UNEP

CBD

CONVENTION ON BIOLOGICAL DIVERSITY

Distr.
GENERAL

UNEP/CBD/COP/8/INF/20
31 January 2006

ENGLISH ONLY

CONFERENCE OF THE PARTIES TO THE
CONVENTION ON BIOLOGICAL DIVERSITY
Eighth meeting
Curitiba, Brazil, 20-31 March 2006

BIOLOGICAL DIVERSITY OF INLAND WATER ECOSYSTEMS

- case-studies on information and lessons learned from the application of national and regional policies, plans and best practices, from the application of water frameworks, including specific examples of successful policy interventions to conserve and sustainably use inland waters

Note by the Executive Secretary

I. INTRODUCTION

1. Paragraph 12 of the programme of work on the biological diversity of inland water ecosystems (decision VII/4) urges Parties to share information and lessons learned from the application of national and regional policies, plans and best practices, from the application of water frameworks, including specific examples of successful policy interventions to conserve and sustainably use inland waters, and requests the Executive Secretary to summarize this and related available information for the eighth meeting of the Conference of the Parties.

2. In response to this request, the Executive Secretary issued notification 2005-021, issued on 28 February 2005.

3. This document summarises the case studies submitted in response to this notification. The full details of each case study have been made available through the Clearing House Mechanism .

4. Parties are invited to use these case-studies to assist their implementation of this and related programmes of work and to provide further case studies to the Secretariat to include in the Clearing House Mechanism.

II. SUMMARY OF CASE-STUDIES SUBMITTED

5. The case-studies submitted in response to the notification are summarised in Table 1. The table also provides links to sources of further information.

6. The main conclusions of each case-study are listed in table 1. Some main overall conclusions from the case-studies are as follows:

/…

- Water frameworks are valuable tools to assist with the development of policies and management guidance for freshwater resources.
- They must be adapted to local conditions but are examples of transferable technology between countries and regions.
- They are particularly useful as a means to address multi-sectoral objectives for water resources use and thereby addressing the challenge of the conservation and sustainable use of the biological diversity of inland water ecosystems under multiple use considerations (and hence are useful tools for the implementation of this programme of work).
- Water frameworks have been used very successfully to address resource management objectives in transboundary rivers (the European Water Directive being a very well developed example). However, they can also be applied successfully at the national or local level.
- A key factor in the successful implementation of an effective water framework is stakeholder participation. This must include all stakeholders throughout the catchment of a river basin, irrespective of political or jurisdictional boundaries.
- Needs include: transparency and accountability in decision making; adequate community consultation and participation in decision making; robust scientific conclusions to support policy decisions and the mechanisms to describe these to the general public; integrated management of waterways to complement site-specific management; and legislative approval of any agreement in each jurisdiction to strengthen its effectiveness.
- Water frameworks can be supported by national or regional legislation but legislation is not a prerequisite for success and neither does it guarantee it. Many successful examples are based upon voluntary, prior informed, compliance.
- Guiding principles might include: ecological integrity of the aquatic ecosystem; managing water resources in a sustainable manner; management does not reasonably harm other jurisdictions; sharing information; and, resolving issues.
- Integrated water resource management must account for the total water cycle, recognising the connectivity between surface and ground water systems, if it is to ensure security for consumptive users and the environment.
- The formal determination of water allocations or entitlements should include allocations for the environment as a legitimate user of water.
- Effectively balancing management of the environment and the need for certainty of access for water users is essential for ongoing reform - water users need sufficient certainty and confidence about on-going access to the resource to enable investment, particularly in water efficient technologies and practices.
- Conservation and sustainable use of the biological diversity of inland water ecosystems is achievable by using a participatory approach, scientific data collection and blending traditional knowledge or techniques according to the local requirements.

Table 1: Summary of the case studies received.

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
Australia	Six case studies (Department of Environment and Heritage) More information: Department of Environment and Heritage http://www.deh.gov.au/water http://www.mdbc.gov.au http://www.deh.gov.au/water http://www.deh.gov.au/water/rivers/flows	*(1) Sustainable Cross-border Management of the Lake Eyrie Basin Australia* The Lake Eyre Basin – Location/Landscapes/Land use Issues leading to the Genesis of the Lake Eyre Basin Agreement Consultation/participatory processes Current Issues	Appropriate and comprehensive consultation with all stakeholders (particularly the local community) is essential. As the Agreement does not override the statutory responsibilities of the States for natural resource management, it relies to a large degree on the good will and commitment of State Governments and the ongoing support and contribution from the Basin community for its success. Having legislative approval of the Agreement in each jurisdiction strengthens its effectiveness.
		(2) *The Murray-Darling Basin Initiative – integrated cross-border river basin management and community engagement* Background Natural Resource Management Issues Establishing the Murray-Darling Basin Commission Charter of the Commission Financial Commitments The Community Advisory Committee Outcomes Achieved The Murray-Darling Basin Cap Permanent Water Trading in the Murray-Darling Basin Lessons Learned Replicability Principles and Practices Transferable	The most important aspects of the approach should be seen as principles and practices that can be replicated elsewhere. These include: the use of: an integrated approach; Commonwealth-State-community partnerships; a real sharing of power between participating jurisdictions; an approach based on agreed values and operational principles; using resource condition targets to help prioritise investment and effort; a range of mitigation strategies, including market-based solutions; a cap on water diversions; a Human Dimension program; and the use of negotiation and legislative tools. These principles and practices are transferable to other river basin organisations throughout the world.

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
		(3) Integrated Approaches – The National Water Initiative Background Issues Outcomes Lessons Learned	A number of important lessons have been learnt during the reform process, including: integrated water resource management must account for the total water cycle, recognising the connectivity between surface and ground water systems, if it is to ensure security for consumptive users and the environment; integration must address a range of cross-cutting issues such as: large scale impacts of land use on the water-balance of catchments, increased water efficiency, and the impact of upstream activities on downstream water quality and availability; effectively balancing management of the environment and the need for certainty of access for water users is essential for ongoing reform - water users need sufficient certainty and confidence about on-going access to the resource to enable investment, particularly in water efficient technologies and practices; water markets and water trading provide mechanisms for the more efficient use of water; however, there are still impediments to water trading, include the many different types of water access rights regimes that exist between States and regions, and the restrictions placed by water authorities on trading upstream and downstream; continual improvement of data and scientific information is needed to support decisions and actions, although it is likely there will never be all the information preferred; extensive public consultation engaging all stakeholders is essential for effective decision making; the costs of repairing a damaged or degraded landscape far exceeds the costs of adopting a conservative, environmentally sensitive approach to developing land for human uses.

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
		(4) The Murray-Darling Basin Initiative – The Living Murray Initiative – e-flows and environmental outcomes. Background The Living Murray Initiative Mainstreaming/Sustainability Replicating the Initiative Lessons Learned	A number of lessons have been learnt through the development and implementation of the Living Murray initiative. These include, but are not limited to: the need for transparency and accountability in decision making; the need for adequate community consultation and participation in decision making; the need for robust scientific conclusions to support policy decisions and the mechanisms to describe these to the general public; the need for integrated management of waterways to complement site-specific management; and that having legislative approval of the Agreement in each jurisdiction strengthens its effectiveness.
		(5) Australia's Water Reforms Unique Characteristics Water Reform Framework Main Elements of Water Reforms	Due to be fully implemented by 2005, the framework includes provisions for water entitlements and trading, environmental requirements, institutional reform, water pricing, research and public consultation and education. The main elements are as follows: All water pricing is to be based on the principles of consumption-based pricing, full cost recovery and transparency of cross-subsidies. For urban water services, charges include an access and usage component. For metropolitan bulk-water suppliers, charges are on a volumetric basis to recover all costs. Any future new investment in irrigation schemes, or extensions to existing schemes, is to be undertaken after an appraisal indicates it is economically viable and ecologically sustainable. State and territory governments are to implement comprehensive water allocation or entitlement systems, which are to be backed by the separation of water property rights from land. These should include clear specification of entitlements in terms of ownership, volume, reliability, transferability and, if appropriate, quality. The formal determination of water allocations or entitlements includes allocations for the environment as a legitimate user of water. Trading (including across state

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
			and territory orders) of water allocations and entitlements is to be within the social or physical and ecological constraints of catchments. As far as possible, resource management and the regulatory roles of government should be separated from water service provision. There should be an integrated catchment management approach to water resources and greater local-level responsibility for water resource management. There should be greater public education about water use and consultation in implementing water reforms. More research into water use efficiency technologies and related areas is to be conducted. The principles behind the development of water markets (the definition of property rights to water, the separation of land and water assets) are critical if Australia is to manage its water resources on a sustainable basis and improve the efficiency of water use.
		(6) Integrated Approaches: The National Water Quality Management Strategy and the Coastal Catchments Initiative The National Water Quality Management Strategy (http://www.deh.gov.au/water/quality/nwqms/index.html) The Coastal Catchments Initiative (http://www.deh.gov.au/coasts/pollution/cci/framework/index.html) Mainstreaming/Sustainability Replicating the Initiative Eight sub-case-studies described. More information: www.deh.gov.au/coasts	The Coastal Catchments Initiative could potentially be replicated in other countries of the world, subject to availability of adequate information on: land use and pollutant export rates; discharge information from industrial or agricultural point sources; ambient water quality information sufficient for setting water quality objectives and end-of-river load targets; the development of catchment water quality decision-support systems; and the cost-effectiveness of pollutant source controls.

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
Canada	Three case studies (Biodiversity Convention Office)	(*1) Water Frameworks – policy interventions to sustainably use inland waters: Case Study – Fraser Basin Council* The Fraser River Basin, British Columbia, Canada Setting and Background – The Fraser River Basin Objectives of the Framework / Policy – The Charter for Sustainability Key Features – Fraser Basin Council Governance Structure and Programmes Tools and Monitoring Processes Used – Lessons Learned	The Fraser Basin Council is unique in that it has pulled together a diversified working group from many different organisations and from the private sector. The Fraser Basin Council was conceived as a new kind of 21st century organisation, purposely designed to have no legal powers, but to be instead an impartial facilitator of sustainable decision-making. It operates under a new mode of collaborative governance. The Council is meant to be infinitely flexible and constantly evolutionary. It is a transpartisan, non-political, non-governmental, autonomous organisation where governments and others serve as equals together in on-going progress toward sustainability.
		(2) The Great Lakes Basin- A Case Study in Rehabilitation and Conservation of a Binational Freshwater Ecosystem. Introduction Governance Achievements Through Co-operative Action-Environmental Quality Achievements Through Co-operative Action-Fisheries Management	The management of the shared resources of the Great Lakes has evolved over the past 100 years from a somewhat hit and miss approach, dealing with issues as they arose, or early on, not dealing with them at all (e.g. fisheries), to a coordinated, multi-agency approach where agencies from both countries, at all levels of government work towards achievement of common, agreed upon goals, objectives and targets. The governments of Canada and the USA have agreed that actual delivery of programs to achieve these ends will be carried out pursuant to domestic legislation and policy. Only in a few cases, such as lake-wide management plans, reporting on the state of the Great Lakes, monitoring, response to spill emergencies, will the governments develop plans and programs separate from domestic ones.
		(3) The Mackenzie River Basin Board Further information is available at: http://www.mrbb.ca	Five guiding principles: ecological integrity of the aquatic ecosystem; managing water resources in a sustainable manner; management does not reasonably harm other jurisdictions; sharing information; and, resolving issues. Strategic Plan which identifies six goals: improve water

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
			quality; ensure sufficient water quantity; sustain instream water uses; ensure healthy, abundant and diverse species and habitat; ensure human health and safety; and, ensure a knowledgeable and involved public.
Colombia	Three case studies under the programme for the sustainable management and restoration/rehabilitation of ecosystems of high mountain regions of Colombia (Páramos: high altitude grasslands, including peatlands) (Ministry of Environment, Housing and Land Development) (in Spanish) More information is available ate: www.minambiente.gov.co	*(1) Production and implementation, on a participative basis, of a management and sustainable use plan for the páramos situated in Rabanal.* Local interest for creating specific zones and protected areas. Creation on a participative basis of Municipal Natural Park, in the municipality of Lenguazaque. Strengthening of the agreement to protect the forest area included therein. Building alliances between different local villages to manage, in an environmental-friendly way the river Raquira which goes through protected forest areas. The local initiative of the users of the aqueduct of the area for its conservation. Declaration of protected areas for the bed and gorges of the river Albarracin. *(2) Planning and environmentally-friendly management of ecosystems of páramos; with emphasis on the local and sustainable development of the water resources.* Restore and conserve ecosystems that need protection as a priority. Building a system of protected areas in the north-east of Colombia. Decentralization of environmental	

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
		management so that municipalities can be responsible for environmental matters. *(3) Planning and environmental management of the volcano area of Doña Juana - Cerro Juanoy.* Design of a capacity-building plan and awareness-building of the local population about environmental issues. Establishment of a list of biomes for the volcano area.	
Czech Republic	*The Water Framework in the Czech Republic* (Ministry of the Environment)	Multilateral international cooperation in water protection Convention on the International Commission for the Elbe River Protection (ICPER) Convention on Cooperation for the Protection and Sustainable Use of the Danube River Convention on the International Commission for the Oder River Protection against Pollution Bilateral cooperation in managing transboundary waters Federal Republic of Germany Republic of Poland Republic of Austria Slovak Republic Convention on the Protection and Use of Transboundary Watercourses and International Lakes The Czech Republic case study covers countries and river basins included in the European Water Framework (see European	The management of water resources should be based on their natural basins rather than on political and administrative boundaries

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
		Commission). It is accompanied by three detailed summary reports according to the EU Directive 2000/60/ES: The Elbe River basin district; The Danube River basin district; and The Oder River basin district. Also accompanied by brochures (i) on the Implementation of the EU Water Framework Directive in the Czech Republic, 2004, Ministry of Environment, Prague ISBN 80-7212-273-8; (ii) Water Protection Department, Prague, the Czech Republic, 2004, Ministry of Environment of the Czech Republic, Prague; (iii) International cooperation of the Czech Republic in water protection, Ministry of the Environment, Prague, ISBN 80-7212-120-0	
European Commission	The EU Water Framework Directive (European Commission, Directorate-General Environment)	The EU Water Framework Directive (WFD) was adopted on 23 October 2000. The WFD constitutes a very important example of the application of the concept of Water Frameworks – policy interventions to sustainable inland water use in Europe. It is legally binding for all 25 EU Member States and encourages cooperation with non-EU Countries where they share transboundary river basins with EU Member States. This is a very comprehensive case study. The CHM (web-site) information includes a copy of the legal text of the WFD and an explanatory brochure for additional information. For substantial additional information (e.g.. guidance documents) consult:	See web-links.

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
		http://europa.eu.int/comm/environment/water/water-framework/index_en.html The case study also draws attention to the international river conventions of the Danube, Rhine, Elbe and Odra. The international River Basin Commissions have an important role in coordinating the WFD in the EU Member States. Some of these conventions play particular attention to wetlands protection and restoration – see: http://europa.eu.int/comm/environment/water/water-framework/links.html for further information on the various commissions and conventions. A workshop was also held (8-11 May 2005), the main focus of which was - working from case studies - the integration of the Water Framework Directive (WFD), and the Habitats and Birds Directives (the constituent directives of Natura 2000), with the challenge of improving wetlands and freshwater habitats. See http://www.eurosite.org/article.php3?id_article=260 for a copy of the workshop report and recommendations	
Germany	*The results of the analysis required by the EC water framework directive concerning the characteristics of the river basins and the impact of human activities on the status of surface waters*	Information supplied by Germany in addition to the European Water Framework (see European Commission case study). For all international river basins partially lying on German territory (Odra, Elbe, Ems, Rhine, Meuse, Danube) this analysis was carried out in co-ordination with the neighbouring States	See web-links.

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
	and groundwater (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety)	and joint reports on the results were produced and submitted to the European Commission. The reports for the Rhine, the Meuse and the Danube are available in official UN languages (French or English) and can be downloaded from the web sides of the International Commission for the Protection of the River Rhine (www.iksr.org); the International Commission for the Protection of the Danube River (www.icpdr.org) and the International Meuse Commission (www.cipm-icbm.de). The case of Danube River Basin could be of particular interest for the purpose of the CBD notification 2005-021, not the least because the Danube River Basin was also selected by UNESCO as a case study for the next World Water Assessment Report. Parties are also recommended to contact the Secretariat of the Convention on the Protection and Use of Trans-boundary Water courses and International Lakes at the UNECE Directorate on Environment and Human Settlements in Geneva. The work plan 2003-2006 agreed upon by the 3rd Conference of the Parties to this Convention contains several activities integrated management of water and related ecosystems (www.unece.org/env/water/welcome.html).	

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
Ghana	*The Water Resources Commission and the Densu Basin Pilot* (Ministry of Environment and Science)	Establishment of the Water Resources Commission Draft Ghana Water Policy Integrated Water Resources Management Transboundary Initiatives The Densu Basin Pilot	
India	Synthesis of five case studies (Ministry of environment and forests)	*(1) Centre for Environment Education (A Centre of Excellence of the Ministry of Environment and Forests) Ahmedabad, Gujarat; Small Grant Programme on sustainable water management* *(2) Tarun Bharat Sangh (NGO), Alwar, Rajasthan; Integrated developmental work of the organization* *(3) C. P. R. Environmental Education Centre (A Centre of Excellence of the Ministry of Environment and Forests), Chennai, Tamilnadu; revival of traditional tanks, monitoring of water quality* *(4) Wetlands International – South Asia (International Organisation), New Delhi; Project on sustainable development and water resource management of Loktak Lake* *(5) Centre for Ecological sciences (A Centre of Excellence of the Ministry of Environment and Forests), IISc., Bangalore, Karnataka; Research work on urban wetlands*	Conservation and sustainable use of wetland biodiversity is possible by using participatory approach, scientific data collection and by blending traditional knowledge or techniques according to the local requirements. At the same time, focused programmes on the wetland conservation and sustainable use are necessary.
Mauritius	*Interventions to sustainably use inland water – Mauritius scenario* (Ministry of Public Utilities)	Fresh water Potential and Utilisation Optismisation of Freshwater National Water Policy	

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
Myanmar	*Draft Strategic Plan of IWRM in Myanmar* (Ministry of Agriculture and Irrigation, Union of Myanmar)	Introduction National water sector context Scope of the study Water resources utilisation and challenges Summary of goals linked to the socio-economic development goals Overall socio-economic development context of the country Opportunities and issues in water resources development Vision statement Legal and institutional framework Legal and institutional context of water resources management Current situation and perspectives of the legal and institutional framework, including organisation chart Brief analysis of strengths and weakness of the current legal and institutional framework Mission and vision statements Strategic Plan Goals Mission Goal 1: Manage, develop and protect water and related resources to meet the needs of current and future generations Mission Goal 2: Operate, maintain and rehabilitate facilities safely, reliably and effectively to protect the public investment Mission Goal 3: Enhance organisational effectiveness of the water resources coordinating system and promote capacity building Implementation, monitoring and evaluations Identification of indicators and benchmarks for performance measurements and expected timeframe Mechanisms for reporting, monitoring and evaluation Consultation mechanisms and initial findings Consultation mechanisms in place and future developments Conclusion and recommendations Annex: Organisation chart of Myanmar Water	An important achievement was the establishment of an Environmental Conservation Committee with the Ministry of Foreign Affairs acting as Chair with ten task forces under it. Duties and responsibilities of each task force are laid down and these report to the chair with recommendations according to river systems, coastal zones and forest conservation regions. Each and every department in the water sector under different ministries has formulated a 30 year master plan for the development and management of water resources. The Ministry of Agriculture and Irrigation has implemented several activities during this decade in respect to: the improvement of irrigation facilities; the efficient management and use of water; water pricing; the initiating of sprinkler and drip irrigation wherever feasible; and the introduction of appropriate cropping patterns. The pressure of rapid population growth, and the attendant demands for more food, will inevitably strain the water resources further and it will be necessary to establish an effective National Water Policy, covering water laws, disaster preparedness, efficient water use, ecosystem conservation, institutional strengthening, sector-wise co-ordination and the setting up of a high level committee, to deal with all relevant aspects.

/…

Country	Title (submitted by)	Scope of the case-study	Conclusions of the case-study
Trinidad and Tobago	*Case-study on the application of water frameworks – policy interventions for sustainable use of inland waters* (Water and Sewerage Authority: Water Resources Agency)	Introduction Background Objectives of the Framework Water resources Initiatives Conclusion	There are a multitude of water resources issues present in the river basins of Trinidad and Tobago. In addressing these issues there is a clear need for adopting the Draft National Policy for water resources management. Other issues which are recognised include: Institutional setting: there should be an autonomous body with the mandate for river basin management. Information: Information forms the basis for decision making and a database management system for River Basin Management is required. Public Awareness: Education of the community and stakeholders are essential for the success of initiatives being undertaken. Public Participation: Strong stakeholder participation and but-in are other essential ingredients for success. A river basin management approach is an important tool to achieve integrated water resources management. The adoption of a policy and legislative framework is essential to rally stakeholders behind a common vision. Educating the stakeholders about options and their respective benefits and costs, would ensure that water resource management decisions and interventions have broad-based support.
Additional information:	Case studies which were presented at the FAO-Netherlands Conference on "Water for Food and Ecosystems" which was held in the Hague from 30 January - 4 February 2005. (Netherlands)	Information can be found on http://www.fao.org/ag/wfe2005/index_en.htm and many interesting (international) case studies can be found on http://www.fao.org/ag/wfe2005/conference_tran_en.htm. The Dutch case study discussed in that Conference is also on this website on http://www.fao.org/ag/wfe2005/docs/Application_Dutch_H2Oboard_en.pdf.	

	The River Basin Initiative is part of the joint work plan between the CBD and Ramsar Convention	Significant additional information and resources available at: http://www.riverbasin.org/ev_en.php	
	The Ramsar Convention holds significant information, management guidance and case studies on Water Frameworks and related subjects	see: http://www.ramsar.org/	
