

Arab World Strategy For Plant Conservation

(A Draft Version)

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Foreword

The countries in the Arab Region have hosted the oldest civilizations in this universe and were always capable of providing food, shelter and social security for their people and inhabitants. Most traditional crops, such as, cereals, vegetables, fruits, fibres and oils are either originated or developed in the Arab world. If the international community can recognize the traditional uses of medicinal plants and their importance in old civilizations such as China and India, they can also recognize the herbal medicines and other traditional uses practiced by the Arab World, especially during the middle ages. Traditional Arab medicine alone uses about 2,000 plants

The Arab Plant Specialist Group (APSG) agrees very much with international plant conservation strategy and its objectives and agrees with the statements given for the importance of the plants to the survival of human being and other living components of the maintenance of the ecosystems as stated in the following words “Plants are a vital part of the world’s biological diversity and an essential resource for human well-being. Besides the crop plants that provide our basic food and fibres, many thousands of wild plants have great economic and cultural importance and potential, providing food, medicine, fuel, clothing and shelter for vast numbers of people throughout the world”.

The Strategy provides a framework for actions at regional, national, and local levels. A global dimension is important because it can facilitate the development of a consensus of key objectives, targets and actions and enhance collaboration and synergy at all levels. This strategy has followed the sequence of events given in the Global Plant Conservation Strategy; and the specific need for the Arab World region has been suggested to suit the need of our region in light of the international perspective. Thus this strategy has followed the same themes of objectives and targets aiming at achieving the goals in the suggested time of 2010.

Again each member country is free to select the most suitable means and methods to achieve their own targets within the framework of the strategy and to work in coordination with other member countries.

Decision VI/9.

Convention on Biological Diversity of the Conference of the Parties to the Global Strategy for Plant Conservation

The meeting of the Arab Plant Specialist Group:-

1. *Adopts* the Global Strategy for Plant Conservation, including outcome-oriented global targets for 2010, annexed to the present decision;
2. *Endorses* the strategy and would contribute to its Implementation, including adoption of the targets, in order to promote a common effort towards halting the loss of plant diversity;
3. *Emphasizes* that the targets should be viewed as a flexible framework within which national and/or regional targets may be developed, according to national priorities and capacities, and taking into account Differences in plant diversity between countries;
4. *Invites* member states and Governments to develop national targets, and, as appropriate, to incorporate them into relevant plans, programmes and initiatives, including national biodiversity strategies and action plans;
5. *Stresses* the potential role of the strategy in contributing to poverty alleviation and sustainable development;
6. *Emphasizes* the need for capacity-building, especially if we know that all the region falls within the classification of developing countries, and countries with economies in transition, in order to enable them to implement the strategy;
7. *Invites* Governments, the financial mechanism, and funding organizations to provide adequate and timely support to the implementation of the strategy,
8. *Decides* to review, at its eighth and tenth meetings, the progress made in reaching the global targets, and provides additional guidance in light of those reviews, including, as necessary, refinement of the targets;
9. *Decides* to consider the APSG Strategy for Plant Conservation as a pilot approach for the use of outcome targets under the Convention within the context of the Strategic Plan and, also consider the wider application of this approach to other areas under the Convention, including other taxonomic groups;
10. *Requests* the Subsidiary Body on Scientific, Technical and Technological Advice:
 - (a) To take the targets into consideration in its periodic reviews of the thematic and crosscutting programmes of work of the Convention;
 - (b) To develop ways and means, within the Convention's thematic and cross-cutting programmes of work, for promoting implementation of the APSG strategy for plant conservation, and for monitoring and assessing progress; and to report to the Conference of the Parties at its seventh meeting;
11. *Welcomes* the contribution of the "Gran Canaria Group" in developing the Global Strategy, and invites the organizations involved, and other relevant organizations, in collaboration with the Executive Secretary, to contribute to the further development, implementation and monitoring of the Strategy.

Arab Strategy for Plant Conservation

As many as one-third of the plants of Arab countries are in danger of extinction due to population growth, deforestation, habitat loss, destructive development, over consumption of resources, the spread of alien invasive species and agricultural expansion. Further loss of plant diversity is predicted through genetic erosion and narrowing of the genetic basis of many species.

APSG Strategy for Plant Conservation

A. Objectives

The Arab Plant Specialist Group adopts the objectives of the Global Plant Conservation Strategy as they are given as follows.

1. The ultimate and long-term objective of the Arab Strategy for Plant Conservation is to halt the current and continuing loss of plant diversity.
2. The Strategy will provide a framework to facilitate harmony between existing initiatives aimed at plant conservation, to identify gaps where new initiatives are required, and to promote mobilization of the necessary resources.
3. The Strategy will be a tool to enhance the ecosystem approach to the conservation and sustainable use of biodiversity and focus on the vital role of plants in the structure and functioning of ecological systems and assure provision of the goods and services such systems provide.
4. The Strategy will also:
 - i. Provide a pilot exercise under the Convention for the setting of targets that relate to ultimate objectives of the Convention;
 - ii. Act as a means to develop and implement the thematic programmes of work of the Convention.
5. Within the ultimate and long-term objective, a number of sub-objectives can be identified as follows:

(a) Understanding and documenting plant diversity:

1. Document the plant diversity of the Arab World, including its use and its distribution, in protected areas and in *ex situ* collections;
2. Monitor the status and trends in Arab Region World plant diversity and its conservation, and threats to plant diversity, and identify plant species, plant communities, and associated habitats and ecosystems, at risk, including consideration of “red lists”;
3. Develop an integrated, information system to manage and make accessible information on plant diversity;

4. Promote research on the genetic diversity, systematics, taxonomy, ecology and conservation biology of plants and plant communities, and associated habitats and ecosystems, and on social, cultural and economic factors that impact biodiversity, so that plant diversity, both in the wild and in the context of human activities, can be well understood and utilized to support conservation action;

(b) Conserving plant diversity:

Improve long-term conservation, management and restoration of plant diversity, plant communities, and the associated habitats and ecosystems, *in situ* (both in more natural and in more managed environments), and, where necessary to complement *in situ* measures, *ex situ*, preferably in the country of origin. The Strategy will pay special attention to the conservation of the Arab World important areas of plant diversity, and to the conservation of plant species of direct importance to human societies;

(c) Using plant diversity sustainably:

1. Strengthen measures to control unsustainable utilization of plant resources;
2. Support the development of livelihoods based on sustainable use of plants, and promote the fair and equitable sharing of benefits arising from the use of plant diversity;

(d) Promoting education and awareness about plant diversity:

Articulate and emphasize the importance of plant diversity, the goods and services that it provides, and the need for its conservation and sustainable use, in order to mobilize necessary popular and political support for its conservation and sustainable use. This should be reflected at all levels of education from early stages of undergraduate to upper stages of postgraduate;

(e) Building capacity for the conservation of plant diversity:

1. Enhance the human resources, physical and technological infrastructure necessary, and necessary financial support for plant conservation;
2. Link and integrate actors to maximize action and potential synergies in support of plant conservation.

B. Rationale, scope and general principles

1. Plants are universally recognized as a vital part of the world's biological diversity and an essential resource for the planet. In addition to the small number of crop plants used for basic food and fibres, many thousands of wild plants have great economic and cultural importance and potential, providing food, medicine, fuel, clothing and shelter for vast numbers of people throughout the world. Plants play a key role in maintaining the planet's basic environmental balance and ecosystem stability and provide an important component of the habitats for the world's animal life. At present, a complete inventory of the plants of Arab countries have not been assembled, but it is estimated that the total number of vascular plant species may be of the order of 6,000. Of particular concern is the fact that many are in danger of extinction, threatened by habitat transformation, over-exploitation, alien invasive species, pollution and climate change. The disappearance of such vital and large amounts of biodiversity sets one of the greatest challenges for the Arab community: to halt the destruction of the plant diversity that is so

essential to meet the present and future needs of mankind. The Global Strategy for Plant Conservation is proposed to address these challenges. While the entry point for the Strategy is conservation, aspects of sustainable use and benefit-sharing are also included.

The estimated number of vascular plant species of the Arab World is almost 2.5% of the whole universe. The plants of the Arab World are very well known to have been adapted to a dry ecosystem, bearing a great group of the most important genetic resources of crop and useful plants. Many economic plant species of the world are originally found in the Arab World. Centres of origin of many species as well as important plant groups of cereals, crops, fruits, medicinal plants and other groups are found naturally in the Arab World or have been selected and propagated by the early man and civilizations of the old world of the Middle East.

2. The rationale for a strategy focusing on plants has two aspects:

- a. Plants are primary producers and provide habitat infrastructure for many ecosystems;
- b. Setting meaningful targets is feasible since scientific understanding of at least higher plants, though incomplete, is better than for most other groups.

3. Accordingly, the Strategy addresses the Plant Kingdom with focus on higher plants, and other well-described groups such as Bryophytes and Pteridophytes. The setting of measurable targets for this set of taxa is more credible than for many lower plant groups. This does not imply that these groups do not have important ecological functions, or that they are not threatened. However, effective action will be best achieved by focusing, in an initial phase at least, on achievable outcomes for known taxa. Parties may choose on a national basis to include lower taxa.

4. The Strategy applies to plant genetic diversity, plant species and communities and their associated habitats and ecosystems.

5. The Strategy would provide a framework for actions at, regional, national and local levels. A regional dimension to the Strategy is important because it can:

- a. Facilitate the development of a regional consensus of key objectives, targets and actions;
- b. Strengthen possibility of implementing necessary trans national actions (such as some recovery programmes);
- c. Optimize availability and usefulness of information;
- d. Be used to focus research on key generic issues (such as conservation methods);
- e. Allow the identification of appropriate standards for plant conservation;
- f. Mobilize support for globally significant actions (globally threatened species; “centres of plant diversity” and “hot spots”); and
- g. Allow for collaboration between national, regional and international entities.

6. The Global Strategy for Plant Conservation will:

- a. Apply the Convention provisions on access and benefit-sharing, drawing as appropriate on the Bonn Guidelines for access and benefit-sharing, with a view to ensuring a fair and equitable sharing of benefits arising from the use of genetic resources, and consistent with the International Treaty on Plant Genetic Resources for Food and Agriculture;
- b. Build upon the knowledge, innovations and practices of indigenous and local communities, with the approval and involvement of the holders of such knowledge, innovations and practices, and contribute to the implementation of Article 8(j) of the Convention;

- c. Apply the ecosystem approach adopted under the Convention, recognizing the interaction of plants and plant communities, with other components of ecosystems, at all scales, and their role in ecosystem functions and processes. The ecosystem approach also implies, *inter alia*, intersectoral cooperation, decentralization of management to the lowest level appropriate, equitable distribution of benefits, and the use of adaptive management policies that can deal with uncertainties and are modified in the light of experience and changing conditions;
- d. Employ *in situ* conservation measures as the primary approach for conservation, complementing them where necessary with *ex situ* measures. The Strategy provides an opportunity to explore linkages between *in situ* and *ex situ* conservation, including in restoration programmes.
- e. Adopt a multidisciplinary approach that takes into account scientific, social and economic issues;
- f. Strengthen initiatives on national inventories.

C. Targets

1. The global targets for the year 2010 are as follows, and their terms and technical rationale are appended to the recent Strategy: The date of 2010 has been used to synchronize the Strategy with the Convention's Strategic Plan. Here the APSG is taking the main targets and selecting the needed activities that are most suitable and have priority for achieving the intended targets.

(a) Understanding and documenting plant diversity:

(i) A widely accessible working list of known plant species, as a step towards a complete Arab flora;

Terms and technical rationale

1. Preparation of a flora checklist of the known species for each member country
2. Preparation of a checklist for the Arab World Region.
3. Preparation of a database for the total number of the species at the national and regional levels.
4. Preparation of CD-ROM and printed versions
5. A pattern of species distribution at least the regional level showing the presence or absence of each species in each member state.
6. The database should be made in a way that can be accessible to international linkages

ii) A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels;

Terms and technical rationale

1. If the total number of 60,000 species at the global level is needed to be conserved, then 1/10 of that will be 6,000 species in the Arab World should be conserved, of which 3,400 species are threatened.
2. Thus a *preliminary* assessment checklist should be prepared for the previous data, further field-work will be essential for comprehensive assessment.

(iii) Development of models with protocols for plant conservation and sustainable use, based on research and practical experience;

Terms and technical rationale

1. Use of conservation traditional practices of plant conservation
2. Use of best known methods, practices and techniques for the conservation of plant diversity
3. Applying ecosystem approach
4. Balancing sustainable use with conservation
5. Applying methods of conservation priorities
6. Applying methods of the integration of *in situ* and *ex situ* conservation
7. Applying practical methods of monitoring for conservation and sustainable use.

(b) Conserving plant diversity:

(i) At least 10 per cent of each of the Arab World's ecological regions should be effectively conserved;

Terms and technical rationale

1. Aiming at conserving 10% of the total area of each country if possible
2. Increasing the representation of different ecological regions in protected areas
3. Increasing the effectiveness of protected areas
4. Future reserve should be selected based on the occurrence of a major vegetation type

(ii) Protection of 50 % of the most important areas for plant diversity assured;

Terms and technical rationale

1. Identification of most important areas of plant diversity based on the criteria of species richness, and/or uniqueness of habitats, including relict ecosystem
2. *Protection* would be *assured* through effective conservation measures, including protected areas
3. Protection of 50% of the *important plant areas* is a realistic target by the year 2010.
4. Long-term protection of all important areas should be assured.

(iii) At least 30 per cent of production lands managed consistent with the conservation of plant diversity;

Terms and technical rationale

1. Conservation of at least 30% of *production lands*, where the primary purpose is agriculture grazing, or wood production
2. Conservation of plant diversity which is an integral part of the production system itself (i.e., crop, pasture or tree species and genetic diversity)

3. Protection of other plant species in the production landscape that are unique, threatened, or of particular socio-economic value
4. Management of ecosystem by avoiding excessive release of agro-chemicals and preventing unsustainable soil erosion.
5. Integrated production methods are increasingly being applied in agriculture, including integrated pest management, conservation agriculture, and on-farm management of plant genetic resources.
6. Similarly, sustainable woodland management practices are being more broadly applied

(iv) 60 per cent of the world's threatened species conserved in situ;

Terms and technical rationale

1. 60 % of the Arab World threatened species should be effectively conserved and maintained in at least one protected area or through other *in situ* management measures.

(v) 60 per cent of threatened plant species in accessible ex situ collections, preferably in the country of origin, and 10 per cent of them included in recovery and restoration programmes;

It is estimated that currently some 30% of known threatened species are maintained in living collections while less than 2% of threatened species are included in recovery and restoration programmes. A target of 10% is recommended

Terms and technical rationale

1. At least 10% of the threatened species should be maintained in living *ex situ* collection, preferably in the country of origin.
2. It is estimated that currently less than 2% of threatened species are included in recovery and restoration programmes

(vi) 70 per cent of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated indigenous and local knowledge maintained;

Terms and technical rationale

1. 70% of the genetic diversity of a crop can be contained in a relatively small sample (generally, less than one thousand accessions). For any one species, therefore, the target is readily attainable.
2. For some 100 crops, it is expected that 20% of genetic diversity is already conserved *ex situ* in gene banks. Genetic diversity is also conserved through on farm management.
3. By working with local communities, associated indigenous and local knowledge can also be maintained.
4. Combining gene-bank, on farm, and other *in situ* approaches, the target could be reached for all crops in production, as well as major forage and tree species.
5. Other major socio-economically important species, such as medicinal plants, could be selected on a case-by-case basis, according to national priorities.
6. Through the combined actions of countries, some 2,000 or 3,000 species could be covered in all.

(vii) Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems;

Terms and technical rationale

1. The 100 invasive alien species would be selected on the basis of national priorities, also taking into account their significance at regional and global levels.
2. For many alien species, it is expected that different management plans will be required in different countries in which they threaten plants, plant communities and associated habitats and ecosystems.
3. This target would be considered as a first step towards developing management plans for all major alien species that threaten plants, plant communities and associated habitats and ecosystems.

(c) Using plant diversity sustainably:

(i) No species of wild flora endangered by international trade;

Terms and technical rationale

1. Conserve the plant species that are endangered due to the fact that they are being used in international trade. According to (CITES) strategic plan (2005) "No species of wild flora subject to unsustainable exploitation because of international trade".

(ii) 30 per cent of plant-based products derived from sources that are sustainably managed;

Terms and technical rationale

1. *Plant-based products* include food products, fibre products, ornamental, medicinal and other plants for direct use.
2. *Sources that are sustainably managed* are understood to include:
 - i. Natural or semi-natural ecosystems that are sustainably managed (by avoiding over harvesting of products, or damage to other components of the ecosystem), excepting that commercial extraction of resources from some primary forests and near-pristine ecosystems of important conservation value might be excluded.
 - ii. Sustainably managed, plantation forests and agricultural lands.
3. In both cases, sustainable management should be understood to integrate social and environmental considerations, such as the fair and equitable sharing of benefits and the participation of indigenous and local communities.
4. Indicators for progress might include:
 - i. Direct measures e.g.: products meeting relevant verified standards (such as for organic food, certified timber, and intermediate standards that codify good practices for sustainable agriculture and forestry);
 - ii. Indirect measures e.g.: products from sources considered to be sustainable, or near sustainable, on the basis of farming system analyses, taking into account the adoption of

integrated production methods. Assessment of progress will be assisted by the development of criteria and indicators of sustainable agricultural and forest management.

5. Certified organic foods and timber currently account for about 2% of production globally. For several product categories, examples exist of 10–20% of products meeting intermediate standards. Against this baseline, the target is considered to be attainable. It would be applied to each category of plant-based products, understanding that for some categories it will be more difficult to reach and more difficult to monitor progress. Implementation would require a combination of product-specific and sector wide approaches, consistent with the Convention’s programme of work on agricultural biodiversity.

(iii) The decline of plant resources, and associated indigenous and local knowledge, innovations and practices that support sustainable livelihoods, local food security and health care, halted;

“Ensure that current trends in the loss of environmental resources are effectively reversed at both global and national levels by 2015”.

Terms and technical rationale

1. Loss of plant diversity and environmental resources should be halted and declined in the Arab World by 2010 and subsequently to reverse the decline.
2. Measures to address the decline in associated indigenous and local knowledge should be implemented consistent with the Convention’s programme of work on Article 8(j) and related provisions.

(d) Promoting education and awareness about plant diversity:

(i) The importance of plant diversity and the need for its conservation incorporated into communication, educational and public –awareness programmes;

Communication, education and the raising of public awareness about the importance of plant diversity are crucial for the achievement of all the targets of the strategy.

Terms and technical rationale

1. Use of both informal and formal education at all levels, including primary, secondary and tertiary education and the raising of public awareness about the importance of plant diversity are crucial for the achievement of all the targets of the plant conservation strategy.

(e) Building capacity for the conservation of plant diversity:

(ii) The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy;

It is likely that the number of trained people working in plant conservation in Arab World will need to double by 2010.

Terms and technical rationale

1. Capacity Building at various levels is required to be able to the targets of the strategy.
2. Long term and short term training programmes are needed.
3. Capacity building should be based on national needs
4. Appropriate facilities are required at the technological, institutional and financial levels.

(iii) Networks for plant conservation activities established or strengthened at national, regional and international levels.

Terms and technical rationale

1. Networks at the national and regional levels are essential to enhance effective communication and avoid duplication of efforts and optimise allocation of resources.
2. Networks provide an essential link between on-the-ground conservation action and coordination, monitoring and policy development at all levels.

6. These targets provide a framework for policy formulation and a basis for monitoring. National targets developed within this framework may vary from country to country, according to national priorities and capacities taking into account differences in plant diversity.

D. The Strategy as a framework

1. The Strategy is not intended to be a “programme of work” analogous to existing thematic and cross-cutting programmes of work under the Convention. It does not, therefore, contain detailed activities, expected outputs, etc. Rather, the Strategy provides a framework by means of setting outcome-orientated targets these differ from the “process” targets used so far under the Convention). It is envisaged that the activities necessary to reach those targets could be developed within this framework. In many cases, activities are already under way, or envisaged in existing initiatives.

These include:

(a) Activities aimed at plant conservation within national biodiversity strategies and action plans and relevant sectoral and cross-sectoral plans, programmes and policies. In this respect, Parties and Governments may wish to report on the incorporation of the Strategy in their national plans, programmes and policies;

(b) Relevant activities under existing relevant initiatives, in particular

- i. The Strategic Plan and work of the Plants Committee of the Convention on International Trade in endangered Species of Wild Fauna and Flora (CITES);
- ii. The International Plant Protection Convention (IPPC);
- iii. The International Treaty on Plant Genetic Resources of the Food and Agriculture Organization;

- iv. The Berne Convention on the Conservation of European Wildlife and Natural Habitats;
- v. The FAO Global Plan of Action for Plant Genetic Resources for Food and Agriculture;
- vi. The Man and the Biosphere programme of the United Nations Educational, Scientific Cultural Organization (UNESCO);
- vii. The Global Strategy on Invasive Alien Species of the Global Invasive Species Programme (GISP);
- viii. The plant conservation programme of the IUCN Species Survival Commission;
- ix. The International Agenda for Botanic Gardens in Conservation;
- x. Activities of the International Association of Botanic Gardens;
- xi. The WWF-UNESCO people and plant programme,
- xii. And regional strategies such as the European Plant Conservation Strategy of the Council of Europe and Planta Europa; and

(c) Relevant activities under the programmes of work of the Convention on Biological Diversity, including those relating to agricultural biodiversity, forest biological diversity, inland water biological diversity, marine and coastal biological diversity, and dry and sub-humid lands, as well as activities involving cross-cutting issues such as access and benefit-sharing, sustainable use, indicators, alien species, the Global Taxonomy Initiative, and issues related to Article 8(j).

2. The Strategy and its 16 targets are intended to provide a framework for policy makers and public opinion and catalyse the reforms necessary to achieve plant conservation. Clear, stable, long-term targets that are adopted by the international community can help shape expectations and create the conditions in which all actors, whether Governments, the private sector, or civil society, have the confidence to develop solutions to address threats to plant diversity. For the targets to be widely understood, and appealing to public opinion, they need to be kept fairly simple and straightforward. They should be understood in a commonsensical rather than a literal way. In order that the number of targets be kept manageable, they need to focus on a set of activities that are strategic, rather than aiming to be comprehensive. Targets may be reviewed, and appropriate revised, as major new scientific evidence becomes available on important areas for plant diversity, threats to diversity, and major alien species that threaten plants, plant communities and associated habitats and ecosystems.

E. Further work required for developing and implementing the Strategy

1. Measures to implement the Strategy will need to be put in place at international, national, and subnational levels. This will include development of national targets and their incorporation into relevant plans, programmes and initiatives, including national biodiversity strategies and action plans. National targets will vary from country to country according to differences in levels of plant diversity and national priorities. Multilateral and bilateral funding agencies should consider putting in place policies and procedures to ensure that their funding activities are supportive of and do not run counter to the strategy and its targets.

2. For each target, the scope of activities may need to be clarified and sub-targets, or milestones, developed. In order to monitor progress towards achieving the targets, baseline data and a series

of indicators may need to be developed. This would draw upon relevant national and international data sets (such as national "red lists"), and make full use of the clearing-house mechanism.

3. Regional components of the Strategy might be developed, perhaps using a biogeographical approach.

4. In addition to the Parties to the Convention, the design, development and implementation of the strategy should involve a range of actors, including:

(a) International initiatives (e.g., intergovernmental organizations, United Nations agencies, multilateral aid agencies);

(b) Conservation and research organizations (including protected-area management boards, botanic gardens, gene banks, universities, research institutes, non-governmental organizations and networks of non-governmental organizations);

(c) Communities and major groups (including indigenous and local communities, farmers, women, youth);

(d) Governments (central, regional, local authorities);

(e) The private sector.

5. In order to promote implementation of the strategy and facilitate cooperation between these initiatives, the Executive Secretary will collaborate with relevant stakeholders. To ensure full participation, the actors mentioned in paragraph 19 above should reflect not only United Nations geographical regions but also biogeographical regions. This collaboration will aim at avoiding duplication of effort, promote collaboration and synergies among existing initiatives, and facilitate analysis of the status, trends, and effectiveness of different measures on the conservation and sustainable use of plant diversity. Consideration might also be given to the establishment of a flexible coordination mechanism.