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UNITED NATIONS
ECONOMIC COMMISSION FOR AFRICA

REGIONAL COOPERATION AND INTEGRATION DIVISION

MISSION REPORT ON WORKSHOP ON

"WATER AND NATURE:ENVIRONMENT AND ECOSYSTEMS"

12 - 15 April 1999, Harare, Zimbabwe

Addis Ababa, Ethiopia
30th May, 1999

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Freshwater Ecosystem Management & Social Security

Harare, Zimbabwe, April 13 to 15, 1999

--- FINAL STATEMENT ---

The Vision

A future in which all people are ensured secure access to safe and adequate water resources to meet their needs and rights in ways that ensure the integrity of freshwater ecosystems.

The Goal

The goal is to have water resources for food security, life and health, as well as resources for the maintenance of livelihoods and non-consumptive processes and products such as biodiversity, nutrient cycling, recreational, aesthetic and cultural values. This should be within a context where the management of water resources enhances both social security and equity and the viability of the ecosystems within which these resources are found.

The Challenges

We see a world where current conditions and trends create formidable challenges:

The Ecological Challenge

To reverse trends in the degradation of freshwater ecosystems and even increase the abundance and quality of freshwater ecosystems through rehabilitation and remediation strategies. To reverse increasing pressures upon these ecosystems which will grow through increased demands for and conflicts over water resources and greater variability and uncertainty in ecological and climatic conditions.

The Human Challenge

To engender greater security and equity within and between households, communities and nations in an urbanising and increasingly integrated world where poverty and inequality remain rife, population and consumption pressures are increasing, conflicts are ever-present and social structures, norms and expectations are changing.

The Institutional Challenge

To build efficient, representative and sustainable institutions for the management of freshwater ecosystems, which see reduction in the vulnerability of both these ecosystems and social security as prime goals,

which integrate government, private sector and civil society and which recognise that many communities whose security is linked to access to freshwater ecosystems are increasingly disenfranchised as their control over these resources is eroded.

Establishing a Process of Change

To move towards realising the goals, a change in freshwater resources management is required. Sector-oriented approaches must give way to integrated water resources management, based on a process that integrates the needs and interests of all stakeholders, and that fosters social security and ecosystem protection and rehabilitation, in terms of biodiversity and natural processes. This process of change will take many years to come to fruition and is in many ways the heart of the vision to which this analysis on freshwater ecosystems and social security is a part.

To create this process, institutional reforms have to take place at local, national and international levels. This process should not be isolated from wider social and institutional changes, but should build on these to improve the institutional responsiveness to social and ecosystem needs and the adaptability of institutions to a changing context. For example, it is important to recognise and work with existing grass-roots community-based management initiatives to take full advantage of the groundwork they have already laid. Institutions and the Private Sector will need to be more accountable and oriented towards the local delivery of services and management of ecosystems. This requires strong national and regional governmental and non-governmental institutions to establish an integrated and transparent decision-making process and to create the conditions through which social mobilisation can take place and changes in government institutions are engendered.

A key element of the process of change is the promotion and establishment of actions at the community and local levels that empower individuals and communities and enhance socially acceptable rights, entitlements and access. This requires understanding of and awareness about potential trade-offs between economic development and social and ecological degradation and opportunities for diversification and flexibility in terms of resource use. All aspects of the process, however, cannot be addressed at the purely local level: there is a need for institutional changes that integrate local structures into wider processes of resource management based around catchment units. It is at these levels that conflicts within and between communities and the range of trade-offs between the interests of different stakeholders can be resolved. In this context, the impact of globalisation weakening the national states and affecting national and local economies has to be considered.

The process of change would establish the conservation of freshwater ecosystems through a more efficient and equitable use and management of water resources. It focuses on reversing the current trends in freshwater ecosystem degradation through maintaining and enhancing the capacity of these systems to provide goods and services whilst conserving biodiversity, natural processes and non-monetary ecosystem qualities. It also recognises and integrates as a central goal the role of freshwater ecosystems in the maintenance of social security.

A Framework for Action

Both the challenges and the actions to meet these challenges are formidable. The process of change set out above will take a long time to materialise and will require a strong will and adequate resources from all parties to bring it about. There will be a need for some co-ordination, but the actions set out here require effective steps from different actors at all levels from global and regional organisations, national and local government, non-governmental and civil society organisations and, above all, local communities and individuals. The specific roles and responsibilities of these different actors cannot and should not be 'blue-printed' : they need to reflect the needs and potentials of different places and times. What is intended here is a framework for action that stimulates these different actors to think about and integrate the relationship between freshwater ecosystems and social security into the decisions that they make regarding the management of these resources.

Improve water resources governance through structural institutional reforms

- Develop, strengthen and enforce proper legislation regarding water and land resource rights and entitlements
- Establish structures for representative decision-making, consensus building and conflict resolution in integrated water resources management
- Promote the development of an environment in which NGOs and community-based organisations for water and development can be established
- Develop demand and supply management strategies to better use and conserve water resources
- Promote integrated planning as an integral part of wider development strategies
- Maintain and upgrade current water resources and freshwater ecosystems monitoring networks
- Enhance regional co-operation in water resource management through establishing and strengthening river basin organisations that are representative of all stakeholder interests

Develop new and foster existing partnerships between water resources management organisations

- Foster a learning process based on experiences and best practices world wide
- Facilitate a greater sharing of research results and data, at national level between various natural resources institutions and at international level between South-South, North-South, East-West
- Enhance capabilities through sharing and exchanges between organisations
- Develop appropriate linkages with private sector water management organisations

Promote and establish action at community and local levels

- Develop exchanges of experiences in sustainable freshwater ecosystem management between similar resource user groups in different communities
- Develop processes for mitigating conflicts between competing resource users
- Promote local participation in planning, implementation and evaluation of projects and establish links to institutions beyond the local level
- Build the capacity of local groups to improve resource management and to cope with natural and man-induced variability in temporal and spatial terms
- Ensure that local freshwater ecosystem management increases sustainable use of resources
- Legitimise local tenure and resource rights and entitlements and access to resources

Create understanding and awareness about trade-offs, opportunities and flexibility

- Promote a learning approach that leads to an increased awareness of ecosystem functioning and appropriate development alternatives at grassroots, NGO and government levels
- Define trade-offs and negotiate effective solutions through stakeholder analysis taking into account needs of freshwater ecosystems
- Reduce pressure on freshwater ecosystems by diversifying patterns of resource use and increasing efficiency

Maintain and improve capacity of freshwater ecosystems to provide goods & services

- Rehabilitate inherited degraded freshwater ecosystems
- Establish socially and environmentally sensitive pricing mechanisms
- Maintain water quality by preventing polluting inputs into freshwater ecosystems through proper effluent treatment
- Maintain freshwater biodiversity by monitoring and setting limits to acceptable standards of biodiversity loss
- Establish integrated catchment management in order to preserve and enhance diversity of habitats and resources and resilience of ecosystems

--- **WORKSHOP REPORT** ---

1. Introduction

The purpose of this report is to provide a summary of the discussions and outputs of the **Freshwater Ecosystem Management & Social Security Workshop** held in Harare, Zimbabwe, April 13 to 15, 1999.

This workshop was the first of a series of three inter-linked workshops which will form the heart of the consultation process for the Vision for Water and Nature component of the World Water Vision (see Annexes 1 and 2 for description of both processes). The consultations, leading to the creation of a Vision for Water and Nature, are being undertaken by IUCN, The World Conservation Union.

The workshop brought together 23 Southern and northern professionals with a wide variety of geographical and technical backgrounds and expertise related to social security issues associated with freshwater ecosystems and water resources management. A full participant list can be found in Annex 3.

The objective of this workshop was to develop a framework vision of Freshwater Ecosystem Management and Social Security, as a part of the Vision for Water and Nature.

As a starting point for debate, a discussion paper[1] was prepared to challenge conventional thinking and propose new key elements for discussion. In order to do this, the paper starts presenting a conceptual framework, including a definition of what is meant by social security and the societal processes through which it is created. It then discusses, through a series of case studies, freshwater ecosystem management and social security in the modern world. It goes on to look at the future, presenting an analysis of three scenarios developed for the overall World Water Vision. These scenarios indicate the uncertainties the world faces as we enter a new millennium, a circumstance which makes the maintenance of social security systems all the more important. Finally, it considers strategies for the future by first outlining approaches that can address structural issues of institutional processes that underlie water resources-social security relationships, and then considering some adaptation and mitigation strategies that are appropriate for specific challenges.

In addition to this discussion paper, inputs were sought from all participants prior to the workshop to round out the basis for discussion. All participants were invited to submit 300 word statements on the two or three crucial elements to be addressed by a vision statement on water and social security.

During the workshop, a combination of plenary and smaller working group sessions examining specific topics were used to arrive at the final workshop statement. Additionally, as this is only one part of the overall World Water Vision process, participation from and links to other sectors of the World Water Vision were worked into the proceedings.

At the conclusion, a Final Statement on Freshwater Ecosystems Management and Social Security was produced and discussed. This main output of the workshop will feed into the development process for the Vision for Water and Nature as a whole.

2. Workshop Discussion Report

The workshop aimed to facilitate this discussion by adopting a format that combined discussion groups with plenary sessions, in order to maximise the contribution of participants' expertise and their diverse

[1] Soussan, J., Emmel, N. and Howarth, C. 1999. Freshwater Ecosystem Management and Social Security. IUCN – The World Conservation Union, 59 p. (Available for download at www.waterandnature.org)

backgrounds. The agenda was developed to allow a free and critical discussion on the institutional processes affecting freshwater ecosystem management and social security. The final agenda can be found in Annex 4.

The Workshop was opened by Ms. Tabeth Matiza Chiuta, representing the host organisation, the IUCN Regional Office for Southern Africa. Duties for chairing the various plenary sessions were shared by Dr. Ger Bergkamp, IUCN Senior Advisor on water resources; Dr. Cristina Espinosa, Global Facilitator of the IUCN Social Policy Programme; and Dr. Atiq Rahman, Director of the Bangladesh Centre for Advanced Studies. Dr. Espinosa noted that IUCN has taken on the task of developing a Vision for Water and Nature because of its core commitment to unite social and environmental agendas focusing on their common goals.

The work of the first day began with an introduction to the discussion paper by its principal author, Dr. John Soussan of the Environment Centre of University of Leeds (UK). In introducing Dr. Soussan, Dr. Bergkamp remarked that one of the main challenges facing water resource managers today is to regain and re-instil in the public at large the sense of mythic awe for water as the root of all life that guided humankind from its earliest days. He suggested that although the water myth has been lost in our modern technological age, only by recapturing it in our Vision will we be able to establish change. According to Dr. Bergkamp, only by giving water back its status as the precious commodity and sacred trust that it truly is, can it be hoped to protect and preserve the sustainability of aquatic ecosystems and resources for their own good and for the goods and services they provide to humankind.

Dr. Soussan picked up the challenge to stretch the analysis beyond conventional approaches in his presentation of the discussion paper, which formed the basis of the three days of discussions. There is little common ground in the literature between the topics of social security and freshwater ecosystems. The two have seldom been discussed in relation to one another before. To make up for this gap, a "livelihoods approach", which is effectively the state of the art of the 1990s in social sciences, was superimposed upon more classic examples of aquatic resources management at increasing scales from the family, community and village out to regions, nations and the global dimension. The result is a novel look at a critical dynamic - how social security is engendered by wise management of an essential resource, water and the ecosystems on which it depends, and how, in return, the sustainability of that resource is enabled once social security is assured.

The first two days were spent in small discussion groups. Each debated a topic of key concern which, when taken collectively, were intended to lead toward the Vision of Freshwater Ecosystem Management and Social Security. These ideas were then discussed in plenary where the integration of concepts began to take shape, leading to the final formulation of the Final Statement.

2.1 Group 1: Social security and freshwater ecosystem management at the level of livelihoods

This group examined two questions in pursuing the issue assigned to them:

1. ***What do we see as the main sources of conflicts and/or social insecurity stemming from current freshwater ecosystem management practices?***

The consensus response included issues such as a lack of understanding and knowledge, poor policies and planning, conflicts over rights and entitlements, conflicts for use of the same resource, lack of capacities (knowledge, institutions, finances), competing uses and interests, and poverty.

2. ***What makes households and communities less vulnerable in terms of access to freshwater resources and social security?***

In responding to this question, members of the group identified three overarching issues: peace and security; good assets and access to credit; and maintenance of a resilient ecological system. Other specific issues identified included: sustainable use of the resource base; rights and entitlements / access to benefits; knowledge and awareness; improved planning systems, decision-making and planning; effective institutions and support organisations; co-management / participatory management; and strong community.

The group also provided some ideas that it felt should be considered in the development of a Vision statement. Firstly, in considering the linkages between ecological goods & services and social security, there is considerable lack of understanding and a need to raise awareness. They cautioned that we need to consider very carefully which paradigm we espouse: water as a social and environmental good; or water as a commodity. Market influences in freshwater resource management can be a double-edged sword. We must consider market mechanisms to control distribution versus legal rights and entitlements to determine distribution. A very open market system is not well-buffered for changes at the local level, which makes communities more vulnerable to social insecurity.

We have to consider what trade-offs are acceptable: the ethical value of degrading vs. preserving environment; the value of pristine environments vs. basic human needs; the acceptability of ecosystem loss/how much change is acceptable. All of this demands an understanding of resilience, both social and environmental, and solid indicators of resilience.

The role of the community as a determinant in livelihoods systems is paramount. Communities should however not be perceived as uniform units; important differences within communities must be considered that determine access and control over water resources. The differences within communities are often based on:

- community divisions related to political, gender, ethnicity, etc.;
- conflicting resource needs and uses;
- empowerment – maintaining current / traditional practices;
- awareness;
- internal structure.

The group also sounded a word of caution regarding maintaining relevance of the Vision by ensuring that it adequately addresses issues of urban as well as rural communities and the North as well as the South.

Finally, the participants noted that it is popular today to emphasise the importance of community-based planning and management but, in so doing, it must be recognised that there are many circumstances which are beyond the control of the community. Examples include: state government decisions; upstream / downstream development and world commodity markets.

2.2 Group 2: Social security and freshwater ecosystem management related to the interactions between government and civil society

The group began with some discussion around the question of the definition of "civil society". It was decided that it was best to work from a broad definition such as that used in the Social Security discussion paper (Soussan). To paraphrase, this is a concept which includes all formal and informal non-state institutions that influence the behaviour of individuals and groups within a society.

This group also conducted its discussions in reference to two pre-set questions:

1. ***a) What are the constraints that national and local governments face to improve their capacity to govern freshwater ecosystem in more sustainable and equitable ways?***

Two clusters of issues were identified by the group. These were:

1) Policy Legislative Issues, which result in inappropriate rules and laws to protect freshwater ecosystems and provide social security. Examples include a lack of policy and laws (i.e. necessary legislative framework unavailable or not appropriate) and aspects of user rights and equal access (i.e. the issue of water scarcity in real terms and/or the problem of distribution).

2) Capacity Issues, which prevent application of appropriate rules and laws where they do exist. This issue has resource and education sub-groupings. In the area of resource constraints would be found finance and funding issues – including limitations of and access to funds; and the lack of inventories of freshwater ecosystems and associated issues, such as lack of methodologies and tools for decision support, insufficient monitoring capacity, data collection and database management. Under the sub-category of need for better education, specific examples include non-enforcement of existing laws relating to freshwater ecosystem management, institutional inertia and decision making that is responsive to certain interests without regard to balancing conflicting user demands. All of these are in some measure at least a result of a lack of awareness or education.

Having examined the constraints that are inhibiting states from undertaking equitable and sustainable freshwater ecosystem management, the group examined the corollary to this question:

1. ***b) What changes are required for the state to achieve sustainable and equitable Freshwater Ecosystem Management?***

There was some discussion as to whether change was actually necessary, or as the question was stated, "Is there really a crisis?" There was strong consensus in the group that change was necessary.

The group considered changes in a fairly broad range of categories (relative to the constraints identified) and developed this further by considering what needs to change and then suggesting how to change it. Without elaborating on the details of the group's discussions, changes were found to be needed in six areas: improved governance; legislative reforms; capacity building; devolution / decentralisation; planning and management strategies; and budgets.

The group then examined a second area of related enquiry:

2. ***a) What are the social and environmental implications of water management based on efficiency criteria (cost efficiency, as defined by water managers)?***

From the social implications standpoint it was concluded that efficiency criteria alone will disadvantage the poor and, considering the gender perspective, women more than men, as the latter are generally better integrated into the "productive" economy. In addition, it was felt that needed large scale water works would not proceed if cost efficiency were the sole criterion considered. On the environmental side, problems exist with a cost efficiency approach as well: is it cost efficient to protect habitat for non-commercial species, for example? Is the "environment" a user that has to pay for water - or is it the resource base? The "value" of ecosystems is always minimised in the cost efficiency equation. On the other hand, if cost efficiency were the rule, commercial interests would reduce their water use, producing environmental and social benefits.

In summary, the "productive water first" principle has a negative aspect on women and the poor and on the environment, since environment is often seen as non-productive.

A corollary considered to this second question is:

2. ***b) What role can water pricing play in promoting equitable sharing of limited water resources and conservation?***

It was concluded during discussion that water pricing can play both negative and positive roles, depending on how it is instituted. If there is due concern to equity in the distribution, both in terms of needed allocations to the poor and for nature, then water pricing can be positive because it leads to conservation of the resource.

Issues raised during discussion that needed to be factored in related to improved water management, water saving measures, and the application of a pay as you use principle.

Other caveats included in the comments provided by participants included:

- progressive tariffs can promote both equity and sustainability;
- if need and ability to pay are factored into the policy, then it could be positive;
- the value of ecosystems should be taken into consideration;
- bigger users by volume should pay more (sliding scale);
- people will use water more carefully - environmental benefits.

Finally, the group suggested a number of actions that would potentially lead to these goals:

- learn from best practices and successes globally and adapting to local/regional conditions;
- increase awareness through traditional methods and greater use of new communications technologies;
- establish structures, such as river parliaments, for discussion and consensus building and conflict resolution in integrated water resources management;
- create indigenous NGOs for water and development;
- involve the business community as a responsible partner in water resource management;
- build capacity to cope with natural and man-induced variability in temporal and spatial availability of water;
- facilitate greater research sharing on sustainable use of water and freshwater ecosystems (South-South as well as North-South);
- match penalties for infractions with incentives for socially responsible water use practices;
- organise communities to take responsibility to demand greater access to existing resources in a sustainable way.

2.3 Group 3: Towards a vision – redefining the institutional context

The question presented to this group was:

1. ***How to bring change into the current institutional context to enhance freshwater ecosystem management and social security?***

To motivate debate on this subject, the group Chairman, Dr. Atiq Rahman enunciated a simplified Vision and challenged the group to define a realistic set of goals directed toward that idealistic Vision:

> *Access of good quality water for all people, all ecosystem services, and all ecosystem survival, at all times, and for all resource needs (sectors, communities, agriculture, industry, etc.).*

The group concluded that within this idealised Vision, a number of practical goals should be achieved over the next 25 years, including:

- catchment level integrated water resources management in place at regional levels everywhere which reduce social vulnerability;
- enhanced equity of social access (considering both temporal and spatial dimensions);
- institutions that are more socially responsive and respective of ecosystem needs and able to adapt to changing context;
- local delivery, supported by strong national and regional institutions, recognising global conventions;
- conservation leading to more efficient use of water.

To get there however, a base set of terms of reference for what is required for institutions to make this happen.

Institutions should:
- be able to operate in a changing world (resilience);
- be more socially responsive and accountable (equity);
- develop and maintain a greater information flow and more transparency in decision making (openness)
- be capable of incorporating all stakeholders (inclusiveness);
- be provided with adequate resourcing (capability);
- adopt multi-sectoral and integrative approaches engendering a willingness amongst government agencies and governments to work with one another towards truly integrated planning and management;
- create conditions through which social mobilisation can lead to empowerment of the individual and the community to take responsibility and force change in government institutions.

2.4 Group 4: Towards a vision - mitigation and adaptation strategies at local and global levels

The final breakout working group session was challenged to develop a process for change through mitigation and adaptation strategies at local and global levels.

To begin with, the participants examined the trends that act as a backdrop against which change must occur:

- increasing world population;
- increasing urbanisation, leading to increasing role for regional level management;
- increasing degradation of freshwater ecosystems (biodiversity, quality, quantity);
- increasing pressure on water and land resources;
- replacement of traditional resource users with commercial/ non-indigenous users;
- changing climate affecting hydrology;
- increasing local, national and transboundary conflicts over freshwater;
- increasing stakeholder involvement in planning and development;
- environment increasingly seen as a legitimate user of water;
- structural reforms leading to dismantling of bureaucracies;
- increasing awareness of need to maintain forests and rivers for direct goods and services;
- increasing involvement of the private sector in resource use and management (including water).

From these trends, or in recognition of them, a number of realistic goals were defined:

- all peoples will enjoy social security, including water and food security and security in non-material aspects, such as local level empowerment, social well-being and equity;
- all freshwater ecosystems will be healthy and provide utilitarian goods and services such as drinking water, fish, recreation and support non-utilitarian processes and products such as nutrient cycling and biodiversity.

In order to achieve these goals, certain strategies were defined:

- maintain and improve the capacity of freshwater ecosystems to provide goods and services:
  - rehabilitate inherited degraded freshwater ecosystems;
  - maintain water quality by preventing polluting inputs into freshwater ecosystems through proper effluent treatment;
  - maintain freshwater biodiversity by monitoring and setting limits to acceptable standards of biodiversity loss;
  - establish integrated catchment management in order to preserve and enhance ecotones and diversity of habitats and resources; and protect the resilience of ecosystems through riparian zone management, head water maintenance, reforestation, etc.

- create understanding and awareness of tradeoffs, opportunities and flexibility:
  - promote a learning approach that leads to increased awareness of ecosystem functioning and alternatives at grassroots, NGO and government levels;
  - define tradeoffs within local circumstances and negotiate effective solutions through stakeholder analysis taking into account needs of freshwater ecosystems;
  - reduce pressure on freshwater ecosystems by diversifying the types of resource use.

- improve freshwater resources management:
  - develop demand management strategies to conserve water resources;
  - establish integrated planning as an integral part of a development strategy.

- promote and establish action at community and local levels:
  - develop exchanges of experiences in sustainable freshwater ecosystems management between similar resource user groups in different communities;
  - promote local participation in planning, implementation and evaluation of projects and establish links to institutions beyond the local level;
  - build the capacity of local groups for resource management;
  - legitimise local tenure and resource rights and access to resources.

As a complement to the group work described above, the workshop included a session in which participants were encouraged to present their thoughts on input to the Vision based on their own experiences. Additionally, the participants heard about the development of and learned the perspectives from other aspects of the Vision, namely Water for People, Water for Food and the Framework for Action, the latter being developed in conjunction with the World Water Council by the Global Water Partnership.

3. Conclusions and Next Steps

The key output from the Workshop was the Vision statement, repeated before the introduction to the present report. This document is not meant to be considered as a stand-alone document. Rather, this vision forms one input into the development of an overall Vision for Water and Nature. It will be brought forward at subsequent workshops and combined with similar visions to be produced on Economic and Environmental security. This having been said, comments are invited on the Social Security vision statement to validate its conclusions and to ensure that it has encompassed all relevant issues.

-Annex 1-
World Water Vision

Throughout 1999 until March 2000, the World Water Council is developing a **Vision for Water, Life and the Environment in the 21st Century (World Water Vision)** to address the pressing issue of scarcity of freshwater in localised areas, and chart a course toward more sustainable and equitable use of water resources.

It is intended as an intensive consultation exercise, bringing together stakeholders and professionals, both within and outside the water sector, which is meant to take us from where we are today to where we need to be to meet future water needs. This process of study, consultation and promotion aims to:

- develop knowledge on what is happening in the water sector, and on trends and developments outside the water sector that will have an impact on future water demand and supply;
- raise awareness of water issues among the general population and decision-makers in order to foster the political will and leadership necessary to achieve the Vision;
- produce a consensus on a Vision for the year 2025 that is shared by all stakeholders;
- contribute to a framework for action with steps to go from vision to action.

The consultations will take place through a number of means:

- Thematic Panels: experts consider possible future developments in biotechnology, energy technology, information technology and institutional changes, and their implications for the water sector.
- Scenarios: a framework that describes possible futures and their driving forces.
- Sectors: professionals discuss strategic water issues in key sectors: Water for Food, Water and Nature; and Water for People (supply and sanitation), and others.
- Regions: regional stakeholders will discuss and develop a regional vision: a desirable future and how to get there.

In addition, a website has been developed to facilitate broad-based consultations from all interested parties: http:// www.watervision.org

-Annex 2-
Vision for Water and Nature

IUCN-The World Conservation Union has been asked to lead the development of a specific sector vision on **Ecosystems and the Environment (Water and Nature)**. This Vision for Water and Nature will be combined with and contribute to visions of the other sectors, as well as the regional visions addressing the geographically varying issues confronting different parts of the world.

To develop the Vision for Water and Nature, the IUCN will call upon the advice of many specialists and interested organizations, not only in the water sector, but in different socio-economic and scientific disciplines that bear upon the use of water.

The key basis for consultations will be three workshops, focussing on the related themes of how management of freshwater and aquatic ecosystems affects **social**, **economic** and **environmental** security. At each workshop, participants will examine, as a starting point for debate, expert opinions captured in discussion papers which are intended to challenge conventional thinking. At the same time, all interested individuals will be invited to examine and offer their comments on these documents via Internet-based discussions. The three scheduled workshops are:

- Freshwater Ecosystem Management & Social Security April 13-15, 1999, Harare, Zimbabwe
- Freshwater Ecosystem Management & Economic Security June 9-11, Bangkok, Thailand
- Freshwater Ecosystem Management & Environmental Security, June 22-24, 1999, San Jose, Costa Rica

The draft Vision for Water and Nature will be submitted at the Stockholm Water Symposium in August 1999 and provision will be made, if required, for a final round of consultations to complete the Sector Vision. It will then be incorporated into the final product of the overall process: an integrated World Water Vision for the 21st century, to be tabled at the 2nd World Water Forum and associated ministerial conference in the Hague in March 2000.

A website has been launched to provide information specifically on the Water and Nature process, post key documents such as the discussion papers and workshop reports for download, and provide a forum for input into the consultations (http://www.waterandnature.org)

-Annex 3-
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-Annex 4-
Freshwater, Ecosystem Management & Social Security Agenda

DAY 1	DAY 2
8:30 a.m. OPENING SESSION Welcome – T. Matiza Chiuta, IUCN ROSA Overview on Vision for Water and Nature and the goals of the meeting – Chair: Dr. A. Rahman , Director Bangladesh Centre for Advanced Studies and Dr. G. Bergkamp, IUCN 9:45 – 10:15 COFFEE BREAK 10:15 – 10:30 – Presentation of participants and expected outputs of the meeting – Dr. C. Espinosa 10:30 – 11:00 Presentation of the discussion paper - Dr. Soussan. 11:00 – 12:15 – Reaction from the floor d OPEN 12:15 – 12:30 - Framework for discussion - A. Rahman	8:30 a.m. Plenary: Group Reports on Day 1 Reactions from the floor 9:45 – 10:15 COFFEE BREAK 10:15 – 12:30 Discussion groups **Group 3**. Towards a vision – redefining the institutional context **Group 4.** Towards a vision - mitigation and adaptation strategies at local and global levels
12:30 LUNCH	12:30 LUNCH
2:00 p.m. Group Discussion **Group 1**. Social security and freshwater ecosystem management at the levels of livelihoods **Group 2.** Social security and freshwater ecosystem management related to the interactions between government and civil society 3:30 COFFEE BREAK 4:00 – 5:00 Discussion continues	2:00 – 5:00 Fieldtrip (Technical visit to Lake Chivero, hosted by Dr. Moyo, Biological Sciences Dept., University of Zimbabwe)