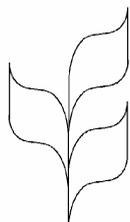




CBD



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AD HOC TECHNICAL EXPERT GROUP ON
MOUNTAIN BIODIVERSITY
Rome, Italy, 1-3 July 2003

REPORT OF THE AD HOC TECHNICAL EXPERT GROUP ON MOUNTAIN BIODIVERSITY
(Unedited version)

I. INTRODUCTION

A. Background

1. At its fourth meeting, the Conference of the Parties (COP) selected mountain biodiversity as one of the three themes for in-depth consideration at its seventh meeting (decision IV/16, annex II). In its decision VI/30, the Conference of the Parties welcomed the proposals presented by the Executive Secretary in his note on preparations for its seventh meeting (UNEP/CBD/COP/6/2) and requested that such preparations continue as outlined in the note.

2. In order to provide advice to the Conference of the Parties, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) considered mountain biological diversity as the main theme of its eighth meeting held in Montreal, Canada, from 10 to 14 March 2003. The Subsidiary Body adopted the structure of the proposed programme of work on mountain biological diversity, with its elements and goals, as specified in annex I to its recommendation VIII/1A. Due to time constraint, the Subsidiary Body could only develop an indicative list of possible actions to be taken under the different goals of the proposed programme of work and decided to complete its work at its ninth meeting to be held from 10 to 14 November 2003, prior to the seventh meeting of the Conference of the Parties.

3. To gather as much information as possible on actions to be carried out under each programme element and goal, the Subsidiary Body:

(a) Requested the Executive Secretary to consult with Parties, Governments and relevant organizations on the proposed programme of work on mountain biological diversity and prepare a list of actions for possible inclusion in the proposed programme of work; and

(b) Established an Ad Hoc Technical Expert Group on Mountain Biological Diversity with the mandate to:

- (i) Review the suggested actions contained in the proposed programme of work on mountain biological diversity as stated in annex I to SBSTTA recommendation VIII/1A;
- (ii) Review and consider for inclusion the results of the consultation referred to in (a) above in the proposed programme of work on mountain biological diversity; and
- (iii) Identify gaps in suggested actions, and include new actions whenever appropriate, under the relevant programme elements and programme goals

4. In response to SBSTTA request, the Executive Secretary has convened, with the support of the Government of Italy, a meeting of the Ad-Hoc Technical Expert Group on Mountain Biodiversity held from 1 to 3 July 2003 at the StarHotel Metropole in Rome, Italy, with the terms of reference as approved by SBSTTA at its eighth meeting. On 4 July, the Ministry of Environment and Land Protection organized a visit to the Gran Sasso e Monti della Laga National Park, a vulnerable mountainous area characterized by unique habitats and wildlife, and harsh climate.

B. Attendance

5. Members of the expert group were selected among government-nominated experts, taking into account the need for a balanced regional distribution, and to the extent possible, from those delegates that attended the eighth meeting of SBSTTA, which took place in Montreal from 10 to 14 March 2003. The meeting was attended by

(a) Government-nominated experts from Algeria, Brazil, Canada, Cuba, Czech Republic, Ecuador, France, India, Italy, Nepal, Saudi Arabia, South Africa, United Kingdom, and

(b) Observer experts from FAO, ICIMOD, IUFRO, the World Bank and from the University of Rome and the Ministry of Environment and Territory Protection in Italy. A list of participants is attached as Annex II.

ITEM 1 OPENING OF THE MEETING

6. The meeting was opened by Kalemani Jo Mulongoy, Principal Officer, Scientific, Technical and Technological Matters Division, on behalf of the Executive Secretary of the Convention on Biological Diversity at 9:30 a.m., on Tuesday 1 July 2003. In his statement, he welcomed the participants and described the importance of this ad hoc technical expert group meeting. He paid tribute to the Government of Italy for generously sponsoring and hosting this meeting and for its excellent hospitality as well as all other Governments and organizations that supported participants.

7. Federico Cinquepalmi welcomed the participants on behalf of the Italian Minister of Environment and Land Protection and of Aldo Cosentino, Director of the Nature Conservation Department. He underlined the importance of conservation of biodiversity in mountain areas and expressed the wish that the meeting would be useful and successful in fulfilling its mandate.

8. Following the welcome addresses, the representative of the Executive Secretary referring to SBSTTA recommendation VIII/1A and its annex, described [the mandate of the group, the expected output, with reference to relevant provisions of the Convention on Biological Diversity](#). He emphasized in particular the criteria for review described by SBSTTA in paragraphs 4 to 8 of Annex I of recommendation VIII/1A. Members of the Group added to the list of criteria for review that actions should be feasible, realistic and precise and agreed that COP decision VI/9 on the Global Plant Conservation Strategy had to be taken into account.

9. The [participants](#) introduced themselves and highlighted their fields of expertise and key areas of their work relevant to the theme of the meeting.

ITEM 2 ORGANIZATIONAL MATTERS

2.1. Election of officers

10. Marco Marchetti from Italy and David Jury McDonald from South Africa were elected as co-chairs of the meeting.

2.2. Adoption of the agenda

11. The Group adopted the following agenda on the basis of the provisional agenda proposed in document UNEP/CBD/AHTEG-PA/1/1 and agreed that the agenda as well as the organization of work (item 2.3 below) should be kept flexible while addressing the full breadth of its mandate:

1. Opening of the meeting.
2. Organizational matters:
 - 2.1. Election of Officers;
 - 2.2. Adoption of the agenda;
 - 2.3. Organization of work.
3. Substantive issues:
 - 3.1 Review of the structure of the programme of work adopted by SBSTTA at its eighth meeting.
 - 3.2 Review of the list of suggested actions within the structure of the programme of work.
 - 3.3 Review of the list of additional suggested actions submitted to the Secretariat of the CBD by Parties, governments, and organizations.
 - 3.4 Identification of gaps in suggested actions and inclusion of new actions whenever appropriate.
 - 3.5 Drafting of the programme of work on mountain biodiversity
4. Preparation and adoption of the report.
5. Other matters.
6. Closure of the meeting.

2.3. Organization of work

12. The AHTEG agreed to consider all issues first in plenary and to establish three working groups as needed. In the Plenary on Wednesday 11 June, the participants agreed to establish three working groups (WG) to review actions suggested by SBSTTA and the list of actions from the consultation carried out by the Executive Secretary, identify eventual gaps and propose new actions as necessary under

(a) Programme element 1 of the programme of work adopted by SBSTTA (WGI chaired by Jean-Patrick Le Duc from France);

(b) Programme element 2 of the programme of work (WG II co-chaired by Desmond Thompson from the UK and Federico Cinquepalmi from Italy);

(c) Programme element 3 of the programme of work (WG III chaired by Sophie Zeichmeister-Boltenstern, representing the International Union of Forest Research Organizations (IUFRO)).

13. The group met in plenary six times and in working groups three times.

ITEM 3 SUBSTANTIVE ISSUES

3.1 *Review of the structure of the programme of work adopted by SBSTTA at its eighth meeting*

14. The structure and components of the programme of work adopted at the eighth meeting of SBSTTA was described as mentioned in paragraph 8 above.

15. In the second plenary, Thomas Hofer representing FAO summarized the output of 2002 the International Year of the Mountains.

3.2 and 3.3. *Review of the list of suggested actions within the structure of the programme of work and*

Review of the list of additional suggested actions submitted to the Secretariat of the CBD by Parties, other Governments and organizations

16. The AHTEG reviewed the actions suggested by SBSTTA at its eighth meeting under each of the goals as well as the actions proposed through the consultation carried out by the Executive Secretary. They assessed their relevance taking into account the guidance from recommendation VIII/1A of SBSTTA and other guidance agreed upon by the group.

3.4 *Identification of gaps in suggested actions and inclusion of new actions whenever appropriate*

17. The AHTEG assessed whether the actions suggested by SBSTTA at its eighth meeting; and by Parties, other Governments and relevant organisations through the consultation undertaken by the Executive Secretary were sufficient to meet the goals of the programme of work taking into account the guidance agreed upon. The group then decided to continue its work in working groups.

3.5 *Drafting of the programme of work on mountain biodiversity*

18. In the final two sessions, the Group revised all the actions and found it useful to attach to the report a short glossary of key terms including for example a description of mountain the upland-lowland contract. The Group finalised its report including the programme of work contained in annex I.

ITEM 4 PREPARATION AND ADOPTION OF THE REPORT.

19. The report of the meeting was adopted at the afternoon plenary meeting, on Thursday 3 July 2003.

ITEM 5 OTHER MATTERS

20. Recognizing that there is no universally accepted definition of the term "mountain", some members of the AHTEG developed the following description that could serve as a basis for common understanding: "Mountains are characterised by distinctive abiotic, biotic, social, cultural, political and spiritual values. Structurally these area tend to have a combination of the following physical/ biological characteristics: elevation, high or sloping terrain, diverse climates, a relatively high composition of endemic / native species, and degrees of fragility and remoteness. Functionally, these are the water towers of the world, and can serve as a refuge for many populations. Mountain regions also tend to be inclusive of lowland communities which depend on the provision of good and services, such as water, energy, food, timber, wildlife, game, recreation and spiritual value."

21. The AHTEG took note of this description.

ITEM 6 CLOSURE OF THE MEETING

22. Ms. Patrizia De Angelis of the Italian Ministry of Environment and Land Protection thanked all the participants for their effective contribution to the success of the meeting and stressed the importance accorded by the Government of Italy to a useful programme of work on mountain biodiversity.

23. Following the customary exchange of courtesies, the AHTEG meeting was closed at 4 p.m on Thursday 3 July 2003 by the two co-Chairs.

ANNEX I: THE PROGRAMME OF WORK ON MOUNTAIN BIODIVERSITY

Programme element 1: Direct actions for conservation, sustainable use and benefit-sharing

Goal 1.1: To prevent and mitigate the negative impacts of key threats to mountain biological diversity

Actions

- 1.1.1. Reduce the impacts of inappropriate land use practices and changes in urban, forest and agricultural areas in mountain ecosystems, including buffer zones of protected areas, so as to ensure the maintenance of biodiversity, in particular ecosystem integrity.
- 1.1.2. Develop mechanisms and implement measures to reduce anthropogenic induced slope instability and to maintain and/or enhance soil stability and ecosystem integrity by way of a diverse and dense vegetation cover that will also promote soil biodiversity function.
- 1.1.3. Prevent or mitigate the negative impacts of economic development, infrastructure projects and other anthropogenically induced disturbances (mining, communication towers, electricity generation, outdoor activities, etc.) on mountain biological diversity at all levels, taking into consideration the results of environmental and social impact assessment, paying particular attention to cumulative impacts.
- 1.1.4. Develop strategies specific to mountains ecosystems to prevent the introduction of invasive alien species and, when they have been introduced, control and eradicate them and/or minimize their negative impacts on mountain biological diversity in accordance with COP decision VI/23 regarding invasive alien species.
- 1.1.5. Monitor and exchange information on the impacts of global climate change on mountain biological diversity, and identify and implement ways and means to reduce the negative impacts.
- 1.1.6. Implement measures to reduce key pressures in mountain ecosystems such as deforestation, illegal logging, inappropriate reforestation or afforestation, land degradation, disruption of water flow, and consequent losses of biological diversity (see also decision VI/22).
- 1.1.7. Identify factors responsible for the retreat of glaciers in some mountain systems and implement measures to minimize the impact of this process on biodiversity.
- 1.1.8. Identify local and long-range pollution (air, water and soil) which threaten mountain biodiversity at all levels and take appropriate measures to prevent and mitigate the impacts.

Supporting activities of the Executive Secretary:

- 1.1.9. Compile, in collaboration with relevant bodies and organizations, and disseminate through the clearing-house mechanism and other means:
 - (a) information on degraded mountain ecosystems as well as key threats to mountain biodiversity and their ecological and socio-economic impacts;
 - (b) case studies, lessons learned and best practice guidance on ways to prevent and mitigate the negative impacts of key threats to mountain biodiversity.

Goal 1.2: To protect, recover, and restore mountain biological diversity

Actions

- 1.2.1. Develop and implement programmes to restore degraded mountain ecosystems and maintain biological diversity in order to enhance the capacity of mountain ecosystems to resist and adapt to climate change, or recover from its negative impacts including *inter alia* by establishing corridors to enable vertical migration of species, ensuring minimal viable population sizes to enable genetic adaptation to changing environmental conditions.
- 1.2.2. Initiate specific activities to facilitate maintenance, protection and conservation of existing levels of endemic species, with a focus on narrowly-distributed taxa.
- 1.2.3. Identify and protect unique, fragile mountain ecosystems, biological diversity hotspots and their associated species, especially threatened species, giving priority consideration to measures aimed at strict *in-situ* protection and/or developing *ex-situ* mechanisms whenever feasible.
- 1.2.4. Develop strategies for land-use planning at landscape level using the ecosystem approach, taking into account elements of ecological connectivity and to prevent and mitigate losses of mountain biological diversity due to fragmentation and land use conversion.
- 1.2.5. Establish and strengthen adequate, effective national and regional networks of mountain protected areas, in accordance with COP decisions on protected areas, while respecting the rights and full participation of indigenous and local communities.
- 1.2.6. Identify suitable practices for enhancing ecosystem sustainability, with particular emphasis on degraded slopes.
- 1.2.7. Address issues related to human-nature conflict, especially with regard to coexistence with predators.
- 1.2.8. Examine the representativity and sustainability of existing protected areas and take measures to identify and address gaps and weaknesses to ensure representativity with wide ecological range.
- 1.2.9. Develop and implement measures to restore freshwater networks for migratory species, taking into account the physical barriers such as dams for fish.

Supporting action of the Executive Secretary

- 1.2.10 Collaborate with relevant organizations and bodies to compile and disseminate information on:
 - (a) components of biodiversity important for conservation , in particular , on mountain endemic species, hotspots and their associated species and threatened species;
 - (b) best practices for their conservation, sustainable use and benefit sharing.
- 1.2.11 Compile and disseminate case studies on methods and economic aspects of restoration of degraded mountain ecosystems and recovery of mountain endangered species

Goal 1.3: To promote the sustainable use of mountain biological resources

Actions

- 1.3.1. Promote sustainable land-use practices in relation to human livelihood needs (agriculture, animal husbandry, forestry, aquaculture, inland water fisheries, etc.) in mountain ecosystems, taking into account the CBD guidelines for sustainable use^{*}.
- 1.3.2. Promote sustainable land use practices, techniques and technologies including those of indigenous/local communities and community-based management systems, for the conservation and sustainable use (including hunting and fishing) of wild flora and fauna and agro-biodiversity in mountain ecosystems, including biological pest control.
- 1.3.3. Support activities of indigenous and local communities involved in the use of traditional mountain-related knowledge, in particular concerning sustainable management of biodiversity, soil, water resources and slope.
- 1.3.4. Promote partnerships between all stakeholders, including indigenous and local communities, involved in the sustainable use of mountain biological resources. (see also goal 2.3)
- 1.3.5. Develop criteria in the framework of the CBD Guidelines on Biodiversity and Tourism Development[‡] in accordance with the ecological conditions of mountains ecosystems and promote the use of these guidelines.
- 1.3.6. Through appropriate environmental planning, manage the reduction of the negative impacts of tourism and outdoor activities on mountain ecosystems, as well as the development of associated human settlements and facilities, (e.g. waste disposal facilities, ski lifts and runs, roads, and associated infrastructure).
- 1.3.7. Strengthen local capacity for sustainable tourism management, in order to ensure that benefits derived from tourism activities are shared by local communities, while preserving natural and cultural heritage values.
- 1.3.8. To promote the sustainable cultivation of economically useful wild plants (e.g., medicinal, edible and aromatic plants) as an income-generating activity for the local inhabitants.
- 1.3.9. Promote integrated watershed management practices at all levels for maintaining ecosystem integrity, soil stability, upstream-downstream inter-connections and protection against natural hazards.

Goal 1.4: To promote access to, and sharing of benefits arising from the utilisation of genetic resources related to mountain biological diversity in accordance with national legislation where it exists

Actions

- 1.4.1. Strengthening capacity of indigenous and local communities, particularly those living in developing countries, who may be vulnerable to exploitation, to have access to genetic resources related to mountain biological diversity and to engage in equitable benefit-sharing arrangements (taking into account the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization, COP decision VI/24).

^{*} The Conference of the Parties will consider the Addis Ababa principles and guidelines at its seventh meeting.

[‡] The Subsidiary Body on Scientific, Technical and Technological Advice adopted the draft guidelines at its eighth meeting in March 2003. They will be considered by the COP at its seventh meeting.

- 1.4.2. Develop methods to assess and conserve genetic resources of high economic value for promoting fair and equitable sharing of benefits, respecting national legislation on access to genetic resources.
- 1.4.3. Promote actions that are beneficial for conservation through generating employment and/or income particularly for marginal communities.

Goal 1.5: To maintain genetic diversity in mountain ecosystems in particular through the preservation and maintenance of traditional knowledge and practices.

Actions

- 1.5.1. Assess and develop strategies aimed at minimising the threat of genetic erosion on domesticated biodiversity (crops, animals), paying particular attention to origin of the genetic resources.
- 1.5.2. Implement provisions contained in Article 8(j) on traditional knowledge and related provisions of the Convention on Biological Diversity, taking into consideration the needs of developing countries.
- 1.5.3. Conserve, develop, validate and implement sustainable-use practices for plants, animals and microorganisms genetic resources at species, population and community level.
- 1.5.4. Document indigenous knowledge, practices, processes and technologies to ensure conservation, sustainable use of biodiversity and sharing of benefits.

Programme element 2: Means of implementation for conservation, sustainable use and benefit sharing

Goal 2.1. To enhance the legal, policy, institutional, and economic framework

Actions

- 2.1.1. Identify and address perverse incentives and/or policies that may impede the implementation of the Convention on Biological Diversity in mountain ecosystems, taking into account COP decisions on incentive measures.
- 2.1.2. Develop and introduce appropriate incentives and market mechanisms for the maintenance of ecosystem goods and services.
- 2.1.3. Promote the diversification of income-generating activities in support of conservation and sustainable use of mountain biological diversity and poverty reduction, including methods to share economic wealth (i.e. within mountain regions through regional development plans and between regions through “upland-lowland contracts”²)

² The concept was described by Christian Koerner at the eighth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice in March 2003 as follows: The upland-lowland contract is an attempt to express, in very simple terms, that the lowlanders profit from uplanders care taking of the fragile mountain landscape, which supplies water and safety down slope. The concept underpins the connectivity between uplands and lowlands for a win-win situation. Lowlanders, commonly, but not always, have more food than they can eat (irrigation crops), uplanders are short of food and ruin the catchment value by over-grazing and over-exploiting with dramatic negative consequences for people in the mountain forelands (mud in reservoirs, bad quality water, roads blocked from erosion, etc.). The concept establishes joint responsibilities in a way that lowlanders may provide food and other resources (not necessarily money) and uplanders provide ecosystem services like stable and intact slopes, and refrain from disastrous land use.

- 2.1.4. Improve the science–policy linkages by undertaking national and sub-national scientific assessments of the causes of biodiversity loss, including making policy recommendations, in order to reduce the rate of loss of mountain biological diversity by 2010.
- 2.1.5. Develop performance measures and report on the integration of conservation and sustainable use of mountain biological diversity into institutional programmes, including sectoral policies, legal and economic frameworks.
- 2.1.6. Strengthen legal and institutional capacity to implement the work programme on mountain biological diversity, especially through national focal points, institutes and other relevant stakeholder groups.
- 2.1.7. Develop and implement legal and policy strategies for land-use planning at the landscape level, taking into account elements of ecological integrity and connectivity while emphasizing upstream-downstream relations and the prevention of losses of mountain biological diversity due to fragmentation and land use conversion.
- 2.1.8. Support proactive planning and adaptive measures to reduce the vulnerability to both natural and human-induced hazards adversely impacting on mountain biological diversity, cultural landscapes and local communities.
- 2.1.9. Encourage the implementation of environmental and social impact assessments at sectoral, program and project levels. Take into account cumulative impacts, to prevent the negative impacts of economic development on mountain biological diversity by observing COP decision VI/7A on incorporating biodiversity-related issues into environmental-impact-assessment legislation or processes and in strategic impact assessment.

Supporting activities of the Executive Secretary

- 2.1.10. Collate and disseminate (e.g. through the clearing-house mechanism and other appropriate means) case studies of best practice of international and national efforts to enhance the legal, policy, institutional and economic frameworks to conserve and sustainably use mountain biodiversity.

Goal 2.2. To respect, preserve, and maintain knowledge, practices and innovations of indigenous and local communities in mountain regions

Actions

- 2.2.1 Promote the implementation of activities aimed at maintaining existing levels of agrobiodiversity, agro-ecosystems and the goods and services they provide both for meeting local demands and to ensure sources of food security.
- 2.2.2 Respect and understand the traditions and sustainable practices of the indigenous and local communities in mountain regions in ways which accommodate their needs, participation, knowledge and practices for conservation and sustainable use of mountain biodiversity (taking into account Article 8 (j) of the Convention and related COP decisions and programmes of work).
- 2.2.3 Promote networking, collaborative action and participation of indigenous and local communities in decision-making processes, paying particular attention to the empowerment of women, in order to maintain mountain biodiversity and its sustainable use.

- 2.2.4 Encourage decentralization and enhance access to information for the full participation and involvement of indigenous and local communities in decisions that affect them in relation to mountain ecosystems.
- 2.2.5 Promote the implementation of activities aimed at the improvement of mountain livelihoods, poverty reduction and the maintenance of cultural self-determination, in order to achieve sustainable use of mountain biological diversity.
- 2.2.6 Develop capacity-building measures and information sharing to facilitate the involvement of indigenous and local communities, with their prior informed consent, in the management, conservation, and sustainable use of mountain biological diversity.

Goal 2.3. To establish regional and transboundary collaboration and the establishment of cooperative agreements

Actions

- 2.3.1. Promote integrated transboundary cooperation, supported by legislation for sustainable activities on mountain ranges. Protocols should cover specific thematic issues such as landscape, soil, watershed, rangeland, mining, protected areas and wildlife management, agriculture, forestry, transportation, energy and tourism.
- 2.3.2. Promote and strengthen regional and transboundary cooperation for research, adaptive management, and exchange of expertise to improve the conservation and management of mountain biodiversity (e.g. GMBA, ICIMOD).
- 2.3.3. Promote the appreciation and conservation of mountain biological diversity as a means of reducing human conflict (i.e. through peace parks).
- 2.3.4. Strengthen collaboration and synergies between the work programmes of CBD and other global conventions and agreements on climate change, desertification, transboundary pollution, invasive alien species and endangered species with a special focus on mountain systems and their biological diversity.
- 2.3.5. Encourage the development of new methodologies and new mechanisms, such as the upland-lowland contract, to implement cooperative agreements which sustain mountain biodiversity and the provision of goods and services.

Programme element 3: Supporting actions for conservation, sustainable use and benefit-sharing

Goal 3.1. To develop work on identification, monitoring and assessment of mountain biological diversity

Actions

- 3.1.1 Promote the monitoring of susceptible areas subject to climate change.
- 3.1.2 Conduct mountain surveys in priority areas for conservation and sustainable use of mountain biological diversity. These surveys should consider inventories at genetic, species and ecosystem levels.
- 3.1.3 Apply, whenever appropriate, the programmes of work of the global initiatives such as the Global Taxonomy Initiative, Millennium Ecosystem Assessment and the Global Invasive Species Program.

- 3.1.4 Support the work of the Global Mountain Biodiversity Assessment.
- 3.1.5 Use national biodiversity strategies and action plans and other national reports to the CBD, for monitoring and assessment of mountain biodiversity.

Goal 3.2. To improve knowledge on and methods for the assessment and monitoring of the status and trends of mountain biological diversity, based on available information.

Actions

- 3.2.1. Develop key abiotic, biotic and socio-economic indicators of status and change of mountain ecosystems.
- 3.2.2. Develop and select international, regional and national criteria and, where appropriate, quantifiable indicators for mountain biological diversity, taking into account the CBD work on monitoring and indicators and the knowledge held by indigenous and local communities together with other experience of sustainable mountain management.
- 3.2.3. Develop methodologies for assigning value to the ecological services provided by biodiversity-rich land management systems in order to develop economic incentive mechanisms for compensating the poor and vulnerable mountain communities.
- 3.2.4 Assess and address the changing status of both local and long-range pollution and global climate change issues with special relevance to mountain ecosystems.
- 3.2.5 Assess and address fragmentation and impacts on biodiversity by changing land use management practices (e.g. land abandonment, mining).
- 3.2.6 Assess and address the positive and the negative impacts of tourism and outdoor activities in mountain ecosystems.

Goal 3.3. To improve the infrastructure for data and information management for accurate assessment and monitoring of mountain biological diversity and develop associated databases

Actions

- 3.3.1. Enhance and improve the technical capacity at the national level to monitor mountain biological diversity, benefiting from the opportunities offered by the clearing-house mechanism of the Convention on Biological Diversity, including the development of associated databases as required at the global scale (to facilitate exchange).
- 3.3.2 Promote repatriation of existing information on biodiversity and related databases.
- 3.3.3 Encourage mapping and inventory of biodiversity and of land use changes using analogue and digital databases (Remote Sensing-Geographic Information System) for scientific purposes and for supporting decision making.

Supporting activity of the Executive Secretary

- 3.3.4 Enhance the capacity of the clearing-house mechanism to facilitate the implementation of goal 3.3.

Goal 3.4. To improve research, technical and scientific cooperation, and other forms of capacity building related to mountain biological diversity

Actions

- 3.4.1 Conduct long-term research on species adaptability to changing environmental conditions under climatic or human-induced global change in relation to mountain biological diversity.
- 3.4.2 Conduct key research on the role and importance of mountain biological diversity and ecosystem functioning, considering ecosystem components, structure, function, processes and services.
- 3.4.3 Develop and support research to assess the role of soil biological diversity and the diversity of protective forests for the stability and safety of mountain areas and watershed protection (e.g., avoidance of erosion, landslides and avalanches).
- 3.4.4 Initiate mechanisms and develop collaborative research/scientific programmes of mutual interest among countries with mountains, especially those having common problems and comparable socio-cultural conditions.
- 3.4.5 Foster exchange of experiences and knowledge of sustainable development and ecosystem vulnerability among countries with mountains, taking into account the vulnerability of social-cultural systems and communities.
- 3.4.6 Conduct interdisciplinary, key research programmes on mountain biological diversity, and its relationship to ecosystem structure and functions, including communities-based management, with special reference to transitional zones linking upland-lowland ecosystems such as ecotones, hotspots, buffer areas and corridors.
- 3.4.7 Develop capacity and enhance opportunities for community-based research and monitoring to conserve mountain biodiversity and provide greater benefits to mountain communities (e.g. Mountain Watch).

Supporting activities of the Executive Secretary

- 3.4.8 Explore and quantify the benefits of a diverse, intact vegetation cover in catchments for water and hydroelectric yield.

Goal 3.5. To increase public education, participation and awareness in relation to mountain biological diversity

Actions

- 3.5.1. Promote educational and capacity-building systems tailored to the specific conditions of mountain ecosystems, such as workshops, courses, study tours, community exchanges, CBD communications, education and publications efforts, in line with the Global Initiative on Communication, Education and Public Awareness described in COP decision VI/19.
- 3.5.2. Increase awareness of the potential contribution of knowledge, practices and innovations of indigenous and local communities to conserve and sustainably use mountain biological diversity. (i.e. biodiversity documentation, inventories by community and other appropriate levels).

- 3.5.3. Encourage the implementation of sustainable tourism activities aimed at increasing awareness, respect and knowledge for mountain biological diversity, including knowledge of the local, natural and cultural landscapes.
- 3.5.4 Increase dissemination of knowledge on upland-lowland interactions.
- 3.5.5 Promote further the education of women and their role in conservation and dissemination of traditional knowledge.

Goal 3.6. To promote the development, validation, and transfer of appropriate technologies for mountain ecosystems, including indigenous technologies in accordance with Article 8(j) of the Convention on Biological Diversity and related provisions

Action

- 3.6.1 Implement the programme of work on technology transfer[§] giving particular attention to matters relating to the conservation and sustainable use of mountain biodiversity.

Supporting activities of the Executive Secretary:

- 3.6.2 Document best practices and appropriate technologies and innovative approaches to managing biodiversity.
- 3.6.3 In collaboration with relevant organizations, provide Parties with access to appropriate and latest technologies and innovations relating to mountain biodiversity.

[§] To be considered by the Conference of the Parties at its seventh meeting.

ANNEX II: List of participants

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