

THEMATIC REPORTS ON FOREST ECOSYSTEMS

*Please provide to following details on the origin of this report*

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*Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report*

This report was prepared by the Swiss Forest Agency - which is a division of the Swiss Agency for the Environment, Forests and Landscape (SAEFL).

It takes into account all the politically important aspects and information concerning forest biological diversity in Switzerland, including:

- Forest laws and ordinances
- Strategic papers on Swiss forest policy
- Research projects
- Monitoring projects
- Management practices
- Education and training curricula
- Steering of subsidies

This report was elaborated in cooperation with the Nature and Landscape Division of SAEFL, the Swiss Federal Research Institute (WSL) and the Swiss Federal Institute of Technology (ETH) in Zurich.

There have also been contacts for advices with cantonal authorities responsible for forest protection.

**Decision IV/7 on Forest biological Diversity**

1. What is the relative priority afforded to implementation of this decision by your country?					
a) High		b) Medium	X	c) Low	
2. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	X
				d) Severely limiting	

3. Has your country assessed the status and trends of its forest biological diversity and identified options for its conservation and sustainable use? (Decision IV/7, paragraph 12)	
a) no	
b) assessment underway (please give details below)	X
c) assessment completed (please give details below)	
d) not relevant	

<b><i>If a developing country Party or a Party with economy in transition -</i></b>	
4. Has your country requested assistance through the financial mechanism for projects that promote the implementation of the focused work programme on forest biological diversity? (Decision IV/7, paragraph 7)	
a) no	
b) yes (please give details below)	

***Programme element 1: Holistic and inter-sectoral ecosystem approaches that integrate the conservation and sustainable use of biological diversity, taking account of social and cultural and economic considerations***

5. Has your country identified methodologies for enhancing the integration of forest biological diversity conservation and sustainable use into an holistic approach to sustainable forest management at the national level? (Work Programme, paragraph 13)	
a) no	
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	X
d) not applicable	
6. Has your country developed methodologies to advance the integration of traditional forest-related knowledge into sustainable forest management, in accordance with Article 8(j)? (Work Programme, paragraph 14)	
a) no	
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	
d) not applicable	X

7. Has your country promoted cooperation on the conservation and sustainable use of forest biological resources at all levels in accordance with Articles 5 and 16 of the Convention? (Work Programme, paragraph 15)	
a) no	
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	X
d) not applicable	
8. Has your country promoted the sharing of relevant technical and scientific information on networks at all levels of protected forest areas and networking modalities in all types of forest ecosystems? (Work Programme, paragraph 17)	
a) no	X
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	
d) not applicable	

**Programme element 2: Comprehensive analysis of the ways in which human activities, in particular forest-management practices, influence biological diversity and assessment of ways to minimize or mitigate negative influences**

9. Has your country promoted activities for an enhanced understanding of positive and negative human influences on forest ecosystems by land-use managers, policy makers, scientists and other relevant stakeholders ) (Work Programme, paragraph 29)	
a) minimal activity	
b) yes - limited extent (please give details below)	X
c) yes - significant extent (please give details below)	
d) not relevant	
10. Has your country promoted activities to assemble management experiences and scientific, indigenous and local information at the national and local levels to provide for the sharing of approaches and tools that lead to improved forest practices with regard to forest biological diversity? (Work Programme, paragraph 30)	
a) minimal activity	
b) yes - limited extent (please give details below)	X
c) yes - significant extent (please give details below)	
d) not relevant	
11. Has your country promoted activities with the aim of providing options to minimize or mitigate negative and to promote positive human influences on forest biological diversity? (Work Programme, paragraph 31)	
a) minimal activity	
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	X
d) not relevant	

12. Has your country promoted activities to minimize the impact of harmful alien species on forest biological diversity? (Work Programme, paragraph 32)	
a) minimal activity	X
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	
d) not relevant	
13. Has your country identified means and mechanisms to improve the identification and prioritisation of research activities related to influences of human activities, in particular forest management practices, on forest biological diversity? (Work Programme, paragraph 33)	
a) minimal activity	
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	X
d) not relevant	
14. Does your country hold research results and syntheses of reports of relevant scientific and traditional knowledge on key forest biological diversity issues and, if so, have these been disseminated as widely as possible? (Work Programme, paragraph 34)	
a) not relevant	
b) some relevant material, but not widely disseminated	
c) significant material that could be more widely disseminated (please give details below)	X
d) yes - already widely disseminated (please give details below)	
15. Has your country prepared case-studies on assessing impacts of fires and alien species on forest biological diversity and their influences on the management of forest ecosystems and savannahs? (Work Programme, paragraph 35)	
a) no - please indicate below whether this is due to a lack of available case-studies or for other reasons	
b) yes - please give below any views you may have on the usefulness of the preparation of case-studies for developing a better biological understanding of the problem and/or better management responses.	X

**Programme element 3: Methodologies necessary to advance the elaboration and implementation of criteria and indicators for forest biological diversity**

16. Has your country assessed experiences gained in national and regional processes, identifying common elements and gaps in existing initiatives and improving indicators for forest biological diversity? (Work Programme, paragraph 43)	
a) minimal activity	X
b) yes - limited assessment made (please give details below)	
c) yes - significant assessment made (please give details below)	
d) not relevant	

17. Has your country carried out taxonomic studies and inventories at the national level which provide for a basic assessment of forest biological diversity? (Work Programme, paragraph 43)	
a) minimal activity	
b) yes - limited assessment made (please give details below)	
c) yes - significant assessment made (please give details below)	X
d) not relevant	

*If you have ticked any of the boxes in questions 5 to 17 above which invite you to provide further details, please do so here.*

*(Information can include descriptions of methodologies and of activities undertaken, reasons for success or failure, outcomes and lessons learned)*

## **Decision IV/7 on Forest biological diversity:**

### **Comments**

#### **Question 3**

The National Forest Inventory of Switzerland provides data on tree diversity, structural diversity, biotope quality and the amount of dead wood. In future, it will also provide more precise information about the degree of naturalness of all forest stands.

In 2000, the Swiss Biodiversity Monitoring (BDM-CH) programme was launched. This long-term programme will show for example how the mean species diversity of forests changes over time in relation to other ecosystems.

In order to determine whether the limited number of species groups included in this programme can provide a representative picture of a larger number of taxonomic groups, the BDM-CH is being temporarily supplemented by the Rapid Biodiversity Assessment (RBA) programme, which monitors the local richness of arthropod morphospecies.

In a special project, the distribution of 10 rare tree species was mapped, and a preservation programme has been initiated.

The genetic resources preservation project assesses the genetic diversity of selected tree species and identifies measures to conserve the gene pools of these trees.

#### **Question 5**

The principle of near-natural silviculture is enshrined in the national Law on Forests. A number of articles set the framework for the protection of biological diversity over the entire forest area: 1) Silvicultural practices must make proper allowances for the conditions prevailing on the site, and for the natural fauna and flora. 2) Clear-felling is prohibited. 3) The use of environmentally hazardous substances is prohibited.

The protection of environmentally important sites is regulated by the Law on the Protection of Nature and Cultural Heritage of 1966.

In addition to these laws, special strategies and projects focus on the integration of biodiversity conservation into forest management practices. They are concerned with the conservation of the genetic resources of tree species, the enhancement of rare tree species, game-management measures, the ecological enhancement of forest margins, and national objectives for delimiting forest reserves.

The strategy for the enhancement of forest biological diversity is part of the integrated Swiss Landscape Concept.

#### **Question 7**

Cooperation is guaranteed between the forestry services at all levels (Confederation, cantons, districts and ranges). At the national level, there is close cooperation between the Swiss Forest Agency and the Nature and Landscape division of SAEFL to ensure an integrated strategy for the protection of forest biodiversity. Many projects and strategies concerning forest biodiversity have been developed in close cooperation with non-governmental organizations such as WWF and Pro Natura Switzerland.

**Question 9**

Projects of research institutes (e.g. the Swiss Federal Research Institute WSL) and campaigns by NGOs, education and training programmes, brochures produced by the Swiss Agency for the Environment, Forests and Landscape (SAEFL).

**Question 10**

There is a long tradition of near-natural silviculture respecting local conditions. Several projects have gathered local information on the distribution of rare tree species and on management practices permitting conservation and enhancement. In many cantons, efforts are being made to map and preserve old-growth stands ("woodpecker trees"). Other projects deal with the methods required for the maintenance or modelling of traditional highly dynamic cultural forest landscapes such as coppice or coppice with standards. Nature protection measures are also covered in the education and training of foresters and forestry engineers.

**Question 11**

Practical manuals exist providing information for foresters, e.g. brochures giving advice on promoting a positive human influence on forest biodiversity, especially on forest margins. Negative influences are prohibited by the forest law. Local political authorities ensure that sensitive forest species are not disturbed by walkers, sportsmen or tourists. Management practices with positive effects on forest biodiversity are supported by subsidies.

**Question 13**

Several research programmes deal with direct and indirect human influences on forest biological diversity (e.g. programmes of the Swiss Federal Research Institute WSL).

**Question 14**

Brochures, fact sheets, articles in specialist journals and workshops provide vehicles for discussion of issues in forest biology (e.g. proposals for more nature in the forests; nature protection in forests; enhancement of snail diversity in forests; enhancement of biodiversity in forest margins; how to increase the amount of dead wood in forests; enhancement of the rare tree species in forests; workshops on forest reserve policy).

**Question 15**

The expansion of alien invasive species is being studied in the forests of the southern slopes of the Alps (Canton of Ticino). In the same area, experiments have been carried out to study the impact of fires on biodiversity.

Case studies are useful in evaluating the long-term effects of alien species and fires on forest biodiversity within a specific area. However, it will probably be difficult to generalize from the results of these local studies.



**Question 16**

First steps have been taken towards such an assessment. Indicators of forest biological diversity need to be improved.

**Question 17**

Many taxonomic studies, Red Lists and inventories are available, covering nearly all the important taxonomic groups (particularly vascular plants, mammals, birds, butterflies, snails, reptiles, fungi, etc.). Extensive data are available in floristic and faunistic databases (on the taxonomy, distribution and ecology of endangered species).