



Convention on Biological Diversity

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CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

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Agenda item 23

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY AT ITS SEVENTH MEETING

VII/27. Mountain biological diversity

The Conference of the Parties

1. *Adopts* the programme of work 1/ on mountain biological diversity, annexed to the present decision, as a set of actions addressing characteristics and problems that are specific to mountain ecosystems;
2. *Underlining* the sovereign rights and responsibilities of countries over their mountains and mountain biodiversity, *notes* that Parties should implement the programme of work on mountain biological diversity in the context of their national and subnational priorities and needs. Inclusion of an activity in the work programme does not mean relevance of that activity to all Parties;
3. *Invites* Parties to identify priority actions among the actions recommended in the programme of work depending on the particular national or local conditions and *urges* Parties to incorporate them into their national biodiversity strategies and action plans, as well as national programmes and activities on the implementation of regional mountain conventions and initiatives, and implement them taking into account the ecosystem approach so as to contribute to the significant reduction of the rate of mountain biological diversity loss by 2010 and as a contribution to poverty reduction and to the benefit of indigenous and local communities dependent on mountains;
4. *Encourages* Parties, other Governments and organizations to ensure cross-referencing to, and coherence with, the other thematic and cross-cutting programmes of work, including technology transfer, while implementing this programme of work;
5. *Invites* Parties to adopt outcome-oriented targets for mountain biodiversity, taking into account the Strategic Plan of the Convention, the Global Strategy for Plant Conservation, the Plan of Implementation of the World Summit on Sustainable Development, the Millennium Development Goals and in conjunction with actions 2.1.5 and 3.2.2 of this programme of work;

1/ Implementation of this programme of work should not promote incentives that negatively affect the biodiversity of other countries.

6. *Agrees* that, in undertaking the implementation of the programme of work, Parties, other Governments, international organizations, civil society organizations and others should take into account the knowledge, innovations and practices of indigenous and local communities and ensure their participation in conservation and sustainable use of mountain biological diversity, in accordance with Article 8(j) and related provisions of the Convention;

7. *Recognizes* the need for resources, human, technological and financial capacity, to implement effectively the activities in the programme of work, and thus *encourages* governments and other interested entities to form partnerships to address these needs and *urges* bilateral and multilateral organizations and processes to provide financial assistance, training and support, where applicable, to developing country Parties, in particular the least developed countries and small island developing States among them, and Parties with economies in transition to assist in the effective implementation of the programme of work;

8. *Invites* Parties, other Governments, and relevant organizations to report on implementation of this decision and those parts of the programme of work, which are identified as priorities under national and local conditions pursuant to paragraphs 3 and 5 through, *inter alia*, their reports submitted to the Conference of the Parties;

9. *Requests* Parties that have not yet done so to submit their thematic reports;

10. *Requests* the Executive Secretary to:

(a) Develop, in collaboration with Parties and relevant organizations, proposals on a small number of global outcome-oriented targets, timeframes in relation to the 2010 target, ways and means for implementation, and indicators at the regional, national and local levels for consideration at a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eighth meeting of the Conference of the Parties;

(b) Compile information received from Parties, other Governments and relevant organizations and bodies, on the implementation of the programme of work, and analyse progress made towards the achievement of a significant reduction in the rate of mountain biodiversity loss by 2010;

(c) Assist the Parties in implementing the programme of work through, *inter alia*, the supporting activities defined in the programme of work, and the development, in collaboration with relevant organizations, of proposals for global and, where appropriate, regional targets or expected measurable outputs with timeframes and main actors; and

(d) Regularly gather information on the characteristics and problems that are specific to mountain biological diversity listed in paragraph 8 of the programme of work;

(e) In collaboration with relevant conventions and organizations, collect, review, evaluate and share, through the Clearing-house Mechanism and other means, existing information about the role of mountain ecosystems in producing and maintaining freshwater resources, and about the consequences of climate change and desertification on mountain biological diversity;

(f) With the assistance of the Global Taxonomy Initiative Co-ordination Mechanism to develop and incorporate activities and targets appropriate to mountain ecosystems within the GTI programme of work for consideration at SBSTTA-11, taking into account the COP-7 decision on targets.

11. *Further requests* the Executive Secretary to strengthen collaboration with other organizations, institutions and conventions, as a way to streamline many of the activities contained in the programme of work; promote synergies and avoid unnecessary duplications;

12. *Notes* that the notes by the Executive Secretary on status and trends of, and threats to, mountain biological diversity (UNEP/CBD/SBSTTA/8/5), and on measures taken for the conservation and sustainable use of mountain biological diversity (UNEP/CBD/SBSTTA/8/6), can be a basis for the identification of priorities for early action, and *recognizes* that the relative importance of threats, and their underlying causes will vary by region and country, and, accordingly, *requests* the Executive Secretary to update this information as part of the reviews of the implementation of the thematic programmes of work in collaboration with Parties and relevant organizations, in particular the Global Mountain Biodiversity Assessment among others, and making use of all available information;

13. *Emphasizes* the importance of mountain biodiversity for livelihoods, and therefore *requests* the Executive Secretary to compile and disseminate information linking mountain biodiversity to sustainable development and poverty alleviation, and examples of successful collaboration between mountain dwellers and communities living in areas adjacent to mountains in form of incentives for mountain dwellers (as a way to illustrate the “upland-lowland contract”);

14. *Recognizing* the value of traditional and sustainable land use practices of indigenous and local communities in preserving mountain biodiversity, *requests* the Executive Secretary to collect and disseminate relevant information contributed by these communities through the clearing-house mechanism and other means;

15. *Reminds* Parties of Article 20 of the Convention and *invites* the developed country Parties to further enhance the provision of additional financial resources and transfer of technology to enable developing country Parties and Parties with economies in transition to implement the programme of work on mountain biological diversity;

*Annex***PROGRAMME OF WORK ON MOUNTAIN BIODIVERSITY****A. Introduction**

1. Mountain areas cover almost one quarter of the Earth's land surface and host about 12 per cent of its human inhabitants. Additionally, mountains provide vital natural resources for lowland peoples. Mountains are both a unique environment in their own right, and one that incorporates many of the existing thematic programmes under the Convention. For example, forests, inland waters, dry and sub-humid lands and agricultural programme elements can all be found in mountain biological diversity. The present programme of work on mountain biological diversity features goals and activities that are specific to mountain biological diversity, although the existing programmes of work on forests, inland waters, agricultural, and dry and sub-humid land biological diversity also apply to mountain ecosystems. As a result, the goals and activities contained in the existing programmes of work of each of these thematic areas should also be applied and implemented, whenever appropriate, for their respective areas in mountain ecosystems.

2. Mountain biological diversity is of high importance for a number of ecological functions. The integrity of soils is the prime focus for ecosystem services and human needs. Mountains have often been referred to as "natural water towers" because they contain the headwaters of rivers that are also vital for maintaining human life in densely populated areas downstream. Natural and semi-natural vegetation cover on mountains helps to stabilize headwaters, preventing flooding, and maintaining steady year-round flows by facilitating the seepage of rainwater into underwater aquifers. Mountain biodiversity contributes to human well-being well beyond its immediate vicinity and is essential to the management of water flows over entire river basins.

3. Soil retention and slope stability are closely connected with the extent of above-ground and below-ground vegetation, both essential to ecosystem resilience after disturbance. The high plant functional diversity of mountain ecosystems may also add to their resiliency and, should extreme disturbances occur, often provides effective barriers to high-energy events such as rock falls and avalanches. It also may reduce extensive damage levels at lower elevations. Although it has been to date impossible to provide a thorough definition of mountains with both universal application and acceptance, there are a number of characteristics that are unique to mountain ecosystems. These are referred to in the note by the Executive Secretary on the status and trends of, and threats to, mountain biodiversity prepared for the eighth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) (UNEP/CBD/SBSTTA/8/5).

4. Information and input from international forums may also be taken into account, particular, chapter 13 of Agenda 21, which relates to sustainable mountain development, and the World Summit on Sustainable Development, which also considered mountain ecosystems. Paragraph 42 of the Plan of Implementation of the World Summit, states that:

"Mountain ecosystems support particular livelihoods, and include significant watershed resources, biological diversity and unique flora and fauna. Many are particularly fragile and vulnerable to the adverse effects of climate change and need specific protection."

5. The Plan of Implementation proposed a number of specific actions to be undertaken in regard to mountains. The 2002 International Year of the Mountains also provides valuable input. In addition, a number of international agreements and bodies, institutions, and programme initiatives may be considered such as the Convention on Wetlands, (Ramsar, Iran, 1971), the United Nations Convention to

Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change (UNFCCC), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Centre for Integrated Mountain Development (ICIMOD), the International Centre for Agricultural Research in the Dry Areas (ICARDA), the International Partnership for Sustainable Development in Mountain Regions, the International Human Dimensions Programme on Global Environmental Change (IHDP), the Centre for Mountain Studies, the Consorcio para el Desarrollo de la Ecoregion Andina (CONDESAN), the Mountain Research Initiative (MRI), the Global Mountain Biodiversity Assessment (GMBA) of DIVERSITAS, the International Union of Forest Research Organizations (IUFRO), the Alpine Convention, the Carpathian Framework Convention and the United Nations Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC).

B. Overall purpose and scope of the programme of work

6. The overall purpose of the programme of work is the significant reduction of mountain biological diversity loss by 2010 at global, regional and national levels, through the implementation of the three main objectives of the Convention on Biological Diversity.

7. The implementation of the programme of work aims at making a significant contribution to poverty alleviation in mountain ecosystems and in lowlands dependent on the goods and services of mountain ecosystems and thereby contribute to the objectives of the Strategic Plan of the Convention on Biological Diversity, the Plan of Implementation of the World Summit on Sustainable Development, and the Millennium Development Goals.

8. The programme of work focuses on addressing characteristics and problems that are specific to mountain biological diversity. These include:

(a) The particularly high concentration of biological diversity hotspots in mountain regions, including high ecosystem diversity, high species richness, high number of endemic and endangered species, and high genetic diversity of crop, livestock, and their wild relatives;

(b) Cultural diversity, and the particularly key role of indigenous and local communities in the conservation and management of mountain biological diversity;

(c) The fragility of mountain ecosystems and species and their vulnerability to human and natural disturbances, in particular to land-use change and global climate change (such as the retreat of glaciers and increased areas of desertification);

(d) The upland-lowland interactions that characterize mountain ecosystems, with special emphasis to the relevance of upland ecosystems for the management of food, water and soil resources;

9. The programme of work also seeks to avoid duplication with existing thematic work programmes and other existing initiatives of the Convention on Biological Diversity. Parties are encouraged to apply, where appropriate, the objectives and activities from these thematic work programmes to the conservation of mountain biological diversity, the sustainable use of mountain biological diversity, and the equitable sharing of benefits arising from the utilization of genetic resources.

10. The programme of work is intended to assist Parties in establishing national programmes of work with targeted goals, objectives, and actions, with specific actors, timeframes, inputs, and expected measurable outputs. Parties may select from, adapt, and/or add to, the goals, objectives and actions suggested in the current programme of work according to particular national and local conditions, and their level of development. Implementation of this programme of work should take into account the ecosystem approach of the Convention on Biological Diversity. In determining national programmes of work, Parties are encouraged to pay due regard to the socio-economic, cultural and environmental costs and benefits of various options. In addition, Parties are encouraged to consider the use of appropriate technologies, sources of finance, and technical cooperation, and to ensure, through appropriate actions, the means to meet the particular challenges and demands of their mountain ecosystems.

C. Programme elements, goals and actions

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 adverse land-use practices and changes in urban, forest, inland waters and agricultural areas in mountain ecosystems, including the buffer zones of protected areas using, as appropriate, planning or management mechanisms, such as ecological/economic/ecoregional planning/bioregional/hazardous-areas zoning, so as to ensure the maintenance of biodiversity, in particular ecosystem integrity.
- 1.1.2. Develop mechanisms and implement measures to reduce human-induced slope instability, adverse effects of natural geological hazards, and to maintain and/or enhance soil stability and ecosystem integrity by way of a diverse and natural 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 human-induced disturbances on mountain biological diversity at all levels, where applicable, 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 their negative impacts on mountain biological diversity.
- 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 and prevent key pressures in mountain ecosystems such as deforestation, fragmentation, unsustainable harvesting, inappropriate reforestation or afforestation, human-induced forest fires, overgrazing, inappropriate mining practices and urban expansion resulting in land degradation, degradation of inland water ecosystems, disruption of water flow, and consequent losses of biological diversity (see also decision VI/22).

- 1.1.7. Identify factors responsible for and possible measures to prevent 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;
 - (c) Information on impact of climate change and desertification on the carrying capacity of mountain ecosystems and traditional uses.

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 protect natural dynamic processes 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 and taking appropriate measures to maintain ecological functions of natural corridors, where appropriate, to enable vertical migration of species, ensuring minimal viable population sizes to enable genetic adaptation to changing environmental conditions. These programmes should include socio-economic considerations, especially in relation to indigenous and local communities.
- 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, other 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 and water-resource planning at landscape level using the ecosystem approach, taking into account elements of ecological connectivity and traditional uses of indigenous and local communities, 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, regional and international networks of mountain-protected areas, in accordance with decisions of the Conference of the Parties on protected areas, while respecting the rights and full participation of indigenous and local communities.

- 1.2.6. Promote, as appropriate, the role of sustainable agriculture and pastoralism, using sustainable traditional practices that can maintain biological diversity in mountain ecosystems.
- 1.2.7. Identify suitable practices for enhancing ecosystem sustainability with particular emphasis on degraded slopes.
- 1.2.8. Address issues related to conflict between humans and other species, especially with regard to coexistence with predators.
- 1.2.9. Review protected area systems within mountain regions and , as appropriate, take measures to ensure that these are developed and maintained to be comprehensive, adequate and representative, in line with decision VII/28 of the Conference of Parties on programme of work on protected areas.
- 1.2.10. Develop and implement measures to rehabilitate freshwater networks for migratory species, taking into account the physical barriers.
- 1.2.11. Establish restoration areas where mountain biological diversity has been degraded significantly and where restoration is needed to complement and buffer the protected-area network.

Supporting action of the Executive Secretary

- 1.2.12. 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.
- 1.2.13. 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 and water resource management practices in relation to human livelihood needs (agriculture, pastoralism, animal husbandry, forestry, aquaculture, inland water fisheries, etc.) in mountain ecosystems, taking into account the Convention principles for sustainable use and the ecosystem approach.
- 1.3.2. Promote sustainable land-use practices, techniques and technologies, including those of indigenous and local communities and community-based management systems, for the conservation and sustainable use (including pastoralism, 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 Convention 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, reduce the negative impacts of tourism and outdoor activities on mountain ecosystems, as well as the development of associated human settlements and facilities.
- 1.3.7. Strengthen local capacity for sustainable tourism management, in order to ensure that benefits derived from tourism activities are shared by indigenous and local communities, while preserving natural and cultural heritage values.
- 1.3.8. Promote the sustainable use of economically valuable wild plants and animals, 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 on slopes, upstream-downstream inter-connections and protection against natural hazards.

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

Actions

- 1.4.1. Strengthen the capacity of indigenous and local communities 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, bearing in mind their voluntary character and that they do not purport to replace national legislation.
- 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 minimizing the threat of genetic erosion on domesticated biodiversity (crops, animals) and wild relatives, paying particular attention to the centres of 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. Develop, validate and implement sustainable use practices for plants, animals and microorganisms at the genetic, species, population, community and ecosystem levels.
- 1.5.4. Respect, preserve and maintain 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 the decisions of the Conference of the Parties on incentive measures.
- 2.1.2. Develop and introduce appropriate incentives, market and compensation mechanisms, in accordance with national and international law where appropriate, specific for the maintenance of mountain ecosystems and the goods and services delivered by the mountain ecosystems.
- 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/}
- 2.1.4. Improve the science/policy linkages by undertaking national and subnational 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/} The concept was described by Professor Christian Körner, Professor of Botany at the University of Basel and Chairman of the Global Mountain Biodiversity Assessment in his keynote presentation at the eighth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice in March 2003 as follows: The upland-lowland contract concept establishes joint responsibilities between lowlanders and uplanders. Under this concept, uplanders would, for example, be responsible for taking care of the fragile upland mountain landscape to reduce potential impacts on lowlanders. In return, lowlanders may be able to provide uplanders with the products of lowland cultivated areas (food and other resources).

- 2.1.5. Develop performance indicators 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 and mechanisms allowing for the coordination of sectorial authorities in implementing those activities within their areas of responsibility.
- 2.1.7. Develop and implement legal and policy strategies for land-use planning at the landscape or river basin level, where appropriate, 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, programme and project levels. Promote sustainable development and the eradication of poverty and prevent the negative impacts of economic development on mountain biological diversity including cumulative impacts. Also take into account specificities of indigenous and local communities depending upon mountain ecosystems, by observing section F of decision VII/16 of the Conference of the Parties on the Akwé: Kon voluntary guidelines for the conduct of cultural, environmental and social impact assessment regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities.
- 2.1.10. Integrate aspects of mountain biological diversity into plans, policies and programmes related to mountain areas.

Supporting activities of the Executive Secretary

- 2.1.11. 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.
- 2.1.12. Promote synergy in the implementation of international and regional conventions including, where relevant, the Ramsar Convention, UNFCCC, CBD, WHC, CITES and the United Nations Convention to Combat desertification.

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 paying particular attention to centres of origin and the goods and services they provide both for meeting local demands and to ensure sources of food security.

- 2.2.2. Respect, understand and support 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 decisions from the Conference of the Parties 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 identity, 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, strategies for sustainable activities on mountain ranges through mutually agreed-upon arrangements by countries concerned. Cooperative arrangements should cover specific thematic issues such as landscape, soil, wetland, watershed, rangeland, mining, protected areas and wildlife management, agriculture, pastoralism, forestry, transportation, energy and tourism.
- 2.3.2. Promote and strengthen regional and transboundary cooperation for research, adaptive management, fair and appropriate allocation of water to ecosystems, and exchange of expertise to improve the conservation and management of mountain biodiversity (e.g., Global Mountain Biodiversity Assessment (GMBA) and International Centre for Integrated Mountain Development (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 the Convention on Biological Diversity and other global conventions and agreements on climate change, desertification, transboundary pollution, invasive alien species, wetlands and endangered species, with a special focus on mountain systems and their biological diversity, including through joint programmes of work. Also strengthen collaboration with the International Partnership for Sustainable Development in Mountain Regions and regional conventions on mountains.

- 2.3.5. Encourage the development of new methodologies and new mechanisms, such as the upland-lowland contract that sustain mountain biological diversity 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 Programme.
- 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 Convention, for monitoring and assessment of mountain biodiversity.

Supporting activity of the Executive Secretary

- 3.1.6. Promote collaboration among the secretariats and national focal points of United Nations Framework Convention on Climate Change, United Nations Convention to Combat Desertification and other relevant organizations to develop adaptive strategies for mountain ecosystems and for the monitoring of changes due to the impact of global processes, where appropriate.

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 work of the Convention 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 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.
- 3.2.7. Assess and address natural dynamic processes in mountain ecosystems and the need to preserve areas for natural dynamic processes.
- 3.2.8. Develop monitoring systems based on key national and subnational indicators of changes in mountain ecosystem structure and function taking into account existing monitoring expert knowledge and systems as well as relevant work and processes on indicators.

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 a 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 open access as Parties consider appropriate, to existing information on biodiversity and related databases and sharing through the clearing-house mechanism of the Convention on Biological Diversity and other appropriate means.
- 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 vegetation cover for the stability and safety of mountain areas and

watershed protection, e.g., avoidance of human-induced 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.
- 3.4.8. Develop scientific and technical coordination mechanisms at national level for identification of research priorities and for optimising the efficient utilization of research results.

Supporting activity of the Executive Secretary

- 3.4.9. Explore and quantify the benefits of a diverse, intact vegetation cover in catchments for water quantity and quality, hydroelectric yield and geological and hydrological hazard prevention and control.

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, communications from the Convention on Biological Diversity, education and publications efforts, in line with the Global Initiative on Communication, Education and Public Awareness (decision VI/19 of the Conference of the Parties).
- 3.5.2. Increase awareness of the actual and 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 and on components of interdependence.

- 3.5.5. Further promote the education of women and their role in the conservation and dissemination of traditional knowledge.
- 3.5.6. Enhance awareness among policy makers and planners on the importance and contribution of mountain ecosystems in poverty eradication programmes;
- 3.5.7. Increase broad-based awareness of the values of mountain biological diversity through, *inter alia*, national and local public awareness campaign.

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 and disseminate, through the Clearing House-Mechanism and other means, 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 with the approval and involvement of indigenous and local communities as appropriate.
