forest and marine resource management. Particular attention was given to the involvement of stakeholders; the impact of use on ecosystem structure and functioning; decentralization of resource management; the balance between conservation and use in multiple use areas; the balance and relationship between international, national and local objectives; and principles of adaptive management. These issues were discussed in nine thematic sessions. The conference also included a panel discussion on trade and local resource management.

The conclusions and recommendations of the conference stress, inter alia, the need to: apply the precautionary principle or adequate risk-management procedures in respect of activities that may affect the structure, composition or functioning of ecosystems; ensure proper valuation of ecosystem services and equitable sharing of benefits obtained from these services; and decentralize ecosystem management to the lowest appropriate level. They also include suggestions to improve intersectoral cooperation within and between government and management agencies and to incorporate adaptive management into policy-making and implementation.

The outcome of the conference is intended to provide input to the next meetings of SBSTTA and the CBD Conference of the Parties in 2000, as well as other relevant fora. (Harm Dotinga)

**Note**


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**IUCN**

**Mining Policy**

The World Commission on Protected Areas (WCPA) of IUCN developed a Position Statement on the topic of mining and protected areas over a 12 months period. WCPA is one of the six commissions of IUCN – the World Conservation Union – and it represents the largest global network of protected area specialists.

The Statement (see page 286) defines the position of WCPA towards mining and associated activities in protected areas and in areas adjacent to them. It is based on the IUCN protected areas management category system; it is increasingly recognised and applied around the world and a number of countries are implementing it directly in their domestic legislation.

This Position Statement was reviewed and welcomed by the IUCN Council in April 1999. The underlying principle is that any activity in a protected area has to be compatible with the overall objectives of the protected area in question. WCPA developed this Position Statement hoping that it will make a valuable contribution to issues relating to mining and conservation throughout the world. (Milena Bellini)

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**CEDE**

**Sustainable Management of Water Resources**

**– The Madeira Declaration –**

by Henri Smets*

**Introduction**


CEDE was founded on 19th May 1974 in Strasbourg as a non-profit organisation under Swiss law. Its aim is to study, promote and develop environmental law, in particular in the European context. Over the years, CEDE has organised many meetings and colloquia, prepared advisory notes at the request of international organisations and adopted conclusions or resolutions to summarise its
opinion on various important topics in environmental law.

CEDE now consists of a small number of well known environmental lawyers from EU countries (academia and legal practice). Each country is represented by a member who can be replaced by an alternate member. In 1995, CEDE signed a Protocol with the Government of the Autonomous Region of Madeira and became a public purpose environmental NGO established under Portuguese law. It holds four meetings per year with the participation of members or alternate members, invited experts and observers from a few international organisations (EU, OECD, Council of Europe).

At the request of the Government of Madeira, CEDE undertook a study on property rights for water in various EU countries. Based on a questionnaire prepared by Prof. E. Rehbinder (Germany), CEDE members reported in 1998 on the legal situation in their countries and Mrs. Lina Camacho (Madeira) prepared a synthesis report on various property rights. With this background, CEDE discussed and adopted a Declaration on the Sustainable Management of Water Resources which was officially transmitted to the Government of Madeira on the occasion of the celebration of the 25th anniversary of CEDE.

The Madeira Declaration (see page 287) outlines major legal principles for the management of water in developed countries; these are drawn from national water legislations, state practice and recent international sources such as the 1992 Dublin Declaration, UNCED’s Agenda 21, the 1992 Helsinki and 1997 New-York conventions on international watercourses, the decision of the International Court of Justice in the Gabčíkovo-Nagymaros case, various OECD Recommendations and EU Directives on water management and water quality.

The Declaration is very much influenced by the increasing threat that water resources are becoming overused in a few industrialised countries and thus are not managed anymore in a sustainable way. Stresses on water resources are being observed in dryer regions while expenses to manage and conserve water resources are growing very rapidly.

The Declaration contains many principles which are already generally recognised principles of environmental or water law as well as new concepts or approaches which are beginning to be used widely and which we shall describe in more detail hereafter.

Among the traditional principles and instruments of environmental law, mention should be made of the principle of integrated management of all water resources, physical planning and regional planning, flood control, licensing, use of standards and of best available technologies, codes of good practices to protect water bodies, inventories, data collection and evaluation, public enquiries and EIA, public information and participation, access to courts, polluter-pays principle, charges and taxes on water abstraction and pollution, etc.

Sustainable development
The Madeira Declaration was prepared with the express aim of implementing the general goal of sustainable development in the management of all water resources. Hence, CEDE paid special attention to all forms of unsustainable development in water uses such as depletion of quantity, overuse of ground water, drying up of rivers and wetlands, degradation of quality, pollution by non-point sources, eutrophication. While recognising that water is an “economic good”, CEDE stresses that it is also an “ecological good”. Thus aquatic ecosystems, wetlands and water bodies should be strictly protected in their own rights and not only because of their value for certain economic activities.

Against this background, CEDE recommends that public authorities manage all water resources in a sustainable way, and in particular ensure that the minimum quantity of water needed to preserve biodiversity and ecosystems is provided even when there is a water shortage (minimum acceptable river flows) and that water amenities are protected. When water use exceeds certain limits, some activities requiring much water will need to be adjusted or curtailed in order to maintain the availability of sufficient water for basic human needs and for the protection of biodiversity. Thus concessions for water abstraction ought to be temporary and open for periodic review.

Degradation of water resources
CEDE recognises that many water resources are threatened and considers that, as a matter of principle, they should not be further degraded nor depleted (standstill principle). Special attention needs to be paid to the protection against pollution of areas where water is being abstracted. By and large, the environment needs to be protected in all its component parts and in some cases water quality will need to be restored. Due account should be taken of the precautionary principle, with a view to preventing as far as possible the release of toxic substances in water bodies as well as the degradation of biological diversity in aquatic systems (including the introduction of exotic species).

Water, property and trade
Water is considered to be a heritage or asset shared between all its users, i.e. the users of the water itself, the aquatic system and the associated ecosystems. This would mean that water is more a collective good than a private good and that it “belongs” primarily to those living in the catchment area. Private ownership of water is decreasing because the use of water in the private domain is increasingly regulated by administrative law and is subject to social requirements of solidarity.

Legal principles established when water was plentiful and human uses were more limited should now be revised in order to cope with a growing demand on water resources. To achieve rational and equitable use of water, existing laws on water ownership and user rights and on
concessions for abstraction may have to be adapted to enable water to be used more efficiently and also to allow for easier trade in water under well regulated conditions. This new approach will require clarification of water ownership and user rights in order to specify who can transfer or sell water rights, who can receive these rights and for what length of time, and who shall control such transfers.

Water is not a commodity like other commodities. First of all, water being a heritage rather than a property may not be overused and should be protected for future generations. Second, the economics of water is traditionally subject to specific rules. Thus the acquisition of water rights for the purpose of storing and subsequent selling of water to the highest bidder is not a socially acceptable practice because it would be inconsistent with the aim of achieving a “reasonable and equitable use of water.” Furthermore, most human groups are very reluctant to pay for the substance itself because it is generally considered as being “God given” or as some kind of collective property from which no rent can be extracted. This opinion (which is not shared by some economists) should not be seen as an obstacle to paying for the work of supplying water or disposing of waste water in an ecologically rational way.

**Water basin management, subsidiarity and public participation**

CEDE is strongly in favour of water management at the level of the catchment area or river basin whether the basin extends to one or more countries. However, it recognises that management at the basin level is not a legal obligation but only a preferred policy option to achieve sustainable development of all surface water and ground water in the basin.

The Madeira Declaration stresses that water is to be managed by national, regional and local authorities at the most appropriate level (and not simply from the top down). This approach, based on the subsidiarity principle, entails a certain degree of decentralisation which is not yet fully implemented because certain traditional water authorities continue to manage the water system of a country as a whole. Concerning ground water which generally falls under the jurisdiction of many authorities, there is a need for these authorities to cooperate more closely to ensure better conservation of a threatened natural resource of great value.

The public should be duly informed on all water issues. Furthermore, it should be in a position to participate in water planning procedures and not simply in individual water use decisions. NGOs concerned (consisting of users, consumers and/or environmentalists) should have a right of access in order to be able to appeal against individual permits as well as more general decisions on water use.

**Inter basin transfers of water**

At times of water scarcity, the issue of inter basin water transfers at national level needs to be addressed in spite of the political sensitivity of the topic. CEDE considers that water needs to be used and shared in a spirit of solidarity. The “donors” in a river basin should not oppose transfers of water to another basin because they may need this water at some unspecified time in the future or because such transfers would benefit the activities of competitors located in another basin. But at the same time, the “recipients” should not consider that an agreed water transfer creates a legal or moral right to further water transfers after the initial agreement has expired.

Provided that this last condition is well understood by all parties concerned, inter basin water transfers should only take place if they do not cause damage to any of the parties and to nature. In many instances such drastic conditions are not completely met and compromises may have to be found in order to induce donors not to oppose water transfers. In particular, special measures may be needed to alleviate negative effects on the aquatic system in the donor area and notably on the ecological conditions of the estuary.

Water transfer between basins located in different countries is an even more complex issue because there is no international agreement on the extent to which an international river might be seen as a shared natural resource or which specifies the extent to which water located in a country could be part of a “common” heritage shared with another country not located in the same basin. Many countries are afraid to give away any portion of their water in a similar way as they do not give away any part of their territory. Thus CEDE only recommends that water transfers between countries ought to take place when there is a need to remedy a critical situation of a temporary nature. In other words, a country with sufficient water should not oppose the transfer of available water to another country if there are exceptional circumstances, for example, in case of an exceptional drought or in an emergency situation.

Long term or quasi-permanent inter basin water transfers are a matter for discretionary decision of the countries concerned. Again it is necessary to recall that an agreed transfer for a given period of time does not create a right for further transfers after the end of the period. However, there are cases – such as the transfer of water taken near the Rhône estuary (France) to supply households in Barcelona (Catalonia) – which by their very nature should be seen as acts of solidarity between neighbouring regions and thus are likely to last for a long time.

**Full cost recovery. The user-pays principle**

Water is recognised by CEDE as being an economic good which needs to be managed in an economically rational way. For this purpose water abstraction and pollution charges may have to be introduced to better protect water resources, regulate abstraction, control pollution and finance related activities. This implies in particular that water metering devices should be
installed on all large scale uses such as abstraction of surface water or ground water for irrigation. Because water prices are growing, new measures will need to to be taken to reduce water wastage in agriculture, industry and households as well as water losses in distribution networks.

CEDE considers that users have to pay all economic costs related to the water they use, bearing in mind that polluters have already to pay pollution abatement and control costs in accordance with the polluter-pays principle. Such economic costs include investment, operational and maintenance costs and related charges and taxes for the provision of water as well as for sewage and waste water treatment. The so-called full cost recovery principle or “user-pays principle” does not address unpaid social costs such as uncompensated damage to the environment or other uncompensated externalities. It seeks to avoid tax payers having to pay for the supply of water or for waste water treatment. When the user-pays principle will be fully implemented, water is likely to be used more efficiently and wastage will be reduced.

The Madeira Declaration recognises only two exceptions to the user-pays principle: a lower price for drinking water may be set for satisfying basic human needs and subsidised water may be provided for traditional local uses (e.g. to supply existing irrigation networks). Thus, water is not only an economic good, it is also a social good to be used in a “socially equitable” way and in a “spirit of solidarity.”

To implement the user-pays principle, existing subsidies for water will need to be scaled down progressively and ultimately eliminated. For social reasons, an adequate transition period will have to be established, in particular in relation to the use of cheap water for large scale irrigation. The user-pays principle should apply fully concerning new equipment, such as water works and dams to develop irrigated agriculture. In other words, there should be no new subsidy, even in the framework of regional policies, to provide cheap irrigation water to farmers at the expense of tax payers and to the detriment of other social policies. Subsidies for agriculture should be given explicitly to farmers and not through environmentally damaging subsidies on a specific input.

Accounting of water related costs and revenue in all water companies should be made fully transparent in order to monitor the rising price of water, to determine the extent to which there are still direct or indirect subsidies from public authorities or cross-subsidies between categories of users (e.g. aid from industry to agriculture) and to avoid excessively high prices or unwarranted payments.

**Right of access to drinking water**

CEDE expresses its strong support for the implementation of an individual right of access to drinking water, *i.e.* water to satisfy basic human needs (drinking, cooking, washing, cleaning, etc). When stating that: “No person can be deprived from a sufficient quantity of water to satisfy basic needs,” CEDE considers that the right to drinking water has already become or is becoming a fundamental human right very much like the human right to health or to food.

In practice, a limited quantity of water could be sold at a lower price or be given away freely in order to meet legitimate social concerns in wealthy industrialised countries. This would constitute a warranted exception to the user-pays principle because in this case the small users would benefit from a cross subsidy from the large users. Such an approach based on solidarity among all users is being implemented in many countries which recognise that poor families find it difficult to pay the rising price of water. In other countries the price of water for disadvantaged people is not lowered but social assistance schemes are used to help poor families to pay for the water they use. In both cases, the principle to be observed is that allocation of water among users should be socially equitable, *i.e.* not solely based on the free forces of the market as is the case for oil resources. Water supply may be privatised but its sale to the public should take place under well regulated conditions which take account of social considerations.

**Final remarks**

The Madeira Declaration outlines modern principles for the prudent management of water resources at a time when water is getting scarce. The implementation of the legal principles and instruments contained in this Declaration should lead to a more rational and equitable management of water resources with a view to reaching sustainable development. Some of the principles outlined by CEDE are not yet internationally recognised principles but they are widely supported in Europe.

The growing price of water and its growing scarcity justify that water should now be considered as an economic good. Nevertheless, it should be kept in mind that water is not a commodity like other commodities and remains very much a social good which deserves special treatment in all human societies. Furthermore, access to water at an affordable price is to be treated as a fundamental human right especially in developed countries which have the financial means to implement such a right.

**References**

1. CEDE Internet site: www.madinfo.pt/organismos/aream/cede.