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COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

INTERGOVERNMENTAL TECHNICAL WORKING GROUP ON FOREST GENETIC RESOURCES

First Session

Rome, 4-6 April 2011

Report of the Regional Training Workshops in Ecuador and the Republic of the Congo for FAO's State of the World's Forest Genetic Resources

Forestry Department

Food and Agriculture Organization of the United Nations

Forest Genetic Resources Working Papers

Report of the Regional Training Workshops in Ecuador and the Republic of the Congo for FAO's State of the World's Forest Genetic Resources

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Forest Assessment, Management and Conservation Division
Forestry Department

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Executive Summary

The FAO has initiated the process of reporting on the "State of the World's Forest Genetic Resources" (SOW-FGR), as requested at the 12th session of the Commission on Genetic Resources for Food and Agriculture (CGRFA Commission) in October 2009. The report is expected to be completed in 2013 and will largely consist of information provided by individual countries.

Two regional workshops were organised by Bioversity International with the joint objectives of providing information and training to representatives from countries in Latin America (Quito, Ecuador; 15-16 March 2010) and sub-Saharan Africa (Brazzaville, Congo; 25-26 March 2010); and testing the template that was developed jointly by FAO and Bioversity for collecting the information required from countries to complete the report.

Bioversity International developed the participant list jointly with FAO, relying on the two regional networks on forest genetic resources – LAFORGEN and SAFORGEN. Workshops included an overview of the SOW-FGR process, a discussion of thematic studies to be carried out and a hands-on practice session for developing country reports. Many useful comments were provided by participants in both workshops on the Country Report template and they have been incorporated into the template.

1. Major outputs

Two workshops were organised: one in Quito, Ecuador on March 15–16 and the second in Brazzaville, Republic of the Congo on March 25–26, 2010. Participant lists were developed jointly by FAO and Bioversity International.

The Quito workshop was organised back-to-back with a LAFORGEN meeting, which guaranteed strong participation of country representatives. The programme is detailed in Annex 1. Bioversity scientists translated the Country Report template into Spanish before the meeting and contributed to facilitating the working sessions. There were 29 participants at the workshop (see Annex 2 for a full list of participants).

The programme for the Brazzaville workshop is detailed in Annex 3. Bioversity staff facilitated the exercises related to completion of Country Reports. The workshop in Brazzaville was attended by 26 participants (listed in Annex 4).

To meet their objectives, the workshops were designed to include hands-on practice sessions, and participants were encouraged to work in groups to begin mock completion of the Country Report template. Throughout this process, they were able to define sources of information for the various tables in the template – determining relative degrees of difficulty in accessing information, and which institutions must be involved in each country to provide complete information.

The workshops achieved their original goals of: (1) training national experts from Africa and Latin America, and increasing their capacity to prepare Country Reports on forest genetic resources (38 national and regional experts trained); and (2) improving the template that will be used to collect the information that will form the basis of the Country Reports.

The evaluation of the workshops by participants was generally positive. Recommendations for implementation and follow-up in the preparation of Country Reports were recorded in each workshop, and the template was modified to address concerns raised in each region. The improved template is included in Annex 5. Strong interest was expressed, especially in Latin America, in contributing to the SOW-FGR thematic studies, and potential contributors were listed for each relevant study.

2. Recommendations

1. Both groups of participants (Latin America and Africa) consider the letter from FAO inviting country participation to be very important in identifying who will be involved in each country. It was recommended that a list of participants from the relevant workshop be sent to countries in each region along with the information that the participants were trained and will be resource persons

for their countries. The institution where each participant works should receive a duplicate of the official letter sent by FAO to countries.

2. It is important that countries have ownership of the development of Country Reports and many countries in the two regions will require assistance in completing the reports. FAO will have to provide funding/support to facilitate production of high-quality reports.

3. There was much discussion in each region about which species to include, and there was agreement that it must be specified to some degree (trees and other woody plant species, for example) but countries should have the flexibility to present their own lists of priority species.

4. A wide variety of stakeholder organizations will need to provide complete information on forest genetic resources in each country. It will be very important for country focal points to bring stakeholders together at an early stage to ensure their involvement. It is also important, however, to ensure that the focus remains on genetic resources and is not diluted to include other aspects of biodiversity.

ANNEX 1 – PROGRAMME OF THE WORKSHOP IN QUITO, EQUADOR

Taller FAO sobre el Estado Mundial de los Recursos Genéticos Forestales. Informe de COFLAC sobre RGF para la Amazonía y III Reunión de LAFORGEN. HOTEL QUITO Av. González Suárez N 27 142 Quito, Ecuador, 15-19 de marzo de 2010

Bioversity International, en conjunto con la Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO) y la Comisión Forestal para América Latina y el Caribe (COFLAC), han planeado el desarrollo de este taller en Recursos Genéticos Forestales para la región, el cual pretende tratar asuntos relacionados con el desarrollo del informe del estado mundial de los RGF, y el estado de los mismos para la cuenca Amazónica.
A través de la red LAFORGEN, la cual celebrará su III Reunión bianual, se ha convocado a un grupo de profesionales en el área forestal para que asistan a este taller. LAFORGEN es una comunidad de investigación colaborativa que, mediante el trabajo conjunto de diversos socios, apoya la conservación y utilización sostenible de la diversidad genética de especies forestales de América Latina, para mejorar los medios de vida de las comunidades dependientes de los bosques. Actualmente LAFORGEN cuenta con más de 122 miembros quienes representan aproximadamente a 75 instituciones de 20 países.
El equipo de Bioversity International co-organiza la realización de este evento gracias al auspicio del Instituto de Investigación y Tecnología Agraria y Alimentaria (CIFOR - INIA) de España y de FAO. Los objetivos planeados para este taller son:

1. Realizar un taller práctico sobre la iniciativa FAO del Estado Mundial de los RGF, a fin de comprender mejor el proceso de desarrollo de los reportes nacionales.

2. Contribuir en la realización del informe de COFLAC sobre los recursos genéticos forestales en la cuenca Amazónica, como documento insumo para el Estado Mundial de los RGF y para aumentar los lazos y la colaboración entre LAFORGEN y COFLAC.

3. Evaluar el estado de las actividades actuales y la estructura de LAFORGEN. Avances en apoyos institucionales a la red y balance de las actividades realizadas durante el período 2008 -2010.

4. Presentar una actualización detallada sobre los principales resultados y avances más significativos del proyecto MAPFORGEN.

5. Proyectar las actividades de LAFORGEN para el período 2010-2012.

PROGRAMACIÓN – AGENDA
Lunes, 15 de Marzo

07:00 Desayuno. *Lugar: Comedor Hotel Quito (toda la semana)*
08:30 Apertura de la reunión y bienvenida. *Lugar: Salón Cayambe, Hotel Quito (toda la semana).*
Palabras de bienvenida a cargo de la Dra. Judy Loo – Bioversity International, Dr. Gustavo Galindo – Ministerio del Ambiente de Ecuador y Dr. Oudara Souvannavong – FAO.
Breve introducción de los participantes.
Establecimiento de la agenda a cargo de Dra. Barbara Vinceti.
9:15 Presentación general sobre el proceso del estado mundial de los recursos genéticos forestales.
Presentación general sobre los fundamentos, el alcance y el proceso de preparación del informe, a cargo del Dr. Oudara Souvannavong.
Preguntas y discusión.
10:30 Receso - *coffee break*
11:00 Presentación de estudios temáticos a cargo de la Dra. Judy Loo.
Discusión sobre estudios de interés para la región, prioridades, contribución/participación de América Latina, información sobre otras regiones.
12:30 Almuerzo. *Comedor Hotel Quito (toda la semana)*

14:00 Taller práctico sobre la realización de informes de los países como insumo para el estado mundial de los RGF.
Presentación introductoria al taller a cargo del Dr. Oudara Souvannavong
Presentación de las directrices para los informes de país a cargo de la Dra. Zohra Bennadji.
Presentación de las bases del taller práctico a cargo de la Dra. Judy Loo (A través del ejercicio, los participantes identificarán la información disponible y faltante, el acceso a las fuentes de información, los obstáculos, los actores/partes involucradas y las características esenciales del proceso de preparación de los informes nacionales).
Inicio del taller práctico (Posiblemente trabajo en grupos subregionales).
16:00 Receso - *coffee break*
16:30-18:00 Continuación de la sesión anterior.

Martes, 16 de Marzo

07:00 Desayuno
08:30 Continuación y cierre del taller práctico.
Comentarios y recomendaciones para mejorar las directrices y el proceso propuesto.
Discusión en plenaria.
Síntesis: principales necesidades para la preparación de los informes nacionales y vías para obtener apoyo en el proceso de preparación (oportunidades dentro de los programas nacionales, cooperación regional e internacional, etc.).
10:30 Receso - *coffee break*
11:00 Informes de los países sobre los recursos genéticos forestales.
Presentación del informe de Bolivia, Brasil, Colombia, Ecuador, Venezuela, a cargo de los delegados de cada país.
Presentación de la red LAFORGEN
12:30 Almuerzo
14:00 Foro sobre la preparación del informe del estado de los RGF en la región amazónica, como documento insumo para la próxima reunión de COFLAC.
Presentación del documento preliminar a cargo de Walter Palacios.
Discusión y aportes. Sesión en plenaria.
16:00 Receso - *coffee break*
16:30-18:00 Continuación y finalización de la sesión anterior. Conclusiones y compromisos.
Próximas etapas hasta presentación del informe en la reunión de COFLAC

Miércoles, 17 de Marzo

07:00 Desayuno
07:30 – 13:00 Salida del Hotel Quito hacia el Valle de Quijos en la provincia del Napo-Amazonia. Este valle es una zona de colonización antigua, rodeada por tres áreas protegidas (Cayambe Coca, Antisana y Sumaco). Se visitarán las oficinas de la Reserva Ecológica Antisana del MAE, con acompañamiento del Dr. Taco del Ministerio del Ambiente. Participación en exposición y discusión grupal con técnicos de la Reserva para conocer sobre la gestión integrada de áreas protegidas en la Amazonia Ecuatoriana.
13:00 Almuerzo
14:30 Regreso al Hotel Quito.
19:00 Evento social, lugar de encuentro recepción del hotel.

Jueves, 18 de Marzo

07:00 Desayuno

08:30 LAFORGEN – Actividades de Investigación.
Presentación general sobre LAFORGEN. Estado actual de la Red y avances en las actividades y compromisos hechos durante la reunión en CATIE 2008, a cargo de Jesús Salcedo.
09:30 Presentación sobre el proyecto MAPFORGEN. Actualización del estado del proyecto a cargo de Maarten van Zonneveld.
10:30 Receso - *coffee break*
11:00 Presentación de las actividades de investigación realizadas por los socios de LAFORGEN en el marco de MAPFORGEN (Duración de cada presentación 20 minutos).

Presentación del proyecto: “Distribución geográfica de la diversidad genética molecular de dos especies de Cedrela *(Cedrela lilloi y Cedrela balansae)* sujetas a severos procesos de degradación en la Selva Tucumano-Boliviana” a cargo del Dr. Luis Fornes.
Presentación del Proyecto: “Diversidad genética en dos especies del género *Nothofagus* analizada a través de marcadores microsatélites” a cargo del Dr. Leonardo Gallo.

12:30 Almuerzo

14:00 Continuación de las presentaciones.

Presentación del proyecto: “Conectividad del paisaje y estructura genética del roble andino (*Quercus humboldtii*)” a cargo de Jesús Salcedo en nombre de Catalina Arias.
Presentación del Proyecto: “Mapeo de la diversidad genética de *Picea chihuahuana* Martínez”.
Actividades futuras dentro del proyecto MAPFORGEN. Presentación del plan de trabajo del proyecto para el periodo 2010-2011 a cargo de Maarten van Zonneveld y Jesús Salcedo.

16:00 Receso - *coffee break*

16:30-17:30 Comentarios sobre la sesión anterior, aportes y sugerencias.

Viernes, 19 de Marzo

07:00 Desayuno

08:30 Futuras actividades y funcionamiento de la Red. Cómo incorporar las opiniones de los miembros en la agenda, cómo obtener una mayor visibilidad a nivel institucional y formulación de políticas.
Presentación de cómo se estructura la red y otras redes forestales en otras regiones a cargo de Maarten van Zonneveld.
Debate sobre posibles mejoras en la estructura actual y la inclusión de diferentes expertos a través de la rotación y la visibilidad a nivel político, sesión en plenaria.

10:30 Receso - *coffee break*

11:00 Revisión del enfoque de investigación de la red y discusión de las futuras actividades con el objetivo de preparar nuevas propuestas.
Debate sobre el enfoque principal de la red en el futuro, sesión en plenaria.

12:30 Almuerzo

14:00 Actividades futuras de LAFORGEN.
Preparación de un plan de trabajo conjunto, hasta septiembre de 2011, siendo aún patrocinados en el marco actual de financiación del INIA – España.
Presentación de oportunidades de capacitación y futuras iniciativas en las que podría participar LAFORGEN: Curso de formación del INTA – Argentina, desarrollo de material de capacitación para RGF y SIG, participación de LAFORGEN en reuniones y congresos, etc.

16:00 Receso - *coffee break*

16:30-17:30 Designación del grupo coordinador de LAFORGEN para el período 2010 – 2012
Síntesis y conclusiones del Taller

Annex 2 – List of Participants on Quito Workshop

Lista de Participantes Reunion LAFORGEN, SOW-FGR, COFLAC, Quito 15 de Marzo 2010

INVITADOS LAFORGEN			
1	Argentina	Leonardo Gallo	INTA
2	Argentina	Luis Fornes	INTA
3	Bolivia	Fimo Aleman	BASFOR
4	Brasil	Paulo Kageyama	(USP-ESALQ)
5	Brasil	Milton Kanashiro	EMBRAPA
6	Chile	Roberto Ipinza Carmona	Instituto Forestal de Chile
7	Colombia	Víctor Manuel Nieto Rodríguez	CONIF
8	Cuba	Orlidia Hechavarría Kindelán	Instituto de Investigaciones Forestales
9	Ecuador	Lenin Prado	Cooperación Española de Solidaridad Internacional
10	Ecuador	Jorge Eduardo Grijalva Olmedo	INIAP
11	Ecuador	Raul Ramos	INIAP
12	Ecuador	Juan Salazar	Coorporación Forestal y Ambiental de Manabí
13	España	Ricardo Alía	CIFOR-INIA
14	International	Julio Ugarte	ICRAF
15	México	Nahum M. Sánchez-Vargas	IIAF-UMSNH
16	Mexico	Jesus Vargas	Colegio de Posgrados
17	Peru	Luis Alban	NCI
18	Regional	Francisco Mesén	CATIE
19	Uruguay	Zohra Bennadji	INIA - Uruguay
20	Venezuela	Nestor Gutierrez	Universidad de los Andes- Merida - Venezuela
REPRESENTANTES BIOVERSITY			
21	Colombia	Maarten van Zonnneveld	Bioversity AMS
22	Colombia	Jesus Salcedo	Bioversity AMS
23	Italia	Judy Loo	Bioversity HQ
24	Italia	Barbara Vinceti	Bioversity HQ
REPRESENTANTES FAO			
25	FAO	Oudara Souvannavong	FAO HQ
26	FAO	Mario Mengarelli	FAO Oficina Regional – Santiago, Chile
INVITADOS COFLAC			
27	Ecuador	Marco Trelles	Consultor - FAO
28	Bolivia	Beymar R. Villarroel Domínguez	Viceministerio de Medio Ambiente
29	Ecuador	Gustavo Galindo	Min Ambiente

Annex 3 – Programme of the Workshop in Brazzaville, Republic of the Congo

Atelier régional sur les rapports nationaux pour l'État des ressources génétiques forestières dans le monde

Brazzaville, Congo, 25-26 mars 2010
organisé par la FAO en collaboration avec Bioversity International et le Centre de Recherche sur la Durabilité et la Productivité des Plantations Industrielles (CRDPI) de la République du Congo

Programme

Jeudi 25 mars 2010

9.00 – 10.00 Ouverture
Présentation de l'atelier et de ses objectifs

10.00 – 10.30 Pause café

10.30 – 12.30 Information sur la préparation du rapport sur l'*État des ressources génétiques forestières mondiales* - Discussion

12.30 – 14.00 Déjeuner

14.00 – 15.30 Présentation des directives pour la préparation des rapports nationaux – Discussion. Travail en groupes (anglophone, francophone)

15.30 – 16.00 Pause café

16.00 – 17.00 Exercice de préparation des rapports nationaux : informations disponibles, leur accessibilité, parties concernées, activités, besoins et appuis nécessaires éventuels, etc. Travail en groupes (anglophone, francophone)

17.00 – 18.30 Visite de l'Arboretum de Brazzaville

Vendredi 26 mars

9.00 – 10.30 Exercice de préparation des rapports nationaux. Travail en groupes (anglophone, francophone) – Suite

10.30 – 11.00 Pause café

11.00 – 12.30 Exercice de préparation des rapports nationaux. Travail en groupes (anglophone, francophone) – Suite et fin

12.30 – 14.00 Déjeuner

14.00 – 17.00 Synthèse et conclusion

Annex 4 – List of Participants in the Congo Workshop

Atelier régional sur les rapports nationaux pour l'État des ressources génétiques forestières dans le monde

Brazzaville, Congo, 25-26 mars 2010
organisé par la FAO en collaboration avec Bioversity International et le Centre de Recherche sur la Durabilité et la Productivité des Plantations Industrielles (CRDPI) de la République du Congo

Liste des participants

PAYS	NOM et ADRESSE
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	Monsieur Joseph Léon Samba Point focal national SAFORGEN Direction des forêts Ministère du développement durable, de l'économie forestière et de l'environnement Brazzaville Sajoleon2003@yahoo.fr
	Madame Rosalie Matondo Directrice SNR BP 839 Pointe-Noire rosalie_mat@yahoo.fr
	Monsieur Emile Kami Chercheur CERVE/DGRST Brazzaville
	Monsieur Valentin Pangou GERDIB/DGRST Brazzaville
	Monsieur Guy-Robert Eboundziand DGST, Ministère de l'Intérieur et de la Décentralisation

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FAO	Monsieur Oudara Souvannavong Forestier principal (biodiversité et conservation) Département des forêts FAO Viale delle Terme di Caracalla 00153 Rome, Italie oudara.souvannavong@fao.org

Annex 5 – Improved Reporting Template

GUIDELINES FOR COUNTRY REPORTS
Proposed basic information and templates

1. INTRODUCTION

The present document provides a proposal for basic information and templates for country reporting, in the framework of the elaboration of the FAO State of the World's Forest Genetic Resources (SoW-FGR). It should be read and used in conjunction with the Commission on Genetic Resources for Food and Agriculture (CGRFA) Information Document No.14, which constitutes the full and detailed guidelines for the countries reports preparation.

As the main input to preparing The State of the World's Forest Genetic Resources would be Country Reports on Forest Genetic Resources, it is proposed that scope of the report be broad, covering forest genetic resources of species used for different purposes and managed or contained in the broad range of management systems. In this way, the Country Reports will provide the overall scope for the report.

2. PROPOSED BASIC INFORMATION AND TEMPLATES

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 FRA)

1. What are the main forest characteristics and tree resource management systems?

Table 1. Forest characteristics and areas.

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

2. What is the forest ownership in your country?

Table 2. Forest ownership and area

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 (to be completed by countries)

Chapter 1: The Current State of Forest Genetic Resources Diversity and State of Knowledge on Forest 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 list following the table or from the categories used in your country.

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

World forest types:

Temperate and Boreal
1 Evergreen needleleaf forest
2 Deciduous needleleaf forest
3 Mixed broadleaf/needleleaf forest
4 Broadleaf evergreen forest
5 Deciduous broadleaf forest
6 Freshwater swamp forest
7 Sclerophyllous dry forest
8 Sparse trees and parkland

Tropical
9 Lowland evergreen broadleaf rain forest
10 Lower montane forest
11 Upper montane forest
12 Freshwater swamp forest
13 Semi-evergreen moist broadleaf forest
14 Mixed broadleaf/needleleaf forest
15 Needleleaf forest
16 Mangroves
17 Deciduous/semi-deciduous broadleaf forest
18 Sclerophyllous dry forest
19 Thorn forest
20 Sparse trees and parkland

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
2 Pulp and paper
3 Energy (fuel)
4 Non wood forest products (food, fodder, medicine, etc.)

5 Used in agroforestry systems
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 (x) 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 management2 Soil fertility
3 Biodiversity conservation
4 Cultural values
5 Aesthetic values
6 Religious values
7 Other (please specify) _____

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)

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

*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.

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 seed of main species used). (Please fill Table 8a and/or 8b)

Table 8a. Annual quantity of seed, fruit and vegetative material used 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 seed used	Quantity of seed from documented sources (provenance/ seed zones delimited)	Quantity of seed from tested provenance (provenance trials established and evaluated)	Quantity that is genetically improved (%)
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 / seed zones delimited)	Quantity of seedlings from tested provenance (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.

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

In situ conservation can have different definitions. 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 genecological 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 *in situ* 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 Has your country developed genetic conservation strategies for specific forest tree or other woody plant species? If yes, which ones?

2.5 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)

2.6 What are your country's priorities for future *in situ* conservation actions (research, capacity-building etc.)?

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

2.8 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,		*In vitro* (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 not considered important, too many species with recalcitrant seed)

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 volume of seed transferred within the country and internationally? (Table 12)

Table 12. Seed transferred domestically and internationally annually (average of last 5 years).

Species		Volume of seed			Purpose
Scientific name	Native (N) or exotic (E)	Domestic	International*		
			Import	Export	

*International may be import or 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)	Number	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 Have any information systems 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 forestry 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 and 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, sub-regional, forest genetic resources-based or thematic networks for forest genetic resources does your country participate in? (Table 21)

Table 21. 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 20)

Table 20. Requirements for international collaboration and networking..

Needs	Level of priority			
	Not applicable	Low	Medium	High
Understanding the state of diversity				
Enhancing *in situ* management and conservation				
Enhancing *ex situ* 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 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.

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

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

Sources of information used for this report