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l'alimentation  
et  
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Organización  
de las  
Naciones  
Unidas  
para la  
Agricultura  
y la  
Alimentación

### Item 6.1 of the Draft Provisional Agenda

**COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

**Eleventh Regular Session**

Rome, 11-15 June 2007

## **THE WORLD'S FOREST GENETIC RESOURCES: STATUS AND NEEDS**

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## **THE WORLD'S FOREST GENETIC RESOURCES: STATUS AND NEEDS**

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### **I. INTRODUCTION**

1. Genetic diversity provides the fundamental basis for the evolution of forest tree species and for their adaptation to change. Conserving forest genetic resources is therefore vital, as they are a unique and irreplaceable resource for the future. FAO has for many decades acknowledged their importance. Already in 1967, the Conference recognized that forest genetic diversity was being increasingly lost and requested the establishment of the Panel of Experts on Forest Gene Resources (the Forest Gene Panel), to help plan and coordinate FAO's efforts to manage genetic resources of forest trees.
2. FAO's activities on forest genetic resources 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 forest genetic resources, reporting on progress made to the Committee on Forestry (COFO).
3. In 1997, the COFO's Thirteenth Session, recommended the Forest Gene Panel to provide advice to the Commission in its fields of competence, noting the recent broadening of the Commission's mandate by the Conference. The Forestry Department has informed the Commission of the relevant recommendations of the Forest Gene Panel, when appropriate, and has also regularly reported on its programmes and activities on forest genetic resources.
4. At its Tenth Session, the Commission agreed that its Secretariat, in cooperation with FAO's relevant services, should submit to its Eleventh Session a Multi-Year Programme of Work (MYPOW); the Secretariat was asked to document the status and needs of the various sectors<sup>1</sup>, including forestry.
5. This document has been prepared by the Forestry Department, which has taken the recommendations of the Forest Gene Panel as the basis for the proposals made. At its Fourteenth Session, the Forest Gene Panel had an in-depth discussion about FAO's future work on forest genetic resources including on the Commission's MYPOW.
6. The Forest Gene Panel recognized that the integration of forest genetic resources with the Commission's MYPOW would draw attention to the importance of the sector, and help focus the Forestry Department's contribution to FAO's cross-sectorial work on biodiversity and genetic resources, and would support cooperation with other relevant international institutions and partners. It also recommended that FAO take much stronger action to support the management of forest genetic resources to achieve sustainable forest development.<sup>2</sup>
7. The document first describes the importance of genetic resources for the forestry sector and then identifies the needs for the future. Section III provides a brief description of work being carried by FAO and other relevant international organizations. Section IV proposes possible future work for the Commission and introduces the time table for the proposed activities. Guidance is sought in the final section.

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<sup>1</sup> CGRFA-10/04/REP, para. 83 – 91.

<sup>2</sup> See CGRFA-11/07/Inf.9, *Report of the Fourteenth Session of the FAO Panel of Experts on Forest Gene Resources*.

## II. GENETIC RESOURCES WITHIN THE FORESTRY SECTOR

### Socio-economic importance of the forestry sector

8. Forests and other wooded areas perform key economic and ecological functions. Not only do they provide goods and livelihoods but they also protect soils, regulate water and absorb carbon. Forests also shelter much of the world's biodiversity. FAO's most recent review on the overall status of forest resources, the Global Forest Resources Assessment (FRA), indicates the following data:

- Nearly 4 billion hectares of the world's land is forest, covering about 30 percent of the world's land area.
- 50 percent of the area of forest has wood production designated as one of the management objectives.
- Only some 5 percent of world's forests are plantations. At the same time planted forests are expanding and their contribution to global wood production is approaching 50 percent of the total.
- Production of industrial roundwood reached 1.6 billion cubic meters (2004), that is 45 percent of the global wood production.
- Forest products trade has reached a total value of US\$327 billion (2004).
- More than half of the wood biomass consumed globally, well over 80 percent in developing countries, is burned as fuel.

9. In addition, about 1.6 billion people are relying heavily on forest resources for their livelihoods. According to a study by the World Bank, 60 million people living in the rain forests of Latin America, Southeast Asia and West Africa depend heavily on forests; 350 million people living in, or next to, dense forests rely on them for subsistence or income; and 1.2 billion people in developing countries use trees on farms to generate food and cash.

10. There is today a worrying loss of forest habitats and ecosystems, at a 0.2 percent annual rate, through deforestation due to changes in land use. In addition, extensive tracts of existing forests are being degraded to various degrees through damage from pests, diseases, fire, atmospheric pollution, climatic variation and fluctuations, and through lack of management or non-sustainable forest management practices, which prevail in many countries.

11. Table 1 presents characteristics of main types of forest and tree resources management.

**Table 1: Main types of forest and tree resources management**

Naturally regenerated forests			Planted forests			Trees outside forests
Primary	Modified natural	Semi-natural		Plantations		
		Assisted natural regeneration	Planted component	Productive	Protective	
Forests of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed	Forests of naturally regenerated native species where there are clearly visible indications of human activities	Silvicultural practices by intensive management: <ul style="list-style-type: none"> <li>• Weeding</li> <li>• Fertilizing</li> <li>• Thinning</li> <li>• Selective logging</li> </ul>	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

12. Forest tree species are generally characterised by a high level of intra-specific variation. The degree of management intensity of genetic resources varies very much from primary natural forests to productive industrial plantations. It tends to vary from intensive genetic selection and breeding in industrial plantation species, to more extensive practices, such as identification of species and provenances, which provide some improved levels of goods and services without major modifications of the external environment.

#### **Status of forest genetic resources**

13. Forest genetic resources, genetic variation in trees of potential or present benefit to humans, refer to variation of genetic origin (DNA) and variation of genes at different levels: between species, between populations within species and between individuals within populations.

14. They are a component of forest biological diversity, which denotes the variability among forest living organisms and the ecological processes of which they are part. The overall goal in the management of this diversity is to help ensure that it is conserved, managed and sustainably utilized in support of local and national development.

15. Diversity includes variation at landscape, ecosystem, species, population, individual, and molecular levels of biotic organization. As these levels are inter-related, a comprehensive approach to conservation is necessary. At the same time, it is essential to specify clearly the level or levels targeted by specific management action (including non-intervention), as it is possible to conserve an ecosystem and still lose specific species, or to conserve a species and lose genetically distinct populations, genes or valuable gene complexes.

16. Many values derive from forest ecosystems as well as from their components. They include the provision of goods and services and the provision of environmental and life-support values. These latter values are typically associated with the ecosystem and population levels; while goods are usually provided at the species or population levels; and evolution and adaptation to change, are dependent on genetic and molecular variation.

17. Sustainable use of forest genetic resources requires dynamic management. Neither natural ecosystems nor breeding programmes are static. Genetic conservation must not be aimed at freezing a given state, which would imply an arbitrary fixation of dynamically evolving, living systems.

18. A variety of management tactics can be used to affect the structure and levels of forest biological diversity and the genetic resources they contain, from the establishment of strictly protected areas and nature reserves, through management for the production of wood and non-wood products or ecosystem services, to intensive tree breeding.
19. Conservation and management of forest genetic diversity can imply: (i) the conservation of genetic resources in protected areas, (ii) the incorporation of genetic considerations in forest resource management for productive or protective goals, and (iii) the incorporation of such considerations in tree improvement strategies.
20. Conservation of forest genetic resources is therefore a cross-cutting activity. The conservation and use of forest genetic resources requires that they be managed, protected, and developed. The key to success lies in the development of programmes which harmonize conservation and sustainable use of forest genetic resources within a mosaic of land use options.
21. Enhanced management of forest genetic resources can bring substantial benefits for sustainable forest development. For example the possibility of having access to a broad base of genetic material gives communities opportunity to utilize well adapted, alternative species at a time of climate change. Choice of right species and seed source combined with proper silviculture can improve productivity by well over 20%.<sup>3</sup>
22. On going forest degradation, as noted above, can be expected to have deeply negative effects on forest genetic resources in affected areas. Even in countries in which forests are being regularly conserved in protected areas or managed for productive or protective purposes, there is still a general lack of consideration of genetic issues in such management.
23. There is a need to greatly intensify awareness, information, know-how and the implementation of conservation and management strategies for forest genetic resources. Delays in action will severely and negatively affect forest biological diversity and the continued availability of forest genetic resources, which would hinder options to sustainably manage forests in the future. As underscored by Forest Gene Panel there is a “great urgency to strengthen efforts to manage forest genetic resources to adapt to and mitigate global climate change, and to address world wide deforestation and potential great losses from invasive pests. Without an adequate knowledge and reserve of well-adapted tree species and populations, countries are in danger of not being able to meet their internal demand for wood, energy, food, fodder, environmental and ecosystem services, all of which underpin overall sustainable development and support the achievement of Millennium Development Goals 1 and 7”.<sup>4</sup>

### **III. THE NEED FOR A SOUND INFORMATION BASIS TO UNDERPIN PRIORITY SETTING FOR FOREST GENETIC RESOURCES**

24. Forest genetic resources management can be effective only if treated as an integral element of overall sustainable forest development. As stressed above, conservation concerns should be integrated into broader national and local development programmes, such as national forest programmes, rural development plans and poverty reduction strategies, which promote cooperation among sectors.
25. Lack of information limits the capacity of countries and the international community to integrate forest genetic resources management into overall cross-cutting policies. It is recognized that reliable general data on forest status and trends is of great importance to the efficient management of forest genetic resources. Forest-related information, however, largely refers to forest resources in general rather than to forest diversity and variation. Availability of specific

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<sup>3</sup> See CGRFA-11/07/Inf.9, *Report of the Fourteenth Session of the FAO Panel of Experts on Forest Gene Resources*.

<sup>4</sup> *Ibid.*

information on status and trends in forest genetic resources is today woefully inadequate, although some progress has been done at national and sub-regional levels in the last decade.

26. Even if progress has been done in recent times, information presently available for forest genetic resources is still scattered and incomplete. Some relevant information can be found in the general evaluations made on forest resources, such as inventories for national forest programmes and, at international level on the Global Forest Resource Assessment. Specific information for a number of countries and sub-regions is in reports of the Forest Gene Panel and in the reports of the regional, sub-regional and eco-regional workshops on forest genetic resources supported by FAO and international partners during the past ten years. This information is contained now in REFORGEN, FAO's worldwide information system on forest genetic resources. Other information is found as part of reporting to the CBD.

27. In conclusion, at global level there are a number of serious information gaps in relation to forest genetic resources management:

- An accurate global picture on the status and trends of forest genetic resources is still missing.
- A comprehensive assessment on the national and international capacities to manage these unique resources is not yet available.
- An accepted methodology has still not been developed for directly linking general information on changes in forests to the impacts that such changes may have on biological diversity, species, provenances, populations and genes; and,
- Agreement has not been reached on the validity of indicators for measuring and monitoring changes in diversity and variation at the levels mentioned above.

28. This lack of information is limiting the capacity of decision-making and action at international and institutional levels.

#### **IV. MAPPING THE INTERNATIONAL ENVIRONMENT WITH RESPECT TO FOREST GENETIC RESOURCES**

29. Growing environmental awareness at all levels of society and acknowledgement by decision makers has lead over the last decades to the development and adoption of a number of international conventions and legally and non-legally binding policy instruments, for which the decisions taken at UNCED provided an important, overall framework.

30. Many international agreements have directly or indirectly affected policies and action in sustainable forest management, including the conservation of forest biological diversity and the management of forest genetic resources. These include, notably, the International Treaty on Genetic Resources for Food and Agriculture; the Convention on Biological Diversity (CBD); The Framework Convention on Climate Change; the UN Convention to combat desertification; and the Forest Principles. More recently, the UN Millennium Development Goals, which set time-bound and measurable targets which should be reached by 2015, stressed the need to ensure environmental sustainability as an integral part of development and human well-being (MDG-7). MDG-1, related to the eradication of extreme poverty and hunger, is also closely linked to sustainable use of the environment, and the role of forest ecosystems in reaching this goal is pronounced.

31. The number of international organizations and forums concerned with forests and forest biological diversity has greatly increased in the last two decades.<sup>5</sup> While a large number of international institutions are involved in forest biological diversity, they generally cover different

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<sup>5</sup> See Background Study Paper 36. *Technical review of the status and trends of the world's forest genetic resources.*

aspects of work, and their mandates and roles are, to some degree, complementary. Collaboration needs however to be further strengthened, based on the overall objectives and comparative advantages of each institution. For example, integration of the 130 activities in the CBD expanded Programme of Work on Forest Biological Diversity with the more than 270 proposals for action of the Intergovernmental Panel on Forests/Intergovernmental Forum on Forests constitutes a major challenge. The Collaborative Partnership on Forests (CPF), which includes 14 major forest-related international organizations, institutions and convention secretariats, is an excellent example of constructive, technical and policy level dialogue and joint programming. The CPF is chaired by FAO.

32. FAO, according to its mandate, provides support to member countries and contributes to international action in programmes which deal with diversity found in ecosystems and their component sectors, and which support food security, rural development, environmental stability and economic and social advancement. While FAO supports both utility and non-utility objectives, the primary focus of related work in the forestry sector is thus the conservation of diversity through the management and sustainable use of forest ecosystems and forest tree and shrub genetic resources of actual or potential value for human well-being .

33. FAO is in a unique position to assist and support countries to safeguard and wisely utilize their forest genetic resources, in partnership with other institutions, agencies and mechanisms. The Forestry Department, in collaboration with national governments and institutions, regularly reports on status and trends of the world's forests through the global forest resources assessment, and its forest genetic resources programme is guided by a renowned, high-level Panel of Experts, active since 1968. Within the framework of its forest genetic resources programme, FAO has developed a global data base to facilitate access to information and to recommend proper seed sources for reforestation and tree planting (REFORGEN), and has a well-established network of collaborating national and regional institutions throughout the world. It is closely involved in supporting countries in the implementation of sustainable forest management and in the monitoring of the effects of forest management interventions on sustainability through the application of criteria and indicators; and it helps support action in protected area management and through networks operating within the framework of many of its Regional Forestry Commissions. FAO thus covers all the dimensions of conservation of forest biological diversity and the management of forest genetic resources in a holistic, balanced manner.

34. The comparative advantage of FAO is further strengthened by the fact that conservation of forest genetic resources implies the application of varying intensities of management within a mosaic of land use options, which include consideration for agriculture, animal husbandry, fisheries and forestry development. FAO's mandate and structure encompass a wide array of programmes that seek to maximize the total utility of biodiversity for food and agriculture in the widest sense, including all of these sectors, and streamlining action across all sectors of agricultural development.

35. FAO's future work on forest genetic resources can therefore strengthen cooperation at the international level and help draw attention to conservation issues of global concern. It can also streamline action among countries and regions to wisely manage and sustainably utilize forest genetic resources for present-day and future benefit. Finally, in pursuing effective international action, FAO can also help ease the international reporting burden of countries, and facilitate the provision of information which is comparable between countries and regions, and consistent across sectors.



## V. PROPOSALS FOR INITIATING COVERAGE OF FORESTRY GENETIC RESOURCES IN THE MYPOW AND TIMETABLE

### **Continued support to country-driven action in the conservation and management of forest genetic resources and networking**

36. Forest genetic resources activities within FAO are an integral part of FAO Forestry Programme, and contribute to a wide range of activities in support to countries actions for sustainable forest development. FAO will continue to support country-driven action in the conservation and management of forest genetic resources and the incorporation of forest genetic resources activities and considerations into larger frameworks such as national forest programmes, overall rural development programmes, poverty reduction strategies and action taken by countries towards meeting the Millennium Development Goals. It will also support the further development of forest genetic resources networks, which have proven to be an efficient cooperation mechanism especially at regional level. Progress will continue to be reported to the Commission at adequate times.

### **Strengthening information mechanisms, including preparation of The State of the World's Forest Genetic Resources**

#### *Support to countries in their assessment of the status and trends of forest genetic resources*

37. At its Thirteen Session (1997), COFO stressed the importance to further strengthen FAO's forest genetic resources programme and in particular requested FAO to support interested countries and regions to convene action-oriented, country-driven forest genetic workshops to review status, trends, needs and gaps, with a view to harmonizing and intensifying forest genetic resources activities at regional, sub-regional and eco-regional levels.

38. Over the past 10 years, FAO and international partners have supported such workshops in seven sub-regions. The aim of the workshops has been to elaborate a flexible framework for national action which is valid at the regional level, and which is as consistent among regions as possible. This was facilitated by agreed-upon national and regional reporting formats, concepts and terms, and common mechanisms for species priority setting for action. The regional, sub-regional and eco-regional action plans on forest genetic resources which were developed in the workshops continue to serve as dynamic tools underpinning action by countries concerned. FAO's information system REFORGEN is the result of gathering, through the workshops, this country-driven information on forest genetic resources status, trends, priorities and threats. Throughout this period, the Forest Gene Panel has overseen the process.

39. In the short and medium term, priority should be given by FAO, and by partner organizations, to continue and intensify support to these country-driven, action-oriented workshops. This process should gradually expand their coverage, ensuring regular verification and up-dating of available information and, most importantly, implementation of recommended action at country and regional levels, ensuring inter-sectorial links and broad stakeholder involvement.

#### *Preparation of a State of the World's Forest Genetic Resources*

40. There is still however lack of a consolidated global picture on the status and trends of forest genetic resources, and the lack of estimators of the rate of genetic diversity loss, which are limiting factors in decision-making at international and institutional levels.

41. The Forest Gene Panel has been already discussing the possibility of developing a global assessment for forest genetic resources at its last two sessions. At its Fourteenth Session, the Forest Gene Panel recommended that top priority should be given to the preparation of the first country-driven *State of the World's Forest Genetic Resources*, in connection with Global Forest

Resource Assessment and the strengthening of REFORGEN and other relevant FAO's information systems.<sup>6</sup> As stressed by the Forest Gene Panel, the preparation of *The State of the World's Forest Genetic Resources* could provide unique opportunities to:

- Further clarify the contribution of forest genetic resources to the achievement of Millennium Development Goals 1 and 7.
- Strengthen and promote collaboration and cooperation among Member Countries and international organizations involved in the management of forest genetic resources.
- Strengthen cooperation mechanisms between the Forest Gene Panel and the Commission in a practical way, with COFO also fully informed throughout the process.

42. The preparation of the *State of the World's Forest Genetic Resources* will not start from a vacuum. It will rely on a number of already existing national reports on forest genetic resources which are the result ten years of support by FAO and partner organizations to Member countries, including through above mentioned workshops at regional, sub-regional and eco-regional levels.<sup>7</sup>

43. As an outcome of this process 71 national reports<sup>8</sup> have so far been produced and a number of country studies could also be used as reliable information sources. Guidelines for national reporting, which were endorsed by the Forest Gene Panel, are already available. The regional synthesis reports prepared with the results and recommendations of the workshops also provide useful policy information. Together with the information gathered by some regional forest genetic resources networks coordinated by Bioversity International (European Forest Genetic Resources Network, Sub-Saharan Africa Forest Genetic Resources Network, Asia-Pacific Forest Genetic Resources Network and others) these national and regional reports are presently the only available sources of reliable information on intra-specific genetic diversity in forest trees and shrubs. It would be important to use this information from countries at the global level before it becomes obsolete.

44. In assessing trends of forest genetic resources management, the Forest Gene Panel highlighted the importance of examining a number of key issues, including: climate change; afforestation; bioenergy; poverty reduction; forestry products supply enhancement; new and traditional methods and technologies in genetic conservation and tree breeding. Through the process of preparation of *The State of the World's Forest Genetic Resources*, thematic studies could be developed to explore a number of selected key and emerging issues. The Forest Gene Panel could provide technical and scientific advice for the preparation of these thematic studies.<sup>9</sup> A number of international scientific conferences or workshops could also be envisaged.

45. In discussing the possible scope of the *State of the World's Forest Genetic Resources*, the Forest Gene Panel recommended that it should include forest species of socio-economic importance, including both major plantation species and those species which have important for local livelihoods. While in the case of major plantation species a comprehensive assessment of the status and trends of genetic diversity will be pursued, a synthesis analysis will be produced for those species important for local livelihoods.

46. A number of activities could be envisaged in preparation of the *State of the World's Forest Genetic Resources*. FAO could first prepare a review which takes stock of existing information, and analyses if it is relevant and up to date, and identifying the main gaps in coverage. This review could be presented to the Forest Gene Panel which make recommendations

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<sup>6</sup> See CGRFA-11/07/Inf.9, *Report of the Fourteenth Session of the FAO Panel of Experts on Forest Gene Resources*.

<sup>7</sup> See Background Study Paper 36. *Technical review of the status and trends of the world's forest genetic resources*.

<sup>8</sup> These National Reports contain including information on: national legislation, institutional set-up, general environmental conditions, status and threats to forest genetic resources, on-going and planned FGR activities, lists of species for priority action, organizations and bibliographic references.

on future work needed, and would also will identify possible ways and means to overcome the gaps identified, including with the identification of possible partners where relevant. The review and recommendations will then be submitted to the Twelfth Session of the Commission.

47. The outline of *The State of the World's Forest Genetic Resources* would also need to be agreed. In this process, it would be important to refine the scope of the *State of the World's Forest Genetic Resources*, in order to understand the information needed for major plantation species and for those important for local livelihoods. The Forest Gene Panel could make a proposal of an outline and scope for *The State of the World's Forest Genetic Resources* which would then would be agreed at the Twelfth Session of the Commission. In discussing the outline, the Forest Gene Panel could also draw a list of key and emerging issues to be examined through thematic studies or scientific seminars.

48. At its Twelfth Session, the Commission will therefore have an opportunity to review the key issues in forest genetic resources for *The State of the World's Forest Genetic Resources*. The *State of the World's Forest Genetic Resources* could be finalized by the Fourteenth Session of the Commission. Arrangements could be made for a joint endorsement by the Commission and COFO, possibly through a high level meeting.

#### *Indicators of forest genetic diversity*

49. As part of the *State of the World's Forest Genetic Resources* preparation, the Forest Gene Panel also recommended the development of indicators that can be used to help monitor changes in types and levels of forest biological diversity and forest genetic diversity as a means for their improved management. This would be another element of the work to strengthen FAO's information systems on genetic resources. These indicators should be practical, scientifically sound, technically applicable and economically feasible indicators for assessing and monitoring the status in forest genetic resources. The aim will be that these indicators should complement, and at the same time be fully integrated with, those being developed and implemented in other fields and sectors, notably criteria and indicators used in the definition and monitoring of sustainable forest management.

50. The draft MYPOW includes provision that the Commission, at its Twelfth Session, would review targets and indicators for biodiversity for food and agriculture, as a contribution to the 2010 biodiversity target.

#### *Global Forest Resources Assessment: Mainstreaming information on forest genetic resources*

51. Finally, there is an opportunity to mainstream information about forest genetic resources, in a step-by-step manner, into the Global Forest Resources Assessment. Close links should be forged with this programme in relation to monitoring of status and trends of forest biological diversity, especially at the levels of ecosystem and species. This would reduce the reporting burden on Member Countries by integrating reporting on forest genetic resources into overall reporting on forest resource management. The Global Forest Resources Assessment is published every five years, being 2010 the next date of release.

#### **Priority setting**

52. As noted by the Forest Gene Panel, the preparation of the *State of the World's Forest Genetic Resources* will provide the basis for priority setting in the medium term. This could be done at two levels, which complement each other: the definition of priority species and the development of a holistic framework for the conservation and sustainable management of forest genetic resources.

*Identifying priority species*

53. Estimates of numbers of tree species vary from 80 000 to 100 000, and many of these provide goods and services to countries and local communities. To allow forest genetic resources programmes to be adequately focused and make optimal use of scarce resources, there is a need to develop and agree upon common or compatible methodologies for the determination of priority species targeted for conservation at local, national, regional and international levels. Information analysed as a basis for setting priorities includes: value and attributes of species; management and occurrence; review of operational needs; levels of security and threats. The identification of priority species is an essential activity in the elaboration of national strategies for forest genetic resources, including for establishing provenance lists and of action plans in order to protect the genetic resources of the most threatened forest ecosystems.

54. The Forest Gene Panel has throughout time defined a list of priority species which has seen an exponential increase over the years in the number of species and provenances listed in need of attention. In the first meetings of the Panel in 1968 and 1969, some half a dozen species were prioritized for international action and support; in the 6th Session of the Panel, in 1985, the list of priority species had grown to more than 800 species. This led to the need to re-think basic principles for including species on the Panel priority list, and to further develop the methodologies for priority setting which are currently being used.

55. FAO should continue providing support to Member countries in their identification of national priority species lists. It should also strengthen its support country-driven priority-setting at regional and global level, taking into account common interests and commonality of priority species and action required, including possibilities to assign regional and sub-regional lead organizations for given species or activities. The Forest Gene Panel should continue its provision of technical and scientific advice in the further development of lists of priority species, informing the Commission of progress made. The Commission may decide to establish in the medium and long term, a mechanism to support efforts of developing countries in the overall management of their priority species. Lists of priority species, based on a regional, country-driven process will be an element of *The State of the World' Forest Genetic Resources*, to be finalized by the Fourteenth Session of the Commission.

*A holistic framework for the conservation and management of forest genetic resources at global level*

56. The international action on forest genetic resources in general, including the Forest Gene Panel, has shifted its main emphasis from a narrow perspective on collection and seed exchange to a more holistic scheme of genetic resources management, in which genetic conservation and use of forest tree and shrub genetic resources are seen as part of comprehensive, sustainable natural resource management strategies.

57. FAO's priority setting for forest genetic resources has therefore evolved over the past decades in response to emerging needs and priorities of member countries and the international community. It has shifted from concentrating in defining priority species to more a comprehensive strategy, which touches upon the various actions needed to conserve and sustainably use forest genetic resources, including seed and germplasm exchange. A first Global Plan of Action in forest tree and shrub genetic resources was elaborated in 1975 within the framework of the Panel and constituted an informal framework to harmonize and coordinate action at international level for a number of years. Forest genetic resources were not included in the Leipzig Global Plan of Action on Plant Genetic Resources for Food and Agriculture in 1996, so there is presently no formally agreed-upon global plan in this field.

58. The CBD expanded programme of work on forest biological diversity, calls for the development of a holistic framework for the conservation and management of forest genetic resources at global level, as well as at sub-regional and national levels. The development of a

global framework through the MYPOW could provide an avenue to strengthen cooperation with the CBD, as requested by the Commission. Such global framework could provide templates for national and sub-regional policy formulation. The Commission may therefore plan for a decision on such framework at the time of its review of key issues of forest genetic resources for *The State of the World's Forest Genetic Resources*, at its Twelfth Session.

### Conclusions

59. The Commission is moving towards implementation of its full mandate, including forest genetic resources. In this field, the Commission has benefited from the advice of the Panel of Experts on Forest Gene Resources which, in addition to reporting to the Committee on Forestry (COFO) has, over the years, regularly provided information and supported the Commission in its areas of expertise.

60. The management of forest genetic resources is an area in which FAO has had historically expertise and comparative advantages. FAO has built throughout time a wide set of partnerships in this field. Together with partners progress has been done in the last decade to assess the status and trends of forest genetic resources at national level. The proposed multi-year programme of work on forest genetic resources for the Commission builds on previous work done. FAO would need to be strengthened to carry on the future work programme, through adequate extra-budgetary financial resources. A detailed budget will be available to the Commission at its Twelfth Session.

61. In order to carry out the programme on forest genetic resources, the availability of sector-specific expertise in forestry will continue to be important. The Panel of Experts on Forest Genetic Resources should continue to provide technical and scientific guidance and support to member countries and the international community within its area of competence. Within FAO, strong links and regular feedback between the Panel of Experts on Forest Gene Resources, the Commission and other relevant policy-making bodies should be assured including also, notably, COFO and FAO's Regional Committees and Regional Forestry Commissions.

62. The proposals made for initiating coverage of forest genetic resources in the MYPOW, establish a practical way to strengthen cooperation between the Commission and the Forest Gene Panel, and provide also for involvement by COFO. These proposals are also aimed to strengthening cooperation with the CBD, as decided by the Commission in requesting its MYPOW, and in particular to support the implementation of its expanded programme of work on forest biological diversity.

### VI. ADVICE SOUGHT FROM THE COMMISSION

63. Advice from the Commission is sought on the elements of the MYPOW, the priorities, timetable and modalities detailed herein to implement the elements.

64. **On general matters**, the Commission is requested to:

- emphasize the importance of FAO's work on forest genetic resources, including its comparative advantages to carry on such work in the future;
- recommend that FAO, in collaboration with partners, lead a process to improve the management of forest genetic resources, within the context of the Commission's MYPOW;
- inform COFO of its decisions, invite its advice and cooperation in this work, and request COFO to help mobilize external funds as required;
- underscore the important role that the Panel of Experts on Forest Gene Resources has played and will continue to play in the field of forest genetic resources, and welcome the

opportunity of strengthening mutual and practical cooperation with it through the MYPOW;

- request donors to provide extra-budgetary resources in a sustained manner to support this work, including making available the necessary human resources.

65. **In relation to FAO's support to country-driven action in the conservation and management of forest genetic resources and networking**, the Commission may wish to request FAO to continue providing and strengthen support to developing countries and to the development of networks.

66. **In relation to the strengthening of information mechanisms, including preparation of *The State of the World's Forest Genetic Resources***, the Commission is requested to:

- confirm this as a priority to begin immediately;
- request the Forestry Department to provide a document on the proposed process for the preparation of *The State of the World's Forest Genetic Resources* at its Twelfth Session. Such document will: review existing information and identify gaps and possible partners; propose an outline and scope, including need for a thematic studies; describe the timeline for its preparation;
- decide to endorse *The State of the World's Forest Genetic Resources* at its Fourteenth Session;
- invite COFO, in due course, to jointly endorse *The State of the World Forest Genetic Resources*, possibly through a high level meeting;
- recommend FAO to continue strengthening its information systems of relevance to forest genetic resources, in particular REFORGEN, and to streamline information on forest genetic resources into the Global Forest Resource Assessment, in a step-by-step manner;
- decide to discuss forest genetic diversity indicators at its Twelfth Session;
- request FAO to give priority to supporting countries in their assessment of the status and trends of forest genetic resources, including through workshops at regional, sub-regional and eco-regional levels.

67. **In relation to priority setting**, the Commission is requested to:

- decide to define rolling country-driven regional lists of priority species as an element of *The State of the World's Forest Genetic Resources*;
- request FAO to continue supporting countries in defining their lists of priority species;
- decide, at its Twelfth Session, whether the development of a holistic framework for the conservation and management of forest genetic resources at global level should be a MYPOW element.