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Organización de las Naciones Unidas para la Alimentación y la Agricultura

# COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

## Item 3.2 of the Provisional Agenda

## **Fourteenth Regular Session**

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## DRAFT STRATEGIC PRIORITIES FOR ACTION FOR THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES

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#### I. INTRODUCTION

1. The Commission on Genetic Resources for Food and Agriculture (the Commission), at its Thirteenth Regular Session, requested FAO to prepare a synthesis paper on priority areas for action based on Country Reports.<sup>1</sup> It also urged donors and relevant international organizations to make available extra-budgetary financial resources and in-kind support for the preparation of Country Reports, including for national and regional consultations. The Commission invited countries to integrate the timely preparation of Country Reports on forest genetic resources (FGR), as well as any follow-up activities, into their National Biodiversity Strategies and Action Plans.<sup>2</sup>

2. The Commission requested its Intergovernmental Technical Working Group on Forest Genetic Resources (Working Group) to review the draft Report on *The State of the World's Forest Genetic Resources* as well as the priority areas for action, as identified in Country Reports and discussed in regional consultations; and to review and evaluate options for a follow-up, and make recommendations to the Commission.<sup>3</sup> The Working Group held its second session from 23 to 25 January 2013 in Rome, Italy.

3. This document briefly describes the process used to identify priority areas for action and options for follow-up to the Report. The document also contains in its *Appendix* the Draft *Strategic Priorities for Action for the Sustainable Development and Conservation of Forest Genetic Resources* as revised by the Working Group.

### II. IDENTIFICATION OF PRIORITY AREAS

4. Between July and October 2012, FAO convened eight regional consultations<sup>4</sup> to identify needs and priorities in the follow-up to the Report:

- Western Africa, held in Ouagadougou, Burkina Faso, 2–6 July 2012;
- North Africa and the Near East, held by FAO in Tabarka, Tunisia, 16–18 July 2012;
- Central Asia, held in Dushanbe, Tajikistan, 27–29 August 2012;
- **Pacific**, held in Nadi, Fiji, 4–6 September 2012;
- Central Africa, held in Libreville, Gabon, 7–8 September 2012;
- Asia, held in Kuala Lumpur, Malaysia, 12–14 September 2012;
- Eastern and Southern Africa, held in Nairobi, Kenya, 17–19 September 2012;
- Latin America, held in Santiago, Chile, 15–17 October 2012.

5. The regional consultations allowed countries to exchange scientific and technical views and to share information and key findings from the Country Reports in order to identify needs and priority areas for action for the sustainable use, management and conservation of FGR in their respective regions. In support of the regional consultations, relevant information was also extracted from 69 Country Reports that had been received by FAO as of 30 October 2012.

6. The strategic priorities for action are grouped in four priority areas:

- i. Improving the availability of, and access to, information regarding FGR ;
- ii. In situ and ex situ conservation of FGR;
- iii. Sustainable use, development and management of FGR;
- iv. Policies, institutions and capacity building.

<sup>&</sup>lt;sup>1</sup> CGRFA-13/11Report, paragraph 68.

<sup>&</sup>lt;sup>2</sup> CGRFA-13/11/Report, paragraph 67.

<sup>&</sup>lt;sup>3</sup> CGRFA-13/11/Report, paragraph 69.

<sup>&</sup>lt;sup>4</sup> http://www.fao.org/forestry/fgr/81076/en/

7. The Working Group, at its Second Session, revised the draft *Strategic Priorities for Action for Conservation, Sustainable Use, and Development of Forest Genetic Resources* and suggested four additional Strategic priorities, which are SP5, SP7, SP10 and SP14. The completed set of the Strategic Priorities is available in Annex I of this document, for consideration by the Commission.

8. The Working Group recommended that the Commission, at its Fourteenth Regular Session, consider the updated Draft *Strategic Priorities for Action for the Sustainable Use, Development and Conservation of Forest Genetic Resources.* The Working Group further recommended that, as a follow-up to *The State of the World's Forest Genetic Resources*, the Commission consider developing a global plan of action for forest genetic resources and following a process in which countries are invited to provide progress reports on its implementation periodically and international organizations are given the opportunity to report on their relevant activities. The Working Group stressed that the implementation of a global plan of action would require the mobilization of adequate financial resources, preferably from voluntary contributions, particularly to support developing countries.<sup>5</sup>

#### III. GUIDANCE SOUGHT

9. The Commission may wish to:

- i. Consider the Draft *Strategic Priorities for Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources* presented in Appendix I to this document, with a view to finalize them,
- ii. Request the Conference, at its 38<sup>th</sup> Session in June 2013, to adopt the *Strategic Priorities* for Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources;
- iii. Request FAO to develop a global plan of action as a follow-up to *The State of the World's Forest Genetic Resources* and to assist in the implementation of the *Strategic Priorities for Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources;*
- iv. Encourage the mobilisation of adequate financial resources, preferably from voluntary contributions, particularly to support developing countries to support the implementation of the Global Plan of Action.

<sup>&</sup>lt;sup>5</sup> CGRFA-14/13/10, paragraphs 15-16.

#### APPENDIX

#### DRAFT STRATEGIC PRIORITIES FOR ACTION FOR THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES Introduction

1 Forest covers about 31 percent of the world's total land area with 93 percent being natural forest and only 7 percent planted. Estimates of the number of tree species vary from 80 000 to 100 000. Forest ecosystems remain essential refuges for biodiversity, and 12 percent of the world forest land is designated primarily for the conservation of biological diversity. Approximately 14 million people worldwide are formally employed in the forestry sector. Many more depend directly on forest and forest products for their livelihoods. In developing countries, wood-based fuels are the dominant source of energy for more than 2 billion poor people. In Africa, over 90 percent of harvested wood is used for energy. Wood is not the only resource taken from forests. About 80 percent of people, in developing countries, use non-wood forest products to meet their health and nutrition needs and for income.

2 The contribution of forests and trees to meeting the present and future challenges of food security, poverty alleviation and environmental sustainability depends on the availability of rich diversity between and within tree species. Genetic diversity is needed to ensure that forest trees can survive, adapt and evolve under changing environmental conditions. It also maintains the vitality of forest and provides resilience to stresses such as pest and diseases. Furthermore, genetic diversity is needed for artificial selection, breeding and domestication programmes for the development of adapted varieties or to strengthen useful traits. In many countries, the prospects for sustainable development in rural areas will be greatly influenced by the state of diversity in forest ecosystems and species.

3 Efforts to sustainably manage FGR at international as well as at national levels need to rely on solid and coherent baseline information. The country reports on State of Forest Genetic Resources as developed following the FAO guidelines are the main source of comparable information. It is also the basis for the identification of the priority areas for actions on FGR.

#### The Strategic Priorities for Action

4 Conserving forest genetic resources (FGR) is vital, as they are a unique and irreplaceable resources for the future. FAO has for many decades acknowledged their importance. Already 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 the genetic resources of forest trees.

5 FAO's activities on FGR are an integral part of the FAO Forestry Programme, and contribute to other programme components, such as Global Forest Resources Assessment, national forest programmes, sustainable forest management, tree breeding and plantation development, and protected area management. For many decades, the Forest Gene Panel has guided FAO's work on FGR, reporting on progress made to the Committee on Forestry (COFO).

#### Nature of the document

6 The strategic priorities listed below are voluntary non-binding and should not be interpreted or implemented in contradiction with existing national legislation and international agreements where applicable.

7 The strategic priorities constitute a rolling document that can be updated also in agreement with the kind of follow up that the Commission may decide.

8 The relative priority of each strategic priority and associated actions may differ significantly for countries and regions. The relative weight applied may depend on the genetic resources themselves, the natural environment or production systems involved, current management capacities, financial resources and policies underway for the management of FGR.

## The rationale for strategic priorities for action for the conservation, sustainable use and development of forest genetic resources

#### Key features of forest genetic resources

9 Most forest tree species are wild, managed in natural ecosystems, or are at a very primitive stage of selection or domestication as compared to agricultural crops<sup>6</sup>

10 Forest tree species are typically long-lived, highly heterozygous organisms, which have developed natural mechanisms to maintain high level of intraspecific variation, such as a high rate of out crossing, and dispersal of pollen and seeds over a wide areas. These mechanisms, combined with native environments that are often variable in both time and space, have contributed to the evolution of forest tree species into some of the most genetically variable organism on earth7. In situ conservation allowing dynamic maintenance of the genetic diversity and processes is the preferred approach for forest species, while ex situ conservation most commonly used for domesticated plant species.

11 Trees have multiple functions by providing numerous products and services About 80 percent of people in the developing world use non-timber forest products for health, nutrition and income.

12 Quantifying the value of the benefit derived from FGR is difficult for several reasons. Apart from timber, most forest products are harvested for local consumption or commercialized without proper national monitoring and documentation. This is particularly the case in developing countries.

13 In term of their present or potential contribution to food security and environmental sustainability, FGR are underutilized and undervalued.

14 Knowledge of FGR is usually scattered and detained by different institutions in unpublished reports, with limited access in most countries. Baseline information, such as country species checklists, species distribution maps and forest reproductive material catalogues, are lacking.

15 The number of known forest tree species exceeds 80 000, but current efforts in member countries to test and improve forest species focus on approximately 450 species.

<sup>&</sup>lt;sup>6</sup> National Academic Press (1991). Managing global genetic resources, Forest Trees. Pp 229

<sup>&</sup>lt;sup>7</sup> FAO, FLD, IPGRI. 2004. Forest genetic resources conservation and management. Vol 1: Overview, concepts and some systematic approaches. International Plant Genetic Resources Institute, Rome, Italy. Pp 106.

#### Aims of the strategic priorities for action

The main aims of the strategic priorities for action are:

- to strengthen understanding and knowledge of FGR;
- to promote the sustainable use and management of FGR;
- to develop and strengthen *in situ* and *ex situ* FGR conservation programmes through collaboration at national, regional and global levels;
- to promote access to, and sharing of, information on FGR at regional and national levels;
- to create and strengthen national programmes to increase regional and international cooperation, including in research, education and training on the use and sustainable management of FGR, and to enhance institutional capacity.
- to assist countries, as appropriate, to integrate FGR conservation and management needs into wider national policies and programmes and frameworks of action at national, regional and global levels;
- to promote the assessment of FGR-related traditional knowledge, innovations and practices , the equitable sharing of benefits arising from their use, the recognition of their roles, and, where appropriate, the putting in place of effective policies and legislation addressing these matters;
- to promote adequate access to. and use of, quality forest reproductive material to support research and development programmes at national and regional levels;
- to promote ecosystem and ecoregional approaches as efficient means of promoting sustainable use and management of FGR;
- to assist countries and institutions responsible for the management of FGR to establish, implement and regularly review national priorities for the sustainable use and management of FGR; and
- to strengthen national programmes and enhance institutional capacity in particular, in developing countries and countries with economies in transition – and develop relevant regional and international programmes. Such programmes should include education, research and training to address the characterization, inventory, monitoring, conservation, development and sustainable use of FGR.

16 The strategic priorities for action are based on the assumption that countries have sovereign rights over their natural resources, including FGR, and that substantial international cooperation is necessary in the management of FGR. In this context, the strategic priorities for action were developed on the basis of the following principles:

- Genetic diversity is the mainstay of biological stability; it enables species to adapt to changing environments, including the effects of climate change and emerging diseases. It is the basis for present and future selection and breeding programmes. In addition to their irreplaceable contribution to environmental sustainability, FGR provide a direct food source for human and animals, even at times when annual crops fail.
- Inventory, characterization and monitoring are necessary to generate the knowledge needed for proper understanding of trends in the status of FGR and to enable adequate decision-making in the sustainable management and use of FGR.

- In situ conservation is the most widespread conservation practice, because most forest species grow wild and are not being domesticated. It also allows species populations to continue to be exposed to evolutionary processes.
- The effective management of FGR, at all levels, depends on the inclusion and willing participation of all relevant stakeholders. Appropriate participatory processes, that ensure that the interests of different stakeholders are respected and balanced, are required.
- Strengthening efforts to develop institutional partnerships within and among countries is essential, given that species distributions and ecosystems boundaries do not respect country borders. Strong partnerships and collaboration at different levels are needed in order to improve awareness and develop appropriate national and international regulations and policy tools that lead to sound technical and scientific programmes at national, regional and global levels.

17 Resource mobilization to allow timely and adequate implementation of the strategic priorities requires due attention and efforts at all levels, including coordination with the numerous initiatives underway within countries, regionally and globally (Convention on Biological Diversity, Global Environment Facility, etc).

#### Structure and organization of the strategic priorities for action

18 The strategic priorities for action are often closely related and interlinked. Many of the actions foreseen are relevant to more than one priority, in four priority areas:

- 1. Improving the Availability and Access to Information on FGR
- 2. Conservation of FGR (in situ and ex situ)
- 3. Sustainable use, development and management of FGR
- 4. Policies, Institutions and Capacity building.

#### STRATEGIC PRIORITIES FOR ACTION

## Priority Area 1: Improving the Availability of, and Access to, Information on FGR *Introduction*

It is recognized that reliable data on forest status and trends are of great importance to the efficient management of FGR. However, currently available forest-related information largely relates to forest resources in general rather than to forest diversity and variation in tree species. Availability of specific information on the status and trends in FGR is today inadequate, although some progress has been made at national and subregional levels during the last decade.

Availability of, and access to, quality and updated information on FGR is reported to be poor in many countries. Most Country Reports highlight the need to promote awareness among decision-makers and the general public of the importance of FGR and their roles in meeting present and future development needs. Lack of information limits the capacity of countries and the international community to integrate FGR management into cross-cutting policies.

Gaps in information related to FGR include the following:

- in many countries, a lack of an updated species check list;
- a lack of an accurate global picture of the status and trends of FGR;
- a lack of a comprehensive assessment of national and international capacities to manage FGR;
- a lack of an accepted methodology for directly linking general information on changes in forests to their impacts on biological diversity, species, (provenances), populations and genetic variation.
- a lack of knowledge on reproductive and development characteristics of forests species, allowing for ex situ conservation, effective production of seedlings, planting and development of such species outside their original habitats.

These deficiencies complicate global monitoring of the status and trends of FGR and limit capacity for effective decision- making and action at national and international levels.

In many countries, there is an important relationship between the use and management of FGR and traditional knowledge. This valuable knowledge supports the livelihoods of indigenous and local communities in many developing countries, while representing a tremendous asset for industrial and trade development in sectors such as pharmacy, food, biopesticides. Policies on FGR information management should take these important roles into consideration. Traditional knowledge is under threat as a consequence of FGR degradation and changes in land use and sociocultural practices.

#### Long-term goal

Improved availability and accessibility of knowledge and information on species and their genetic diversity, forest ecosystems and related traditional knowledge, to facilitate and enable decision-making on sustainable use and management of FGR and to enhance their contribution to solving serious global problems such as food shortage, land and water degradation, the effects of climate change, and the increased demand for various forest products and services.

## NATIONAL LEVEL

Strategic Priority 1.	Establish and strengthen national FGR assessment, characterization and monitoring system:
	<b>Rationale:</b> Information on FGR is inadequate in many countries. National forest inventories do not usually include the parameters needed for planning the sustainable management of FGR. Baseline information on the status, trends and characteristics of FGR is needed in order to allow the definition and regular review of priorities for sustainable use and conservation, as well as the development of tree domestication and improvement programmes.
	Action: Promote species inventory and characterization. Promote mapping of the distribution of priority or important species populations. Reinforce the capacities of <b>national herbaria and botanic survey</b> to support the development of knowledge on forest species.
	Develop <b>technical standards, protocols and documentation systems</b> for assessing and monitoring the status of FGR management. Promote and support the development of <b>national and regional species checklists</b> and mechanisms for updating them regularly.
	<b>Develop networks of forest gene banks, information units and databases,</b> and enhance information management and sharing at national and international level.
Strategic Priority 2	Develop national and subnational systems for the assessment and management of traditional knowledge on FGR
	<b>Rationale: Traditional knowledge</b> can make a significant contribution to sustainable development through practices such as local conservation and sustainable use of plants and can contribute to efforts to solve serious global problems such as climate change, desertification and land and water degradation. There is therefore a need to preserve traditional knowledge of FGR by developing national assessments and improving documentation.
	Action: Promote national-level assessments and documentation of traditional knowledge related to the use and management of FGR by local communities.
	Develop national and subnational traditional knowledge registration mechanism and databases to preserve, protect, and promote traditional knowledge on FGR.
	As appropriate, develop guidance on registering, accessing, storing and using traditional knowledge of forest genetic resources at national, subnational and local scales, with effective participation of indigenous and local communities, taking into consideration similar initiatives under the Convention on Biological Diversity (CBD).

### INTERNATIONAL LEVEL

Strategic Priority 3	Develop international technical standards and protocols for FGR
	inventories, characterization and monitoring of trends and risks
	<b>Rationale:</b> Scientifically sound, realistic and policy-relevant indicators for defining a baseline and monitoring the status and trends of FGR and their management are lacking at global, regional and national levels. There is a need for to develop and use standardized methods and protocols for inventory, characterization and monitoring. There is also a need to enhance the coordination of research on the identification, mapping and characterization of species populations and to improve the impact of the results in FGR management policies.
	Action: Develop global criteria and indicators for assessing the status and trends of FGR within national forest inventories and others forest-related programmes.
	Develop protocols for participatory assessment and monitoring of FGR.
Strategic Priority 4	Promote the establishment and the reinforcement of FGR information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations.
	<b>Rationale:</b> <i>The State of the World's Forest Genetic Resources</i> provides the first global overview of the diversity, status and trends of FGR and of national regional and global capacity to manage these resources. Many Country Reports indicate that there are important gaps in knowledge of FGR and that information at country level is scattered and difficult to access. Furthermore research programmes suffer lack of adequate financial support, especially in developing countries. There is therefore an urgent need to improve access to information on FGR for all stakeholders, while also developing the knowledge base required for sustainable use and management of FGR. There is also a need to improve countries' financial support to research activities.
	Action: Improve access to information by developing and strengthening information management and sharing mechanisms at national and global levels.
	Promote the establishment and maintainance of FGR databases at local, subnational, national, regional and global levels.
	Improve access to information on forest species for a wide range of stakeholders, including indigenous and local communities.

#### Priority Area 2: In situ and ex situ conservation of FGR

The development of a worldwide conservation strategy for FGR is based on the need to maintain the adaptive and neutral genetic diversity of forest trees and shrubs. This goal can be met by applying *in situ* conservation methods across tree species distribution ranges.

Regional collaboration through species or thematic networks should play an important role in implementing the strategy and monitoring the progress made. This collaboration should aim to facilitate the use of ecosystem approach and to promote greater awareness of the different forest and tree management types(Table 1) and the different levels of genetic conservation.

Naturally regenerated forests				Planted forests	l	Trees outside forests, and
Primary	ary Modified Semi-na		itural Plantations		agroforestry	
	haturai	Assisted natural regeneration	Planted component	Productive	Protective	Systems
Forests of native species, where there are no clearly visible indications of human activities and the ecological processes are not directly disturbed by humans	Forests of naturally regenerated native species where there are clearly visible indications of significant human activities	Silvicultural practices in natural forest by intensive management: • weeding • fertilizing • thinning • selective logging	Forests of native species, established through planting or seeding intensively managed	Forests of introduced and/or native species established through planting or seeding mainly for production of wood or non wood goods	Forests of introduced and/or native species, established through planting or seeding mainly for provision of services	Stands smaller than 0.5 ha; tree cover in agricultural land (agroforestry systems, home gardens, orchards); trees in urban environments; and scattered along roads and in landscapes

#### Table 1: The main types of forest and tree resources management

**Protected areas** are established, regulated and managed to achieve conservation objectives in the context of a growing pressure from the harvesting of forest resources and the conversion of forests to other land-use types, They mostly serve as a refuge for species that are unable to survive in intensely managed landscapes. National programmes for the sustainable use and management of FGR should therefore take the important roles of protected areas into account, although most of them may have been primarily design for purposes such as wildlife (mostly animals) protection, recreation and various ecosystem services.

Protected areas are suitable for the conservation of viable forest tree populations of diverse species and of representative ecosystem samples, as well as for maintaining vital ecosystem services.

**Marginal and/or range limits<sup>8</sup> tree species populations** may be key in providing adaptation to the novel environmental extremes that are expected to occur as a result of rapid climatic change. It is necessary to understand the dynamics of marginal forest species populations through adequate examination of adaptive genetic variation in quantitative traits. Furthermore conservation in the current climate change context requires accurate estimates of the positions of future extreme environmental conditions (range limits). Modelling of species distribution dynamics needs to account for changes in species' distribution areas and in those of their associated environment correlates (e.g. pollinators) and also the possible influences of interactions with other plant or animal species.

Adequate *in situ* conservation measures are needed to preserve the natural growing conditions of the tree species in order to study and better understand their evolutionary process and adaptation to changes. Information from *in situ* conservation activities for marginal and/or range limits populations will be essential in providing options for adaptation to climate change.

**On-farm management of FGR,** including agroforestry systems, is identified as one of the important land use types that contribute substantially to *in situ* conservation of FGR, particularly domesticated or semi-domesticated species (e.g. the agroforestry parkland system in West Africa).

Many priority species identified in Country Reports from semi arid zones are trees growing on farmlands, including agroforestry systems. Most of them are indigenous species that have been traditionally managed by farmers for centuries.

Tree diversity in farmland varies from a few species in some countries to more than 100 in some others. Some of these species are semi-domesticated species that occur only in agroforestry systems Sustainable management of the agroforestry systems is therefore needed in order to conserve the genetic resources of the species.

Given the important number of tree species recorded worldwide as mentioned earlier in the document, it is clear that there is a need for **priority setting** among the many alternative species that might be targeted for action. Priority setting is complicated greatly by the lack of basic information on the variation, variation patterns and potentialities of many tree species.

The general aim of priority setting is to compare the consequences and trade-offs of a range of actions. It implies that some areas, species or genetic resources will be given lower priority than others. When different stakeholders have similar priorities, concerted action on the part of these stakeholders is possible. When their priorities are dissimilar, independent but harmonized action is more likely to succeed. It is likely that among governmental, non-governmental and international organizations active in forest biological diversity and genetic conservation, substantial differences will exist in terms of priorities, as well as in terms of their capabilities to implement various management techniques. Where such differences exist, it will be necessary to form coalitions for action, operating under coherent frameworks and at appropriate levels.

Commitment at national and local levels to specified objectives and priorities is a prerequisite for the implementation of sustainable conservation programmes. Governments have worked towards ensuring a wide ownership of their Country Reports by organizing stakeholder workshops to review and validate the reports. During regional consultations in the Near East and North Africa, West Africa, Central Asia, Asia, Pacific, Central Africa, East and Southern Africa and Latin America, regional priorities for action were identified. In many cases regional priority species were discussed. However, the process needs to be continued in order to define the detailed actions for each species and to allocate responsibilities among actors and partners at national, regional and international levels.

**Ex situ Conservation**. In a growing number of situations in situ conservation of FGR is no longer possible in particular due to climate change effects. As a consequence, conservation strategies should include the creation of

<sup>&</sup>lt;sup>8</sup> Sexton al (2009) in Annu. Rev. Ecol. Syst. 40:415-36

in situ and of ex situ conservation units.

*Long-term goal* Maintain genetic diversity and ensure evolutionary processes of forest species by better implementing and harmonizing measures to conserve forest genetic resources, both in situ and ex situ, including through regional cooperation and networking.

## NATIONAL LEVEL

Strategic Priority 5	Develop national strategies for in situ and ex situ conservation of FGR and
	their sustainable use.
	<b>Rationale</b> : Countries are often lacking adequate policies and programmes addressing the needs for in situ and ex situ conservation of FGR. Given the large number of stakeholders involved in many ways, in the use, development and management of FGR at national levels, it is useful that national strategies and programmes are developed to provide an appropriate framework of action.
	Action:
	Develop policy tools where appropriate to provide national framework of action for the sustainable <i>in situ</i> and <i>ex situ</i> conservation of FGR.
	Develop or strengthen institutional capacities with respect to in situ and ex situ conservation of FGR to enable implementation of existing or future national strategies for conservation of FGR including gene banks.
Strategic Priority 6	Strengthen the contribution of primary forests and protected areas to <i>in situ</i> conservation of FGR
	<b>Rationale:</b> In the current context of increasing pressure on forest land and forest resources, primary forests and protected areas remain refuges for threatened FGR. An important proportion of wild and/or endemic plants occur only in primary forests and protected forest areas. Only in those forests the natural population genetic structure is conserved. Natural processes involved in the dynamics of FGR resources are better assessed and understood in protected natural forests, which remain the best laboratories for studying species ecology and biology. The contributions of primary forests and protected areas to the development of knowledge on plant species and to conservation of FGR, therefore, need to be promoted.
	Action: Develop collaboration between institutions or programmes in charge of protected forest areas and those responsible for the development and use of FGR, such as national forest tree breeding centres, forest tree seed centres and other forest germplasm collection and conservation institutions operating at national or regional levels.
	Promote and reinforce development of national FGR assessment and conservation activities in primary forests and <b>protected areas</b> and in <b>conservation forests</b> with the participation of indigenous and local communities, as appropriate.
	Manage genetic reserves within protected areas to maintain the evolutionary potentials of targeted species.

## **Strategic priority 7** Promote the establishment and development of efficient and sustainable ex situ conservation programmes including in vivo collections and genebanks Rationale: A comprehensive forest genetic conservation programme requires some combination of in situ and ex situ conservation. Ex situ conservation of FGR is mainly concerned with sampling as much of the genetic variation as possible that resides within and among populations of selected target species. Ex situ conservation is in many cases is the only option available for conserving the intraspecific genetic variation in peripheral or isolated populations<sup>9</sup> which are seriously threatened by changes in land use and environmental conditions, such as drought, flooding, salinity etc. The important features of an ex situ conservation programme for any particular species are: to be an important backup measure should other in situ conservation means be unworkable or unavailable to ensure that a wide range of the diversity available is a species is conserved, to manage the regeneration of the species outside its original natural range (provenance) in a more controlled way with specific conservation or uses objectives. Action: promote the documentation, characterization, regeneration and evaluation of FGR germplasm. Collect seeds that are representative of natural variation. Establish collections of improved seeds. Promote the use of post-harvesting procedures that maintain the quality of the seed before and after ex situ conservation. Promote and support indigenous and local communities' initiatives for the conservation of FGR. Promote and develop mechanisms for the involvement of the private sector in the conservation of FGR. Foster studies on seed collection, quality, conservation and reproduction. Promote and encourage research on the conservation of recalcitrant-seed species. Promote the establishment of incentives for ex situ conservation.

<sup>&</sup>lt;sup>9</sup> FAO, FLD, IPGRI, 2004. Forest genetic resources conservation and management. Vol. 3: In plantations and genebanks (*ex situ*). International Plant Genetic Resources Institute, Rome, Italy

Strategic Priority 8	Support assessment, management and conservation of Marginal and/or range limits Forest Species Populations
	<b>Rationale:</b> Marginal populations are fragile and more inclined to degradation than central populations, because they normally have less variation. Evolutionary forces can have particular effects on marginal populations and may lead to specific adaptations. Marginal populations should therefore have high priority in global and regional conservation strategies and programmes.
	Action: Develop guidelines for the inventory and documentation of marginal forest species populations and promote their management and conservation through integration in conservation networks and by emphasizing the participation of local communities.
	Support programme development at global and regional levels to assess marginal populations and promote their conservation and evaluation in both <i>in situ</i> and <i>ex situ</i> conditions.
Strategic Priority 9	Support and develop sustainable management and conservation of FGR on farmland
	<b>Rationale:</b> Farmers contribute to FGR <b>management and conservation on-farm</b> in traditional land-use systems such as <b>agroforestry systems. They therefore influence interspecific and intraspecific diversity of species in the landscape</b> . FGR managed in traditional agroforestry systems are seriously threatened by a lack of regeneration resulting from the increasing pressure on forest resources and current trends in agricultural intensification. There is a need to address the issue of on-farm management of FGR in countries where agroforestry a common practice.
	Action: Develop methodological tools for on-farm management and conservation of important agroforestry species.
	Assess the status of conservation and management of important agroforestry species at national and regional levels.
	Provide technical support to promote on-farm sustainable management and use of FGR.
Strategic priority 10	Support and strengthen the role of forests managed by indigenous and local communities in sustainable management and conservation of FGR
	<b>Rationale</b> : forests managed by indigenous and local communities often have a stronger role in maintaining genetic resources than do protected areas. Forests managed by indigenous and local communities have been shown to be one of the most effective approaches for combining conservation with poverty alleviation. There is a need for greater recognition and support for this role in those countries where this management is applicable.

Action: Assess the status of conservation and management of FGR in forests managed by indigenous and local communities.

Provide technical support for sustainable management and conservation of FGR in forests managed by indigenous and local communities.

#### Strategic Priority 11 Identify priority species for action

**Rationale:** Because of the complexity of the subject, FGR management is better handled using a species approach. Processes involved in genetic diversity dynamics determine species adaptation and performance in a given environment. Understanding and developing FGR using a species approach is regarded as an adequate and useful option. Given the high number of forest species present is each country, it is impossible to develop research activities or programmes for all forest species. Priority species should be identified at the national, sub-national levels and shared in existing regional and international fora so as to provide better focus and more efficient resource use.

Action: Promote research networks focusing on important species at national, regional and international levels.

Update priority species lists regularly at both country and regional levels.

Provide international support for the development of guidelines for species prioritization and for the identification of priority areas of research.

The prioritization of species could be based on: species, populations, or varieties, those with reduced populations and those in danger of extinction, and species of diverse, current and future value, including those with strategic, scientific, and economic importance. The values of these species, populations, breeds or varieties can be linked to the following factors: socio-economic, gender, food security, climate change adaptation and sacred or cultural significance at the local, national and international levels.

#### **REGIONAL LEVEL**

Strategic Priority 12Develop and implement regional <i>in situ</i> conservation strategies and promote eco-regional networking and collaborationRationale: The ecosystem approach is a way to manage entire ecosystems in a holistic manner without excluding other management and conservation approaches such as area-based management tools and single-species conservation practices. Ideally all these approaches should be integrated, through regional networks when appropriate.Regional strategies for conservation of forest genetic resources, including regional networks of <i>in situ</i> genetic conservation units and corridors of priority species are needed to ensure the dynamic conservation of key forest genetic resources and their avalutionary obility for the future.		
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conservation strategies provide a good justification for coordination and collaboration at regional level. Investment in joint activities regional level may often be more efficient and cost-effective than the multiplication and duplication of activities at national level.

Action: Development of methodologies for preparation of regional strategies for conservation of forest genetic resources, including principles for their implementation, taking into account existing experience and using existing regional networks relevant to FGR.

Promote ecosystem-based partnership and regional collaboration to develop species genetic resources conservation and evaluation programmes (*in situ* and *ex situ*) in line with commitments under existing international regulations.

Mobilize resources by involving existing regional economic and environmental organizations.

#### Priority area 3: Sustainable use, development and management of FGR

The challenge of achieving food security for all and environment sustainability in the context of the combined effects of climate change and the increasing human pressure on forests is greater now than it has ever been. More efficient use and management of available forest resources is therefore needed, especially in tropical and less-developed countries, in order to meet the growing demand for forest goods and services.

To ensure sustainable management of forests, the genetic resources of forest trees must be conserved and developed, whether they exist as trees in planted forest, in natural forest or protected conservation stands, or as seeds or tissue cultures in storage. Managing FGR involves developing overall strategies, applying specific methodologies, developing and applying new technologies, and coordinating local, national, regional and global efforts.<sup>10</sup>

Monitoring forest biological diversity and managing FGR requires reliable information on the status and trends of these resources. There are no common standard methods for measuring changes in the status of FGR in relation to sustainable forest management as undertaken in most countries. Parameters commonly included in national and global forest resources assessments, such as forest area, species occurrence and richness and forest fragmentation, are not on their own able to provide information on FGR. Adequate and commonly agreed indicators are needed and should be integrated into the national forest assessment policies and monitoring tools.

Many countries face difficulties in getting the quantities and quality of forest reproductive material needed to implement their plantation programmes. Lack of an efficient tree seed supply system has been reported as a bottleneck for national afforestation programmes by many countries. Furthermore, using improved forest reproductive material can be expected to provide a substantial production gain. Efforts should therefore be made to support the seed supply system.

#### Long term goal

Enhance sustainable use, development and management of FGR, as a key contribution to environmental sustainability, food security and poverty alleviation.

<sup>&</sup>lt;sup>10</sup> National Academic Press (1991). Managing global genetic resources, Forest Trees. Pp 229.

## NATIONAL LEVEL

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Strategic Filority 15	of genetically appropriate tree goods in the quantities and of the (cartified)
	guality peeded for patienal plantation programmes
	quality needed for national plantation programmes
	<b>Rationale:</b> Countries reported that large plantations areas are being established to serve many purposes, including the production of timber biofuel and fibres and the provision of various environmental services such as reclamation of degraded land and soil and water management. However, most developing countries lack adequate forest seed supply systems. This jeopardizes the success and performance of plantation programmes in these countries. This concern is highlighted in most Countries Reports and was identified as a priority area for action by most regional consultations.
	Action: Promote the establishment of, and support to, national tree seed supply systems.
	Enhance <b>collaboration</b> between tree seed centres, and <b>develop common quality seed standards</b> , to facilitate forest reproductive material exchange within regions and support national afforestation programmes.
Strategic Priority 14	Promote restoration and rehabilitation of ecosystems using genetically appropriate material
	<b>Rationale</b> : Millions of square km of degraded and disturbed forest land are attracting attention from many national and international organizations and agencies as potential sites for restoration or rehabilitation, but little attention is typically paid to the importance of selecting appropriate genetic sources to produce planting material. The challenge of matching adapted populations to current and future environmental conditions is often complicated by the extent and type of degradation and disturbance, which may require field testing and/or predictive modeling.
	Action: Support and conduct research to identify key variables for choosing well-matched populations for current and future conditions of degraded sites.
	Develop guidelines and decision support tools for selection of appropriate genetic composition of planting materials.
	Develop and implement monitoring protocols to assess viability and resilience of tree populations over time in rehabilitated sites.
Strategic Priority 15	Support climate change adaptation and mitigation through proper management and use of FGR Rationale: The current growing concern about climate change and its effects on ecosystems and the performance of forest-related production systems challenges
	stakeholders in FGR management to better understand forest species and

mechanisms for adaptation to current and future climate changes. Genetic diversity is needed in order to ensure that species can adapt, as well as to allow for artificial selection and breeding to improve productivity. Thus genetic diversity, including diversity among species, is the key to the resilience of forest ecosystems and the adaptation of forest species to climate change.

Action: Develop sub-national, national and regional standard methods and guidelines for the identification, selection and use of species population conservation units, based on environmental and sociocultural factors, which are the main determinants of the status of forest and agroforestry ecosystem diversity.

Assist countries in their efforts to improve the conservation and sustainable use of forest genetic resources in the face of climate change by:

- promoting best practices in FGR management, specifically in the fields of conservation, exploration, testing, breeding and sustainable use; and
- promoting FGR's contribution to environmental sustainability through development and use of well- suited genetic material.

## Strategic Priority 16Promote appropriate use of emerging technology to support the<br/>conservation development and sustainable use of FGR

**Rationale:** Tree improvement activities remain limited to a few economically important tree species, not only because of the financial constraints but also because of their specific characteristics. Trees are long lived perennial species, with long regeneration cycles and late sexual maturity. Because of these characteristics, improvement and breeding research in tree species require more time than is required for the equivalent activities in other crops.

New technologies, as appropriate, such as genomics and micro-propagation, can help accelerate the selection process and unlock the huge potential of forest trees.

These new technologies have proved to be useful for understanding forest ecosystem dynamics, including genetic processes. They can orientate appropriate practical measures for sustainable conservation, management, restoration and rehabilitation".

Action: Promote the use of emerging technology to support conservation and sustainable use of FGR, tree improvement programmes and to enhance the use of quality FGR in forestry programmes.

Assess available technologies and their effectiveness for use in *in situ* and *ex situ* conservation and in the development of the genetic resources of priority species.

## **Strategic Priority 17** Develop and reinforce research programmes on tree breeding, domestication and bioprospection in order to unlock the full potential of FGR Rationale: In addition to timber, forests provide many other commodities that are important to local communities and to national economies. The importance of medicinal plants, fodder plants and food plants is increasingly recognized and strongly reflected in many Country Reports. In many developing countries, a large portion of the population make use of medicinal plants for their health care. Free grazing is still a common practice in many developing countries, and forests are often an essential source of fodder. These various resources are still harvested from wild plants in forest lands and in some cases are under threat due to overexploitation. Domestication of such plants will improve the supply of the targeted products while reducing the vulnerability of their genetic resources. Action: Assess and evaluate the contributions of forest species to environmental services (soil and water conservation, carbon sequestration, .etc.). Assess and evaluate the contributions of priority forest species to important national production sectors (timber, fruits, fodder, vegetable oil, vegetable, medicines, etc.). Develop programme-based multi-purpose tree breeding for priority species. Promote participatory approaches by involving local communities in selection and breeding programmes for priority species, based on farmers' desired traits.

### **INTERNATIONAL LEVEL**

Strategic Priority 18	Develop and promote networking and collaboration among concerned
	countries to combat invasive species (animals, plants and microorganisms)
	affecting FGR.
	Rationale: Invasive species are increasingly being noted as major threats to
	FGR. The major threats come from plant species, which have the capacity to
	invade natural and/or slightly disturbed forest associations and become
	predominant often displacing whole ecosystems and species. Pest and diseases
	affecting forest and trees are predicted to become an increasing threat as the
	affecting forest and frees are predicted to become an increasing threat as the
	effects of climate change become more prominent and the movement of plant
	material across countries and continents accelerates.
	Action: Review existing standards and protocols, where appropriate, and, when
	needed, propose volunteer protocols for the movement of forest plant material
	across countries and regions to avoid the spread of invasive organisms.
	Promote national assessments of invasive alien species and their effects on FGR,
	using a regional or ecosystem approach.
	Work with the IPPC to include FGR in existing biosecurity regulations to
	integrate concerns about FGR.

Promote the development of research in the field of pest and diseases which affect FGR.

#### Priority area 4: Policies, institutions and capacity building

In many cases, national policies and regulatory frameworks for FGR are partial, ineffective or inexistent given the fact that FGR is not commonly well understood and properly dealt with in many countries. Awareness building at all levels will be a key factor in mobilizing popular support and international collaboration for the implementation of the Strategic priorities for Action.

There is an increasing demand for forest products including round wood, fire wood and non wood forest products (NWFP) in many countries. Country data reported in the Global Forest Assessment 2010 showed that the value of NWFP is some times higher that round wood and firewood when information in available. Sound social and economic policies are needed at national and global levels to ensure integration of FGR in wider national forest policy frameworks and global initiative such as FRA for sustainable management of FGR.

In many countries, lack of trained personnel – both in terms of numbers and in terms of skills to address FGR management in a time of rapid social and economic change – is a major impediment to developing and implementing FGR policies, strategies, programmes and projects. Education and training in order to build sustainable capacity in all priority areas is required.

Institutional strengthening, training and support to research, are needed for countries to be able to respond to pressing and increasingly varied needs in conservation and FGR management. This includes promotion of training and research at national and international level in aspects related to recent development on Forest Genetic Resource Management. The role of National Research Systems and programmes including Tree Seed Centers and their support by the CGIAR system is crucial in this context.

In the context of scarce resources and a great risk a duplicating the same activities at national or regional levels, efforts should be made to promote partnership and coordination at national, regional and international levels when appropriate. Promotion of Networking should also be encouraged in linking stakeholders, and in supporting institutional development and capacity-building.

#### Long term goal

Establish and review relevant policies and legal frameworks to integrate major issues related to sustainable FGR management and strengthen institutional and human capacity to achieve the successful medium and long-term planning of the forestry sector in member countries as well as for the long-term sustainable use, management and conservation of FGR.

## NATIONAL LEVEL

Strategic priority 19	Update and Integration of FGR conservation and management needs into wider national policies and programmes frameworks of action at national, regional and global levels
	<b>Rationale:</b> Many countries reported that due to the scarcity of financial and human resources, FGR will be best managed, if the relevant needs and priorities are taken care by wider national forestry and land use programmes and policies (e.g. national forest inventories, protected areas), in line with the Strategic Plan for Biodiversity 2011 – 2020 and the Aichi Biodiversity Targets.
	Action: Promote review of national policy and legal frameworks on Forest to integrate key concerns on FGR.
	Review and align forest and land use policies and programs, where appropriate, to better integrate the FGR dimension and contribute to climate change mitigation and adaptation.
	Amend national biosecurity regulations, where appropriate, to integrate concerns about FGR.
Strategic priority 20	Develop collaboration and promote coordination of national institutions and programmes related to FGR
	<b>Rationale:</b> There is a need to build synergy at national level between coordination units and National Focal Points of the different international programmes and conventions to enable efficient information sharing and resource use and for a better support of the national priorities identified on FGR. <b>Action:</b> Enhance cooperation and synergies between national authorities and National Focal Points in charge of FGR related international programmes and conventions (eg CBD, UNCCD, Climate change, ABS, FRA NFPs,).
	Create national consultation framework such as permanent national commission for FGR to enhance sustainable management of FGR within national development and research programmes.
Strategic priority 21	Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programmes
	<b>Rationale:</b> Technical and scientific capacities on FGR were reported by many countries as weak. University training curricula on issues such as FGR conservation, tree breeding and management of NTFP are rarely available in many countries. Research and education needs strengthening in all areas of management of FGR in most countries in particular in developing countries and countries in economic transition. Establishing, strengthening and maintaining research and education institutions is key to building national capacities to plan and implement priority activities for sustainable use, development and conservation of FGR.

	Action: Develop appropriate training modules to support the management and use of genetic resources of forest plants which are important source of NTFP.
	Develop needed inter-sector and inter institutional collaboration to make use of available scientific and technical information to ensure appropriate content of the modules.
	Organize training workshops on recent technologies and advancements and exposure visits for scientists and technicians and training courses for decision makers and forest managers.
	Strengthen national Research and education programmes and capacity on FGR and promote regional connectivity and collaboration between institutions.
	Reinforce national herbaria capacity and operation to support development of knowledge on species.
	Develop training modules/curricula that integrates major and varied concerns on FGR management and sustainable uses. This could lead to: 1) Identify medium and long-term needs for qualified human resources necessary for supporting national development and research activities on FGR. 2) Develop extension and education modules with special emphasis on modern technology (e.g. biotechnogy), to support national education capacity on forestry and FGR management.
Strategic priority 22	Promote participation of indigenous and local communities in FGR management in the context of decentralization.
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Strategic priority 22	<ul> <li>Promote participation of indigenous and local communities in FGR management in the context of decentralization.</li> <li>Rationale: Many developing countries have a decentralized country administration or are undergoing decentralization process. Natural resources, including FGR, management should therefore be considered in this perspective for these countries. In some cases regulations measures are decided at province or state level. There is therefore a need to provide appropriate technical support to decentralized administrations in the countries to review or develop policy tools that ensure sustainable use and management of FGR, including to protect, preserve and sustainably use FGR for maintaining customary use by indigenous and local communities.</li> <li>Action: Develop, strengthen or review local policies related to management of forests, to increase awareness on FGR among local communities and to properly address the need for sustainable management, development and uses of FGR at decentralized level.</li> <li>Develop adequate human resources to support ongoing decentralization processes with proper management of FGR and enhance it contribution to local development.</li> </ul>

### **REGIONAL LEVEL**

Strategic priority 23	Promote and apply mechanisms for germplasm exchange at regional level to support research and development activities, in agreement with international conventions
	<b>Rationale:</b> Transfer and exchange of Forest Genetic Material are regulated under international agreements, which, in some cases, can limit access to proper material and subsequently prevent research programmes from delivering results that are likely to have a real impact.
	Action: Improve awareness and understanding of member countries on existing international regulations on genetic material exchange.
	In compliance with national legislation and international regulations, improve or develop adapted national and regional exchange regulations that ensure keeping records of the source and transfer of Forest Genetic Material for research purposes, and promote mechanisms to facilitate access of material for scientific work within the region.
	Strengthen and encourage regional networking for exchange of FGR material.
Strategic priority 24	Reinforce regional and international cooperation to support education, knowledge dissemination, research, conservation and sustainable management of FGR
	<b>Rationale:</b> One of the most common constraints for research activities on FGR is the lack of adequate financial and human resources. It is therefore recommended by member countries to strengthen international and regional cooperation to better support education and research activities on conservation and sustainable management of FGR.
	Action: Promote establishment of new networks and encourage existing networks, to share information, experiences and theoretical and practical knowledge.
	Identify international channels for financial support (e.g. climate-related funds)

## INTERNATIONAL LEVEL

Stratogia priority 25	Encourage the establishment of networks activities and support
Strategic priority 25	development and reinforcement of international networking and information sharing on FGR research, management and conservation
	<b>Rationale:</b> The need for networking was expressed in most regional consultation workshops as a priority for action, which should improve information and experience sharing between stakeholders at global level.
	Action: Establish better linkages and mechanisms to enhance coordination and collaboration between institutions on technology, policy implementation and information sharing.
Strategic priority 26	Promote public and international awareness of the roles and values of FGR
	<b>Rationale:</b> Many countries reported that decision makers and the general public are not well aware of the importance of FGR. Needs and priorities for actions at country, regional and international level will be better supported by stakeholders if effective extension activities are developed and supported.
	Action: Develop FGR advocacy measures and tools to ensure effective communication and information sharing related sustainable FGR management and uses.
	Support international campaigns to raise awareness on the status and trends of FGR and its contribution to the Millennium Development Goals including food security, ecotourism potential, poverty alleviation and environment sustainability, and subsequently seek to develop wide support at government and institutional levels as well as among the general public.
	Organize training for forestry technicians and administration managers on FGR.
Strategic priority 27	Strengthen efforts to mobilize the necessary resources, including financing for the conservation and sustainable use and development of FGR
	<b>Rationale:</b> Most countries reported that FGR conservation, sustainable use and development efforts are lacking adequate funding. Efforts need to be made at national and international level to ensure that strategic priorities are successfully translated in to actions within existing and/or new programmes.
	Action: Develop efforts to assist countries and stakeholders in designing appropriate programmes and policies for the conservation and sustainable use and development of FGR, to secure adequate funding, particularly in developing countries and countries with economy in transition.
	Encourage countries and stakeholders to explore new funding opportunities including climate change and biodiversity related funds.
	Support the creation of incentives for conservation and sustainable use activities related to FGR.

SUMMARY TABLE OF STRATEGIC PRIORITIES	<b>Priority area 4:</b> Policies, institutions and capacity building	SP 19. Update and Integration of FGR conservation and management needs into wider national policies and programmes frameworks of action at national, regional and global levels	SP 20. Develop collaboration and promote coordination of national institutions and programmes related to FGR	SP 21. Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programmes	SP 22. Promote participation of indigenous and local communities in FGR management in the context of decentralization
	<b>Priority area 3:</b> Sustainable use, development and management of FGR	SP 13. Develop and reinforce national seed programmes to ensure the availability of genetically appropriate tree seeds in the quantities and of the (certified) quality needed for national plantation programmes	SP 14. Promote restoration and rehabilitation of ecosystems using genetically appropriate material	SP 15. Support climate change adaptation and mitigation through proper management and use of FGR	SP 16. Promote appropriate use of emerging technology to support the conservation development and sustainable use of FGR
	<b>Priority area 2:</b> In situ and ex situ conservation of FGR	SP 5. Develop national strategies for in situ and ex situ conservation of FGR and their sustainable use	SP 6. Strengthen the contribution of primary forests and protected areas to <i>in situ</i> conservation of FGR	SP 7. Promote the establishment and development of efficient and sustainable ex situ conservation systems, including <i>in vivo</i> collections and genebanks	SP 8. Support assessment, management and conservation of Marginal and/or range limits Forest Species Populations
	<b>Priority area 1: I</b> mproving the availability of, and access to, information on FGR	SP 1. Establish and strengthen national FGR assessment, characterization and monitoring system	SP 2. Develop national and subnational systems for the assessment and management of traditional knowledge on FGR		
		National			

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				SP 23. Promote and apply mechanisms for germplasm exchange at regional level to support research and development activities, in agreement with international conventions	SP 24. Reinforce regional and international cooperation to support education, knowledge dissemination, research, conservation and sustainable management of FGR
SUMMARY TABLE OF STRATEGIC PRIORITIES	SP 17. Develop and reinforce research programmes on tree breeding, domestication and bioprospection in order to unlock the full potential of FGR				
	SP 9. Support and develop sustainable management and conservation of FGR on farmland	SP 10. Support and strengthen the role of forests managed by indigenous and local communities in sustainable management and conservation of FGR	SP 11. Identify priority species for action	SP 12. Develop and implement regional <i>in situ</i> conservation strategies and promote eco-regional networking and collaboration	
	National			Regional	

	SP 25. Encourage the establishment of networks activities and support development and reinforcement of international networking and information sharing on FGR research, management and conservation	SP 26. Promote public and international awareness of the roles and values of FGR	SP 27. Strengthen efforts to mobilize the necessary resources, including financing for the conservation and sustainable use and development of FGR
UMMARY TABLE OF STRATEGIC PRIORITIES	SP 18. Develop and promote networking and collaboration among concerned countries to combat invasive species (animals, plants and microorganisms) affecting FGR.		
	SP 3. Develop international technical standards and protocols for FGR inventories, characterization and monitoring of trends and risks	SP 4. Promote the establishment and the reinforcement of FGR information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations	
		International	

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