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ACP MEAs



United Nations Environment Programme

Brochure on Biological Diversity

THE CONVENTION ON BIOLOGICAL DIVERSITY

The Case of Africa

Multilateral Environmental Agreements (MEAs) Project

I. THE CONVENTION ON BIOLOGICAL DIVERSITY: BETWEEN COMPLEXITY AND EFFECTIVENESS

- An international treaty adopted at the Earth Summit in Rio de Janeiro in 1992 aimed at developing national strategies for the sustainable conservation and use of biological diversity;
- Currently signed by 189 countries;
- It came into force on 29 December 1993;
- Three principal objectives: (1) the conservation of biological diversity (or biodiversity) ; (2) the sustainable use of its components; and (3) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources;
- With the advent of the Convention on Biological Diversity (CBD), we are witnessing the beginnings of the «ABS»(Access and Benefit-Sharing) process, a mechanism for access and benefit sharing.

II. BIODIVERSITY IN AFRICA: SOURCE OF WEALTH AND MEANS OF COMBATING CLIMATE CHANGE

In Africa, the stakes in the area of biodiversity are extremely important, particularly since the Congo Basin forest block is the second tropical forest continuum in the world, and has enormous biological resources

with a very high endemic rate. However, the extinction rate is speeding up rather than slowing down, and the areas with rich biodiversity are particularly vulnerable to this trend. Will the new objectives fixed for 2020 be better achieved?

(1) Biodiversity, for Combatting Poverty and as a Means of Livelihood

Biological diversity is an economic and financial asset. The CBD affirms that the conservation of biological diversity is a common concern of humankind and an integral part of the development process, and recognizes that “economic and social development and poverty eradication are the first and overriding priorities of developing countries”. Biodiversity is a renewable resource that can be rapidly depleted. Its exploitation, which is the guarantee of its perpetuity due to its importance, should be sustainable. This concerns its exploitation in order to satisfy the needs of local communities as well as international trade, which is a source of revenue for all nations.

(2) Biodiversity, Access and Benefit Sharing

70% of the world's poor population live in rural areas and depend directly on biological diversity for their wellbeing. Approximately 1.6 billion individuals rely on timber and non-timber forest products for their means of livelihood. Sixty million indigenous people are totally dependent on forests. One billion individuals throughout the world depend on drugs derived from forest plants for their medicinal needs. About 1.2 billion people are dependent on agroforestry. However, 13 million hectares of

forest is lost per year. Over 3 billion individuals depend on marine and coastal biodiversity for their livelihood. It is estimated that fish is the primary food source for 1 billion people living in developing countries. Yet, 80% of world fisheries are being exploited to the maximum or over-exploited. In Africa, the key challenges concern, inter alia, the Johannesburg Biodiversity Target to achieve by 2010 a significant reduction of the current rate of biodiversity loss, which was included in 2006 as an integral part of Goal 7 of the Millennium Development Goals.

(3) Biodiversity, Food Security and Health

In Africa, wild biodiversity is an essential food source in non-urban areas (roots, fruits, bush meat, etc.). Its replacement by livestock breeding or agriculture (domestic biodiversity) is essential to food security, but it is also costly in terms of space and energy; it often has negative impacts on the environment (fertilizers, pesticides, bushfires). There are alternatives which are not widely used (ranch breeding of semi-domestic animals). As regards fishery products, they are irreplaceable for some populations in the interior (lakes) and coastal regions.

(4) Biodiversity and Climate Change

Climate change has negative effects on many ecosystems and their services which are so essential to human welfare, with adverse economic consequences, particularly loss of natural capital, tourism revenue, and loss of protection against natural disasters.

At the level of species, a mere 1° C rise in temperature could lead to increased risks of extinction for 10% of additional species. As regards the

oceans, they constitute a fundamental element of the earth's carbon cycle and serve as a long-term carbon dioxide emission sink. It is estimated that 25 to 30% of cumulative CO₂ emissions of anthropogenic origin were absorbed by the oceans. However, recent scientific discoveries underscored the harmful effects of an increase in concentrations of carbon dioxide in the ocean. There has been a 30% increase in ocean acidity since the industrial revolution—a change that is about 100 times more rapid than all the acidity changes that occurred in the last 50 million years. The potential to be derived from activities for land use management to reduce emissions and increase carbon sequestration is estimated at a 0.5 to 4 GtCO₂-eq/year range for forestry activities (Reducing Emissions from Deforestation and Forest Degradation-REDD, reforestation, forest management, agroforestry), and 1 to 6 GtCO₂-eq/year for sustainable agricultural practices.

(5) **Biodiversity and Contribution of African Expertise**

The enhancement of biological resources would require increased scientific research. Without interfering with the mandate of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), many stakeholders would like an African scientific platform to be established. It was to this effect that the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) initiative was made official. The issue also involves the consideration of the political and geopolitical stakes in order to give a pan-African voice to

a dossier that will feature prominently on the post 2010 international agenda.

III. THE CBD: INSTRUMENT FOR THE RECOGNITION OF THE RIGHTS OF STATES AND COMMUNITIES

The CBD is a text that is equivalent to a treaty for the countries that have ratified it. In international law, the CBD is unprecedented: it recognizes for the first time, that the conservation of biological diversity is a common concern for all humanity, and is an integral part of the development process.

Essence/Scope of the CBD

For a long time, the CBD had a limited binding effect, but since the late 90s, it started being concretely applied in some countries and supranational communities such as the European Union. It contains a reminder on the Use of Terms in its Article 2, and introduces the precautionary principle. Many signatory countries have established plans of action to promote biodiversity in order to implement the Convention; Europe proposed a pan-European ecological network, for which the Natura 2000 Network is organizing the hubs. The United Kingdom, New Zealand and Tanzania for instance, formulated responses for the conservation of some species and specific habitats. Australia is building a climate corridor.

The CBD marks three essential divergences: 1) It recognizes the sovereign rights of States over their biological and genetic resources, which until then were considered a common heritage of mankind, and stipulates that access to the resources is subject to prior consent of the States concerned; 2) It requires the signatories to protect and support the rights of communities, farmers

and indigenous peoples to their biological resources and their knowledge systems; 3) It requires equitable sharing of benefits arising from the commercial use of the biological resources and local knowledge of communities.

IV. THE CBD AND THE AFRICAN CONTEXT

Africa: a vast cradle of biodiversity that is still not widely known

Africa is a vast continent of 29,630,000 km² with approximately 1 billion inhabitants. Divided by the Equator, it is located in the intertropical zone, linked to Asia by the Isthmus of Suez, and separated from Europe by the Strait of Gibraltar, it extends from 37 degrees north latitude to 35 degrees south latitude. It includes vast basins (Niger, Chad, Zaïre, Kalahari), major mountains (Atlas (Maghreb), Hoggar, Tibesti, Ethiopian Massif, Mount Drakensberg), the world's largest desert: the Sahara (3 million Km²) and four major rivers: Nile, Zaïre (Congo), Niger, Senegal and Zambezi. The rift region (in the East) is a gigantic tectonic valley with volcanoes (Kilimanjaro, peak at 5895m) and lakes (Malawi, Tanganyika, Victoria). It has 5 types of landscape, which vary from the North to the centre of the continent depending on the distance from the Equator: the urbanized coast that is found for instance in the Maghreb (North Africa), the desert landscape of the Sahara further in the South (Mali, Niger, Chad), the steppes (example in Niger), the savannah (Burkina Faso) and the great Equatorial Forest (Cameroon, Congo, Gabon, Central African Republic, Democratic Republic of Congo).



The Congo River and the dynamics of the lush tropical forest.

Strong Commitment of African Countries to the Ideals of the CBD

Through ratification, African countries have demonstrated their commitment to supporting the CBD: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Côte d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda, Mauritania, Sao Tomé and Príncipe, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, and Zimbabwe.

Challenges of Biodiversity in Africa

According to scientists who feel that there is a need to rapidly bridge the gap between science and policy in Africa, we are now on the brink of a major crisis in terms of biological diversity.

How Much Biodiversity is There?

A large part of the biodiversity that surrounds us in Africa remains unknown by science. It is the fruit of billions of years of evolution, formed by natural processes and being increasingly subjected to the influence of Mankind. Today, nearly two million species in the world have been identified. Many scientists think that there are almost 13 million species on earth, but others estimate the number at between 3 and 100 million.

Species could soon become extinct more rapidly than science discovers them. Africa should therefore resort to molecular and bio/electronic tools, particularly for the study of micro-organisms.

How is Biodiversity Changing in General?

Most scientists in the world believe that the current rate of species loss is higher than ever before, and recall that nearly 12% of the bird species, 23% of mammals, 25% of coniferous trees, and 32% of amphibians are now threatened with extinction. Furthermore, writers stress that climate alone could increase the figures for the premature extinction of living species by 15% to 37% in the next fifty years. In 2006, the International Union for the Conservation of Nature (IUCN) identified over 16,000 endangered species.

One out of three amphibians, and a quarter of the coniferous trees in the world, one out of eight birds and one out of four mammals is facing extinction. For many scientists, human activities are largely responsible for this situation: excessive hunting, destruction of ecosystems and urbanization are mainly to blame. However, there is increasing awareness of the fact that the earth is currently experiencing its sixth extinction of living species crisis– the fifth extinction crisis saw the end of the dinosaurs.

Why is Biodiversity in the Process of Changing in Africa?

Demographic, economic and institutional factors, as well as factors linked to governance, which are concretely reflected in loss of habitat, overexploitation of biological resources, the introduction of exotic species, pollution and climate change, are clearly major causes of the erosion of biodiversity. However, the extinction of species results from a complex interaction that Africa is still far from grasping, among other social, ecological and economic factors. The present capacity to anticipate changes in biodiversity is therefore extremely limited and cannot predict future changes in diversity.

What are the Social Consequences of Changes in Biodiversity?

Ultimately, the ecological effects of biodiversity bring about repercussions at the economic and social levels. In Africa, the consequences on human societies are still not widely known, mainly due to lack of integration of economic and social approaches which allow for the evaluation of the many effects of changes in biodiversity on human societies.

How can the Management, Conservation of Biological Resources and Protection of Biodiversity in Africa be Improved?

Biodiversity specialists in Africa have adopted various approaches, which have advantages as well as disadvantages. The scientific community was divided up according to: a) different scientific disciplines (taxonomy, molecular biology, ecology, economics, social sciences...); b) divisions within the scientific disciplines (for example, between populations ecology and ecosystem ecology); c) divisions between communities studying different types of ecosystems (land, freshwater, marine); d) divisions between

communities studying different kinds of organisms (vertebrates, invertebrates, plants, micro-organisms ...). In Africa, progress in biodiversity science entails the integration of the different approaches and disciplines: we need unity in diversity. The recent development of DIVERSITAS, an international programme of biodiversity science established in 1991, under the auspices of the International Council for Science (ICSU), the International Union of Biological Sciences (IUBS), the Scientific Committee on Problems of the Environment (SCOPE) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), shows that this objective can be achieved in Africa.

DIVERSITAS accomplishes a dual mission: 1) To promote an integrative biodiversity science, linking biological, ecological and social disciplines in an effort to produce socially relevant new knowledge; 2) To provide the scientific basis for the conservation and sustainable use of biodiversity. Thus DIVERSITAS promotes the study of biodiversity at global level through four projects, namely: 1) **bioGENESIS**: providing an evolutionary framework for biodiversity science; 2) **bioDISCOVERY**: assessing, monitoring and predicting biodiversity change; 3) **ecoSERVICES**: exploring the links between biodiversity, ecosystem functioning and services; 4) **bioSUSTAINABILITY**: guiding the elaboration of policies and decisions that support conservation and sustainable use of biodiversity as a whole.

V. THE CBD: REAL POINTS OF SYNERGY WITH OTHER LEGAL INSTRUMENTS

Virtually all legal instruments on the environment have strong synergies with biodiversity. The CBD was adopted on 5 June 1992, and entered into force on 29 December 1993. The

central objective of the CBD is “... the conservation of biological diversity, the sustainable use of its components, and fair and equitable sharing of the benefits arising out of the utilization of genetic resources ...”(Article 1, CBD).

1. Environmental Conventions Emanating from the Earth Summit (Rio 1992)

Environmental conventions are international obligations with concrete objectives aimed at integrating environmental protection and natural resources management into socio-economic development. These conventions have clarified and broadened the concept and the implementation of sustainable development. (Agenda 21)

Framework Convention on Climate Change (CCC)

The CCC was adopted on 9 May 1992 and entered into force on 21 March 1994. The central objective of the CCC is “... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”(Article 2, UNFCCC).

United Nations Convention to Combat Desertification (UNCCD)

The CCD was adopted on 17 June 1994 and entered into force on 26 December 1996. The central objective of the CCD is to “... combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or

desertification, particularly in Africa, through effective action at all levels, ... with a view to contributing to the achievement of sustainable development in affected areas. Achieving this objective will involve long-term integrated strategies that focus simultaneously, in all affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at community level" (Article 2, UNCCD).

Forest Principles

The Statement of Principles is aimed at protecting forests as an economic resource (wood, food, medicine), as well as cultural and touristic needs, and as storehouses of many biological components, some of which are yet to be discovered.

2. Link Between the Three Rio Conventions

The common traits between the three conventions are: they are in keeping with the framework for sustainable development; they function in the same ecosystems; they are cross-cutting, at regional and local levels; they involve quasi-permanent inventory at sectoral and national levels; they all advocate cooperation among them, particularly since 1996; they contribute to establishing new types of partnership; they are multidimensional; they call for the use of new tools for analysis and evaluation; they require capacity building; and they overlap in terms of recommendations to the Parties.

3. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity

The prevention of biotechnological risks is one of the major problems addressed by the CBD. This concept concerns the need to protect human health and the

environment against the potentially adverse effects of products linked to biotechnology. The Cartagena Protocol on Biosafety to the CBD was adopted in Montreal on 29 January 2000, at an extraordinary meeting of the Conference of Parties (CBD Secretariat, 2000). The Protocol is the first agreement that regulates trade in Living Modified Organisms (LMO). It requires exporters to provide the competent national authorities of importing countries with information on the origin and destination of LMO prior to their importation. It allows countries to ban imports of LMO according to the precautionary principle when there is not enough scientific evidence that the product is safe. In Africa, the poor development of Genetically Modified Organisms (GMO) is based on several observations: 1) the extension of monoculture, due to the fact that the companies that are holders of intellectual property rights strive to maximize returns on investment by increasing their market shares; 2) the irreversible nature of the environmental pollution they could cause; and 3) the determination of a handful of major companies to control potentially huge markets.

4. Intellectual Property Rights (IPR)

International treaties such as the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), adopted in 1994, protect “intellectual property” by granting patents for “any invention, whether products or processes (...) provided they are new, involve an inventive step and are capable of industrial application”. Thus the TRIPS Agreement contradicts the principles of the Convention on Biological Diversity. Indeed, while the CBD is in keeping with the principle of sharing the benefits arising from the use of genetic resources, TRIPS promotes privatization. The CBD recognizes community rights, while TRIPS protects the rights of

private individuals (including companies). Consequently, the African Union is against “the patenting of living organisms”.

CONCLUSION

The CBD was the first international treaty to recognize the primordial role of traditional knowledge, innovations and practices in the area of environment and sustainable development, and promote their protection through Intellectual Property Rights (IPR) or any other means. In view of climate change and the different crises Africa is faced with, (food crisis, energy crisis, economic crisis..), the promotion of the CBD could provide a solution. In fact, the first sign of the modernity of the Convention is the renewal of the very idea of conservation. Biodiversity is then perceived as a social construction, the result of dynamic interaction between human societies and nature. The conservation of biodiversity is all the more effective insofar as the options have not been imposed from outside the continent, but are based strictly on scientific or policy criteria. On the whole, the ABS process, which stems from the CBD, would be aimed at reconciling scientific and commercial interests, a source of development of genetic resources with the objectives of equity and social justice for the benefit of those who conserve or are at the origin of genetic resources and the related traditional knowledge. The main objective is to strictly regulate access and make it compulsory to share benefits with the countries that provide the genetic resources used.

REFERENCES

1. PROCEEDINGS OF THE INTERNATIONAL CONFERENCE,
Biodiversity, Science and Governance, Paris, 24-28 January 2005
2. Decision VII/11 (Operational Directives for Principle 5)
3. FAO, State of the World's Forests 2009, FAO Rome, 2009
4. LEONARD, R. et TOULMIN, C., "Traditional Knowledge: building linkages between environmental conventions and initiatives » Report prepared for the Secretariat of the Convention to Combat Desertification. IIED., 1999
5. BIODIVERSITY SUPPORT PROGRAMME, African Biodiversity:
Foundation for the Future : a Framework for Integrating Biodiversity Conservation and Sustainable Development, 1993
6. THIAM Abou, Les problèmes environnementaux majeurs de l'Afrique: l'appauvrissement de la biodiversité, 2005.(Major Environmental Issues in Africa: depletion of biodiversity, 2005).
7. SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY, Cartagena Protocol on Biosafety to the Convention on Biological Diversity: text and annexes, Montreal, 2000
8. SECRETARIAT OF THE CONVENTION ON BIOLOGICAL

DIVERSITY, Convention on Biological Diversity.
Text and annexes,
Montreal, 2001

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