



Item 7 of the  
Provisional Agenda

COMMISSION ON PLANT GENETIC RESOURCES

Second Session

Rome, 16-20 March 1987

STATUS OF IN SITU CONSERVATION OF PLANT GENETIC RESOURCES

Follow-up to the recommendations of the

First Session of the Commission

Table of Contents

	<u>Paragraphs</u>
I. INTRODUCTION	1-2
II. ACTION TAKEN SINCE THE FIRST SESSION OF THE COMMISSION	3
III. SUGGESTIONS FOR FUTURE ACTION	4-5
IV. CONCLUSIONS	6-8
KEY TO ABBREVIATIONS	



## I. INTRODUCTION

1. At its First Session in March 1985, the FAO Commission on Plant Genetic Resources acknowledged the important role of in situ (on site) conservation of plant genetic resources and requested that this strategy be given due attention in the future work programme of the Commission. Recognizing that in situ conservation of species and ecosystems must be considered in the context of overall land use planning it stressed that activities in this field should meet present-day needs of local populations, while at the same time safe-guarding the conservation of the resources for future generations.

2. In line with the above observations, the Commission recommended that action be strengthened on in situ conservation, with special emphasis on raising of awareness; dissemination of information; training and research. It further requested FAO to place increased emphasis on assistance to developing countries in the formulation and execution of viable projects in in situ conservation and in the generation of funding for such projects. In this work, due attention should be given not only to the in situ conservation of crop relatives and economically important forest species, but also to other plants providing important products, e.g. fruits, fodder, medicines and environmental stabilization.

## II. ACTION TAKEN SINCE THE FIRST SESSION OF THE COMMISSION

3. In response to the recommendations made by the Commission, actions taken by FAO and other international organizations in cooperation with national institutes include the following <sup>1/</sup>:

- (i) Preparation of a practical booklet on in situ conservation of plant genetic resources in collaboration with the other members of the Ecosystems Conservation Group (Unesco, UNEP, IUCN), aimed at decision-makers and the informed public. The booklet (scheduled for publication in 1987), relies heavily on case studies on status and on-going activities in in situ conservation, solicited from seven institutes or individual scientists <sup>2/</sup>. In addition to this booklet dealing with all plant species, IBPGR/IUCN are preparing an information leaflet focusing on in situ conservation of wild crop relatives.
- (ii) Preparation and elaboration of FAO/UNEP Guidelines on management methodologies in in situ conservation of inter and intraspecific genetic variation of woody species, with particular reference to the tropics; and assistance in the establishment of pilot activities in four countries (Cameroon, Malaysia, Peru, P.D.R. Yemen). These pilot projects focus on a number of important plant species identified by the countries as being of actual or potential socio-economic value; and pay due attention to both international and national/local priorities.
- (iii) Genecological/ecogeographic surveys in a number of species with a view to elaborating biologically sound conservation programmes.' Such surveys include an IUCN/IBPGR/WWF project on wild mango in Indonesia (Kalimantan) with an extension of the survey by WWF/Malaysia into Malaysia (Sabah and Sarawak); an IBPGR/Unesco survey of Prunus species in Europe; surveys on Acacia and Prosopis species in South Asia, the Near East, Africa and Latin America (FAO in collaboration with national institutes in India, Pakistan, P.D.R. Yemen, Sudan, Senegal, Mexico, Peru and Chile); surveys on karite (Butyrospermum parkii) and nere (Parkia bioglobosa) in Burkina Faso and Hippophaë spp. in China (FAO in collaboration with national institutes).

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<sup>1/</sup> See page 5 for Key to Abbreviations

<sup>2/</sup> The case studies include the following: Argentina: forage legumes; Brazil: natural woody vegetation; IRRI, Philippines: rice; Mauritius: indigenous endemic flora; Mexico: teosinte; Sri Lanka: medicinal plants; Zambia: Zambesi redwood (Zambian teak).

- (iv) Initiation of FAO and FAO/UNEP pilot research projects for determining variation, breeding systems, phenology and management requirements of a number of tropical species in Brazil, Cameroon, Malaysia and Peru. Findings from these projects will be used as a basis for sound recommendations on in situ conservation of the species studied as well as other, biologically similar species both within and outside protected areas; and their sustained utilization for the benefit of present-day and future generations.
- (v) Strengthening the international network of protected areas, through the initiation of an FAO/UNEP Regional Project for Latin America, which supports the establishment and management of protected areas and the in situ conservation of genetic resources, including the organization of a workshop in this subject in Peru in 1987. Promotion and expansion of the Unesco Biosphere Reserve Network.
- (vi) Elaboration by FAO of project proposals on conservation and wise utilization of genetic resources of woody species in the Sahelian and North Sudanian zones of Africa; and in South/South-East Asia (field activities to commence in 1987).
- (vii) Elaboration, dissemination and initiation of FAO's Tropical Forestry Action Plan, a conceptual framework for strengthening and harmonizing international cooperation for conservation, development and sustained use of forests and trees. The TFAP, which has been widely adopted by tropical countries, international organizations and the international donor community, includes, as one of its five priority areas, the conservation of tropical forest ecosystems.
- (viii) Development of a short course on in situ conservation at the University of Birmingham, U.K., with IBPGR assistance.
- (ix) Dissemination of information on in situ conservation through a special issue of FAO's Newsletter "Forest Genetic Resources Information" and FAO Conservation Guide No. 9 "Operational. Manual for a Protected Area System". Continuation, by IUCN, in assisting countries to elaborate "Red Data Books" on endangered, vulnerable and rare plant species at national levels; and a Plant Sites Red Data Book (to be published in 1987), identifying sites and vegetation types for priority conservation. Publication of the FAO Data Book on Endangered Tree and Shrub Species and Provenances (mid 1987).
- (x) Holding of the 6th Session of the FAO Panel of Experts on Forest Gene Resources; and the second meeting of the Ad Hoc Working Group on in situ conservation of plant genetic resources of the Ecosystems Conservation Group, chaired by FAO. The former reviews action and priorities especially at national/regional levels; the latter aims at harmonizing activities of international organizations involved in genetic conservation activities. Within the framework of the Ad Hoc Working Group, workshops are planned for 1987 on the conservation and rational exploitation of medicinal plants (Thailand), in collaboration with WHO and possibly UNIDO; and conservation and utilization of plant genetic resources (Morocco).

### III. SUGGESTIONS FOR FUTURE ACTION

4. In line with the recommendations of the First Session of the Commission on Plant Genetic Resources (March 1985) and its Working Group (June 1986), priority action at national level. should continue to be directed towards the following issues:

- (i) identification of priority species for conservation and evaluating and mapping of intra-specific genetic diversity in them; (ii) assessment of the value of existing protected areas in genetic resource conservation and the selection and demarcation of additional conservation sites, where necessary;

(iii) action to ensure that the management of protected areas incorporates the conservation of genetic resources of target species and ecosystems, and that prevailing forest and wildland management methods are compatible with the aims of sustainable use and conservation.

5. FAO should continue to serve as a focal point in (i) determining priorities, based on information from countries and on recommendations from its Statutory Bodies; (ii) assisting countries in drawing up viable and soundly based conservation programmes, taking into account legal, technical and socio-economic aspects; (iii) stimulating collaboration between neighbouring countries and countries with similar ecological conditions; and (iv) disseminating technical information. Full use should be made of existing schemes such as FAO's Tropical Forestry Action Plan, Unesco's Biosphere Reserve Action Plan and IUCN's Bali Action Plan for promoting action in the field of genetic conservation and in generating funding.

#### IV. CONCLUSIONS

6. To be sustainable in the long term, agricultural development is dependent on the sound management of genetic resources of crop and other useful plant species, and in particular on the conservation of natural resources and their genetic wealth in dynamically evolving in situ conservation areas.

7. In situ conservation requires identification and sampling of important plant species and their management in natural stands of sufficient size, their distribution and number to maintain the genetic variation found in them. Provided adequate biological knowledge is available and applied, in situ conservation of genetic resources is compatible with the sustained production of goods and services.

8. Sane progress has been achieved over the past few years in the identification of priority species, the dissemination of information, awareness raising and coordination of work of international organizations involved in ecosystem and genetic resource conservation. However, considerably increased efforts are needed in the implementation of integrated, inter-disciplinary pilot projects at national and sub-regional levels; and in training and research.

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#### KEY TO ABBREVIATIONS

FAO	Food and Agriculture Organization of the United Nations
IBPGR	International Board for Plant Genetic Resources (a subsidiary body of CGIAR)
IUCN	International Union for the Conservation of Nature and Natural Resources
UNEP	United Nations Environment Programme
Unesco	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
WHO	World Health Organization
WWF	World Wildlife Fund