managed production forests, provenance zones, strictly protected areas).**
- 2.3. What actions have been taken for sustaining *in situ* collections? What actions have been taken to improve inventories and surveys of forest genetic resources?
- 2.4. What actions are being taken for promoting *in situ* conservation?
- 2.5. What are the greatest constraints to improving *in situ* conservation in the country?**
- 2.6. What are the priorities for future *in situ* conservation actions?**
- 2.7. What are the capacity-building needs and priorities for *in situ* conservation actions?**
- 2.8. Has your country established any national/regional forum for stakeholders involved with *in situ* conservation, and that are recognized by the National Forest Programme?**
- 2.9. What are your research priorities to support *in situ* conservation?**
- 2.10. What are your priorities for policy development to support *in situ* conservation actions?

Chapter 3: The State of *ex situ* Genetic Conservation

The main objective of this section is to describe the current state of *ex situ* conservation of forest genetic resources and the needs and priorities for improving it. Countries should identify the appropriate level for intervention – national, regional and/or global activities.

Information in the following areas should be considered in developing the Country Report:

- The state of collections (if any)
- Collecting initiatives
- Types of collections (priority species and others, arboreta, botanical gardens, etc)
- Storage facilities
- Documentation and characterization
- The state of current and emerging technologies
- Germplasm movement
- Access and benefit-sharing policy and legislative developments
- An assessment of major *ex situ* conservation needs

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

- 3.1. List target forest tree species included in *ex situ* conservation programmes.**

- 3.2. **List for each species the means of conservation (provenances stored as seeds, pollen, tissue, other).**
- 3.3. **Quantify the total number of trees of each provenance stored.**
- 3.4. **Specify if the seed lots/accessions are bulked or kept separately by single tree.**
- 3.5. **Specify the infrastructure capacity for *ex situ* conservation (laboratory, germplasm banks etc.).**
- 3.6. **List number and size of *ex situ* conservation stands established in the country (species, provenance, size).**
- 3.7. **List number, size and roles of arboreta and botanical gardens established in the country.**
- 3.8. **Describe use and transfer of germplasm in the country.**
- 3.9. **Describe the documentation and characterization used.**
- 3.10. **What are the actions for sustaining existing *ex situ* collections?**
- 3.11. **What are the actions for promoting *ex situ* conservation?**
- 3.12. **What are the greatest constraints to improving *ex situ* conservation in the country?**
- 3.13. **What are the priorities for future *ex situ* conservation actions?**
- 3.14. **What are the capacity-building needs and priorities for *ex situ* conservation actions?**

Chapter 4: The State of Use and Sustainable Management of Forest Genetic Resources

The main objective of this section is to describe the use and sustainable management of forest genetic resources. The Country Report should indicate the needs and priorities for improving them. Countries should identify the level of appropriate intervention – national, regional and/or global. Information on the following areas should be considered:

- The importance of sustainable management and use.
- Utilization of conserved forest genetic resources and major constraints to their use.
- The state of forest genetic improvement and breeding programmes.
- The state of use and management of forest reproductive materials; forest reproductive material availability, demand and supply.
- The state of current and emerging technologies.
- Assessment of needs to improve the forest genetic resources management and use.

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

Genetic improvement programmes and their implementation:

- 4.1. **List the species which are presently subject to tree improvement programmes.**
- 4.2. Specify if native or introduced species are being used.

- 4.3. Specify the main improvement objective (timber, pulpwood, fuel wood, non-wood products, other).**
- 4.4. Specify the level of the improvement programmes (first, second generation).
- 4.5. List for each species listed in the first question above, as applicable, the number of provenances tested in field trials, phenotypically selected individuals (plus trees), seedling progenies tested in field trials and clones tested in field trials.**
- 4.6. List type, number and size of seedling seed orchards.**
- 4.7. List type, number and size of clonal seed orchards.**
- 4.8. List number and size of clonal banks established in the country.**
- 4.9. If on-going breeding programmes include controlled crosses, specify species/provenance and approximate number of distinct crosses included in trials.
- 4.10. List the number and storage capacity of gene banks established in the country.**
- 4.11. Indicate the grade of use of improved forest reproductive materials in the country.
- 4.12. Indicate the actions taken to promote the use of improved reproductive material in the country.
- 4.13. Are there any participatory tree breeding programmes in the country?
- 4.14. If yes, what are the participatory approaches being implemented?
- 4.15. Have any information systems been established on tree breeding programmes?**
- 4.16. What is the state of the use and transfer of germplasm?**
- 4.17. What is the state of access and benefit-sharing?**

Delivery/deployment systems; availability of reproductive materials

- 4.18. Specify species of which quantities of seed, pollen, scions and/or other reproductive materials can be made available, at request.**
- 4.19. Specify species of which improved reproductive materials can be made available at a commercial scale (seed and clonal reproductive material production and distribution).
- 4.20. Specify the type of improved reproductive material classification in use in the country.**
- 4.21. Was any variety release registered in the country?
- 4.22. Specify the mean of release of the improved forest genetic materials**
- 4.23. Has your country implemented any national seed improvement programme?**

<p>Chapter 5: The State of National Programmes, Research, Education, Training and Legislation</p>
--

The main objective of this section is to describe the state of national capacities in research, education, training and legislation as well as coordination and information mechanisms for forest genetic resources. The Country Report should indicate their needs and priorities and identify the appropriate level of intervention- national, regional and/or global. The following areas should be considered:

- National programmes for forest genetic resources
- National legislation
- Research
- Education and Training
- Dissemination
- Coordination mechanisms
- Assessment of major needs in capacity building

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

National Programmes:

- 5.1. **List the main institutions actively engaged in field and laboratory work related to forest genetic resources conservation.**
- 5.2. **Indicate if the involved institutions are: (governmental/non-governmental institutions, research institutes, universities, industry etc.).**
- 5.3. List the main institution actively engaged in field work related to tree improvement.
- 5.4. List the number of institutions indirectly and directly related to forest genetic resources conservation and management in the country.
- 5.5. **Has your country established a National Programme for forest genetic resources?**
- 5.6. **If yes, describe its structure and main functions in your Country Report.**
- 5.7. How are national stakeholders (public and private sector, educational and research institutions, civil society organizations, local communities, etc.) involved in planning and implementing national forest genetic resources programmes?
- 5.8. **Has your country established a legal framework for forest genetic resources strategies, plans and programmes? If yes, describe the framework.**
- 5.9. Does your national forest genetic programme work in cooperation with national programmes in related areas (e.g. agriculture, biodiversity, development, environment programmes)?
- 5.10. **Have the trends in support for your National Programme for forest genetic resources changed over the past 10 years – become stronger, declined, remained about the same? Is programme funding increasing, decreasing or stable?**
- 5.11. Have you determined any gaps in the current level of financial support necessary to achieve your country's forest genetic resources goals? If so, indicate the needs and priorities in your Country Report.
- 5.12. **Indicate the main challenges, needs and priorities that your country faces to maintain or strengthen its National Programme for forest genetic resources over the next 10 years?**

Networks:

- 5.13. **Has your country developed/enhanced national networks for forest genetic resources over the past 10 years?**
- 5.14. **Indicate the participants in any network and the main functions and benefits that are derived from the networks.**

Education, Research and Training:

- 5.15. **List the number and categories (private, public, governmental etc.) of research institution involved in forest genetic resources in your country.**
- 5.16. List the number of research projects related to forest genetic resources.
- 5.17. **Estimate the budget allocated to forest genetic resource research in the country.**
- 5.18. **List the number of patents (if any) related to forest genetic resources.**

- 5.19. What is the state of education and training in forest genetic resources?**
- 5.20. What are your needs and priorities for education and training to support the sustainable use, development and conservation of forest genetic resources?**
- 5.21. What are the main obstacles to providing the required education and training and what can be done to address the obstacles?
- 5.22. Has your country developed a strategy to address education and training needs for forest genetic resources?
- 5.23. Has your country identified opportunities for education and training outside the country? If so, what are the obstacles to participating in identified education and training opportunities?

National Legislation:

- 5.24. Has your country established legislation or regulations relevant to forest genetic resources over the past 10 years (phytosanitary, seed production, forest breeders rights, others)?**
- 5.25. List the treaties, agreements, and conventions endorsed by the country that are related to forest genetic resources conservation and management.
- 5.26. Has your country identified any obstacles to developing legislation and regulations relevant to forest genetic resources? If so, what are your needs and priorities to address the obstacles?**

Information Systems:

- 5.27. Has your country developed any information management systems to support efforts to sustainably use, develop, and conserve forest genetic resources?**
- 5.28. Have your documentation systems been computerized with standard formats to facilitate data exchanges?
- 5.29. What are your priorities and needs?
- 5.30. What are your main challenges, needs and priorities for developing or enhancing your information management systems for forest genetic resources?**

Public Awareness:

- 5.31. How would you describe the level of awareness of the roles and values of forest genetic resources in your country (unaware, limited awareness, satisfactory awareness, excellent awareness)?**
- 5.32. Has your country developed awareness programmes for forest genetic resources? If so, describe them and any products obtained.**
- 5.33. Has your country identified any constraints to developing public awareness programmes for forest genetic resources?**
- 5.34. If so, what are your needs and priorities to address the constraints?**

Chapter 6: The State of Regional and International Collaboration

The main objective of this section is to describe the current state of regional and international collaboration for forest genetic resources in your country and to indicate future needs and priorities.

Countries should identify the level of appropriate intervention – regional and/or global. The following areas should be considered in developing the Country Report:

- Regional and sub-regional networks, international specific networks and sub-regional collaboration for maintaining *ex situ* and *in situ* collections.
- International programmes.
- International agreements.
- Assessment of major needs to promote/improve international collaboration.

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

International Networks:

6. **What regional, sub-regional, forest genetic resources-bases or thematic networks for forest genetic resources did your country participate in, over the past 10 years, and what benefits resulted?**
7. **What are your country's needs and priorities to develop or strengthen international networks for forest genetic resources?**

International Programmes:

8. **What international programmes for forest genetic resources have been most beneficial for your country, and why?**
9. List the agencies and the main results of these programmes.
10. Has international financial support to forest genetic resources changed in your country over the past 10 years?
11. **What are your country's needs and priorities for future international collaboration related to:**
 - **Understanding the state of diversity**
 - **Enhancing *in situ* conservation and management**
 - **Enhancing *ex situ* conservation and management**
 - **Enhancing use of forest genetic resources**
 - **Enhancing research**
 - **Enhancing education and training**
 - **Enhancing legislation**
 - **Enhancing information management and early warning systems for forest genetic resources.**
 - **Enhancing public awareness**
 - **Any other priorities for international programmes**

International Agreements:

12. **Has your country subscribed to any international agreement, treaty, convention, or trade agreement over the past 10 years that are relevant to the sustainable use, development and conservation of forest genetic resources?**
13. **If so, briefly describe the impact of these agreements with regard to the conservation and sustainable use of forest genetic resources in your country.**

Chapter 7: Access to Forest Genetic Resources and Sharing of Benefits Arising from their Use

The main objective of this section is to describe the state of access to forest genetic resources, transfer and sharing benefit arising out of their use. Countries should identify the level of appropriate intervention- national, regional and/or global as related to:

- Regulations
- Agreements
- Main stakeholders.

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

Access to forest genetic resources:

- 7.1. **Over the past 10 years, has your country subscribed to any international agreement relevant to access to forest genetic resources, transfer and sharing of benefit arising out of their use?**
- 7.2. **If so, list them in your Country Report.**
- 7.3. **Over the past 10 years, has your country developed or modified national legislation and policies or taken other action in terms of providing access to forest genetic resources within the country and sharing of benefits arising out of their use?**
- 7.4. Over the past 10 years, has your country undertaken any management actions to maintain or enhance access to forest genetic resources located outside your country (e.g. established germplasm exchange agreements)?
- 7.5. If so, describe the actions taken.
- 7.6. Indicate the number of accessions obtained if possible, the countries of origin and the purposes for accessing the germplasm.
- 7.7. **Is access to forest genetic resources remaining about the same, improving or being more difficult over the past 10 years?**
- 7.8. Over the past 10 years, has your country encountered any difficulty in maintaining or enhancing access to forest genetic resources located outside your country? Is access to such forest genetic resources adequate to support forest development goals? If not, what should be done to improve the situation?

- 7.9. Does your country restrict access to certain types of forest genetic resources? If so, indicate the restrictions and the reasons for them.

Sharing of benefits arising out of the use of forest genetic resources:

- 7.10. What are the benefits arising from the use of forest genetic resources in your country (qualitative and quantitative information if available?)**
- 7.11. Who shares the benefits arising from the use of forest genetic resources in your country?**
- 7.12. Has your country established mechanisms of sharing benefits arising out of the use of forest genetic resources? If so, describe them.**
- 7.13. Has your country identified obstacles to achieving or enhancing the fair and equitable sharing of the benefits arising out of the use of forest genetic resources?
- 7.14. If so, describe the obstacles and ways to overcome them.
- 7.15. Indicate in your Country Report the importance of maintaining or enhancing access to forest genetic resources and benefit-sharing and provide any other strategic direction for maintaining access and benefit sharing.**

Chapter 8: The Contribution of Forest Genetic Resource to Food Security, Poverty Alleviation and Sustainable Development

The Country Report should indicate the status, needs and priorities of the contributions of forest genetic resources to food security, poverty alleviation and sustainable development. Countries should identify the level of appropriate intervention - national, regional and/or global. Information in the following areas should be considered in developing the Country Report, the contribution of forest genetic resources to:

- Forest and agricultural sustainability.
- Food security and poverty alleviation.
- Sustainable development.

- 8.1. What are your priorities to better understand the economic, social, environmental and other contributions of forest genetic resources for food, agriculture and forest development?**
- 8.2. What are the contributions of forest genetic resources management to the Millennium Development Goals in your country?**

The following questions are provided to assist countries to consider the content of their introductory section. In considering them, please try to ensure data and information are provided for the questions indicated in **bold**. This will enable basic understanding of the conditions in your country and facilitate global synthesis of the data and information collected.

ANNEX 2:

PROPOSED TEMPLATE FOR SPECIFIC INFORMATION

The present document provides a proposed template for specific information which could be included in different chapters of the Country Report for The State of the World's Forest Genetic Resources.

SECTION I: EXECUTIVE SUMMARY**SECTION II: INTRODUCTION TO THE COUNTRY AND FOREST SECTOR**

Information for the first two questions will be completed by FAO with information obtained from the Global Forest Resource Assessment, FRA.

1. What are the main forest characteristics and tree resource management systems?**Table 1. Forest characteristics and areas (FRA)**

Main forest characteristics	Area (ha)
Primary forests	
Naturally regenerated forests	
Planted forests	
Reforestation	
Afforestation	

Please give an estimate of the area covered by agroforestry systems (information not requested in FRA reporting)

2. What is the forest ownership in your country?**Table 2. Forest ownership and area (FRA)**

Forest ownership	Area (ha)
Public	
Private	
Others	

3. What trends in forest conservation and management were observed over the past 10 years? What are their main driving forces?**4. What roles do forest resources play in meeting the current demands for forest products in your country?**

SECTION III: MAIN BODY OF THE COUNTRY REPORT

Chapter 1: The Current State of Forest Genetic Resources

Please list, in Table 3, the main forest tree species, using scientific names, associated with each major forest type defined in your country. Main species are the species that characterise the forest types; i.e., relatively common and widespread. The number of species listed for each forest type will vary depending on species diversity.

Table 3. Major forest type categories and main tree species. Forest types may be drawn from the categories used in your country or from the list below (Forest Types and Ecological Zone breakdown used in FRA 2000).

Major Forest Types	Area (covered by forest type)	Main species for each type	
		Trees	Other species if applicable

Forest Types and Ecological Zone breakdown used in FRA 2000

EZ Level 1 - Domain		EZ Level 2 - Global Ecological Zone		
Name	Criteria (equivalent to Köppen-Trewartha climatic groups)	Name (reflecting dominant zonal ^a vegetation)	Code	Criteria (approximate equivalent of Köppen-Trewartha climatic types, in combination with vegetation physiognomy, and one orographic zone within each domain)
Tropical	All months without frost: in marine areas over 18°C	Tropical rain forest	TAr	Wet: 0-3 months dry, ^b during winter
		Tropical moist deciduous forest	TAwa	Wet/dry: 3-5 months dry, during winter
		Tropical dry forest	TAwb	Dry/wet: 5-8 months dry, during winter
		Tropical shrubland	TBSh	Semi-arid: evaporation > precipitation
		Tropical desert	TBWh	Arid: all months dry
		Tropical mountain systems	TM	Approximately > 1 000 m altitude (local variations)
Subtropical	Eight months or more over 10°C	Subtropical humid forest	SCf	Humid: no dry season

		Subtropical dry forest	SCs	Seasonally dry: winter rains, dry summer
		Subtropical steppe	SBSH	Semi-arid: evaporation > precipitation
		Subtropical desert	SBWh	Arid: all months dry
		Subtropical mountain systems	SM	Approximately > 800-1000 m altitude
Temperate	Four to eight months over 10°C	Temperate oceanic forest	TeDo	Oceanic climate: coldest month over 0°C
		Temperate continental forest	TeDc	Continental climate: coldest month under 0°C
		Temperate steppe	TeBSk	Semi-arid: evaporation > precipitation
		Temperate desert	TeBWk	Arid: All months dry
		Temperate mountain systems	TM	Approximately > 800 m altitude
Boreal	Up to three months over 10°C	Boreal coniferous forest	Ba	Vegetation physiognomy: coniferous dense forest dominant
		Boreal tundra woodland	Bb	Vegetation physiognomy: woodland and sparse forest dominant
		Boreal mountain systems	BM	Approximately > 600 m altitude
Polar	All months below 10°C	Polar	P	Same as domain level

^a Zonal vegetation: resulting from the variation in environmental, i.e. climatic, conditions in a north-south direction.

^b A dry month is defined as the month in which the total precipitation expressed in millimetres is equal to or less than twice the mean temperature in degrees Centigrade.

1.1 List priority forest tree and other woody plant species (for example palms, bamboo, rattan) in your country and reason for priority (e.g. economic importance, threatened, etc.) (Table 4)

Table 4. Priority species (scientific names)

Priority species			Reasons for priority
Scientific name	Tree (T) or other (O)	Native (N) or exotic (E)	

Examples of reasons for priority: Economic, social or cultural importance; Threatened; Invasive (priority for removal)

1.2 What are the main tree and other forest plant species actively managed for human utilization in your country? (Table 5)

Table 5. Forest species currently used in your country; for each species please indicate (N or E) whether native or exotic (using the codes for uses listed below).

Species (Scientific name)	Native (N) or Exotic (E)	Current uses (code)	If managed, type of management system (e.g. natural forest, plantation, agroforestry)	Area managed if known (ha)

***Current use:**

- | | |
|-----------------------|---|
| 1 Solid wood products | 4 Non wood forest products (food, fodder, medicine, etc.) |
| 2 Pulp and paper | 5 Used in agroforestry systems |
| 3 Energy (fuel) | 6 Other (please specify)_____ |

1.3 What are the main forest tree or other woody plant species actively managed or identified for environmental services in your country (Table 6)?

Table 6. Main tree and other woody forest species providing environmental services or social values. For each species please indicate (N or E) whether native or exotic.

Species (scientific name)	Native (N) or Exotic (E)	Environmental service or social value (code)

Services and values include:

- | | |
|--|--------------------|
| 1 Soil and water conservation including watershed management | 5 Aesthetic values |
|--|--------------------|

2 Soil fertility

6 Religious values

3 Biodiversity conservation

7 Other (please specify) _____

4 Cultural values

1.4 List forest tree and other woody species (scientific name) which are endemic in your country.

1.5 List tree and other woody forest species identified in your country as being threatened (include documented threatened populations). (Table 7 in p. 31)

1.6 Is there a regular assessment of threatened species in your country?

1.7 List the tree species for which there is insufficient information to determine whether or not they are threatened.

1.8 Is there a system in your country for documenting forest reproductive material?

1.9 What is the current state of forest reproductive material (native and exotic) identification (seed sources, provenance zones) and utilization (including vegetatively propagated material) in the country? (If available provide volumes of seeds of main species used). (Please fill Table 8a and/or 8b)

Table 8a. Annual quantity of seeds produced and current state of identification of forest reproductive material of the main forest tree and other woody species in the country.

Species		Total quantity of seeds used (Kg)	Quantity of seeds from documented sources (provenance/ delimited seed zones)	Quantity of seeds from tested provenances (provenance trials established and evaluated)	Quantity that is genetically improved (from seed orchards)
Scientific name	Native (N) or Exotic (E)				

Table 8b. Annual number of seedlings (or vegetative propagules) planted and the state of identification of the reproductive material used for the main forest tree and other woody species in the country.

Species		Total quantity of seedlings planted	Quantity of seedlings from documented sources (provenance/ delimited seed zones)	Quantity of seedlings from tested provenances (provenance trials established and evaluated)	Quantity of vegetative reproductive material used	Quantity of seedlings that are genetically improved
Scientific name	Native (N) or Exotic (E)					

1.10 What is the current state of genetic characterization of the main forest tree and other woody plant species in the country? (Table 9)

Table 9. List forest species for which genetic variability has been evaluated and check each column that applies. Begin with species mentioned in Tables 5 and 6.

Species		Morphological traits	Adaptive and production characters assessed	Molecular characterization
Scientific name	Native (N) or exotic(E)			

1.11. Does your country collect information on forest genetic resources as part of national forest surveys? If yes, please specify what kind of information.

1.12. Has your country developed genetic conservation strategies/programmes (including *in situ* and/or *ex situ*) for specific forest tree or other woody plant species? If yes, which ones?

Table 7. List of tree and other woody forest species considered to be threatened in all or part of their range from genetic conservation point of view.

Species (scientific name)	*Area (ha) of species' natural distribution in your country if known	Average number of trees per hectare, if known	**Proportion of species' natural distribution that is in your country (%)	Distribution in the country: widespread (W), rare (R), or local (L)	Type of threat (Code)	Threat category***		
						High	Medium	Low

Type of threat:

- | | |
|--|-----------------------------------|
| 1 Forest cover reduction and degradation | 9 Acidification of soil and water |
| 2 Forest ecosystem diversity reduction and degradation | 10 Pollutant emissions |
| 3 Unsustainable logging | 11 Pests and diseases |
| 4 Management intensification | 12 Forest fires |
| 5 Competition for land use | 13 Drought and desertification |
| 6 Urbanization | 14 Rising sea level |
| 7 Habitat fragmentation | 15 Other (please specify) _____ |
| 8 Uncontrolled introduction of alien species | |

*Refer to species range maps where they exist to estimate the area in hectares of the species' natural range that is within the borders of your country.

**Considering the full extent of the species' natural range, which proportion is within the borders of your country? For example, an endemic species is 100% within your country. A species that is naturally distributed over approximately equal areas of your country and a neighbouring country, is 50%.

***Threat categories: High – threatened throughout species range within the country; Medium – threatened in at least 50% of range within country; Low – threatened in less than 50% of range within country.

Chapter 2: The State of *in situ* Genetic Conservation

In situ conservation can have different purpose\\$. Here we refer to genetic conservation but do not exclude protected areas that were established for other purposes but also provide protection for genetic resources.

- 2.1 Has an analysis been conducted in part or all of your country to evaluate genetic conservation of forest tree and other woody plant species in protected areas (national parks, ecological reserves, etc.)? If yes, how? (e.g. viable population sizes, connectivity of populations, designation of areas in different geneecological zones of the country?)**
- 2.2 What proportion of all native tree and other woody forest species are conserved *in situ*? What proportion of threatened tree and other woody species is included in conservation programmes?**
- 2.3 Is there a programme for *insitu* conservation of forest genetic resources in your country? If so, please complete (Table 10).**

Table 10. Target forest species included within *in situ* conservation programmes/units.

Species (scientific name)	Purpose for establishing conservation unit	Number of populations or stands conserved	Total Area

- 2.4 What are the main constraints to improving *in situ* genetic conservation programmes in the country? (For example, lack of public interest, lack of information/inadequate knowledge, competing use for available land, lack of government resources, people living in conservation areas with unsustainable exploitation of resources)**
- 2.5 What are your country's priorities for future *in situ* conservation actions (research, capacity-building, etc.)?**
- 2.6 Please include other relevant information on *in situ* conservation in your country.**
- 2.7 Please list species that are conserved on-farm (*circa situ*) in your country. *Circa situ* means conservation on farms of trees useful in agroforestry systems.**

Chapter 3: The State of *ex situ* Genetic Conservation

3.1 List target forest species included in *ex situ* conservation programmes/units in your country. Please provide information on species and material in germplasm banks by completing Table 11.

Table 11 Ex situ conservation

Species		Field collections				Germplasm bank			
Scientific name	Native (N) or exotic (E)	Collections, provenance or progeny tests, arboreta or conservation stands		Clone banks,		<i>In vitro</i> (including cryo conservation)		Seed banks	
		No. stands	No. acc.	No. banks	No. clones	No. banks	No. acc.	No. Banks	No. acc.

3.2 What are the main constraints to improving *ex situ* conservation in the country? (Examples: lack of resources or infrastructure, field tests not protected or not considered important, too many species with recalcitrant seeds)

3.3 What are the priorities for future *ex situ* conservation actions (research, capacity-building) in your country?

3.4 Please include other relevant information on *ex situ* conservation in your country.

Chapter 4: The State of Use and Sustainable Management of Forest Genetic Resources

4.1 What is the annual quantity of seed transferred internationally? (Table 12)

Table 12. Seed and vegetative propagules transferred internationally per annum (average of last 5 years).

Species		Quantity of seed (Kg)		Number of vegetative propagules		Number of seedlings		Purpose
Scientific name	Native (N) or Exotic (E) ?	Import	Export	Import	Export	Import	Export	

4.2 List the species which are presently subject to tree improvement programmes. (Table 13)

4.3 Specify the main improvement objective (timber, pulpwood, fuel wood, non-wood products, other). (Table 13)

Table 13. Forest improvement programmes. Please check all objectives that apply.

Species		Improvement programme objective					
Scientific name	Native (N) or exotic (E)	Timber	Pulpwood	Energy	MP*	NWFP*	Other

* MP: Multipurpose tree improvement program

**NWFP: Non-wood forest product

4.4 Provide data for each species listed in question 4.2, as applicable, the number of plus trees and genetic tests. (Table 14)

Table 14. Tree improvement trials.

Species		Plus trees*	Provenance trials		Progenies trials		Clonal testing and development			
Scientific name	Native (N) or exotic (E)		No. of trials	No. of prov.	No. of trials	No. of families	No. of tests	No. of clones tested	No. Clones selected	No. Clones used

* List number of plus trees if programme is beginning and only first generation seed orchards have been established.

Table 15. Seed orchards.

Species (scientific name)	Seed orchards*		
	Number	**Generation	Area

*Seed orchards are plantations specifically planted and managed for seed production, not natural seed stands.

**Generation refers to 1st, 2nd, 3rd, etc., breeding cycle

4.5 Has any information system been established on tree breeding programmes? If yes, what information is collected and stored?

4.6 List species of which quantities of improved seed, pollen, scions and/or other reproductive materials can be made available, at request. (Table 16)

Table 16. Type of reproductive material available.

Species (scientific name)	Type of material	Available for national requests only		Available for international requests	
		Commercial	Research	Commercial	Research

Chapter 5: The State of National Programmes, Research, Education, Training and Legislation

National programmes

5.1 Does your country have a national forest programme? If yes, does the national forest programme include forest genetic resources? If yes, how are they mentioned in the programme (general terms / specific actions)?

5.2 List and identify the type of institutions (government, university, private, etc.) actively engaged in conservation and sustainable use of forest genetic resources. Please provide contact information. (Table 17)

Table 17. Institutions involved with conservation and use of forest genetic resources.

Name of Institution	Type of Institution	Activities or Programs	Contact Information

5.3 Has your country established a national coordination mechanism to include different institutions or a national programme for forest genetic resources?

5.4 If yes, describe its structure and main functions.

5.5 Have the trends in support for forest genetic resources changed over the past 10 years (become stronger, declined, remained about the same)? Is programme funding increasing, decreasing or stable?

Research, Education and Training

- 5.6 Estimate the budget allocated to forest genetic resource research in the country. What proportion of the forestry budget goes to forest genetic resources?
- 5.7 In which courses and universities are forest genetic resources explicitly covered in your country? At Bachelor's level? Masters? PhD?
- 5.8 What are your country's needs and priorities for research, education and training to support the conservation and sustainable use of forest genetic resources?

National Legislation:

- 5.9 What legislation or regulations that are relevant to forest genetic resources (phytosanitary, seed production, community rights, patent legislation, other) exist in your country?
- 5.10 Has your country established a legal framework for forest genetic resources strategies, plans and programmes? If yes, describe the framework.
- 5.11 What are the identified needs in your country for developing or strengthening forest genetic resources legislation? (Table 18)

Table 18. Needs for developing forest genetic resources legislation.

Needs	Priority level			
	Not applicable	Low	Moderate	High
Improve forest genetic resources legislation				
Improve reporting requirements				
Consider sanction for non-compliance				
Create forest genetic resources targeted regulations				
Improve effectiveness of forest genetic resources regulations				
Enhance cooperation between forest genetic resources national authorities				
Create a permanent national commission for conservation and management of forest genetic resources				
Other (Please specify)				

Public Awareness:

5.12 What initiatives are necessary for greater visibility for forest genetic resources in your country?

5.13 Has your country developed any specific awareness programme for forest genetic resources? If so, describe it and any products obtained.

5.14 What are your country's needs and priorities for raising awareness of forest genetic resources issues? (Table 19)

Table 19. Awareness raising needs.

Needs	Priority level			
	Not applicable	Low	Moderate	High
Prepare targeted forest genetic resources information				
Prepare targeted forest genetic resources communication strategy				
Improve access to forest genetic resources information				
Enhance forest genetic resources training and education				
Improve understanding of benefits and values of forest genetic resources				
Other (Specify)				

Chapter 6: The State of Regional and International Agreements and Collaboration

International Agreements

Information will be retrieved from official sources regarding international agreements, treaties, conventions, or trade agreements relevant to the sustainable use, development and conservation of forest genetic resources that your country has signed.

6.1 Briefly describe the impact of any international conventions, treaties or agreements that your country has signed with regard to the conservation and sustainable use of forest genetic resources in your country (For example CBD, CITES).

International Collaboration

6.2 Describe your country's current international collaboration

6.3 What regional or sub-regional forest genetic resources-based or thematic networks for forest genetic resources does your country participate in? (Table 20)

Table 20. Overview of the main activities carried out through networks and their outputs

Network name	Activities *	Genus/species involved (scientific names)

*** Examples of activities:**

- Information exchanges
- Development of technical guidelines
- Development of shared databases
- Establishment of genetic conservation strategies
- Germplasm exchange
- Elaboration, submission and execution of joint research projects.
- Other (Please specify) _____

6.4 What are your country's needs and priorities for future international collaboration? (Table 21)

Table 21. Awareness raising needs/ Needs for international collaboration and networking

Needs	Level of priority			
	Not applicable	Low	Medium	High
Understanding the state of diversity				
Enhancing <i>in situ</i> management and conservation				
Enhancing <i>ex situ</i> management and conservation				
Enhancing use of forest genetic resources				
Enhancing research				
Enhancing education and training				
Enhancing legislation				
Enhancing information management and early warning systems for forest genetic resources.				
Enhancing public awareness				
Any other priorities for international programmes				

Chapter 7: Access to Forest Genetic Resources and Sharing of Benefits Arising out of their Use

Access to forest genetic resources:

- 7.1 Are there any regulations with respect to access and benefit sharing of forest genetic resources in your country?**
- 7.2 Does any legislation in your country limit access and movement of forest genetic resources into or out of the country?**
- 7.3 If yes, what can be done to improve access?**

Sharing of benefits arising out of the use of forest genetic resources:

- 7.4 Has your country established mechanisms for recognizing intellectual property rights related to forest genetic resources? If so, please specify.**
- 7.5 Has your country established mechanisms of sharing benefits arising out of the use of forest genetic resources? If so, please specify.**

Chapter 8: Contribution of Forest Genetic Resources to Food Security and Poverty Reduction

Table 22. List tree and other woody species that are important in your country for food security or livelihoods

Species		Use for food security	Use for poverty reduction
Scientific name	Native (N) or exotic (E)		

Sources of Information

Please list sources of information used for this report