

Holistic Approaches to Freshwater Vitality

at the

Intersessional Working Groups

for the

Sixth Session

of the

Commission on Sustainable Development

1998.02.23 - 1998.03.05

United Nations Headquarters

New York, New York

Preliminary Compilation, Integration and Reformulation of
Harare Expert Group Recommendations and NGO Suggestions

A compilation of a proposed revisions and additions to

“Integrated Approaches to Freshwater Management”

Prepared by the Expert Group in Harare, Zimbabwe

raised in and around the

Freshwater Caucus and the Information Ecology Caucus

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for the Information Ecology Caucus

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Preliminary Compilation, Integration and Reformulation of Harare Expert Group Recommendations and NGO Suggestions

Holistic Approaches to Freshwater Vitality

Key Recommendations

1 Principle objectives

The four principal objectives that were identified in the Freshwater chapter of Agenda 21, Chapter 18, Section 9, continue to provide a fundamentally sound basis for further work, as follows (headings added):

1.2 Dynamic, interactive, iterative and multisectoral approach

To promote a dynamic, interactive, iterative and multisectoral approach to water resources management, including the identification and protection of potential sources of freshwater supply, that integrates technological, socio-economic, environmental and human health considerations;

1.4 Sustainable and rational management of water resources based on community needs and priorities

To plan for the sustainable and rational utilization, protection, conservation and management of water resources based on community needs and priorities within the framework of national economic development policy;

1.6 Economically efficient and socially appropriate design and implementation

To design, implement and evaluate projects and programmes that are both economically efficient and socially appropriate within clearly defined strategies, based on an approach of full public participation, including that of women, youth, indigenous people and local communities in water management policy-making and decision-making;

1.8 Appropriate institutional, legal and financial mechanisms for sustainable social progress and economic growth

To identify and strengthen or develop, as required, in particular in developing countries, the appropriate institutional, legal and financial mechanisms to ensure that water policy and its implementation are a catalyst for sustainable social progress and economic growth."

2 Necessity for Holistic Approaches

Holistic approaches are fundamental to lasting resolution of freshwater issues, and are critical to effective response to freshwater management. The adoption of an approach that recognized the interrelationship of all aspects of environment and development was one of the major contribution of Agenda 21 and in no area is a holistic approach more vital than in implementing strategies for developing and addressing freshwater.

2.2 Health Considerations

If there is a single unifying framework within which the role of fresh water can be approached, it is that of health. Access to adequate supply of freshwater is the single most important requirement for human health - both directly and as a prerequisite for healthy food supply. Freshwater is fundamental

to the health of all ecosystems. The concern for health can be seen in the Agenda 21 principles; by taking a fresh look Agenda 21, Chapter 18, section 9(a) one can see "health considerations" - rather than "considerations" as the noun to which the preceding adjectives refer, this provides a unifying framework as follows:

2.2.1 Technological Health

- Clean production processes
- Recycling, reuse of liquid "waste"

2.2.2 Socio-economic Health

- Community participation in water policy and practice
- Adequate freshwater as fundamental right

2.2.3 Environmental Health

- Watershed based approaches
- Remediation of polluted waters

2.2.4 Human Health

- Safe Food Supply
- Pure Drinking Water
- Personal Hygiene
- Water-related Disease

2.4 Sustainability

There is a need to recognise water as a social and economic good with a vital role in the satisfaction of basic human needs, food security, poverty alleviation and the protection of ecosystems. The principle of sustainability must underpin a holistic approach to managing freshwater resources in order to maintain and extend the benefits derived from natural freshwater systems.

2.6 Water Policy and Holistic Approaches

As recommended in Agenda 21, it is essential for all countries to develop national, and where relevant sub-national, water policies and continually review these policies as circumstances change.

Fundamental to this process is the concept of a holistic approach to the planning, allocation, development, management and rehabilitation of freshwater resources at the level of river basins and aquifers. The basic management unit should be designated in these policies as river basins / watersheds and aquifer units.

2.8 Principles for Allocation

The management of the demand for, and the allocation of, water resources should be based on principles of equity and efficient use to promote sustainable development including health, the satisfaction of basic human needs, food security and environmental protection.

2.10 Language of Holistic Processes

3 Information Ecology

3.2 Information Ecology as Enabling Approach

There is a need to finance, establish, support and maintain effective data collection and dissemination, information management systems and research - within an information ecology framework - in order to provide a sound basis for policy formulation, planning and investment decisions and operational

management of freshwater resources. Integrative strategies for collection and organization of, and access to, all freshwater resource and related socio-economic and environmental data and information needed for policy decisions, planning and management action and monitoring, should have a high and continued priority.

3.2.1 Transformative Possibilities of Information Ecology

3.2.2 Beneficial Externalities

3.4 Interactive Public Access to Freshwater Information

3.4.1 Inclusive, Participatory Processes

3.4.2 Collaborative Design Processes

3.4.3 Green Maps and Geographic Information Systems

3.4.4 Geographic Relational Database Structures

3.4.5 Meaningful and Visible Indicators of Progress

Governments need to adopt, implement and monitor national water-related indicators of progress in achieving holistic water resources management, including water quality objectives. This should take account of the CSD work in this area.

3.4.6 Local Information Ecology Centres

3.4.7 Microlibrary Resources on CD-Rom

3.4.8 Public Access to Freshwater Streams and Bodies

3.6 Meeting and Conference Processes

3.6.1 Online Integration of Agendas, Documentation and Statements

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3.10 Capacity-Building

Institutional and human capacities at national and local levels will need substantial strengthening if a holistic approach is to be implemented. The need to strengthen capacity at local levels is especially strong; the training of local entrepreneurs has an important role in implementing actions. There is also a need to promote the use of indigenous technologies and knowledge, in addition to the transfer of appropriate technologies.

3.10.1 Local Stream and Groundwater Monitoring Capabilities

3.10.2 Information Processing and Analysis

3.10.3 Information Technology Equipment, Skills and Support

3.10.4 Telecommunications Infrastructure

3.10.5 Enabling Regulatory Environment for Information and Communications

4 Education and Public Awareness

4.2 Community & Home

Public awareness raising and educational efforts which deal with water management at home, reduction of waste, rational water use, safe reuse of water and waste water have to be targeted, especially for women and youth who (often literally) carry the responsibility of ensuring water supply for homes and farming activities.

4.4 Women

Women should be encouraged to develop and share appropriate methods of monitoring their water usage, and reduction of wastage should be rewarded as well as shared within local communities.

4.6 Elementary, Secondary & Academic

4.8 Traditional and Indigenous Knowledge

Programs to raise awareness and to integrate traditional knowledge of the issues are very important.

5 Environment and Development

5.2 Ecosystem Integration

The conservation of freshwater and related ecosystems is vital to sustainable development. These ecosystems are themselves users, water regulators and providers of freshwater-based resources (including fisheries). It is therefore necessary to promote an ecosystem approach in holistic water resources planning, development and management within the framework of river basin and aquifer systems.

5.4 Human Interactions with the Environment

There is a need to ensure that effective local and national systems are in a position to bring about productive and sustainable interactions between human activities and the ecological functioning of

freshwater systems and to minimise downstream impacts including estuarine and marine environments and to reduce losses from droughts and floods.

5.6 Water Quality and Environmental Sanitation

There is a need to safeguard water quality as regards human health, productive uses of water and the protection of freshwater ecosystems. There is a need to implement measures, including sanitation programmes which have been notably neglected, to safeguard water quality recognising that poor environmental sanitation is the leading cause of human sickness in developing countries.

6 Social Integration

6.2 Gender Equity

Good water management must give appropriate priority to the issue of gender differences and the special roles, responsibilities and burdens of women with regard to freshwater. Freshwater is a women's issue - for several reasons. Therefore specific goals have to be targeted and specific methodologies have to be implemented:

(a) Women are those who ensure the families' supply of freshwater - in the homes as well as - in many cases - in the agricultural activities of families, especially in developing countries and among rural population. As freshwater gets scarce in many countries, the workload of women supplying water for their families and farms has been growing enormously. Governments, local authorities and the public in general have to be made aware of this workload and appropriate steps have to be taken to diminish this workload.

(b) Public awareness raising and educational efforts which deal with water management at home, reduction of waste, rational water use, safe reuse of water and waste water have to be targeted especially at women and youth who carry the responsibility of water supply for homes and farming activities. Women shall be encouraged to develop their own methods of monitoring their water usage and reduction of wastage shall be rewarded as well as shared in local communities.

©) Local authorities, NGOs and other major groups shall be encouraged to integrate participatory approaches of freshwater management, especially with women, into their Local Agenda 21 processes and activities.

(d) To diminish the workload of women, the development of technologies and devices for efficient, cheap and easy usable freshwater transportation for short distances shall be encouraged and rewarded.

6.4 Refugees and Displaced Persons

7 Participation and Institutions

7.2 Participation

There is a need to ensure the implementation of participatory approaches to freshwater resources management based on the recognition of the social and economic values of freshwater and its related ecosystems. Programmes to raise awareness of the issues, particularly among youth, are important. It is important that stakeholders at all levels be involved in a transparent approach for policy making, planning and management, as a "bottom up" and "top-down" process.

7.4 Focus on Local Level

Every effort towards rational water management has to be based on a participatory approach, especially at the local level.

7.6 All Stakeholders

Participation of all stakeholder groups, especially of women, should be encouraged to ensure the quality and the successful implementation of good water management strategies.

7.8 Local Agenda 21

We recommend striving for participatory, holistic approaches, as opposed to an exclusive reliance on either top-down or bottom-up processes; where applicable, this should be done through Local Agenda 21 processes.

7.10 Legislative and Regulatory Framework

A legislative and regulatory framework should be established in order to facilitate holistic water resources management strategies and to ensure that the capacity exists to apply the legislation and to enforce regulations. Such framework should be conducive to private sector investment and the involvement of local service providers.

7.12 Community Property Rights

7.14 Institutional Development

There is a need to design and adapt institutions to effect a holistic approach to policy analysis and to holistic water resources management for specific environmental and socio-economic settings. The role of Government needs to be clearly defined, with a distinction between the functions of standard and regulation setting and control on the one hand, and the direct management and provision of services on the other, and between the role of government at all levels and the roles of the private sector and other stakeholders.

7.16 Partnership

The establishment of an enabling environment should be promoted, with specific mechanisms, that facilitate partnerships between public, private and community organisations, local authorities, NGOs and all public and private actors.

7.18 Enhancing the Role of Women

Women should have an equal role with regard to water resources management at local, national and international levels.

8 International Co-operation

8.2 Support for National Action

International co-operation and partnership in support of national actions are essential for achieving sustainable development, particularly in the water sector. This includes the need for mobilising and providing new and additional financial resources to developing countries as set out in Agenda 21, as well as the need for enhancing international co-operation in such areas as capacity building, transfer of technology, research and information exchange.

8.4 Promoting a Common Approach

The United Nations system should play an active role in harmonising, at international and national levels, the recommendations being made to countries for holistic water resources management strategies.

8.6 Information Exchange

Governments should promote vital information exchange and dissemination through a comprehensive and systematic use of information and communication technology, including geographic Internet and other modern means of communication.

8.8 Donor-recipient Dialogue

Governments and the international community need to strengthen consultation mechanisms aimed at improving donor/recipient dialogues for the mobilisation of financial resources in a well-targeted and predictable manner, based on national action plans with a special focus on holistic water resources management which recognises the need of the poorest communities.

8.10 Regional Consultations on Drought and Flood Preparedness

There is a need to establish or strengthen mechanisms for regional consultations on drought and flood preparedness and early warning systems and mitigation plans at local and national levels, regional emergency funds and/or collective insurance programmes. At the international level, there is a need to maintain support of these activities following the close of the IDNDR (1999).

8.12 International Watercourses

Riparian States are encouraged to co-operate among each other on matters related to transboundary water resources, building on existing agreements principles, arrangements, instruments and programmes of action, taking into account the interests of all riparian States concerned. Such efforts, upon common requests of concerned States, may need to be supported through international co-operation.

8.14 Water-Related International Conventions and Programmes for Action

In the formulation and implementation of holistic water resources management policies and programmes, there is a need to take into account actions to implement a number of existing Conventions and Programmes of Action relevant to freshwater, in particular conventions on Biodiversity, Desertification, Climate Change, Wetlands (RAMSAR) and International Trade in Endangered Species (CITES) as well as the Global Programme of Action for the Protection for the Marine Environment from Land-Based Sources of Pollution.

8.16 Sustainable Human Development-related Programmes of Action and Agendas

9 Economics and Finance

9.2 Economics

Water planning and management needs to be holistic into the national economy, recognising the vital role of water for the satisfaction of basic human needs, food security, poverty alleviation, ecosystem functioning and taking into account special conditions of non-monetary sectors of the economy.

9.4 Allocation

Water needs to be considered as a finite and vulnerable resource, and a social and economic good, and the costs and benefits of different allocation - social, economic and environmental- need to be assessed. The use of various economic instruments is important in guiding allocation decisions.

9.6 Accountability

It is essential to ensure efficiency, transparency and accountability in water resources management as a precondition for sustainable financial management.

9.8 Covering Costs

All costs must be covered if the provision of water is to be viable. Subsidies for specific groups, usually the poorest, may be judged desirable within some countries. Wherever possible, the level of such subsidies and who benefits from them should be transparent. Information on performance indicators, procurement procedures, pricing, cost estimates, revenues and subsidies needs to be provided in order to ensure transparency and accountability, to maintain confidence and improve investment capacities in the sector.

9.10 Financial Resources

Increased financial resources will need to be mobilised for the sustainable development of freshwater resources if the broader aims for sustainable economic and social development are to be realised, particularly in relation to poverty alleviation. Evidence that existing resources are used optimally will help mobilise additional finance from national and international sources, both public and private.

10 Conclusion

10.2 Holistic Approaches to Freshwater Vitality

The Expert Group Meeting invites the Commission on Sustainable Development to give consideration to the general conclusions and recommendations outlined above, together with more detailed proposals for action contained in the annexed reports of the four Working Groups. It is hoped that the CSD will support these recommendations and proposals for action, thus promoting a holistic approach to freshwater management at all levels while ensuring that national action is supported through adequate means of international co-operation.

10.4 Information on National Water Policies, Plans and Implementation

Furthermore, the Expert Group Meeting recommends that the CSD invites countries to submit, by 2002, information concerning their national water policies and related plans and progress in their implementation