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**Freshwater Resources and Transboundary Rivers  
on the International Agenda:  
From UNCED to RIO+10**

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## Abbreviations and acronyms

CSD	Commission for Sustainable Development
FAO	Food and Agriculture Organisation
G-77/China	Group of 77 developing countries, established in 1964, with meanwhile more than 130 member countries including China
GWP	Global Water Partnership
ICWE	International Conference on Water and Environment
ISWG	Intersectional ad-hoc Working Group
IUCN	International Union for the Conservation of Nature
NGO	Non-governmental Organisation
PrepCom	Preparatory Committee
UNCED	United Nations Conference on Environment and Development
UNCHE	United Nations Conference on Human Environment
UNDP	United Nations Development Programme
UNEP	United Environmental Programme
UNGASS	United Nation General Assembly Special Session
WWC	World Water Council

# 1 Introduction

Freshwater resources were not among the topics of the United Nations Conference on Environment and Development (UNCED) that received much political attention and publicity. The agenda was dominated by negotiations on conventions on climate change, bio-diversity, on protecting (tropical) forests, and, finally, it was agreed that a convention on combating desertification would be negotiated later in 1994. However, it would be misleading to assume that freshwater resources were a neglected issue.

Prior to RIO, the UN Conference on Water and the Environment (Dublin 1992) decided on four relevant principles which influenced negotiations during the UNCED, and have dominated academic as well as political discussion ever since. In RIO, debates over freshwater resources were restricted to the Working Group II that proposed a draft which became part of the AGENDA 21 (Chapter 18: "Protection of the Quality and Supply of Freshwater Resources: Application of Integrated Approaches to the Development, Management and Use of Water Resources"). After the UNCED, protection and development of freshwater resources attracted increasing attention and a considerable number of international conferences were organised. In 1997, the Special Session of the UN General Assembly (UNGASS) called for a Programme for the Further Implementation of the Agenda 21, and decided that the CSD-6 working programme for 1998 to 2002 would be to develop strategic approaches to freshwater management. Early this year, the Second World Water Forum in The Hague developed a World Water Vision and a Framework for Action for overcoming the threatening water crises.

However, despite continuing efforts, success has been mixed. Therefore, the **International Conference on Freshwater 2001**, hosted by Germany, will focus on practical solutions to be implemented. The Conference is part of the 10-year follow-up to the United Nations Conference on Environment and Development in 2002, and will be a preparatory step for the upcoming review of the UNCED's outcomes.

Our study provides an overview of the UNCED negotiation process identifying common understandings, controversial issues and deficits. It then displays how protection and development of freshwater resources has dominated the international agenda since RIO.

## **2 Freshwater Resources on the International Agenda: From UNCED to RIO+10**

In order to assess the effectiveness of Agenda 21's Chapter 18 "Protection of the Quality and Supply of Freshwater Resources: Application of Integrated Approaches to the Development, Management and Use of Water Resources", it is useful to remember the specific character and dramaturgy of the RIO negotiation process:

1. The Earth Summit in RIO 1992, including its preparatory process, was the first opportunity for the governments involved to discuss main aspects of interrelated issues of environment and development. This fact contributed to the enormous size of the agenda, while negotiation capacity and time was limited. Consequently, many details, controversial aspects and crosscutting issues had to be neglected or postponed. Therefore, Agenda 21 does not have the character of a final and complete action programme with all tasks, responsibilities and financial as well as political consequences precisely mentioned. But at least it is a first approach to a comprehensive programme for international action. Nevertheless, it can not be denied that consensus diplomacy and the will of all participants to reach a comprehensive resolution led to a variety of 'lowest common denominator' agreements.
2. Freshwater resources were neither among the topics of the RIO negotiation process that received much publicity, nor was the text of Chapter 18 extraordinarily controversial compared to other topics.
3. National delegations worked hard and succeeded in creating new instruments of international law – both hard law, e.g. Conventions on Climate Change and Biological Diversity, and soft law, e.g. the non-legally-binding Agenda 21. It is obvious that negotiators turned their attention much more to the controversial aspects of the new international instruments with hard law character than to the new soft instrument Agenda 21, and struggling for particular phrases was much more common during the negotiations on the legally-binding conventions.
4. It is worth noting that the UNCED was the core of a larger system of environmental and development negotiations. All subsystems of environmental negotiations (atmosphere, protection of the ozone layer, waste, oceans, freshwater etc.) had their own specific history and components prior to RIO: international conferences and legally binding or non-binding conventions that had been negotiated in the 20 years since the Stockholm Conference on the Human Environment (UNCHE) in 1972. Other relevant topics were not captured by the UNCED, though some of these neglected issues were parallel to RIO or afterwards intensively and partly successfully debated elsewhere. Consequently, Agenda 21 did not reflect all relevant and latest developments.

## 2.1 From Stockholm 1972 to the Brundtland Report 1987: Water Blindness?

The UN Conference on Human Environment in 1972 (Stockholm) was the starting point for many initiatives in global environmental policy. This first world conference on environmental issues brought together political leaders from UN member countries and raised the attention to already perceptible or potential ecological consequences of population growth and human threats to the environment.<sup>1</sup> The member states adopted some fundamental principles including humanity's responsibility to reduce pollution and to protect the environment, the importance of nature conservation and of planning economic development, the protection of non-renewable resources and the need of assisting developing countries to achieve higher stages in development as a way of reducing poverty.

Although the importance of the Stockholm Conference for the emergence of environmental issues on the international agenda is unquestionable, the specific recommendations for the protection of freshwater resources are rather selective and vague: the Stockholm Conference's contribution to water resource management included recommendations in general terms for ensuring the preservation of water quality and protection of the environment from large-scale water development projects. It also stressed the need to reduce the pollution of marine ecosystems caused by industrial development.

The 1977 Mar del Plata World Conference on Water Resources was the next milestone in the development of international water policy. In order to characterise its outcomes, it is important to consider the influences of previous events which helped to set the agenda for the Mar del Plata Conference.<sup>2</sup> While the Stockholm Conference had a certain influence on recommending actions to ensure preservation of water quality and to diminish environmental degradation caused by large scale water development projects, three additional conferences in 1974 and 1976 enriched the international water policy agenda. Firstly, the World Bank Population Conference (Bucharest, 1974) discussed water as a necessity for meeting growing human needs. Consequently, negotiators jointly came to the conclusion that in view of the increasing population growth a sufficient water supply must be considered as an essential prerequisite for social and economic development. Secondly, the World Food Conference (Rome, 1974) elaborated on this topic by discussing the importance of water for agriculture and food security in developing countries. Finally, the Vancouver Conference on Human Settlements (1976) pointed to lack of clean water for the majority of the world's rural population as one of the central themes. This Conference stressed the necessity to improve the supply of clean water to the world's population by setting definite targets.

The Mar del Plata Conference on Water Resources agreed with the goal of the Vancouver Conference to provide clean and adequate water supplies for all by 1990. To that effect, the conference was the first global conference that paid specific attention to freshwater issues by establishing people's right to water for their basic needs, which has often been repeated as a basic principle of international water policy.<sup>3</sup> In spite of the fact that the Mar del Plata Conference stressed a multitude of related aspects – inter alia the need for rational instituting, better management practices, adequate data as a prerequisite for water planning, long-term development and management plans for water resources – developmental and environmental

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<sup>1</sup> United Nations (1973): Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, New York.

<sup>2</sup> Biswas, Asit K. (Ed.) (1978): United Nations Water Conference: Summary and Main Documents, United Nations.

<sup>3</sup> United Nations. Report of the United Nations Water Conference. Mar del Plata, 14-25 March, 1977. New York.

issues were not yet fully approached in a comprehensive manner.

Rather, the Conference, as well as its well-known follow-up the International Decade on Water Supply and Sanitation (1981-1990) were dominated by an engineering approach and an over-accentuation of the extension of technical infrastructure for overcoming shortages in water supply (including irrigation) and waste water disposal.<sup>4</sup> Water demand management, which was stressed as a key element in international documents later, was not part of the water decade. Although water scarcity received more publicity with the Decade throughout the world, and the programmes carried out reached a large number of people in developing countries, especially by projects intended to expand water supply, the overall aim of providing clean water for all was by far not realised. The assessment of the Decade by the Conference on Water and Sanitation in 1990 (New Delhi) was rather disillusioning: At the start of the 1990s, more than a quarter of the world's population still lacked the basic human needs of enough food to eat, a clean water supply and hygienic means of sanitation. Partly impressive gains of the Water Decade in the number served were largely negated by population increases. Therefore participants of the New Delhi Conference concluded, among other things, that reducing costs and a mobilisation of additional funds would be needed, and they put emphasis on institutional and management aspects for the future.<sup>5</sup>

Another milestone leading to current principles in water resource management was the Brundtland Report on sustainable development in 1987, although in this document water scarcity and the relevant institutional or political aspects were only marginally discussed as sub-themes to urban development and food security.<sup>6</sup> In spite of that the Brundtland-Commission had clearly forced the international water community into thinking about the interdependence of water dependent economic development and related environmental aspects. The report noted the need to conserve the world's resources and gave particular attention to the interrelationships between people, resources, environment and development. With the notion of sustainable development, the Brundtland Report changed the political perception of resource protection in general terms. However, in retrospect it did not succeed in setting the agenda for international negotiations on freshwater resources in the short term. The fact that there was a missing link between international water experts - whose publications already at that time convincingly verified the urgency of the water crisis and its international dimension<sup>7</sup> - and the international environment and the development community represented by the Brundtland Commission led to an underestimation of the seriousness of the global water situation.

Thus, in spite of the Water Decade and the rhetoric of many international organisations and documents, the common feature of international events in the 1980's was a remarkable neglect of freshwater as an increasingly scarce resource under severe and increasing environmental stress. This "water blindness"<sup>8</sup> of international policy in the sense of an obvious ignorance of the urgency of the water crisis explains why key issues of a global water policy were still far from being agreed upon, explaining why the 1980's is viewed by many scholars as a

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<sup>4</sup> Hartje, Volkmar (1998): Die Thematisierung der Wasserknappheit und ihre Wirkungen auf die Wasserpolitik, in: Hartje, Volkmar; Ermer, Harald (Eds.): Wasser – Kultur – Politik, Wechselwirkungen und Optionen, Berlin, pp. 1-28.

<sup>5</sup> See United Nations. Dept. of Technical Co-operation for Development. Legal and institutional factors affecting the implementation of the international drinking water supply and sanitation decade. Natural resources/water series; No. 23. New York: United Nations, 1989.

<sup>6</sup> WCED (World Commission on Environment and Development) (1987): Our Common Future, Oxford.

<sup>7</sup> See e.g. Falkenmark, M. (1989): The Massive Water Scarcity Now Threatening Africa – Why Isn't It Being Addressed?, in: *Ambio*, Vol. 18 (2), pp. 112-118.

<sup>8</sup> Biswas, Asit K. (1998): Deafness of Global Water Crisis: Causes and Risks, in: *Ambio* Vol. 27, No. 6, p. 493.

lost decade for international water policy.

## **2.2 Water Issues in the Preparatory Committee of the UNCED<sup>9</sup>**

When the Brundlandt Commission presented its report to the UN General Assembly in 1987, among its recommendations was a call for the United Nations to prepare a universal declaration and a convention on environmental protection and sustainable development. The General Assembly formally moved to establish the UNCED in December 1989. The mandate of the conference - environment and development - was extremely broad. Although the text of the authorising resolution focused mostly on environmental issues, the stated intention was that environment and development issues be fully integrated. The General Assembly Resolution 44/228, which formally established the conference, states that the UNCED was to "elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote sustainable and environmentally sound development in all countries". In accordance with the resolution one of the main tasks of the UNCED was "to examine the relationship between environmental degradation and the international economic environment, with a view to ensuring a more integrated approach to problems of environment and development in relevant international forums without introducing new forms of conditionality". Furthermore, the UN agreed on nine environmental key areas (inter alia the "Protection of the quality and supply of freshwater resources"), which are of major concern in maintaining the quality of the Earth's environment and in achieving environmentally sound and sustainable development.

Much of the preliminary work for the conference was conducted by the Preparatory Committee (PrepCom), which held an organisational meeting in March 1990 and four substantive sessions from August 1990 to April 1992.<sup>10</sup> The PrepCom was mandated to draft the provisional agenda, adopt guidelines for states in their preparations for it, and prepare draft decisions for considerations and adoption by the UNCED. During the Organisational Session (5-16 March 1990, New York), it was agreed to establish two working groups for negotiating the items identified in the UN Resolution 44/228. The mandate of the second group included inter alia the protection and supply of freshwater resources. Other important topics delegated to Working Group II were the protection of oceans, seas and coastal areas, as well as the environmentally sound management of waste.

During the first substantive session of the PrepCom (PrepCom I) held in Nairobi in August 1990, the sessions of Working Group II were dominated by the delegates defining their interests, emphasising the need for information and drafting requests for reports to be prepared by the secretariat. Concerning freshwater issues at PrepCom II, a draft proposal was agreed. Delegates also recognised the need for further information and expressed the necessity for intensive discussions with experts and institutions from developing countries. The need to strengthen institutional capabilities for effective monitoring of water resources was noted, as was the necessity for the international community to support developing countries through technology transfer, financial assistance and technical co-operation. In contrast to the rhetoric of many international meetings already at that early stage of negotiation, it was obvious that

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<sup>9</sup> Information from Earth Negotiations Bulletin, International Institute for Sustainable Development, [www.iisd.ca](http://www.iisd.ca), and unpublished NGO and official papers.

<sup>10</sup> See for PrepCom Chasek, P. (1994): The Story of the UNCED Process, in: Spector, B.I.; Sjöstedt, G.; Zartmann, I.W. (ed.): Negotiating international regimes: lessons learned from the United Nations Conference on Environment and Development (UNCED), London, pp. 45-62.



the majority of delegations intended to avoid ideological debates on technology transfer. However, delegations found clear language on the importance of traditional and indigenous practices in water management strategies.<sup>11</sup>

During the intersessional period until PrepCom II in 1991, the Conference Secretariat convened working parties of experts to prepare background reports on various substantive issues to be negotiated. For the majority of the issues the respective working parties included representatives from UN agencies, other intergovernmental organisation, academic experts, members of NGOs and interest groups. In the case of freshwater issues no such special working party had been established, but it was decided that the **Inter-secretariat Group Preparing for the 1992 Dublin Conference on Water and the Environment** should act as a co-ordinating group. With the Dublin Conference, a substantial part of the preliminary work had been de-politicised and separated from the working group. The Dublin Conference was to act as the formal entry for freshwater issues into the UNCED and as primary input into the Agenda 21's chapter on freshwater resources. Consequently, many decisions on the final text of Agenda 21 relevant to freshwater were postponed until after the Dublin Conference in January 1992. This was due to the fact that the Conference was to be convened by water profession and governmental water experts, and not high-ranking politicians who would only have been able to make necessary concessions in order to reach joint decisions. The consequences of this decision were already perceptible at the PrepCom II (18 March-5 April 1991, Geneva) where the main focus of the debates on freshwater issues was on the Dublin Conference's input to it. The delegations decided to invite the Dublin Conference to consider an action framework on sustainable development and management of freshwater resources, and to prepare guidelines for the elaboration of national and regional action.

Even during PrepCom III (12 August to 4 September 1991, Geneva), which really had the major objective of moving from discussion to looking at measures to be taken, the water chapter was only debated in a general way. The Secretariat had prepared the initial negotiating texts for each item (amongst others freshwater). The documents outlined the basis for action; goals, objectives and targets; programme areas; and implementation requirements for the protection and management of water resources. Already this draft text can be judged as an attempt to tackle freshwater issues in a comprehensive manner with a particular emphasis on **integrated water resource management, protection of water resources and aquatic ecosystems, drinking water supply and food security**. But at that early stage of negotiations it was equally noticeable that many countries preferred weak language concerning **transboundary water issues, environmental threats** caused by water projects (i.e. **dams**) and economic aspects of water supply (i.e. **water pricing**). Suggestions for clear language concerning environmental damage caused by water projects and full cost-recovery as a basic principle for water pricing were especially neglected and perceived as "Northern" topics by many developing countries.<sup>12</sup>

Although one has to realise that opposition and reservations came mostly from the G-77 (Group of developing countries) and China, the G-77/China did not act as a homogenous group, and some developing countries were quite receptive to new approaches in water management. In the entire preliminary work to the UNCED, the G-77/China insisted that new and additional financial resources would be necessary to implement the envisaged measures in

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<sup>11</sup> Projektstelle UNCED '92 des BUND/DNR (1992): UNCED – Ein Leitfaden, Bonn, p. 7.

<sup>12</sup> See for details of the negotiation process and the statements of individual countries: Earth Negotiation Bulletin (1992): A Reporting Service for Environment and Development Negotiations, Vol. 1, March 2, 1992, <http://www.iisd.ca/linkages/vol01/>.

freshwater management. Furthermore, developing countries - as well as the majority of northern states - were strictly concerned about preserving their sovereignty over their territory and watercourses. In that sense the G-77/China tried at an early stage of PrepCom's negotiations to avoid new substantial obligations for the management of transboundary rivers and lakes. Concerning other controversial freshwater issues (economic aspects, food security, urban growth etc.), developing countries' statements were influenced by their individual situation (e.g. population growth, agriculture dependence, importance of hydroelectric power, geographical situation). Apart from few controversial issues (e.g. technology transfer, international financial mechanism), delegations looked after the interests of their states and not of the G-77 as a whole.

Finally, at PrepCom III Working Group II agreed on some paragraphs of the draft version of the future Agenda 21's Chapter 18 and some important aspects were mentioned, such as the elaboration of implementation mechanism, groundwater, research and development, inland fisheries and aqua-culture as well as the participation of women and indigenous people. But substantive negotiations, let alone final agreements on controversial parts of these programme areas, were again postponed until after the Dublin Conference.

In retrospect it is important to note that the PrepCom also looked at negotiations on a number of other issues related to freshwater conservation.<sup>13</sup> This is especially true for the effects of climate change on water supply, which were acknowledged as an important threat to the fragile balance between water supply and demand in many countries.<sup>14</sup> Therefore, Working Group II intended to reflect the conclusions of the Second World Climate Conference, and the INC for a Framework Convention on Climate Change. Furthermore, food security was identified as an important theme in collaboration with the Food and Agriculture Organisation of the United Nations (FAO) during the preparation of the Dublin Conference. The protection of water-related ecosystems and other water-related aspects of international nature conservancy were debated in relation to e.g. the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention).

### **2.3 The Dublin Principles (1992): A Landmark for Water Policies**

The Dublin International Conference on Water and the Environment (ICWE) took place in January 1992. The conference was the first major and comprehensive UN-supported water conference since Mar del Plata 1977. Today the Dublin Conference is usually interpreted in the context of the preliminary work to the UNCED, but the new strategy to management and use of water resources was the result of efforts made by national and international water experts in 1991. Foremost among the several conferences and meetings that led into and contributed towards the synthesis of opinion at the Dublin Conference were:<sup>15</sup>

- The UNDP-sponsored Symposium held in Delft, The Netherlands, in 1991, which agreed on "A Strategy for Water Resources Capacity Building in the Next Century" (Delft Decla-

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<sup>13</sup> See Chasek, P. (1994): The Negotiating System of Environment and Development, in: Spector, B. I.; Sjöstedt, G.; Zartmann, I. W. (Ed.): Negotiating international regimes: lessons learned from the United Nations Conference on Environment and Development (UNCED), London, pp. 21-44.

<sup>14</sup> IPCC (Intergovernmental Panel on Climate Change) (1995): Climate Change 1995, Economic and Social Dimensions of Climate Change, Contribution of Working Group III to the Second Assessment Report of IPCC, Cambridge.

<sup>15</sup> See Chasek (1994).

ration). The Delft Symposium's most useful conclusions and recommendations were articulated in an annex to the Declaration entitled "Helping countries to solve their problems themselves" which stressed the objective of capacity-building "to improve the quality of decision-making, sector efficiency and managerial performance in the planning and implementation of water sector programmes and projects" (annex to the Delft Declaration, Para 6).<sup>16</sup>

- The meeting on "Water Quality Assessment and Management" (Bratislava - August 1991).
- The "ESCAP Meeting Water Resources Planning" (Bangkok - October 1991); and the
- Informal consultation on "Integrated Water Management for Developing Countries" (Copenhagen - November 1991).

The principle objective of the Dublin Conference, as formulated in the preface to the adopted Dublin Statement and the Report of the Conference, was the assessment of the status of the world's freshwater resources and the identification of priorities issues for the 1990's; the development of co-ordinated inter-sector approaches to managing those resources by strengthening linkages between international and national water programmes, formulation of environmentally sustainable strategies and action programmes for the 1990's and beyond, and promotion of increased awareness of the environmental consequences and development opportunities in improving the management of water resources.

Regarding its results, the participants agreed on the need for concerted action to reverse the current trends of over consumption, pollution, and rising threats from drought and floods.<sup>17</sup> Furthermore, participants generally stressed the need to manage water and land resources more effectively in order to protect human health, food security, industrial development and the ecosystems. The conference report contained recommendations of actions which should enable states to tackle their freshwater resource problems in an integrated manner, on a wide range of fronts and in regional international co-operation. Capacity building at all levels was emphasised and should be based on four guiding principles, usually quoted as the Dublin Principles since then:

1. Freshwater is a finite and vulnerable resource, essential to sustain life, development and the environment.
2. Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels.
3. Women play a central role in the provision, management and safeguarding of water.
4. Water has an economic value in all its uses, and should be recognised as an economic good.

In retrospect it is hardly feasible to assess the Dublin Conference's outcomes or to judge whether development in the water sector would have been substantially different even if the

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<sup>16</sup> See Alaerts, G. J., Blair, T. L. and Hartvelt F.J.A. (Eds.) (1991). A Strategy for Water Sector Capacity Building. Proceedings of UNDP Symposium, Delft, 3-5 June 1991, New York, UNDP.

<sup>17</sup> See International Conference on Water and the Environment: Development Issues for the 21st Century, 26-31 January 1992, Dublin, Ireland. The Dublin Statement and the Report of the Conference (Geneva, World Meteorological Organisation, 1992).

Dublin Principles had not been adopted.<sup>18</sup> Some complain about poor preparation, and time-consuming debates on topics of minor relevance, which led to the impression that water professions showed no awareness of the urgency of the problem.<sup>19</sup> But driven by the complexity of freshwater management considerations and the different national perceptions of the water crisis expressed by participants, the value of agreeing on global water management principles - as well as of other visions, codes, charters, and statements - should not be underestimated. The Dublin Principles are a particularly significant example given their widespread acceptance by the international community. Indeed, a signal of their importance may be found in the number of documents and statements quoting the principles that are currently being circulated internationally. Furthermore, in order to join the Global Water Partnership<sup>20</sup> (GWP), for example, commitment to the Dublin Principles is obligatory.

Regarding the emerging global consensus in the early 1990's, the Dublin Principles remain the clearest, most comprehensive and far-reaching political statement because they consider three dimensions of water management<sup>21</sup>: The "ecological dimension", requiring the holistic management of water; the "institutional dimension", requiring that management be participatory, with responsibility "at the lowest appropriate level", and with greater involvement of NGOs, the private sector and women; and the 'instrument dimension', requiring that water be managed as an economic resource. The Dublin Conference recognised water as an integral part of the human and natural environment, a "finite and vulnerable resource" which is likely to be the principal constraint on economic and social development in some countries, and calls for protecting watershed, or catchment areas, in order to preserve the quantity and quality of water. Institutional weaknesses and malfunctions are pointed out as major causes of ineffective and unsustainable water services, requiring urgent attention to institutional capacity building.

The notion of "water as an economic good" can be judged as especially effective because water experts found adequate language for the economic value of freshwater and the contribution of water pricing on water conservation efforts. Where this notion was once an issue of interest primarily to theoreticians and could only be found in economic textbooks on water management, Dublin established the political principle that water must no longer be viewed as a free good, but rather as an economic commodity to be efficiently used, managed, allocated and conserved. Through this an economic and institutional view on water scarcity and the importance of water pricing has been put on the international agenda, and with it a reform climate in the water sector of many countries was stimulated, albeit with varying degrees of success. These principles also form the core of the water policy of the World Bank, which has been a major actor in developing international consensus and translating the management principles into practice.

There is no doubt that the Dublin Principles had a significant influence on the development of international negotiations on water management and that they are a convincing example of

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<sup>18</sup> See for an assessment of existing relationships between the Dublin Principles and national water law systems Solanes, Miguel; Gonzalez-Villarreal, Fernando (1999): The Dublin Principles for Water as Reflected in a comparative Assessment of Institutional and Legal Arrangements for Integrated Water Resources Management, Global Water Partnership Technical Advisory Committee (TAC), TAC Background Papers No. 3, Stockholm.

<sup>19</sup> See Biswas, Asit K. (2000): The Water Crisis, in: D+C 1/2000, pp. 16-18.

<sup>20</sup> The GWP is an international network of organisations and institutions that are interested in the sustainable use of water resources ([www.gwpforum.org](http://www.gwpforum.org)).

<sup>21</sup> See Briscoe, John (1997): Managing Water as an Economic Good, Keynote Paper to: The International Committee on Irrigation and Drainage Conference on Water as an Economic Good, Oxford.

the growing significance of *ideas* in international negotiations of complex issues.<sup>22</sup> But at the same time it is worth mentioning that the Dublin Conference was an expert conference and the Dublin Principles are not at all legally binding or basic principles of an emerging international water law. Furthermore, at Dublin water experts avoided considering many critical issues, such as how much the envisaged programmes would cost, where the funds should come from and how states can overcome the numerous institutional and political obstacles so as to implement the ideas of the conference.

#### **2.4 Negotiations and Agreements in Working Group II (PrepCom IV) and UNCED 1992**

After the Dublin Conference, PrepCom held its last sessions before the UNCED in New York (PrepCom IV, 2 March-4 April 1992). Since insufficient time was allocated for substantive negotiation, not only on freshwater issues but on the majority of topics devoted to negotiations in Working Group II, all unresolved matters were deferred to PrepCom IV's already overtaxed agenda. Negotiations on oceans were among the most complex and extraordinarily controversial. However, remaining time for the systematic discussion of all relevant aspects of freshwater issues was short.

Fortunately, at least some initial disagreements with the provisional version of the text could be resolved: At the beginning of PrepCom IV a contact group working on the freshwater resources chapter of Agenda 21 had been established to handle the controversial issues. These initial controversial items were<sup>23</sup>:

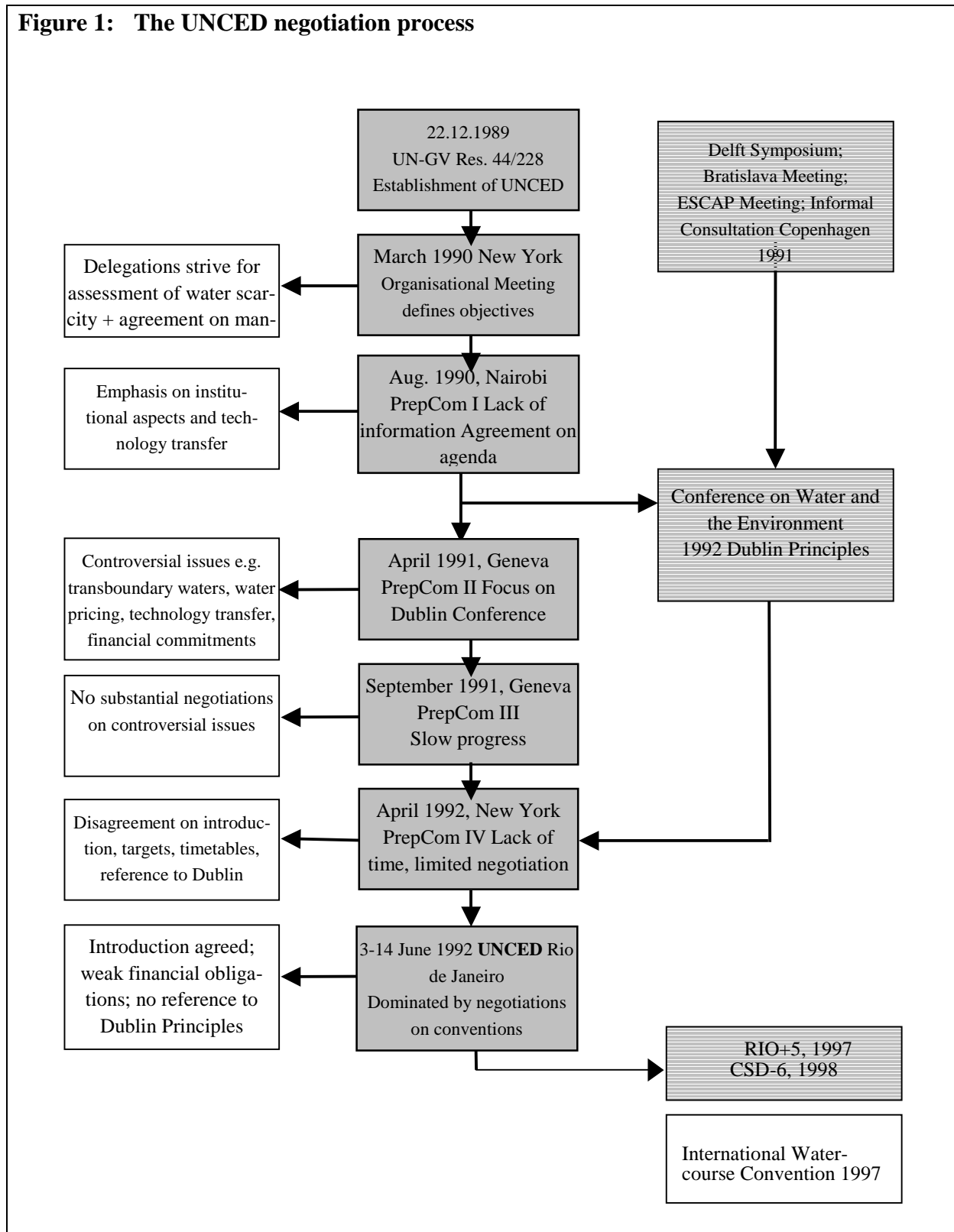
- “Restrictions on the construction of dams”, against which several countries, including Japan and China, had argued;
- The formulation “water as an economic good”, with several developing countries advocating that freshwater resources be considered not only an economic good but a social good with a cultural or spiritual value;
- The establishment of concrete targets and deadlines (especially in case of target dates for water resource assessment and water and sustainable urban development), because developed countries (e.g. USA, Canada) expressed their concerns about “unrealistic” targets which might produce new financial obligations;
- Impacts of climate change on water resources;
- The incorporation of the results of the Dublin Conference into Agenda 21; and
- The topic of transboundary freshwater resources.

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<sup>22</sup> See Heritier, A. 1993: Policy-Analysis. Kritik und Neuorientierung, PVS - Sonderheft 24, Opladen.

<sup>23</sup> See Earth Negotiation Bulletin (1992): A Reporting Service for Environment and Development Negotiations, Vol. 1, March/April 1992.

**Figure 1: The UNCED negotiation process**



At the end of PrepCom IV nearly all initial disagreements could be resolved. The potential environmental impacts of dams were mentioned in the document, although weakly stated. The formulation “water as an economic good” remained in the revised document, albeit less accentuated as in the Dublin Conference’s documents. The transboundary aspects of freshwater resources had been especially controversial at PrepCom IV. For this a special sub-contact group was established which finally led to the solution that the problem of transboundary water resources is recognised in the chapter: co-operation among states affected by transboundary impacts is recommended, although obligations for riparian states or basic principles for an integrated management of transboundary rivers were avoided. Finally, Working Group II held an extensive discussion on the status of paragraphs 1-16 of the draft text, the “Introduction” and “General Objectives” sections. These paragraphs were not negotiated by the contact group due to lack of time.

After the New York Marathon of PrepCom IV, consensus was reached on the majority of freshwater issues. But owing to a lack of time and limited negotiation capacity of delegations, the overall structure of the text was not reassessed, although some delegations expressed their concerns about an overly comprehensive approach of Chapter 18, and the fact that there was not enough time to incorporate systematically the ideas and programmes of the Dublin Conference. At PrepCom IV the failure of the Dublin Conference was clear: due to the very poor timing of the Conference, which left only several weeks between the two events in Dublin and New York, and the absence of any strategy for the implementation of the conference results into the PrepCom, Dublin had only a small perceptible impact on the water chapter of Agenda 21.

Some delegations objected to the water chapter mentioning that objectives, measures and means of implementation envisaged had not been developed within an analytical framework in order to identify the underlying patterns of development that cause stress on water resources. Demographic pressures, rapid urban growth or subsidies which led to unsustainable consumption patterns, for example, were only poorly mentioned and not systematically analysed due to their delicate political character. Furthermore, two items were not resolved: the question of “new and additional financial resources” in connection with concrete targets and timetables for the implementation of various activities, and the formulation of the introduction of Chapter 18. Compared to other controversial programme areas of Agenda 21 (climate change, bio-diversity, forests, financial resources, modes of technology transfer, environment and trade etc.), Chapter 18 on freshwater was already a nearly ‘clean’ chapter.

At the UNCED freshwater issues were in the shadow of the controversial areas which the “northern” and “southern” governments were mostly interested in. Therefore, only little attention was paid to debates on the text of Chapter 18 as a whole by high-ranking politicians. Delegations agreed not to renegotiate already agreed upon paragraphs at PrepCom III and IV and decided to discuss only the small contentious text parts. Negotiations were devoted to the contact group and started by debating the draft version of the introduction. Although most delegations were satisfied with the draft in terms of the contents, there was some concern about the mentioning of the Dublin Conference. A number of delegations argued that reference to the Dublin Conference should not be made because (1) not all recommendations of the Conference had been incorporated into Agenda 21; (2) Dublin had not been a conference of governments; and (3) the Dublin Principles were agreed by vote and not consensus. After considerable debate on these issues, those states which preferred a clear reference to the Dublin Conference gave up, allowing the text to be adopted without any reference.

The other controversial paragraphs dealt with targets and timetables. Members of G-

77/China recognised the importance of setting such targets but wanted to ensure that new and additional financial resources be made available. Finally, consensus was reached.<sup>24</sup> Delegations agreed on the language that “it is understood that the fulfilment of the targets quantified (...) will depend upon new and additional financial resources that will be made available to developing countries in accordance with the relevant provisions of General Assembly resolution 44/228” (Agenda 21, Chapter 18.11). Therefore, developed countries succeeded in avoiding new financial obligations but Chapter 18 still contains concrete financial estimates for the measures suggested.

## 2.5 Agenda 21 (Water Chapter): Contents, Restrictions and Neglected Issues

The general objective of Chapter 18 is to make sure that adequate supplies of good quality water are maintained for the entire population of the planet while preserving the hydrological, biological and chemical functions of ecosystems. The text recognises the need for water in all aspects of life and the necessity for integrated water resources planning and management given the widespread scarcity, gradual destruction and pollution of freshwater resources in many regions. Such integration must consider interrelated freshwater bodies, including both surface and groundwater in terms of quality and quantity. The approach to planning and management must accommodate the multi-interest utilisation of water resources for water supply, sanitation, agriculture, industry, urban development, hydropower, fisheries, transportation, recreation etc. Management of transboundary water resources and co-operation among states is recommended in general terms.

Chapter 18 identifies seven programme areas each with a number of objectives - partly quantified and endowed with target dates - and a multitude of activities recommended:

1. Integrated water resources development and management;
2. Water resources assessment;
3. Protection of water resources, water quality and aquatic systems;
4. Drinking water supply and sanitation;
5. Water and sustainable urban development;
6. Water for sustainable food production and rural development;
7. Impacts of climate change on water resources.

Whether the UNCED and especially the water chapter can be assessed as successful or not, depends heavily on the expectations of the Conference. Generally high expectations in the early stages of the negotiation process were replaced by the realisation that the time for the negotiations was limited and many issues had to be left unresolved.<sup>25</sup> Taking into account the absence of water experts within many delegations and the (partly) non-corresponding interests of developing and developed countries, the water chapter represents a consensus with regard to:

- a comprehensive approach in water management by recommending integrated planning and management,

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<sup>24</sup> Delegations agreed that developed countries would *reaffirm* their commitments to reach the UN target of 0.7 percent of GNP for Official Development Assistance (ODA) and augment their respective aid programmes in order to reach that target *as soon as possible*.

<sup>25</sup> See Chasek (1994).



- the need for a comprehensive water assessment,
- the recognition of potential threats to aquatic ecosystems,
- the importance of decentralisation,
- recommending institutional capacity building and participation of stakeholders, as well as
- recommending to regard water as a finite resource having an economic value.

However, Chapter 18 comprises shortcomings, with other issues being more or less neglected: it attempts to include too many considerations for all regions of the world, and uses tentative language as well in which it is hard to identify the substantial strategic messages. Due to poor preparation of the text, the limited time for a proper and effective reflection of the results of the Dublin Conference as the main input to the water chapter and the tendency of participants to leave aside controversial issues, no priorities for action were defined. Consequently, the water chapter is the longest and perhaps the “most poorly formulated”<sup>26</sup> of Agenda 21. While some programme areas are discussed in great detail, other topics (e.g. urban growth) are only superficially treated. In brief, throughout the text there are a lot of goals mentioned, but there is insufficient concentration on key issues and lack of analytical discussion as to how these goals might be achieved.

A good example for this perception is the discussion of environmental aspects of water projects and the protection of ecosystems. The controversial debates on the potential threats to aquatic ecosystems caused by **dams** and other water resource development projects have already been mentioned above. Although several countries’ proposal to delete the relevant sentences that mention potential environmental problems caused by construction of dams was refused, no comprehensive discussion of the ecological, social and economic aspects of dams and other water projects took place.

In addition, the water chapter highlights the need for an **ecosystem approach** in water management: according to paragraph 18.2 the general objective is “... to make certain that adequate supplies of water of good quality are maintained for the entire population of this planet, while preserving the hydrological, biological and chemical functions of the ecosystems, adapting human activities within the capacity limits of nature ...”. But while mentioning the protection of the ecosystem as a general principle, the Chapter fails to emphasise the necessity of strengthening of institutional capacities for conservation. Necessary changes in national and international legislation, policies, processes etc. in order to provide for management in an ecosystem perspective are not systematically discussed, nor are implications for land-use development and the related social economic considerations sufficiently highlighted.

Furthermore, Chapter 18 uses weak language for international aspects and poorly considers transboundary water issues. It failed to provide a concise analysis of different international institutions and instruments already available, nor does it stress the respective responsibility of individual states for the protection of transboundary water resources. In paragraph 18.10 it is only recognised that “in the case of transboundary water resources, there is a need for riparian states to formulate water resources strategies, prepare water resources action programmes, and consider, where appropriate, the harmonisation of those strategies and action programmes”. Thus the water chapter only half-heartedly acknowledges the need for international co-operation on river basins (**river basin management**), let alone the necessity to establish international river basin organisation which offer basin states a platform for coordinating their policy and management. The disregarding of purely international aspects of

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<sup>26</sup> Biswas, Asit K. (2000): The Water Crisis, Current Perceptions and Future Realities, in: D+C, pp. 16-18.

water management can be explained to a high degree by the non-existence of stable global institutional arrangements for the negotiating of international freshwater issues, and the low normative content of the existing multilateral efforts for the management of international river basins. Furthermore, the neglect of international aspects of freshwater management in Chapter 18 subsequently led to a total ambivalence of security concerns related to freshwater resources.

The water chapter correctly highlights the economic value of water and the economic implications of deteriorating water quality and reduced supply. But due to vague formulations, the implications of this statement for individual countries are hard to identify. While the importance of obtaining efficiency in water use must be underscored, the water chapter does not at all present a concise demand management approach. Having stressed the necessity to satisfy basic human needs and the protection of ecosystems as priorities (Para 18.8), the Chapter then recommends that beyond these requirements water users should be “charged appropriately”. But the role of water pricing in a **demand management approach**, the different options to arrive at environmentally and economically appropriate water prices, the various options for charging water users in practice and the relevant consequences for the intra-sectoral and inter-sectoral water allocation are not taken into account.

Finally, the water chapter totally ignores **trade-related aspects of water policy**. This is valid for both the aspect whether water should be regarded as an international tradable good and for all the economic, social and ecological impacts of growing foreign direct investment in the water sector. This ignorance of trade-related aspects of water management is also important in the context of food security. The water chapter’s paragraphs on food security refer to the activities of the FAO and presents a real bouquet of objectives and activities. But it seems to argue from a more or less traditionalistic point of view and does not highlight the necessity for a strategic approach to food security. While paragraph 18.68 emphasises the importance of regarding “water as an economic good”, for example, this can be read as an attempt to promote end-use efficiency of water in **irrigated agriculture** in connection with the extension of water-related technical infrastructure. The water chapter ignores the option to replace the paradigm of self-sufficiency in food by government options for ‘self-reliance’ in food in order to balance the water budget and to make easier an efficiency enhancing inter-sector water transfer.<sup>27</sup>

#### **Challenging issues**

1. River Basin Management
2. Water Demand Management
3. Sustainability of irrigated agriculture
4. Trade-related aspects of water policy
5. Virtual water policy
6. Dams as water supply options
7. Water for nature

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<sup>27</sup> See Allan, J.A. (1998): ‘Virtual Water’: An Essential Element in Stabilising the Political Economies of the Middle East. *Yale University Forestry & Environmental Studies Bulletin*, No. 103; pp. 141-149.

## 2.6 Priority Actions and Strategic Approaches

Since 1992, a vast multitude of conferences and initiatives has taken place, some within the CSD (Commission for Sustainable Development) context, in particular CSD-6. After RIO the first important international event was the Ministerial Conference on Drinking Water and Environmental Sanitation held in Nordwijk (The Netherlands, March 1994). This conference called for strategies for drinking water and sanitation to be developed in the context of broader strategies for sustainable water resources management and environmental protection. Partnership between stakeholders was highlighted, as was the need to change behavioural patterns and to promote technical innovations.

In the 19<sup>th</sup> Special Session of the UN General Assembly (UNGASS) for RIO+5 in 1997, most of the heads of the states from developed and developing countries alike identified water supply and sanitation as the priority area for the UN. Delegates adopted a programme for the further implementation of Agenda 21. The highlighted message was that water availability is increasingly limited to the extent that there is no more room for sub-optimal management if sustainable economic development is to be achieved. The consensus was that growing water scarcity and misuse of freshwater will pose serious threat to sustainable development. Delegates agreed that gradual implementation of pricing policies could be considered in developing countries when they reach an appropriate stage in their development. The adopted programme widely corresponded to Chapter 18. The G-77/China strongly insisted that additional financial resources would be needed to attain sustainable development in developing countries. The debates on financial commitments of developed countries were the most polarised at RIO+5. Developing countries called for renewed donor commitment and objected to policy reforms that appeared to be recommended for developing countries only or that would create conditionalities for assistance. Time consuming negotiations led to the conclusion that “additional and new financial resources” would be needed for further implementation of Agenda 21. Regarding the CSD work programme for 1998-2002, UNGASS recognised the need for strategic actions to progress and therefore decided that “strategic approaches to freshwater management” would be a sector theme for CSD-6 according to a proposal of the European Union.

In preparation for CSD-6's Strategic Approaches to Freshwater Management in 1998, several preparatory meetings and expert conferences took place. The Expert Meeting on Strategic Approaches to Freshwater Management in Harare (January 1998) stressed the importance of integrated resource management in the national and international context. It recommended action on capacity building, information management, environment and development, economics and finance, participation and institutions, and international co-operation. The majority of Harare's recommendations did not go beyond already adopted agreements and rehearsed already formulated principles at RIO and RIO+5.

The CSD Intersessional ad-hoc Working Group (ISWG) on Strategic Approaches to Freshwater Management met in February 1998 at UN Headquarters in New York. Delegates exchanged views on freshwater issues, highlighting the economic and social values of water and accompanying governmental responses, as well as co-operation among riparian states on transboundary, or international watercourses. The draft report, which provided the basis for negotiation at CSD-6, outlined key issues and challenges, calls for action and means of implementation in the areas of information for decision-making, institutions, capacity building and participation, technology transfer and research co-operation and financial resources and mechanisms. The report also presents recommendations for follow-up and assessment.

The Petersberg expert meeting (International Dialogue Forum on Global Water Politics, Cooperation for Transboundary Water Management, Bonn, March 1998) arrived at highlighting the importance of transboundary water management, and can be considered as an effective input to the CSD-6 meeting. Experts focused on measures addressing the development, security, environment and public-private partnership aspects of water resources management. The adopted declaration stressed regional co-operation, river basin organisations, development of political commitment and mutual trust, and public-private partnerships with companies and community-based organisations. The Petersberg Forum concluded inter alia that a common understanding of co-operative management or a shared vision is critical for effective management of international water resources. According to the declaration, river basin management can serve a broader political co-operation between states sharing transboundary watercourses.

The International Conference on Water and Sustainable Development (Paris, March 1998) brought little news and points of departure on political principles for freshwater management and planning. The Conference elaborated strategies necessary for improving freshwater resources conservation and management in rural and urban areas to ensure better-controlled drinking water supply, sanitation and irrigation. Participants convened in three parallel workshops on improving knowledge of water resources and uses for sustainable management, favouring the development of regulatory tools and institutional capacity building, defining strategies for sustainable management and identifying appropriate financial resources. The Conference adopted a Programme for Priority Actions and a Ministerial Declaration.

The Sixth Session of the CSD (CSD-6) took place in New York in April/May 1998. Already at the beginning it was obvious that it would not be easy to move beyond words agreed upon six years ago in RIO. According to some developing countries, international co-ordination should concentrate simply on clean water and sanitation, combined with the demand for a new financial mechanism to ensure continuation of water supply in countries affected by water crises. The early statement of the G-77/China to the ISWG in February 1998 made clear that developing countries “noted with concern the tendency to view water mainly as an economic good”. Furthermore, it was stated that the G-77/China “cannot accept the concept expressing the view that national food security has lost much of its significance in an increasingly global economy, and that water resources should not necessarily be allocated to the production of food, if they can be used more profitably in other sectors of the economy to generate the necessary income to import food products”.<sup>28</sup> At CSD-6 a particularly sensitive issue was again that of shared watercourses. While some countries of the G-77/China would have preferred to avoid a debate on that issue, other delegations proposed to reflect the language of the meanwhile adopted International Watercourse Convention (1997).

Against this background, negotiations were particularly difficult and controversial. But finally delegates adopted the “Strategic Approaches to Freshwater Management”, which contains recommendations on (I) information and data for decision-making, (II) institutions, capacity building and participation, (III) technology transfer and research co-operation, (IV) financial resources and mechanisms, and follow-up and assessment. Many controversial debates emerged over particular phrases of a draft text of the ISWG. While some controversial issues were of minor relevance, key issues were the introduction of the text, the chapters on technology transfer, financial resources and mechanisms (see box 1).

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<sup>28</sup> Statement by Mr. Bagas Hapsoro, Delegate of the Republic of Indonesia, on behalf of the G-77/China to the CSD Ad-hoc Inter-sessional Working Group on Strategic Approaches to Freshwater (New York, 23 February 1998), <http://www.g77.org/Speeches/1998.htm>.

The text highlights the private sector as one of the growing sources of investment in the water sector; the importance of encouraging private sector participation within appropriate national policy frameworks and the contribution of enabling financial frameworks to promote private sector finance mobilisation. Furthermore, the important role of government regulation in developing countries in allocating freshwater resources is emphasised. The G-77/China objected to EU proposals that subsidies for specific groups should be transparent "and well-targeted" and are "appropriate", rather than "required" in some countries. The EU added that costs should be covered either through cost recovery or from public sector budgets. The text states that cost recovery could be gradually phased in, taking into account specific national conditions.

The text also calls for strengthened consultative mechanisms between donors and recipients to improve financial mobilisation schemes; initiatives to identify and mobilise more resources, and allocation of sufficient public resources to provide safe and sustainable water supply and sanitation. Regarding a call on governments to consider the needs of vulnerable groups in using economic instruments to guide water allocation, the EU added consideration of the polluter pays principle and user pays systems. The G-77/China objected to the latter and deleted the need to consider the specific conditions of each region. The text proposed to initiate a review of existing financial support arrangements. The G-77/China wished the review should aim at mobilising "international" financial resources. Australia objected, emphasising resources "from all sources". Delegates agreed to mobilise financial resources from all sources, particularly international resources.

The section's final paragraph originally consisted of a G-77/China proposal that considered the creation of a financial mechanism for promoting efforts of developing country in the area of freshwater, which was opposed by the EU and US. Delegates agreed to call on the international community to intensify efforts and consider new initiatives, within appropriate existing mechanisms, for mobilising financial resources.

Compared to shortcomings and neglected issues of the water chapter of Agenda 21, CSD-6 showed little progress. Again delegates did not reach a clear language on transboundary water issues. Any reference to existing legal instruments (e.g. the then adopted International Watercourse Convention) was avoided. At the least, organisations at the river basin level were mentioned for the first time as a helpful tool for the implementation of water management programmes. Furthermore, delegates recognised the role of public-private partnership and stressed the role of private investment in the water sector, which can be judged as a step forward. Therefore, debates at CDS-6 can be judged as somewhat more pragmatic and less ideological. Another example of this cautious convergence of views from the G-77 and other delegations, including the EU and the US, was the economic valuation of water. This concept still caused some reservations within the G-77/China, but at the end of CDS-6 members of the G-77/China welcomed the fact that the EU, the US and Japan acknowledged that water is also a social good, and indicated a necessity to take account of regional specifics. The adopted language on water pricing corresponds widely with Agenda 21 and maintains the fragile balance between the interests of the North and South. Generally, in face of the conflictive positions of G-77/China and the developed countries on many topics, the reaffirmation of the basic principles of Chapter 18 can be regarded as a success. The adopted decision clearly emphasised that costs should be covered either through cost recovery or from public sector budgets, and proposed that cost recovery of water prices could be gradually phased in.

### **Box 1: Debates on the contentious text passages at CSD-6<sup>29</sup>:**

#### *Introduction*

After serious debates delegates agreed on reference to the conferences in Bonn, Petersberg and Paris. They also stated that the water chapter of Agenda 21 should continue to be the "fundamental" basis for further action. The G-77/China successfully proposed to add that Chapter 18 should be implemented in accordance with specific national characteristics. The introduction reaffirms quite a lot of principles and general statements already adopted earlier.

The draft paragraph encouraging riparian states to co-operate on matters related to international watercourses was controversially debated. Some states (e.g. Turkey) had difficulty with the reference to 'international' watercourses while other countries stated that the CSD in general would not have the expertise to address this complex legal issue. Delegates agreed that appropriate arrangements (preferred by the EU) and/or mechanisms (preferred by G-77/China) and the interests of all riparian states concerned, relevant to effective development, management, protection and use of water resources, should be taken into account. The text also encourages riparian states to establish, where appropriate, organisations at the river basin level to implement water management programmes. The EU added that the GEF may consider support. Governments are encouraged to formulate and publish the main goals, objectives and principles of water policies "in accordance with specific characteristics of each country" as the G-77/China added.

#### *Technology Transfer and Research Co-operation*

The modes and conditions of technology transfer were controversially debated. The G-77/China originally called for technology transfer "on favourable terms, including on concessional and preferential terms". The US objected to renegotiating agreed language used to refer to terms of technology transfer. Delegates ultimately cited Agenda 21 and UNGASS language.

#### *Financial Resources and Mechanisms*

The text cites the Programme for the Further Implementation of Agenda 21 on the need for a proved commitment by the international community to provide new and additional financial resources to developing countries to make the current intergovernmental process on freshwater fully fruitful. Regarding text stating that such financial resources need to be mobilised if sustainable development aims are to be realised, the US stipulated resources "from all sources". The G-77/China proposed stating that effective use of current resources allocated to the freshwater sector "is also important", rather than "would help to mobilise additional finances from public and private sources". The US objected. Delegates agreed that effective and "efficient" use "is also important and could contribute in helping to increase the flow of finances" from public and private sources.

In general, negotiations at CSD-6 were again dominated by the demand of the G-77/China for the installation of new financial mechanism and commitments. Controversial and highly sensitive issues were technology transfer, agriculture and population growth. These ever present conflictive issues in the north-south context eclipsed many other topics and made progress generally slow. The perceived ongoing north-south conflict in international environmental and development negotiations leads to the conclusion that it is still difficult to implement interna-

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<sup>29</sup> The following assessment is based on an evaluation by the International Institute for Sustainable Development. See Earth Negotiations Bulletin, Vol. 5, No. 110, May 1998.

tional water protection, as well as the related institutional, economic and social tasks as abstract goals within the UN system. Obviously, progress in international co-operation could be reached somewhat easier for specific river basins. In these cases co-operation is facilitated by the fact that the advantages of co-operation are more 'visible' for the political actors involved. Another inherent characteristic of international negotiations on freshwater is that there is already more than adequate language concerning the normative content of the statements. Therefore, a strong push towards the implementation of measures is needed. But the heart of the implementation task is the unsolved problem of slow institutional change and needed capacity in many countries.

The CSD-6 decision underlined the importance of UN organisations, including the need for a more transparent way of working and more co-ordination within the UN system. But finally another water-oriented development of the 1990s is worth noting. From 1972 to 1992 global discussions and negotiation on water were mostly carried out within the UN system. But after RIO the UN system failed to establish a permanent mechanism for negotiation and information exchange. As discussed in this chapter, delegations worked hard in the conferences and meetings and some progress could be reached, but real success in the form of an action-oriented programme for a global water policy remained elusive. Therefore, UN agencies and their water experts lost much of their power and do no longer act as a monopolistic agenda setter for international water negotiations. Instead, since the late 1990s new institutions like the World Water Council (WWC) and the Global Water Partnership (GWP) have filled the vacuum as well as individual countries, in particular European, seeking to establish themselves as major actors in international water policy. The UN negotiation system has been supplemented by a highly complex system of negotiation, information exchange and attempts to reach a global consensus on freshwater issues.

### **3 Summary**

During the 1970s and 1980s the perception of water scarcity in the international water community was dominated by an engineering approach: national and international water policy should overcome water shortage by means of extending the technical infrastructure combined with additional financial resources, mainly from public sources.

In face of the disillusioning results of the International Drinking Water and Sanitation Decade (1981-1990), international water experts turned to a more comprehensive approach to water management, including the accentuation of institutional and economic aspects. This development led to the Dublin Principles (1992) which can be judged as one of the clearest, most comprehensive and far-reaching statements of water management up to today. Chapter 18 of Agenda 21 adopted at the UNCED (1992), represents the political consensus in the early 1990's of emphasising the need for integrated planning and management, comprehensive water assessment, recognition of potential threats to aquatic ecosystems, the importance of institutional capacity building and the need to regard water as a finite resource having an economic value.

However, Agenda 21 failed to develop a strategic approach to international water policy. Strategic and urgent measures for individual countries are hard to identify. Although many issues were mentioned, concrete obligations were avoided. This particularly applies to water pricing, ecological threats of water projects, river basin management, the ecosystem approach, transboundary water issues and national reporting on implementation. The purely interna-

tional dimension of water policy - transboundary watercourses, water and security, trade-related aspects - was especially neglected.

At CSD-6 (1998) debates were more pragmatic; the document subsequently adopted recognised the role of public-private partnership, the importance of private investment and proposes a gradual phasing-in of cost-recovery in water pricing. Therefore, more or less adequate language was found for the economic aspects of water management. However, little progress was made regarding transboundary water resources and the relationship between water scarcity and food production, population growth and urban development. These topics remain highly controversial and politically sensitive.

Altogether, there is a broad consensus regarding many aspects of water management. This leads to the impression that another normative statement for many issues is not necessary but that there is a growing need to answer the question of how countries can implement the measures desired.



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## Annex: Most important international events

UN Conference on Human Environment (UNCHE)	Stockholm/Sweden	1972
United Nations Water Conference	Mar del Plata/Argentina	1977
World Commission on Environment and Development (Brundtland Report)		1987
International Water Supply and Sanitation Decade		1981-90
Global Consultation on Safe Water and Sanitation	New Delhi/India	1990
A Strategy for Water Resources Capacity Building in the Next Century	Delft/The Netherlands	1991
UN International Conference on Water and the Environment	Dublin/Ireland	1/1992
UN Conference on Environment and Development (UNCED)	Rio de Janeiro/Brazil	1992
Ministerial Conference on Drinking Water Supply and Environmental Sanitation	Noordwijk/The Netherlands	3/1994
International Conference on Population and Development	Cairo/Egypt	1994
World Food Summit: "World Food Summit Action Plan" (FAO)	Rome/Italy	1996
International Convention on Non-navigational Uses of International Watercourses	New York/USA	5/1997
First World Water Forum (World Water Council)	Marrakesch/Morocco	1997
UN GASS Further Implementation of Agenda 21, CSD working programme for 1998-2002: Strategic Approaches to Freshwater Management (sectoral theme for CSD-6)	New York/USA	6/1997
CSD/ECOSOC Freshwater Workshop, Expert Group Meeting on Strategic Approaches	Harare/Zimbabwe	1/1998
International Conference on Water and Sustainable Development	Paris/France	3/1998
CSD-6: Strategic Approaches to Freshwater Management		4-5/1998
Petersberg Round Tables	Bonn/Germany	1998-2000
Second World Water Forum (World Water Council) and Ministerial Conference	The Hague/The Netherlands	3/2000
CSD-8: Review of progress made since CSD-6: Strategic Approaches to Freshwater Management	New York/USA	4/2000
World Commission on Dams/ The World Conservation Union (IUCN): "Dams and Development"		11/2000