

Perspectives on freshwater

Issues and recommendations of NGO's

Editor preface and acknowledgements

Freshwater is a precious resource, it flows throughout all terrestrial life and is used for all aspects of human activity, yet its future is far from secure as humans continue to destroy the ecological base of our water supply. Rapid population growth combined with poverty, industrialisation, urbanisation, agricultural intensification is resulting in a global water crisis. While some one billion people, 20 per cent of the population, are excluded from their right of access to safe drinking water, almost two and half billion people live without access to sanitation systems. Water is central to the lives of women, yet they are invariably excluded from decisions regarding its management.

The reasons for the water crisis are not technological or financial, but are rooted in mismanagement and the inequitable allocation of resources throughout society. The political nature of some of the proposed 'solutions' to the water crisis, such as privatisation of water or biotechnology require frank public debate, with full engagement at the local level.

As a group, NGOs have amassed a great deal of experience in a range of water-related issues under different political, economic, cultural and environmental circumstances. The papers and recommendations presented in this report reflect just a portion of the contribution NGOs can make to inform the development of policies and practices for better quality and more equitably managed water.

We welcome the fact that NGOs were recognised as one of the significant Major Groups and invited to participate at the Second World Water Forum and Hague Ministerial Conference on Water Security earlier this year. This event was hosted by the Dutch government and was the largest ever international freshwater policy conference. Four thousand people attended a packed programme of presentations and debate over 6 days. The Ministerial Conference, held in parallel, aimed to mobilise political support for water security in the 21st century and produced a ministerial declaration.

Water, like all environmental problems, requires an integrated approach. We were lucky to have such a wealth of issues represented within the NGO group who participated in the Forum and that so many of the delegates came from the South and worked as practitioners in the field. The diversity of this group itself reflects the scope of the challenge; to create an integrated strategy which responds to local needs and, amongst other things, addresses sustainable agriculture, ecosystem restoration, large dams, ground-water depletion, poverty, water supply and sanitation, floods and pollution.

In coming together for an event such as the Second World Water Forum and Ministerial Conference, many of the participating NGOs were making their first connection with multilateral environmental policy making. They made a valuable contribution to the event, as well as developing alliances for further strategic partnerships. UNED Forum co-ordinated a day of workshops and panel debate for NGOs on topics recommended by the Advisory Committee and facilitated a daily caucus meeting. Background papers and case studies were commissioned from panellists in each workshop, these being: - integrated water resource management, water as an economic and social good, governance and participation, hazards, water and agriculture and water as a basic need. The recommendations reproduced here are taken directly from the conclusions reached at the workshops.

Although the Ministerial Declaration of the Hague on Water Security is rather non-committal and vague, it does contain some positive words and refers to participation, coherent policies and institutional frameworks, technology transfer and capacity building and strengthening water within the UN system - all of which were issues raised by the NGO group at the Forum. On the penultimate day, a few NGO representatives attended interactive workshops with Ministers. The recommendations agreed at these workshops are more far-reaching and concrete but were not included in the Declaration. The NGO Major Group statement, which forms an attachment to the Declaration, was drafted during the Forum with the collaboration of many in the group, including some Trade

Unions who were invited to join the NGOs as they lacked an official platform of their own.

Unfortunately it has not been possible to reproduce all the background papers in this report. The compilation of papers and recommendations printed here are taken from each of the workshops and give a flavour of the expertise represented in the group. It is certain that the energy, experience and commitment of NGOs are a great asset for policy making if the social and ecological water crisis has any chance of subsiding.

The international community must strengthen its commitment to water resource management. The United Nations should take a lead in this process. We hope that the issues and recommendations raised by the NGOs are used as a solid basis for further stakeholder dialogue and as a preparation for the International Conference on Freshwater to be hosted by the German government in 2002. Following the impetus generated already this year by the World Water Forum and the report of the UN Secretary General on water supply and sanitation, we submit this report for the attention of all those attending the 8th session of the UN Commission for Sustainable Development.

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Thank you to all the panellists and delegates who participated in the NGO sessions, both formal and informal, and who travelled so far to attend. It was a pleasure and inspiration to meet all of you.

Finally, a special thanks to our advisory committee members for all their preparatory input and for managing to remain coherent and calm at all times.

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NGO Major Group at the World Water Forum

Discussion Paper on freshwater

In preparation for NGO participation in the 2nd World Water Forum, the NGO coordinators (UNED-UK) and its advisory committee drafted a discussion paper which was structured to link to the seven key challenges identified in the draft Ministerial Declaration. It was circulated for comment via the CSD Freshwater caucus and redrafted several times before the Hague meeting. It was then submitted for debate to NGOs attending the NGO major group sessions at the World Water Forum and has since been redrafted to reflect their fairly extensive comments. The political nature of some of the issues under discussion inevitably means that the NGO community hold a range of opinions. This is not a position paper, but it is a useful focus which reflects some common concerns of a wide variety of NGOs involved in water related issues.

Access to water

Access to water, sanitation and a healthy environment are basic rights and must be respected as such. The UN ACC Task force on Basic Social services states that 'At the highest political level, there needs to be recognition that water and sanitation are basic needs and rights'. The right to water must encompass both the quality and quantity of water provision.

People, especially the poor who spend a very high proportion of their income on water and sanitation services, need legal protection and political space to argue for better services and better access.

If water is to be demand responsive, service providers must invest time, resources, and effort in 'unlocking' demand from communities, individuals and women who have less capacity to articulate their demands and less power to get their demands heard.

Governments must make proper budgets available so that adequate water services are delivered to the poor. In addition to water services, this requires massively increased investment in health care, education and poverty eradication. Funds could be realised through existing initiatives, such as the 20/20 initiative of the World Summit for Social Development 1995, and if Northern governments agreed to cancel the debts of developing countries. This must be according to a framework set by the South and the integral involvement of civil society in defining and monitoring the use of the resources so released.

Water is the common heritage of mankind and should not be negotiated as a commodity.

Democratic governance and participation

Water security will not be achieved unless the needs, aspirations and knowledge of local communities drive the process. This requires an open and equal dialogue between service providers, policy makers and the community.

Access to information as a fundamental right must be more widely accepted. It is a prerequisite for participation in decision-making processes.

Participation in decision-making must be widened and deepened beyond current shallow levels, paying particular attention to women and marginalised peoples. A genuine participatory approach has to be supported throughout all levels in management of international agencies, government departments and the private sector and viewed as part of a larger Agenda 21 process. Legal and institutional mechanisms must be put in place for the empowerment of communities to participate at all levels.

Capacity building is a core element for effective participation, through education, training, access to information and gender mainstreaming.

Water-users must be engaged at an early stage in the development of new technologies or investment programmes.

Community-based water management needs to be greatly extended across sectors, for example small-scale, and decentralised water harvesting projects or hydro-power schemes. This would reduce the occurrence of alienating and inappropriate large scale water projects.

There should be greater accountability of international agencies and the private sector contractors who provide water services or develop water management programmes. Prior assessment of the impacts of programmes is vital and must give weight to traditional and community user rights. The displacement of communities should not take place except in exceptional circumstances and only then with their prior informed consent and on the basis of negotiated agreements to which developers can be held accountable.

No use of force in the form of intimidation, repression or violence will be tolerated or accepted in any water project.

Protecting ecosystems

Restoring and conserving the hydrological cycle and natural ecosystems is the basis for sustainable water management and must become the accepted approach. Many freshwater ecosystems have been seriously degraded or destroyed and must be rehabilitated or restored for sustained provision of clean water. This needs to be integrated with the protection and restoration of the functional integrity and biodiversity of all ecosystems, as defined in Agenda 21.

An ecosystems based approach requires a greater degree of co-operation at all levels and across sectors - to develop suitable criteria and indicators for river basin management. Governments need to increase the collection of baseline data, and monitor the wise use of water resources for sustainable river basin management in collaboration with the wide network of existing research and civil society organisations.

The social and environmental value of the goods and services provided by freshwater ecosystems should be reflected in demand management and polluter pays principles.

An integrated approach to water management must pay due regard to the pollution of rivers and ground waters by intensive agriculture and industrial production. Environmentally friendly and low cost technologies should be adopted for sanitation, wastewater treatment.

Greater institutional and policy links need to be made with existing multilateral environmental agreements such as the UN Commission on Sustainable Development, Convention on Biological Diversity, Convention on Desertification, RAMSAR Convention on Wetlands, Convention on Climate Change; or work programmes e.g. the joint work programme for 2000-2001 between CBD and the RAMSAR Convention.

Food security

In recognition of the fact that adequate water supplies are essential for food security, water should primarily be used to improve peoples livelihoods and not appropriated for profit making purposes. An integrated approach to food security must also address land rights for women and all the landless people as part of a sustainable livelihoods strategy.

Land and water distribution must become more equitable than at present. Food sufficiency at the national level does not guarantee food security at the local level. In this context a particular reference is made to the disproportionate level of resources used for growing monoculture cash crops.

The use of biotechnology to produce crops in water scarcity, should not be promoted until there is a thorough understanding of the social and environmental implications. Genetically modified organisms must not be released into the environment or placed on the market without the prior informed consent of the public.

There needs to be greater recognition of those local technologies that offer a sustainable and cheap alternative to large-scale infrastructure projects. For example, soil and water conservation techniques or reinvigoration of old community managed irrigation channels.

Effective and far-reaching institutional reform is needed to devolve responsibility in a gender balanced way within the agriculture and irrigation sector. Too often institutional reform has not progressed beyond decentralising power to an existing social elite who tend to dominate participatory management.

Food security is intrinsically linked to trade and in particular the promotion of international free trade according to the World Trade Organisation model. Market access issues, including the high tariff level and restrictive tariff quotas are also important. Perverse subsidies should be removed to enable small and medium sized farmers to compete with subsidised industrial agriculture, both in the North and South.

Baseline mapping of existing resources and land uses should be offered in all regions to assist the optimal location of crops. However the suggestion that water intensive crops are confined to areas with a sufficient water supply has potentially serious trade implications for many developing countries.

Shared and transboundary water resources

Where water resources are shared between different countries or regions, the political problems of securing effective and equitable integrated management can be acute. Greater responsibility for downstream, or cross border impacts must be assumed with respect to pollution, water flow and ecosystem impacts. This requires international and national co-operation on shared resources between neighbouring countries or provinces, more usage of formal and informal dispute resolution mechanisms between stakeholders, and wider provisions for non-discriminatory access to justice. Work has already been done regarding these sorts of mechanisms and such examples need to be shared more widely. For example, UNECE Convention on the Protection and use of transboundary Watercourses and International Lakes, the 1998 Convention on the Protection of the Rhine.

Adequate legal frameworks for the entitlement, allocation and re-allocation of water, and compliance with an agreed legal regime should be developed in consultation with the local communities.

Valuing Water

Equity and social justice should guide and inspire the mechanisms for bearing collectively the costs of all water services to safeguard the quantity and quality of water for life. There is an urgent need for a full and open public debate between governments and the different stakeholders on the socio-economic implications of full cost recovery policies.

In many regions, the poor already subsidise those richest in society for their water use. Research needs to be undertaken on mechanisms to adequately and in a transparent manner, subsidise a critical level of clean water for the poor. Water is a public good, and all funds raised through full cost recovery must be re-invested in the provision of improved water services for people and the environment.

Suitable mechanisms need to be developed for full cost transparency and classification of water price according to its quality.

Water intensive, polluting or other socially negative water users should be financially penalised or prohibited and communities should receive compensation for the worst of these abuses.

Any investments in water must be transparent and well regulated. If water services are contracted to the private sector, regulations must be strong yet realistically enforceable and provide a means of true accountability to the stakeholders. Regulators should publish the performance standards on which they evaluate the concessionaires. An increased reliance on regulations requires strengthening the role and capacity of the public sector.

The emphasis on (large scale) privatisation of water is rejected. Control of access should remain in the hands of the users and water user associations or other modes of community managed water services who often best serve the provision of quality and affordable water.

Privatisation as a conditionality imposed by multilateral financial institutions is rejected.

Trade liberalisation of water and waste-water services under the WTO General Agreement on Trade in Services is to be avoided on socio-economic, environmental and ethical grounds.

Managing Risks

There should be formal recognition of the fact that human activities cause or aggravate many of the world's floods and droughts e.g. deforestation, intensive agriculture, large dams, climate change, and the avoidance of threats should be prioritised as far as possible.

The threat of pollution from urban-industrial-agricultural development is growing throughout the world. The threat of inorganic contamination of water supplies from arsenic, fluoride, and other substances has increased as a result of over-pumping of aquifers for agriculture and industry. This has caused deaths and high rate of morbidity amongst local populations. The quality of water must be recognised as presenting a severe health risk to people and the environment and should become more central in planning water security or Integrated Water Resource Management strategies.

Poor people who live in marginalised and hazardous areas of the world are extremely vulnerable to hazards. Local communities at risk of flood, drought or pollution, require full support in consolidating and developing appropriate early warning systems and contingency strategies. Eradication of poverty would help minimise the impacts and reduce the risks.

Mobilisation of international forces must be better coordinated to ensure preparedness to meet natural and human induced risks.

Integrated water resource management (IWRM)

As referred to above, the principle and practice of IWRM must recognise and develop formal procedures for local consultation and participation of local women, men, children and other stakeholder groups. This requires a change in the working practices of all sections of society to devolve decision making away from specialists and to enable a circular flow of information, which develops the design and management of IWRM. For real integration and decentralisation, great numbers of people need to be equipped with the skills to facilitate the process.

The World Water Council and Global Water Partnership

The report of the World Water Commission, World Water Vision and the Framework for Action are not accepted as a satisfactory basis for further action. Although the process initiated some good community based participation and consultation in some regions and sectors, which resulted in so positive action points and recommendations, such as community-based rights, the mechanisms for integrating this into the overall reports were flawed. The process was dominated by technocratic and top down thinking which has resulted in documents with an emphasis on a corporate vision of privatisation, large-scale investments and biotechnologies as being key answers - and failed to address the real problems of mismanagement and inequity. The FFA and WWV give insufficient emphasis and recognition to the rights, knowledge and priorities of local people and communities.

If the Global Water Partnership and the World Water Council continue they must become more accountable and transparent. Their governance should be reconstituted in a more transparent and legitimate way and their work should be regularly reviewed by the United Nations (through the CSD) and by the stakeholders themselves.

Key points for action

- Ultimately water security can only be achieved in conjunction with redistribution of resources and an end to poverty.
- Northern governments must make water security a strategic priority for multilateral and bilateral overseas development aid and a key element for poverty eradication strategies.
- Overseas development aid should support the choice of communities to provide and manage their own water services.
- The public sector must retain ultimate responsibility for the actual provision of water services, this role includes:
 - Developing guidelines, structures and processes by which all stakeholders, especially poor people can participate in designing and implementing services and manage their water resources.
 - Increasing the opportunities for communities to manage their water services and resources.
 - Establishing legislative and regulatory frameworks to ensure that every man woman and child has access to safe, affordable water that meets their demands without depleting or degrading environmental goods or services.
- Any involvement by the private sector must not cause harm by exploiting the vulnerability of local people, must deliver an equitable net benefit at a local level and must become accountable to the people they serve through appropriate democratic institutions.

- Public and private bodies should seek greater collaboration with NGOs to assist in wider dissemination and implementation of successful projects and processes.
- Non-governmental initiatives are useful to raise awareness and develop structural relations and networks. NGOs have a continuing role in prompting action by others, co-operating in the implementation of programmes at all levels, disseminating information on the social and environmental impact of projects with water impacts. NGOs should increase advocacy programmes, assisting people and in particular women, to advocate their demands and to participate in decision making of government and private sector processes.

NGO Major Group statement to the Hague Ministerial Conference on Water Security

1. The NGO and Trade Union Major Groups, who have signed below (pg 11), do not accept:
 - The report of the World Water Commission.
 - The Vision document produced by the World Water Council

We express serious concerns about the process and contents to date of the Framework for Action. Although there are some positive action points and recommendations, such as community-based rights, the mechanisms for integrating them into an overall process are flawed. The process is dominated by technocratic and top-down thinking, resulting in documents which emphasise a corporate vision of privatisation, large-scale investments and biotechnology as the key answers. The process gives insufficient emphasis and recognition of the rights, knowledge and experience of local people and communities and the need to manage water in ways that protect natural ecosystems, the source of all water.

However, we support the process of community-based participation employed for the Vision 21 (Vision for Water for People).

2. If the Global Water Partnership and the World Water Council are to continue, their work must be made accountable and transparent. Their governance must be reconstituted to be more transparent and legitimate. Their work must be regularly reviewed by the United Nations, through the Commission on Sustainable Development, and by the stake holders themselves.
3. We strongly insist that a clean, healthy environment and access to basic water and sanitation are universal rights, and cannot therefore be negotiated as commodities. Thus, water and water services must be removed from the General Agreement on Trade and Services and the agenda of the World Trade Organisation.
4. We also consider that food and water insecurity is intrinsically linked to the current unfair global trade system, embodied in the WTO rules.
5. Access to information, as a prerequisite for participation in decision-making processes, is a fundamental right. Legal and institutional mechanisms must be put in place for the empowerment of communities to participate at all levels. Access to justice must be guaranteed.
6. The key to the sustainable provision of water for life is the maintenance and protection of the ecological integrity of all ecosystems. We call for the adoption and implementation of a restoration agenda for the rehabilitation of degraded ecosystems.
7. We urge a substantial increase in the levels of spending for clean water and sanitation for poor people and communities.
8. Debt cancellation is essential for water security in poor countries.
9. We strongly demand that water and sanitation services are under the control of the local communities and that the benefits stay within the communities. We also demand that the management of these services be participatory and transparent. We reject privatisation, other than in accordance with these principles.
10. The degree to which the gender perspective is mainstreamed must be the determining indicator of the success or failure of all future policies and actions.
11. We want to move forward. We are committed to transparent participatory processes and to work with all stakeholders, to develop pro-poor national strategies and standards for water resources management and services.

Presentación a la Conferencia Ministerial del Grupo de Organizaciones No-Gubernamentales - Marzo 21 del 2000 Segundo Foro Mundial del Agua

1. El Grupo de Organizaciones No-Gubernamentales y Sindicatos de Trabajadores, que han firmado aquí, no aceptan
 - El informe de la Comisión Mundial del Agua.
 - El documento Visión producido por el Consejo Mundial del Agua.

Expresamos serias preocupaciones sobre el proceso y contenido hasta la fecha del marco de acción. Aunque hay algunos puntos de acción y recomendaciones positivos, tales como los derechos de las comunidades, los mecanismos para integrarlos al proceso en su totalidad han sido defectuosos. El proceso está dominado por pensamiento tecnocrático y de “arriba - abajo”, resultando en documentos que enfatizan una visión corporativa de la privatización, inversiones a gran escala y biotecnología como las respuestas claves. El proceso da insuficiente énfasis y reconocimiento a los derechos, conocimiento y experiencia de las poblaciones locales y de las comunidades, y a la necesidad de administrar el agua en formas que protejan a los ecosistemas naturales, la fuente de toda el agua.

Sin embargo, apoyamos el proceso de participación basada en la comunidad de la Visión 21 (Visión del Agua para la Gente).

2. Si el Global Water Partnership y el Consejo Mundial del Agua continúan, su trabajo debe ser transformado a una configuración responsable y transparente. Su gobernabilidad debe ser reconstituida en una forma más transparente y legítima. Su trabajo debe ser regularmente revisado a través de las Naciones Unidas, por la Comisión de Desarrollo Sustentable, y a través de los grupos interesados mismos.
3. Insistimos vigorosamente que un ambiente limpio y sano y el acceso a servicios de saneamiento y agua son derechos universales, y no pueden por lo tanto ser negociados como mercancías. Por lo tanto, el agua y los servicios asociados al agua deben ser quitados de la esfera del Acuerdo General de Comercio y Servicios (GATS) y de la agenda de la Organización Mundial del Comercio.
4. También consideramos que la inseguridad alimenticia y del agua están intrínsecamente conectadas con el actual e injusto sistema de comercio global, incorporado a las reglas de la OMC.
5. El acceso a la información, como pre-requisito de la participación en los procesos de toma de decisión, es un derecho fundamental. Mecanismos legales e institucionales deben ser implementados para el empoderamiento de las comunidades a fin de que participen a todos los niveles. El acceso a la justicia debe ser garantizado.
6. La clave para la provisión sustentable del agua para la vida es el mantenimiento y protección de la integridad ecológica de todos los ecosistemas. Exhortamos la adopción e implementaron de programas de restauración para la rehabilitación de ecosistemas degradados.
7. Instamos a un incremento sustancial en todos los niveles de gasto para la provisión de agua limpia y de saneamiento para las comunidades pobres y personas sin recursos.
8. La cancelación de la deuda es esencial para la seguridad del agua en los países pobres.
9. Demandamos con firmeza que el agua y los servicios de saneamiento estén bajo el control de la comunidad y que los beneficios permanezcan dentro de las comunidades. También demandamos que el manejo de estos servicios sea participativo y transparente. Rechazamos las privatizaciones que no estén de acuerdo con estos principios.
10. El grado por el cual la perspectiva de género es incorporada debe ser el indicador determinante del éxito o fracaso de todas las acciones y políticas futuras.
11. Queremos avanzar. Estamos comprometidas/os a procesos participativos transparente y a trabajar con todos los grupos interesados, así como a desarrollar estrategias y estándares nacionales en el manejo de recursos de agua y servicios que beneficien a los pobres.

Signatories

Network of Women Water Professionals in Sri Lanka - Sri Lanka. Water, Research and Training Centre for a New Burma - The Netherlands. Greens Movement of Georgia. Friends of the Earth - Georgia. The Barefoot College - India. Global Water Contract, Quebec Section - Canada. Institute for Popular Democracy - Philippines. Unhyam Shahjojogy Team - Bangladesh. Arab Network for Environment and Development - Egypt. Arab Office for Youth and Environment - Egypt. Mediterranean Information Office for Environment Culture and Sustainable Development. Centre for Sustainable Development - Iran. Biotica Ecological Society - Republic of Moldova. National Association of Professional Environmentalists - Uganda. Earthforever Foundation - Bulgaria. Econet - India. Leisa Network - India. Neosynthesis Research Centre - Sri Lanka. Rainforest Rescue - Ecuador. Klub Gaja - Poland. Centre of Rural Studies and Development - India. Nepal Water for Health - Nepal. Accion Fraternal Ananta Pur - India. Independent (Jyoti Krishnan) - India. Inhured International - India. African Network for Environmental and Economic Justice - Nigeria. Green Cross Burkina Faso - Burkina Faso. Lets Help the River - Russia. Mountain Resource Management Group - Nepal. Nature Trust - Malta. National Institute of Science, Technology and Development Studies - India. Palestinian Agricultural Relief Committee - Palestine. Palestinian Hydrology Group - Palestine. Centro des Estudios Ambientares - Argentina. Propublic - Nepal. Management and Organisational Development for Empowerment. Agua del Pueblo - Guatemala. Friends of Nomads - Kenya. Yemen Water Protection Society - Yemen. Solidarity Water Europe. BothENDS - The Netherlands. United Nations Environment and Development Committee - UK. United Nations Association - UK. Indian Network for Participatory Irrigation Management - India. Hind Swaraj Trust - India. Coalicion Rios Vivos - Brazil. Taller Ecologica - Argentina. PSII Unison - UK. PSII/South African Municipal Workers Union South Africa. PSII/Courage - Philippines. PSII/FNCUT - Brazil. PSII/CUPE - Canada. Council of Canadians - Canada. Mama86 - Ukraine. Instituto Ipanema - Brazil. NGO Forum for Drinking Water Supply and Sanitation - Bangladesh.

The Second World Water Forum: A New Way Forward?

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Introduction

“The impending water crisis will hit internationally, developing countries and developed countries alike” UNGASS 1998

The reality of a global water crisis is undeniable. Although water misuse, overuse, scarcity or excess are extremely divergent and cannot be dealt with uniformly, our fundamental dependence on water for basic human survival and to support environmental systems is common to all.

Table 1. Estimated level of global population impacted by the water crisis

Year	Total global population effected by crisis (range in Billions)	Range of population effected by crisis (%)
1995	1.9 - 2.1	34 - 37 %
2025	2.7 - 3.3	33 - 40%

(adapted from WBGU, 1999)

The First World Water Forum, held in Marrakech in 1997, aimed to identify more localised, integrated and informed approaches for water management, and institutional mechanisms. The Forum initiated the World Water Vision (WWV) process coordinated by World Water Council, which was later incorporated under the umbrella of the World Commission on Water. The Global Water Partnership (GWP) was later formed as a parallel organisation to develop a Framework For Action (FFA) outlining how the Vision could be achieved. Following two years of international, regional and some local consultations, the FFA and WWV were presented at the Second World Water Forum (SWWF). The aim of the two processes is to outline water strategies and recommend ways to move from “vision to action” with the broad goals of mobilising governments and generating “water wisdom”.

The documents outline cross-sectoral goals, targets and new strategies for sustainable water management. The idea was to provoke an international response and assist the process by which governments and civil society can take collective responsibility for water management into the twenty first century.

This paper seeks to consider whether and to what degree these processes and the discussions during the Second World Water Forum will make an impact to water management and policy, in the context of previous meetings and existing institutional structures.

Recycling Old Issues?

The Second World Water Forum is the most recent international meeting on freshwater.

Table 2. Key International Water Meetings and Organisations

Year	Event/organisation	Details
1960	UN Coordination and Advisory Council.	Inter-agency sub-committee set up for freshwater resources.
1977	Mar de Plata water conference, Argentina.	International Water Resource Board established (WRB).
1980	International drinking water and sanitation decade.	
1992	International Water Conference, Dublin: UNCED Earth Summit, Rio. UN ECE, Helsinki convention.	Sets out principles on sustainable water management. Supports “Dublin Principles” in Chapter 18 of Agenda 21. Set restrictions on contamination of transboundary water courses.
1994	Ministerial Conference on Drinking Water and Environmental Sanitation, Noordwijk.	
1994/95	Global Water Partnership and World Water Council initiated:	linked to WB, UNEP, UNED, UNESCO, amongst other agencies.
1997	UN General Assembly Special Assembly: First World Water Forum, Marrakech.	Drinking water, sanitation and freshwater management identified as critical issues. Start of World Water Vision and Framework For Action Process.
1998	United Nations Department of Economic and Social Affairs (DESA) Expert Group. International Conference on Water and Sustainable Development, Paris. Sixth UN Commission on Sustainable Development: EU forum, Strasbourg. World Commission on Water: 8th Stockholm Water Symposium.	Meeting on strategic approaches to freshwater management Harare, Zimbabwe. Assessed strategic approaches to freshwater management, and raised the need for greater international coordination through the ACC sub-committee for water resources. Looked at water as a source of citizenship, peace and regional development. Umbrella organisation for WWC and GWP. Urban stability through Integrated Water Resource Management.

(adapted from Bjorklund 1999, FAU, 1999 b)

The Ministerial Conference held during the Forum agreed to a text for the Ministerial Declaration of the Hague on Water Security in the 21st Century. This outlines government commitment on seven urgent challenges for achieving global water security, within the overarching idea of Integrated Water Resource and Ecosystem Management (IWRM). IWRM has been advocated in other international fora, but has been variously interpreted. The UN CSD states that effective IWRM requires action at all levels and recognition of the cross-over between different ecosystems (coastal, forest, wetland, arable) and uses (agricultural, industrial, domestic), including transboundary issues. Paradoxically, the underlying political, cultural, socio-economic and environmental factors are also part of the reasons why it is such a difficult process to define and implement.

The FFA document sets a target for 75% countries to have comprehensive IWRM policies and strategies by 2005 and all countries by 2015. This will require considerable work to collect and develop IWRM tools and identify the barriers to integration.

As stated in the WWV - the biggest challenge facing water resource management is institutional. The need for participatory processes has been reiterated at many international fora. The Strasbourg Declaration (1998) talks of the critical need to make better links between administrative and management processes, as well as legislative and economic mechanisms. At UNGASS (1998) the importance of local input was recognized. However this requires additional financial support and political action, both of which are still lacking. In Dublin, gender equality in water management was embodied, water democracy was seen as a “common heritage” at Strasbourg and at UNGASS women and indigenous communities were identified as critical groups for safeguarding and monitoring water.

The principle of subsidiarity, where public water supply, irrigation and water resource management occurs at the lowest appropriate level was approved at UN CSD6. Devolved responsibility is also promoted in the FFA/WWV, linked to mechanisms that support stakeholder empowerment through gender and capacity building, access to information, transparency, training and technology transfer. Many countries have already begun to do work in this area and the enthusiasm for participatory watershed management widespread (Rhoades 1998).

Participation in itself does not guarantee an integrated approach and mechanisms by which decisions and management can be made more inclusive are still poorly defined. For instance, the consultation process for the WWV and FFA has been criticised by some as being fragmentary and the Forum itself only recognised four major groups - youth, gender, NGO and industry - with only a late and partial inclusion of trade unions, local authorities, and other specific groups e.g. indigenous communities. Without better definition of participatory processes and their goals, there is a risk of either missing critical groups or conversely for decisions to get lost in a “noise of opinion” (Rhoades, 1999).

Key issues

- Lack of access to information and transparency of international and national water policy at local level.
- Participative planning.
- Assessment of the mechanisms for participation, particularly regarding conflict resolution (WBGU, 1999).

Watershed boundaries may not reflect political and social constructs, nearly two thirds of the world’s major catchments are shared by several states, over 300 rivers cross national boundaries and 40% of the world population live alongside river basins (UNEP, 1999). The WWV calls for greater international cooperation as key to transboundary issues and for countries to support each other in

adopting new integrative approaches for management. The Dublin principles denote the river basin as the unit of water management and call for reconciliation and harmonization between different riparian states to manage these areas via joint action plans and information exchange. UNGASS highlighted the need for cooperative management and legal frameworks for conflict resolution, as international and regional agreements provide a framework for clearer dispute mechanisms and more accountable transboundary practices. The UN Convention on the Law of the Non-Navigational users of International Watercourses sets minimum standards for state cooperation at regional level. There are also regional examples of bilateral and multilateral cooperation e.g. the Indus Convention between India and Pakistan, and the Economic Commission for Europe's Helsinki Convention.

Key Issues

- International variation: countries are subject to extremely variable qualitative and quantitative conditions making it difficult to reach a global consensus on principles for shared waters.
- Rural-urban migratory flows and large scale water projects can intensify local water needs, conflicts and place a greater burden on the environment

Water as a basic need

FFA target: halving of the numbers who lack access to hygienic sanitation facilities and to adequate quantities of affordable and safe water by 2015.

At Dublin the need to accelerate the provision of food, water and sanitation for the “unserved millions still lacking basic service” was agreed. This emphasizes the point that priority should be given to those in poverty and women. The FFA reiterates this link by stating “water security is a vital component of poverty elimination and a world wide water security target should be adopted to support the now internationally accepted OECD target of reducing absolute poverty by half by the year 2015”. CSD6 agreed that IWRM must “recognise the needs of all stakeholders, especially vulnerable groups and people living in poverty” and called for water related economic instruments to take into account these vulnerable groups. It also called for mobilisation of and estimated that over \$50 billion per year would be required from 1990 and 2000 to meet global drinking water needs. Also, distributional aspects were raised, in terms of better international allocation of water to safeguard public health.

In Agenda 21 rights of access to water, participative and legislative rights are vital to improving livelihoods for the poor. The Guidelines for Water and Sanitation of the UN ACC Task Force on Basic Social Services states that ‘At the highest political level, there needs to be a recognition that water and sanitation are basic needs and rights’. UNGASS also referred to the importance of greater resource access for vulnerable stakeholders, including women, children, indigenous and other marginalised communities, by promoting processes which are more inclusive. A shocking example of the past failure to incorporate the rights of the poorest has been the displacement of more than ten million people with the construction of 604 major dams in over 93 countries (Bruscasco-Mackenzie, 2000) with untold effects on people's access to water and general welfare.

Key Issue

- Exclusion of poor and indigenous in planning, policy and development programme leading to displacement of communities and further marginalisation.

Ecosystem Protection and Maintenance

FFA target: Establish national standards and programmes in all countries to ensure and improve the health of freshwater ecosystems by 2015

Our reliance on natural systems for the provision of drinking water and sanitation is clear, yet human activities have resulted in water courses that are over-extracted or overloaded with sediment or toxic substances. Agenda 21 refers to the importance of maintaining water quality and ecosystems, and the preservation of hydrological, biological and chemical functions of ecosystems through working within natural assimilative capacity of the hydrological system. Dublin had previously recommended recycling, efficient technologies, the polluter pays principle and discharge compliance. UNGASS set biodiversity and ecosystem protection and enhancement as the key aims, and recommended that international conventions and programmes be brought together. Stockholm also highlighted that pollution avoidance is often less costly than remediation. Many of these agreements support the internalisation of ecological costs where highly consumptive uses and contamination of aquifers and surface waters have a direct and indirect cost.

Key Issues

- Developing countries still lack adequate resources to effectively adopt and maintain clean or efficient operations and regulate mis-use.
- Water and land use have reciprocal effects so should not be treated separately.
- More information is needed on the status of ground and surface waters, fossil aquifer reserves, rate of renewal, classification of ecosystems and critical stressed areas.

Water and food

FFA target: increase water productivity for food production from rain fed and irrigated farming by 30% by 2015

The pressure on water resources from agricultural practices has reached full capacity in many regions and irrigation alone is no longer an answer (Barghouti, 1999). Agenda 21 initiated a “water for sustainable food production and rural development programme” which advocated food production within natural capacities, ensuring ecosystem preservation and maintenance of water resource quality. UNGASS recognised agriculture as the single greatest human use of water and that demand was likely to grow. The Stockholm declaration highlighted the high proportion of agriculture that takes place in unsuitable/hazardous areas. This places considerable stress on natural systems which are already vulnerable and will require greater risk avoidance and mitigation mechanisms in the future.

The most pressing global concern is the impact of population growth on water demand for food. Indeed, in Europe and USA, industrial water use is greater than agriculture and the issues of ground and surface water contamination and overuse are still relevant. To improve efficient agricultural practice. UNGASS called for international agricultural research centres and the UN CSD has advocated technology transfer for agricultural purposes. The FFA calls for new mechanisms for increasing water productivity or “more crop per drop”, however this should not necessarily imply a high tech approach but adoption of most appropriate technology, driven by local community and environmental needs. For example, if 5-10% of India’s land area was set aside for rainwater collection, most of India’s irrigation and household water needs could be met (Argwal and Narain, 1999).

The Dublin principle refers to water as an economic, social and environmental good. Other international meetings have advocated water utility privatisation, water pricing mechanisms and other demand measures to improve user efficiency and generate revenue, particularly for urban

areas. With regard to the issue of allocation, UNESCO outlined the need for equalization of income disparities via subsidies, price transparency, and the use of price bracketing.

Greater investment is a particular priority for developing countries, international aid has fallen in the last ten years to around \$70 Billion per year (Serageldin, 2000). The World Bank estimates that \$600 Billion is needed for investment in water infrastructure, but available funds are less than half this level (UNESCO, 1998). UNGASS and CSD agreements refer to the need to create an enabling environment to stimulate investment from the private sector via public-private partnerships and through increased economic stability through legislation of transboundary systems. It is vital that the wider socio-economic implications of this approach are openly discussed and assessed.

Key Issues

- Full cost pricing of water may not take into account broader ecosystem, social and cultural values (UNESCO, 1998). Economic capital might not always be sufficient to substitute for natural capital lost through water use/misuse.
- Global decline in investment and aid supporting in basic infrastructure provision
- To assess the locally experienced impact of different demand management tools.

Managing Risks

FFA Target: reduce risk of floods for 50% of people living in flood plains by 2015

At Dublin the need for greater investment in disaster preparedness and further research for better understanding of risks. It was agreed at Stockholm that flood management should be linked to urban-rural development programmes, and to adopt a more proactive approach to forecasting risks and mitigation. The CSD also highlighted the need for early warning systems, consultative processes, rapid intervention systems, and support for strategies to combat desertification, biodiversity loss and the impact of climate change. The FFA calls for mapping of critical areas and awareness raising campaigns.

Key Issue

- Poor understanding or assessment of underlying causal factors behind risks. For example the links between climate change, intensive agriculture or deforestation and the occurrence of floods, salinisation, pollution or drought.

Beyond the Forum

Many of the targets agreed to at the Rio Earth Summit have not been met. Also many countries still lack the resources to do so (Rast, 1999). The FFA targets to be clearly defined and transparently assessed so that governments and civil society can monitor their progress. There must be increased international assistance to countries in the South. One of the reasons for not reaching these targets is a failure to effectively incorporate the principles of subsidiarity and participation.

Governments have a key responsibility to identify gaps in knowledge, review current status of resources, predict future areas of conflict, scarcity, mis-use.

If civil society is to take greater responsibility for individual use and management of water, it requires support to ensure that people have sufficient capability and access to decision making.

Non-governmental organisations working at community level can play a valuable role in local capacity building, to develop and document innovative systems and encourage community ownership of water resources and the wider application of successful community projects. Also they can be effective agents for voicing local concerns in policy making procedures.

Local Authorities are pivotal in regulating local practice and for encouraging neighbourhood involvement in water-related planning. Industry has an increasingly important role in the provision of water and sanitation services, technical/productive efficiency and enhancement of local communities via employment, income generation projects and developing partnerships with public and NGOs.

International networks of technical and information resource centres are increasing. These type of initiatives are important if they are accessible and would benefit from assessment of their overall benefit.

Along with the IWRM toolbox, the FFA talks “Regional technical advisory committees” to develop regional IWRM plans. These should seek to maximise the cost efficiency and sustainability of action plans by assessing the social and environmental costs of alternative tools and sources of investment.

The CSD6, it was agreed that the UN Secretary General will produce a report on the progress of drinking and sanitation provision during the 1990's, but collaborative monitoring programmes need to be developed in other sectors e.g. agricultural and industrial uses and for the assessment of institutional reform. The UN task master for water resources, the ACC inter- agency subcommittee for Water Resources, has been discussing possibility of producing a Biennial World Water Report. Such a report should seek to gather together global data in order to monitor global progress.

Previous international meetings outline many of the recommendations that are contained in the WWV and FFA documents. The issues are bound up with matters of money and management and politics, and ultimately, solutions to the looming crisis in freshwater are only to be found in the collective political will (Marq de Villers, 1999).

Selected Background Papers

These papers were commissioned as background material for the NGO Major Group workshops at the 2nd World Water Forum. The full complement of papers are available on the CSD NGO Freshwater Caucus website: <http://www.earthsummit2002.org/freshwater> or <http://www.uned-uk.org/freshwater>

Towards People Oriented River Basin Management: An NGO Vision

Prepared by BothENDS, The Netherlands.

Serious degradation of river ecosystems undermines rural livelihoods and can spell disaster for urban households. The World Water Council, the World Commission on Water and the Global Water Partnership have respectively created a World Water Vision and Framework for Action, that could guide water policies for decades to come. NGOs working on river and water issues and with communities affected by large scale river development schemes have serious concerns about the process, the products and the priorities of these documents, and have therefore come up with an alternative Vision. This NGO Vision builds on consultations with NGOs, scientists and local peoples' organisations both in the North and the South.

People who have sufficient access to natural resources to meet their basic needs generally do not consider themselves poor, thus the NGO Vision is based on the premise that access to and control over natural resources is essential for livelihood security. Currently, large groups of people, such as the landless, marginal farmers, urban poor and indigenous people, suffer disproportionately from the large scale distortion and degradation of river basins. Decision makers are urged to give absolute priority to maintaining sustainable livelihoods and the preservation of the integrity of all water related ecosystems.

The NGO Vision calls for the equitable incorporation of gender considerations in all aspects of water management. Due to different gender roles, women and men are affected differently by the same policies. Irrespective of their social status, women tend to be excluded from decision making in water management, thereby denying their role as major water users and managers. The need to address women's involvement in water management needs to be explicitly addressed, recognising that their social and economic activities are of a significantly different character than those of men.

The NGO Vision questions three predominant assumptions and shortcomings which greatly determine river basin management. Essentially these are:

- “The sole reliance on economic growth as the way to development”. This economic model of development considers natural resources, such as river ecosystems, as mere commodities. It denies the fact that a significant proportion of the rural population in developing and transitional countries, especially women, are not able to satisfy their basic needs through the market place. In reality, for many people access to natural resources is more important for livelihood security than access to monetary resources and usually this means a direct dependence on common property resources within the river basin. Market based approaches for natural resource management - such as the principle of full cost recovery to regulate water supply and demand - are only one aspect of the human-ecological relationship. These approaches can not be relied upon as the solution.
- “The principle of eminent domain”, by which the state has a legitimate right to override local objections and expropriate private or communal property in the name of ‘national interest’. In daily practice, when exercising this right, there is a strong bias towards centralised and capital intensive structures which transfers water to urban and export- oriented industries. Local decisions are frequently overruled to satisfy the demands of an extremely small political and economic elite and frequently this has led to extreme natural resource damage, with a disproportionate affect on rural and urban marginalised groups.

- Opportunities for effective participation by local stakeholders, and by women and other disadvantaged groups in particular, is severely lacking. Although the need for participation is recognised by the authors of the World Water Vision and Framework for Action, there is still a huge void of political commitment to give all stakeholders an equal chance to participate in planning, implementation, monitoring and evaluation. Far too often, planners and decision makers abuse the term ‘participation’ to legitimise blueprint arrangement and infrastructure developments.

To help counter these trends the NGO Vision presents a range of actions which would counteract the negative impacts of today’s water management and create the basis for water management that supports livelihoods. These actions provide an answer to a key questions:

“How can we enable people to obtain adequate and equitable supplies of water and energy far into the future, reduce the destructiveness of floods (and droughts), and protect the watersheds from degradation?”

1. A new goal for river basin management

The primary goal of river basin management should be to enable rivers and watersheds to perform their many vital ecological functions and to benefit those who depend on them for their livelihoods. This calls for governments, donors and multilateral organisations to seriously analyse the social and environmental impacts of unchecked, politically motivated, large scale economic activities on river basins.

2. Full participation in decision making

Participation can no longer be limited to the current shallow levels, which neglect the effective participation of women and other marginalised groups in society. For genuine stakeholder participation, governments, donors and multilateral organisations should be prepared to even out the balance of power, dis-empowering dominant groups and bringing the marginalised fully into the process.

The existing knowledge of local and indigenous people and women should be considered at the outset of the decision making process. Small scale management approaches - often based on locally developed technologies - should be seriously considered as viable alternatives for large scale infrastructure projects and technology driven management approaches.

To guide the decision making process, a set of alternative indicators of ‘development’ should be developed and implemented in collaboration with all stakeholders.

3. Land and water rights

Security of local land and water rights, or user rights of local communities, women, indigenous and landless peoples, is a precondition of genuine participatory decision making processes and should be a pre-requisite of any intervention in river basin management. To this end the political recognition and security of customary land and water titles is a precondition. However, as these are often gender biased, the empowerment of women and promotion of gender equality requires progressive legal reforms.

4. Institutions and capacity building

Efforts to promote the interests of local people require long term commitment to foster unity and a common direction within the community and to secure legal standing and political support towards their recognition. Institutions must pay greater attention to degree of gender-sensitivity in their constitution and working practices. This should be supported by governments, donor agencies and NGOs in order to create open, accountable and representative institutions

5. Ecosystem approach

An appropriate framework for integrated ecosystem management is urgently needed. This framework should be based on a river basin approach which integrates land and water management and respects the multiple ecosystem functions that take place within the watershed as a whole.

6. Technology and planning

In order to support the recognition of local and indigenous knowledge, there should be a systematic inventory and analysis of existing water management practices to gain insight into the wealth of traditional and innovative land and water resources management approaches. In order to avoid starting new medium or large scale water infrastructure projects, priority should be given to micro water impounding structures, conservation and use of soil qualities in the upper catchments.

7. Rehabilitation/Restoration

The restoration of degraded watersheds and the implementation of strict controls on destructive actions - logging, industrial pollution, canalisation, etc. - and a halt to government and multilateral support for these activities, should become a major element of future management plans and policies. Mechanisms of flexible funding, research and other forms of encouragement need to be directed at traditional and modern agricultural and land restoration techniques, giving first priority to strengthening of the position of marginalised groups.

8. Gender as a means and an end

An equitable planning process and management system needs a clear understanding of women's roles at the household, village, watershed and river basin level. The degree to which the well-being and socio-economic position of women is affected should become key indicators to judge the quality of water management.

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Private Sector participation in the Water Sector

Prepared by Libby Wood, Environmental Economics Programme, International Institute for Environment and Development, United Kingdom.

1. Increasing Private Sector participation

Traditionally, the provision of water supply and sanitation (WSS) services in developing countries has been the responsibility of governments. Substantial private sector involvement was considered inappropriate given the public good and basic need characteristics of water and sanitation, and the monopolistic tendencies of the sector.

In recent years there has been a large increase in private sector participation (PSP) in the provision of WSS, largely driven by a desperate need for increased capital investment. In the majority of developing countries, rapidly growing populations, a reduction in assistance for WSS from international development agencies and severely constrained public sources of finance have all contributed to making it increasingly difficult for governments to bear the costs of system rehabilitation and expansion. In addition to the need for capital, the motivation for PSP has been driven by a belief that private sector providers may be more efficient, reducing costs and increasing service quality and coverage.

Social concerns

Concerns have been raised about the ability of the private sector to address the WSS needs of poorer households. At a regional level, there are concerns that PSP will not benefit the poorest of developing countries which are less attractive to foreign investors. Indeed, investment so far has been concentrated in Latin America and East Asia with Sub-Saharan Africa accounting for less than one per cent of total investment.

Within countries, PSP in WSS tends to be concentrated in urban areas where economies of scale can be realised and potential returns are likely to be higher. Even within urban areas, there are concerns that poorer households may not benefit, either because they live in areas where costs of provision are relatively higher or because their demand is relatively lower.

When households do not have access to formal systems of WSS, they adopt a variety of alternative strategies. For water supply, these range from reliance on surface waters, vendors and wells. For sanitation, households without formal access use pit latrines, septic tanks and simplified sewerage. Some of these strategies (e.g. water vendors and septic tanks) are expensive relative to formal provision not only in financial terms but also in terms of household health. Indeed, inadequate water and sanitation facilities can have detrimental health and environmental effects not only for the users themselves, but also for the wider community.

Why should the private sector be interested in serving the poor?

For a number of reasons, it may actually be in the interest of the private sector to provide WSS for the poor:

- Firstly, the high expenditures incurred by lower-income households are not only a reflection of social deprivation, but also of commercial opportunity.
- Secondly, since environmental and health externalities are endemic in the sector, the continued existence of a large number of “unserved” households in the city will have adverse effects on the service provider’s capacity to meet its contractual obligations and the needs of its customers.

- Thirdly, in the longer run, if it is to be given more opportunities to provide WSS in developing countries, the private sector will clearly have to prove itself not only in commercial, but also in social and environmental terms.

Obstacles and solutions to private sector provision in poorer neighbourhoods

However, there is a multitude of related problems which the private sector provider needs to overcome to provide services to poorer areas. For example, households in expansion areas may be unwilling to pay for expansion costs through their connection fees when existing (usually richer) users did not do so when they were first connected to the network. Where they are willing, many households may not be able to finance initial connection costs. From the provider's perspective, the costs of providing a standardised service to some areas, particularly in irregular settlements may be prohibitive.

Overcoming such obstacles requires innovative solutions, some of which have already been adopted by the more far-sighted firms. Issues such as tariff structure, differentiation of services, and local community involvement have to be approached in a new way if the needs of the poor are to be addressed. In particular, increased community participation in deciding on appropriate forms of provision and in the management and operation of provision, including where appropriate, the employment generated by informal provision (e.g. water vendors and neighbourhood resale) is required. Furthermore, attention must be paid to the viability and desirability of differentiated forms of service provision (within and between network areas) and alternative systems of management, more closely reflecting the preferences and ability to pay of users.

There is little question that inappropriate forms of private sector involvement which are inadequately regulated are unlikely to be of much value to poorer households or any other users. However, many publicly managed and operated systems have not themselves been serving poorer households particularly well. As such PSP, is perhaps best seen as an opportunity to right the balance, rather than as a threat to any existing benefits presently enjoyed by poorer households.

It would seem that experience thus far has been mixed. In many cases, there have been clear and important benefits, with positive social consequences: service networks have expanded into poorer neighbourhoods and in some cases, measures are being adopted to make services more affordable. However, there is still a great deal to be done.

2. What Role should the NGO Sector Play?

The changing relationship between the state, the private sector and civil society is brought clearly into focus with PSP in WSS. Indeed, in some senses PSP in the sector has become the vehicle through which the relationship between the urban poor and the wider urban community has also been brought clearly into focus. In this context, there are a number of important contributions that the NGO sector can take to ensuring that PSP benefits poorer neighbourhoods.

Pre-PSP institutional support

Internal and external pressures to introduce the private sector in WSS provision are considerable. In the face of this, it is important that governments be able to evaluate the relative merits of PSP with some degree of objectivity. In some cases (particularly low-income countries), reform of public provision may be a more appropriate option in the first instance. In the event that it is decided that PSP is a sensible option, governments will need support in evaluating which form of PSP is most appropriate. In some areas, the appropriate form of PSP (given market, information, regulatory and other constraints) may be limited to the legalisation of informal providers, e.g. door-to-door vendors and neighbourhood resale, through licensing or service contracts. In other areas, large-scale concessions may be preferable. NGOs and donor organisations have a role to play in ensuring that

governments are not forced into pursuing strategies which are not in their long-run interest.

Institutional support for regulatory authorities

Due to the very “public” nature of the sector, public authorities continue to have an important role to play. Rather than being a manager and provider of services, the government must serve as a regulator and a guarantor of a certain level and quality of provision. The objectives may remain the same, but the instruments have changed. In this respect, PSP may actually place more rather than less demand on effective and capable public authorities. Intervention through incentives requires more skill than intervention through investment. New regulatory capacity is required to deal with these new roles.

In most developing countries in which PSP is being introduced, conditions for the development of the new regulatory capacity required are far from ideal. Rent-seeking, regulatory capture and technical constraints all pose problems. Donor agencies and NGOs have an important role to play in ensuring that such capacity is adequate to the task of protecting the needs of poorer households and neighbourhoods - e.g. meeting expansion targets in poorer neighbourhoods, ensuring that water quality standards are met, introducing adequate interim measures, etc.

Ensure that the needs of the poor are reflected

In order to be effective, users or their representatives should be consulted when designing the specifications of the PSP contract. This will ensure that the services provided reflect household needs and that the households are willing and able to pay for the services provided. For instance, users can be provided with a set of service options (including cost and other implications). Few examples of PSP have allowed for such efforts since it is perceived to be quite time-consuming and costly. NGOs, CBOs and development agencies, familiar with working in poorer neighbourhoods and with relevant experience, are well placed to assist with these assessments.

Assisting in effective operation of differentiated services

The ultimate objective in most contracts remains universal coverage of a standardised type of service provision. In some areas this may be appropriate. However, in many it may well not be. By “vertically unbundling” the sector, it may be possible to provide different types and levels of services in different areas. For example, in poorer neighbourhoods, households may have preferences for efficient, but inexpensive, collective forms of provision. In many cases such services will require delegated management responsibilities. It is only by working closely with the users themselves that the demand for, and the cost implications of, differentiated services can be known with any degree of certainty. NGOs and donor agencies may have a role to play in terms of capacity building for user associations, community-based organisations, etc.

Attention on poorer countries, small to medium sized towns and rural areas

Attention thus far has largely concentrated on large cities within middle-income developing countries. Innovative solutions need to be found for poorer countries, small-medium sized towns and rural areas if they are to benefit from private sector investment.

Fresh (water) Ideas For Old Water Problems. Operationalising an Environmental Water and Health Disaster

Prepared by Ian Small, Head of Mission, Medics Sans Frontiers, Aral Sea Area.

Introduction

This paper aims to go beyond what is known about the Aral Sea Area Disaster and to put forward ideas on “operationalising an environmental water and health crisis”. Countless scientific expeditions and assessments have been conducted in the area and there is a common saying in the region: “If every specialist brought with them a bucket of water, the Sea would be filled again”. There is a wealth of information on the causal nature of the disaster but despairingly little on the effects on human health. The commonly used catch phrase is the death of the Aral Sea, not that 5 million people are living within a degraded environment and unable to cope. This paper explores the health situation on the ground and brings forth some ideas that have been developed in the region that could potentially be applicable to many other places in the world that are caught up in an environmental water and human health disaster.

Defining Health

Our definitions of ‘health’ are now so inclusive that any attempt to define an actual intervention into health is clouded by a host of independent variables preventing the study of a given field with any degree of specificity. As research becomes increasingly mired in a plethora of confounding variables, progressive solutions and interventions into health issues for positive public outcomes becomes difficult to obtain. Such an approach in the Aral Sea Area would be self-satisfied in its sophistication, but the supposed beneficiaries would be left with more theories and reports, rather than an empowering progression that leads to tangible results

In the Aral Sea area, a critical approach that considers the etiology of disease, and that aims to address the host of assumptions about the water quality and health in the region is required. Given the specificity and magnitude of the Aral Sea Area disaster, there are several potential links between the environmental disaster and various pathologies, virtually unknown in other regions of the world. However, at the same time, given the interplay between environmental destruction, the breakup of the Soviet Union and its ensuing economic and social effects, there is certainly room and necessity for a holistic problem solving approach that can translate research findings into health centred policy and appropriate action that would actually improve the health and quality of life of the population living in the region.

Development Versus Humanitarian and Immediate Needs

The countless slew of assessments in the region have concentrated primarily on large scale and long term industrial projects, such as the now hopefully permanently archived scheme of bleeding the rivers of Siberia to feed the Aral Sea, or large scale infrastructure programs designed to bring piped water to the communities. Although sustainability should be the long term objective in the region, it will take years to even begin to take hold let alone bear fruit. To bridge this gap, humanitarian and immediate basic human needs must be addressed. In the Aral Sea area, the level of health and the quality of life is profoundly poor, and deteriorating. It is a tragic humanitarian disaster. Although it has occurred within the last generation, in geological time the devastation of the environment and the depletion of vital water resources is nothing short of sententious. In addition, there is a tendency in informal parlance to describe the disaster in past tense terms, yet the same process that has desiccated the Sea

continues taking its toll on the health of the region today. While many places in the world have shown a positive increase in the quality of life, in the Aral Sea Area the trend continues to fall. In just one generation the great rivers of Central Asia no longer reach the Aral Sea. How many years until the river does not even reach and supply water to the population and how many years will the region be able to sustain human life? Without humanitarian assistance today, ideas of sustainable development will not see tomorrow.

A Situation of Environmental Scarcity

The term “environmental scarcity”, is the convergence of three important indices of the human condition. It combines elements of supply, demand and equity. On the supply side, environmental scarcity is a situation where natural resources have encountered extreme environmental degradation to such a degree as to threaten the quality, quantity and sustainability of natural resources. Demand is seen primarily from population growth and the subsequent increased reliance and consumption of resources following the increased requirements of the population, while equity deals with access to and the distribution of the available resources.

Due to the development of a situation of environmental scarcity, several negative social effects ensue. In this case - migration, economic decline and health effects. The migration and economic decline further contribute to the spiraling downwards of environmental scarcity as the population is no longer able to adapt and cope on its own. In addition and to a degree as a result, the health effects continue to deteriorate further.

The Health Effects

Given the salinisation of the land, contamination of the water supplies by salt and agricultural chemicals, economic decline and unemployment, desiccation of the sea, alteration of the climatic conditions, the death of the fish stocks and the breakdown of public health systems, towns which were previously on the shores of the Sea and are now more than 100 kilometers away from the shore, are some of the most chronically sick places on earth.

The most serious concern is the extremely high incidence of infectious diseases such as tuberculosis, hepatitis, respiratory and diarrheal diseases. Such diseases are the leading causes of morbidity and mortality in the region and are symptomatic of a population suffering from upheaval.

There are also more complex chronic health problems. The direct cause of which are unknown, but may be affected by environmental conditions such as the extreme salinity of the ground water table, pesticides, dust storms and air quality on human health. It is probable that the environmental conditions have contributed to the alarming rates of hypertension and heart disease, kidney disease and cancer found in the region, but sound research is needed for a clearer understanding of their etiology, so that action can be taken.

Water Quality, Quantity and Human Health Effects

The Aral Sea is confronted with a crippling water crisis. The lack of water is the reason for the death of the Aral Sea and the associated negative effects. Due to the desiccation, the regional climate has been negatively affected, the Sea now has a higher salt content than the oceans and is now biologically dead. twenty two fish species, which were an important economic and nutritional resource have become extinct. It is a terminal sea, so all the upstream salts and agricultural chemicals end up in the

Aral Sea and as the dessication continues, the residues are blown back into the face of the population. Frequent dust storms now displace roughly 150 000 tons of dust per year and it is estimated that if the Aral Sea completely dries up, over 15 billion tons of salts will enter into the environment. Clearly, given a very short chain of causal relationships, the water quantity crisis is not just about water. Air quality, nutrition, climate and the economy are a result of what on the surface is described as a water crisis.

In terms of water quality and water for human consumption, the situation is just as grave and complicated. Ground water quality ranges from 0.5g/litre to 6g/litre total dissolved salts TDS, compared to an average of 300mg/l TDS for North American water consumption. The TDS quality standard for water for human consumption used by the Uzbekistan government is 1g/l TDS, for WHO it is 1.5g/l TDS, the World Bank set a rate at 2g/l TDS and a recent UNDP pilot hand pump project, allowed a level as high as 3 g/l TDS. The trend is clear: based only on palatability or operational difficulties the standard increases without any conclusive research into the actual health effects of such highly mineralized water.

The level of bacteriological contamination in water sources and the lack of hygiene awareness that contributes to the fact that diarrheal related diseases are one of the greatest causes of morbidity and mortality among children. However, given the general acceptance of this issue by all involved parties, standards for such things as community participation, the appropriateness of various technical approaches and implementation strategies are not defined.

Health Infrastructure

Amazingly enough the health professionals are present and are eager to work but do not have the means and require access to new international protocols and tools for treating disease and improving health services including effective health information systems and the development of a primary health care approach

Psycho-social and Adaptability Issues

Until very recently, there has been no research conducted into the psychological effects on a population who have experienced the complete destruction of their environment and their livelihoods destroyed. A recent MSF study showed that almost half of the population report levels of somatic symptoms associated with emotional stress. This finding is comparable to acute environmental disaster studies in North America but higher than findings from chronic, non-acute environmental exposures situations. Without hope, what is the potential for adaptation?

A Case For Environment, Health and Human Rights?

Establishing the basis for a health-environment-human rights advocacy approach is central to addressing the Aral Sea Area Disaster. It would be the subject of extensive research so here only a very brief review of the current position is offered to give an idea of how the health and environment issues run alongside one another.

As to the right to a healthy environment, this debate is less advanced. In 1972, the Stockholm Declaration, produced at the UN Conference on Human Environment, established the relationships between environment, development, satisfactory living conditions, well-being and individual rights. This constituted recognition of a right to a healthy and decent environment. It also inextricably links the individual and the collective to universally recognized fundamental human rights standards and principles which may be demanded as such by their beneficiaries.

The next major development was the World Charter for Nature of 1982 (General Assembly

Resolution 37\7) where 24 principles of conservation were established. All human conduct affecting nature was to be guided and judged by these principles. The United Nations Conference on Environment and Development in Rio in 1992 developed the principles of environmental rights and this led to Agenda 21. All these activities talked about the significance of health and the protection of human health (see Chapter 6 of Agenda 21).

In the report on “Environment and Human Rights” commissioned by the UN Commission on Human Rights in 1994, the right to an attainable standard of health is taken as the status quo. In the environmental context this implies “feasible protection from natural hazards and freedom from pollution” and is also linked directly to the right to safe water and food as well as safe and healthy working conditions.

The report goes on to state that the direct link between adverse environmental conditions and violations of the right to health. It developed a draft Charter of Environmental Rights, which includes the right to a healthy environment, but has not yet been adopted by the United Nations. In the meantime, the link has officially been made and the evidence of the link is abundant. NGOs can help made the link more concrete by showing its existence in the field.

Separating Cause and Effect

Medecins Sans Frontiers is still the only international humanitarian medical NGO based in the Aral Sea area. One of the reasons why the area is neglected by the international community is due to a paradigm that has difficulty separating cause and effect, this means that health policies are set up ad hoc. Advances can be made through Operational Research, that is grounded in the needs of the population and aims towards directly impacting on the health of the population. Advocacy also plays an important role, to advocate for recognition of the links (or disproof) between the environmental hazard and human health and to ensure that interventions are developed.

Conclusion

Environmental health is a relatively new discipline and as such is still largely western based and research focussed. However, communities like those in the Aral Sea Area increasingly are becoming assessment fatigued and frustrated with the lack of direct assistance. Research can not stand alone, it needs to be combined with a direct health improvement. Finally, the third component in operationalising environmental water disaster is advocacy. Advocacy is key to turning research into policy and further into action, while at the same ensuring that populations receive humanitarian assistance as they wait for research policy and sustainable long term solutions to catch up.

Institutions, Governance and Participation

Prepared by Shailaja Annamraju, WaterAid, United Kingdom

The looming water crisis has been referred to by many as a crisis of governance and a lack of political will. Governance, in the water resources sense, could be defined as the manner in which power is exercised in the management of the water resource. While good governance is where the management of the resource yields equitable, transparent and accountable institutions. This paper asserts that discussions around governance and integrated water resources management do not adequately recognise community management structures as an appropriate institutional scale for water resources management. It is the contention of WaterAid that if stakeholder participation is as critical to water resources management as it is claimed to be in the Framework for Action and World Water Vision, then capacity building should begin in partnerships at the community level.

Governance

Good governance has two objectives - one is encouraging greater transparency, accountability and administrative efficiency, the other related concern is with human rights and participation. Specifically, good governance is concerned with the appropriate scale for planning and management of the resource; defining the costs and charges to be included in pricing water; and the ownership of the process.

Appropriate level of resource planning and management

The World Water Vision acknowledges that a governance transformation “will always be necessary to proceed with a logically linked scheme of reforms management of the resource should begin at the catchment level and move to that of the river basins.” Stakeholder participation in integrated water resource lies at the heart of changes in governance structures.

Stakeholder participation and the involvement of communities in water resources management requires the emphasis of actions to shift to empowering communities to manage their own resources, for decisions on pricing water at an affordable level to be made with effective participation of the community especially to poorer sections, for farmers to understand the concept of more crop per drop, and for communities and farmers to understand the concept of demand management and conservation.

The community management structures for water and sanitation services and farmer associations are the structures where capacity building first needs to take place in logical sequence towards integrated water resources management. Complementary components of good governance of participation and human rights and accountability, transparency and administrative efficiency can only be achieved with communities in partnership.

Community level planning and management

WaterAid’s experience of the provision of safe, drinking water and effective sanitation to the poor communities in 15 countries in Africa and Asia demonstrate that where the communities are in control of the decision-making over the services and facilities at all levels, of operations and maintenance, and of funds for repairs and spare parts results in a high level of empowerment and ownership, administrative efficiency, and sustainability of service.

Strong working examples of sustainable community management are visible in domestic water supply provision in the shape of water user associations. Inter-sectoral allocation by users is seen in the management of village tanks (ponds) or other local water sources used for domestic water, irrigation, and even livestock watering. There are also examples of inter-sectoral community management structures within catchments.

Advantages of community management structures include the potential flexibility to adapt water delivery patterns to meet local needs in an equitable manner both in terms of cost recovery and subsidies, to achieve administrative feasibility and sustainability, to balance gender representation and to obtain political acceptability as a resource allocation mechanism. Additionally, a central concept of community management is sustainability through ownership of the process. Ownership comes in partnerships with stakeholders, through community and involvement at every stage of the planning, implementation and monitoring and evaluation process.

Community management is also firmly based on a belief in participation and democracy. A culture of democratic governance will strongly influence the effectiveness of community participation and management in water resources management at the local level and at the catchment level.

Capacity Building and Institution building of community management structures

Community management requires community management structures with authority to make decisions on design, implementation and operations of a water or sanitation point. These institutions can develop spontaneously or get mobilised by an external catalyst, and can be strong enough to allocate water efficiently within appropriate conditions.

At present, many of these institutions can easily organise collectively for distributing the water amongst themselves and with increased knowledge and awareness can promote efficient use and create incentives for conservation and effective water resource management. Community management institutional structures such as water user associations could become both resource allocators as well as overall resource managers through institutional support building mechanisms.

Capacity building should focus on community mobilisation to increase ownership and empowerment, in institution building to organise community management structures and build alliances to engage in macro-level river basin management, and on increasing awareness and knowledge of ecosystems and water-use conservation for water resources management.

Capacity building through Partnerships

Capacity building and building appropriate community management structures for water resources management can only be achieved in partnerships; partnerships with local NGOs, local government and local communities. Partnerships utilise the inherent strengths of the different organisations in order to achieve a common goal: integrated water resource management at the community or catchment level, for example:

- Partnerships in WaterAid's experience have been the pillar for sustainable projects where partnerships with local governments, local NGOs, local private sector, and local communities have recognised the comparative advantages and limitations of each of the organisations for providing safe water and effective sanitation.
- Partnerships can only work in an environment of trust, long-termism, mutual understanding of the common objective and a recognition of each other's contributions to the partnership within a clear framework of each other's roles and responsibilities.

Only through partnerships, which promote capacity building and issues awareness, can one achieve the objectives of water resources management and the indicative targets for the sector:

- Promoting the involvement of communities and local governments in participatory planning, monitoring and evaluation.
- Enhancing community bargaining power in water resource issues through organisation and representation.
- Maintaining water quality through source and ecosystem protection and improved use.
- Promoting pricing mechanisms that are equitable and realistic.
- Providing sustainable delivery of water and sanitation services.

If the starting point for governance of the water resource is through partnerships with communities and capacity building of community management structures, then more action oriented discussions are needed to initiate the relevant mechanisms, than has happened to date.

Institutions, Governance and Public Participation in Water Users Associations, in Nepal.

Prepared by Duman Thapa, Mountain Resources Management Group, Nepal

1. Introduction

This paper mainly draws on the research findings and experience of the Mountain Resources Management Group (MRMG) in the context of Nepal in respect of four principal issues:

- How to manage for sustainability.
- How to manage a catchment across administrative/political boundaries.
- How to achieve effective decision making.

Background of MRMG

The Mountain Resources Management Group or MRMG is a national, non-political, secular and independent non-governmental organization established in 1993. Its aim is to work for the sustainable development of the poorest of the poor among the rural communities in Nepal with participatory approach by using the local technology and indigenous resources and by facilitating the communities to build linkages with line agencies.

Water as Focus of MRMG's Activities

MRMG has taken water as the major means of and tool for poverty alleviation in the rural areas of Nepal.

The Himalayan Kingdom of Nepal is the world's second richest country in terms of water resources. This does not prevent water from being a scarce commodity in many parts of the country, which is mainly due to its overwhelmingly mountainous terrain. In Nepal, the priority order as fixed by the Water Resources Act of Nepal, 1992, for use of water laid down in the Water Resources Act of 1992 is as follows:

- Drinking.
- Irrigation.
- Hydropower.
- Industrial.

Predominantly an agricultural country, over 80 per cent of Nepal's population is directly or indirectly dependent upon agriculture. Water for irrigation finds a top priority for a large number of people and often becomes the biggest bone of contention between villagers and between villages. Water occupies a high and sacred place in the Hindu religion. Therefore, the religious use of water also sometimes competes with other uses, especially when it is scarce, and often always overrides the other uses in importance. Water is an economic commodity. However, in Nepal, it is hardly recognized as so, despite the fact that the Nepali woman on average spends two hours a day in fetching water from sources that may lie many kilometres away from her house. The reason is Nepal is predominantly a male - dominated society where the problems, issues, concerns and priorities of women are seldom considered.

Rajapur Irrigation Rehabilitation Project (RIRP)

MRMG is currently involved in the Process Documentation Research, at the Rajapur Irrigation Rehabilitation Project (RIRP). The Project is an undertaking of the Department of Irrigation (DOI) with loan from Asian Development Bank (ADB) for the rehabilitation and improvement of the six farmer managed irrigation systems (FMISs) situated in the island of Rajapur, which is primarily alluvial formation sandwiched between two big rivers, Geruwa and Karnali.

These six FMISs are almost a century old and cover an aggregate area of about 15,790 hectares (ha). After rehabilitation, the system will become the largest FMIS in Asia. All the intakes are of the open channel type and ungated. Thus, floodwater can easily enter the canals during high river flows. These events cause heavy damage to the irrigation structures, crops, properties, and even loss of human and animal lives. In order to increase the quantity of water that could be drawn from the river, the farmers have traditionally been building brush dams across branches of the rivers at the intake sites. These brush dams usually get destroyed after every heavy rainfall and the farmers have to repair/re-construct the dams at least two to four times during the monsoon season. The operation and maintenance (O&M) of the system is undertaken by the farmers themselves.

Due to the dwindling supply of forest products and the difficulties being encountered by the farmers in mobilizing the necessary local materials for the maintenance of their irrigation systems, the ADB, in early 1992, considered and approved the request of the Government for a loan assistance for the rehabilitation of Rajapur FMIS. The major objective of the project is to bring about sustainable economic development in the Project area by:

- Increasing agricultural production and income.
- Arresting the loss of irrigated land caused by river capture and river bank erosion.
- Reducing environmental degradation through reduction of farmers' reliance on forest products for the repair of their irrigation systems.
- Strengthening the institutional base and technical capabilities of the existing farmers' association.
- Poverty reduction.

The project is anchored on farmers' full and active participation in all phases of project implementation. The farmers have to contribute about 10 per cent of the cost of irrigation improvements in the form of either cash or kind (labour) or a combination thereof. In order to ensure farmers' participation, the design of the project included the establishment of a Project Management Committee (PMC), which is composed of ten members - three from the Department of Irrigation (DOI) and seven from the farmers. The PMC serves as the meeting platform and a forum for the project management and the farmers to reach consensus on all matters relating to the project.

2. Managing for Sustainability

Sustainability of any water resource project is essential so that it is passed on undiminished in quantity and quality to other users and future generations. On the question of sustainable water management, the following are worth mentioning:

- Implementation and documentation of management initiatives.
- Strengthening the basis for informed debate within civil society regarding water management needs and options.
- Reforming water related institutions and organizations away from development and into the types of structures needed to support the larger social process of management.

One of the major requirements for the sustainability of a development project is that the O&M of the project can be taken care of by the users/stakeholders themselves upon withdrawal of the support agencies, and necessarily includes financial sustainability. The sustainability of the project is greatly enhanced if the participatory approach is followed in all phases of project implementation - from conceptualization, designing, constructing, monitoring and evaluation, to sharing of benefits. It is necessary that the system be based on technology that is not unnecessarily too sophisticated or beyond the capacity of the users/stakeholders to understand and maintain.

Gender has of late been emerging as an equally important factor for sustainability of any project, including irrigation projects. In the Nepalese context, women play a major role in the use and management of water resources. These uses include drinking water, washing of dishes, washing of clothes, bathing of children and cattle/livestock. In irrigation also, water is often applied in the field by women. Since irrigation water is used for multiple purposes by women, it is only natural that they are involved in decision-making in all irrigation projects in all phases of project implementation. However, in Nepal, due to the male-dominated and patriarchal social structure, women are hardly involved in the development, implementation and management of irrigation projects. Because women do not have any right to ancestral/parental property (except under certain exceptional conditions), they do not own land (unless it is self-earned, which is rare), their participation in WUAs is minimal as membership of the WUA is contingent upon land ownership.

Further, in many communities women are barred from contributing labour in the construction and maintenance of irrigation canals because of the social restrictions on their mobility and interaction with non-family men. Instead, they are made to contribute in cash or kind in lieu of labour, whether or not their financial condition permits it. As a result, female-headed households are suffering economically.

Government policies have focussed on the participation of women in development projects and legislation have been enacted to make compulsory provision for women's participation in various development projects. The Irrigation Policy also has provided for compulsory inclusion of women in the irrigation water users association.

However, government legislation and policies alone are not sufficient - it is more important to have awareness building and education of all users and stakeholders at all levels, including the grass roots women. While designing the development project, the issue of gender should not be tied up with the existing legal provisions (which are often used as a delaying tactics) but should be taken up by issue. For example, the lack of property rights has hampered women from becoming members of water users associations. Therefore, instead of waiting for legal reforms, necessary provisions should be made for compulsorily including women's participation in the development projects in any event.

After a long process, MRMG has been successful in introducing in the Constitution of these WUAs provision for reserving 50 per cent of the membership of the WUAs for women. However, the next challenge is to how to motivate the women to actively and fully participate in the activities of the WUAs.

O&M capacity of the WUA have to be built up by providing to the members with various study/ observation tours and training such as financial management, operation & maintenance, leadership development, resource mobilization, fund raising etc. For ensuring financial sustainability of the project, development projects in Nepal have recently started adopting an integrated approach whereby savings and credit and income generation activities form important components so that the individual users' economic status are improved.

A Participatory approach enabled the different stakeholders of the project, to constantly and extensively interact with each other and understand and accommodate each others' point of view. This resulted in a much better design one that was systemic, and that seriously considered the environmental impact of the project, one whose operation and maintenance was within the capacity and capability of the local users and, consequently, one that had almost all the elements of sustainability.

Now, the system has been designed and constructed in such a way that the local people themselves can carry out much of the O&M tasks of the RIRP by using local skills and technology and indigenous resources such as boulders found along river banks, tree trunks, tree branches, twigs, leaves, brush-wood, etc that are collected from the nearby forests. Environment protection, river training and anti-erosion measures are some of the essential components of project implementation. Gabion boxes are woven by the local people themselves, which has to some extent provided employment to the local people, thus contributing to income of the local people.

RIRP has been designed in such a way that it is sustainable in every way-financially, managerially and operationally. In spite of being the largest FMIS in Asia, it has been designed in such a way that it can be operated and maintained by the users themselves without external assistance. In this respect, substantial modifications have been made wherever possible in the original project design to meet the farmers' capacity and capabilities. O&M training is also provided to the farmers on a periodic basis. In case any repair is beyond the capacity of the users, the farmers now know whom to approach.

Similarly, the users have been organized at different levels to manage the system. In Rajapur, several tiers of WUAs have been formed; (1) water course or tertiary level; (2) secondary level; (3) main canal level; (4) catchment or system or intake level (i.e. CFC). While forming these organizations, care has been taken to ensure that each of them has adequate and equitable representation of the smallest of landowning farmers as well as women. The capacity and capabilities of these organizations are being strengthened through various training and study/observation tour programmes for better system O&M.

3. Managing a catchment across borders and boundaries

There have not been any recorded cases of disputes over sharing of water along administrative or political boundaries in Nepal because water is shared on the basis of hydrological boundaries. However, disputes over water are common between two or more villages/hamlets or between upstream and downstream users.

The WUAs that have been formed at different levels also try to prevent and resolve such disputes. All the water users concerned are members of these organizations. Such associations or committees have ensured that the right to water of the downstream users is adequately recognized and there is equitable distribution of water among all users. Through the organization of the water users, the maintenanc

and upkeep of the intakes and the water sources are undertaken. A right of ownership of all the users over the water sources, including those of downstream, has been established. However, an 'enabling environment' has to be created for the federation or network of water users association to function in an effective manner.

There have been instances in Nepal when the Government did not consult the local people, downstream, before implementing large scale hydro projects, eg Jhimruk Hydropower Project. Consequently, local people are severely affected by water shortages and the implications are far-reaching in the case of drinking water and irrigation. In order to understand the price and outcome of the project to local people, it is much rational to be concerned about the local control over the river.

Irrigation development considers only the river area rather than the watershed area. This has led to creation of projects that are beset with many complications and problems, such as floods, land and river erosion and other environmental forms of degradation. All irrigation development projects have to be an integrated package, that also takes into account protection of the watershed area and right over it.

4. Stakeholder involvement

In Nepal, participatory approach is a new concept and implemented at the pressure of donors, such as the World Bank and the Asian Development Bank. Although the government has emphasized participatory approach in various plans and programmes, it has not really been implemented in letter and in spirit. The reasons are not very far to seek. It is clear that emphasizing of participatory approach and issuing of directives alone are not sufficient. The implementing agencies, ie government bureaucracy and technocrats also have to understand the real meaning and spirit of a participatory approach. This will require an overhaul of the system to change the mindset of the bureaucrats and technocrats and reorienting to become people-centred. At the other end of the spectrum are the people who are uneducated, uninformed, unskilled and diffident. They are not even aware of their rights and the existence of policies and papers that empower them with certain decision making authority as regards projects that concern them. The people or the public are hardly bothered. This is where the role of the civil society, the NGOs and voluntary organizations come in.

Experience in Nepal has been that people's participation is limited to the time the project lasts. No effort is made to develop a permanent mechanism whereby people's participation in all development projects becomes necessary. Therefore, it is imperative that the government seriously considers developing an in-built mechanism to include people's participation in all development projects. At the same time, it must become receptive to criticisms against it.

Towards a Global Water Vision

Prepared by Ranil Senanayake, Neosynthesis Research Centre, Sri Lanka.

Water is a critical element of all living things and is the medium through which much of life is expressed, all animals and plants including humans are mostly water. Water is required in the right quality and quantity for each purpose that it is used for. Water moves across a landscape as energized by gravity, it flows both above and below the soil level in every terrestrial ecosystem. Water is critical not only to the human but also for the sustainability of human life support systems. A visioning process that seeks to address all aspects of water and harmonizes this vision with the existing international agreements is critical.

Optimally functioning hydrospheres at the local, regional and global levels could be a vision for a development goal. Management at the local hydrospheric level, would focus on the watershed level, in most cases represented by a river basin. Regional scale management would focus at the bioregional level, this means grouping ecosystems that possess similar functional attributes, with climate and soil as significant variables. At the global scale, management would focus at the transregional level and be concerned with transregional effects, Here political considerations and global undertakings begin to shape the management decisions.

Whatever the scale of the hydrosphere, the quality and quantity of water will be of interest to society. Once the scale is determined the indicators of optimum functioning need to be outlined. While mechanisms for the demand management of quantity have been developed in response to many activities such as energy, transport or agriculture, parallel developments for water quality still need to be expressed. Even where there are well developed markets for drinking water and agriculture, in most cases the cost of water quality goes unpaid.

The condition of surface water is easily evaluated using a suite of indicator species. These can range from macro-organisms such as fishes or insects to microorganisms such as diatoms or plankton. The studies that demonstrate the correlation between water quality and aquatic organisms are many. However, there is not the capacity to use or appreciate such knowledge at a local level. Thus programs to help communities assess the quality of their surface waters using indicator species can prove especially useful. Such programs can even be tied to school education curricula and 'Stream or Lake Watch' can be constructed on the successful models of 'salt watch' or 'frog watch' in Australia or 'Adopt a Watershed' in the USA.

Indicator species of water quality have a significant role to play in the implementation of the Convention on Biological Diversity. The Convention's vision for 'The conservation and sustainable use of biodiversity at the genetic, specific and ecosystem levels' can be effectively addressed if indicator species form the basis of monitoring and evaluation of development processes as applied to surface water systems.

The quality and quantity of water also has a significant impact on agricultural productivity and food security, The status of both surface and subterranean waters are significant in determining the sustainability of a production system. Thus, water becomes a central plank on which sustainable development rests.

Agriculture has been demonstrated to have either a positive or negative effect on water quality depending on the agricultural technology used. By adopting the user pays principle; those agriculturists who pollute water would be taxed while those who improve water must be rewarded. This will enable many farmers to use and husband their lands effectively. Also, the fossil fuel subsidy to obtain or clean water for agricultural use needs to be calculated into the product cost. Otherwise, crops grown for export in remote places creates a hidden greenhouse gas cost of irrigated crops and should be subject to quantification under the Kyoto Protocol on climate change.

A global water vision, must take into consideration the physical and biological attributes of the terrestrial hydrosphere, and must also demonstrate links to and harmonization with the goals set out in the international agreements that have a bearing on water. A global water vision should be shared by all stakeholders and the indicators of quality must be such that the achievement of the vision will be visible at the community level and confirmed by the status of life in aquatic system. The current focus on human needs alone will not solve all the ills that assail the fresh water of this planet.

A Better Livelihood with Every Drop.

Tamil Nadu Peasants Vision of Water and Livelihood Nexus

Prepared by Drs. S.T.Somashekhar Reddy and H.N.Chanakya.

Introduction

Farmers from 82 villages in the Cauvery river basin of Tamil Nadu examined the status of agriculture from the point of view of their livelihood and evolved a vision, which is outlined here.

Water is a means to livelihood and not to be marketed

Water has moved quickly from a societally controlled resource to a politically and now market controlled commodity. Today water has become a tradable commodity within this basin - drawn from deep borewells and sold for irrigation by those who can afford the initial costs. This has gradually depleted this finite reserve of ground water.

Water is used largely to 'irrigate' crops that are exported to industries within and mostly outside the basin. These industries, be it sugar, cotton textile, rayon or oil mills or even milk processing centres, pollute almost all the water flow within the basin. Such centralised production units compete with irrigation and even livelihood needs of the population.

Crop cultivation by 'high external input agriculture' (HEIA) methods is reducing the availability of water within the basin. Cultivation of sugarcane and cotton within the command areas of major dams has reduced the area under paddy and pulses. These high water demanding crops have reduced the availability of water within the command areas and a conflict has ensued between the farmers in the up stream and down stream. The Cauvery basin is no longer the 'rice bowl' of India and instead is now the bowl of discontent.

A burden on exchequer (from 'rice bowl' to 'begging bowl')

Through the motivation provided by the command areas, the rich farmers who are able to exploit the ground water are cultivating crops which are exported outside the village or river basin. The area under coarse grains, consumed largely by the 'resource poor farmers' (RPF) are being replaced by crops such as peanut which totally exported to industries. As a result, the livelihood situation of these farmers is threatened and there is now a larger dependence on public distribution system. This is a huge expenditure to the state in terms of the subsidies and also restricts the consumption pattern of resource poor farmers to only one cereal (rice). Such a dependency on external market for basic food has affected the women and children to a much greater extent. To compensate the nutritional deficiencies among women and children, the state government spends enormous cost in feeding the children once in a day and women during pre and post-natal stages. This expenditure consumes more than 25 per cent of the annual budget of the state.

Livelihood threatened by the economics of high external input agriculture (HEIA)

Cultivation of coarse grain in the rainfed areas of the basin has not been able withstand the economic criteria provided by the HEIA cultivated in the irrigated areas. Higher emphasis placed on a marketable part of the produce, neglecting the livelihood base, has enabled farmers to move towards marketable HEIA mono-crops such as peanuts.

Degraded rainfed area and enhanced vulnerability to drought

Farmers are neglecting almost all the good soil husbandry practises they had previously been using. Exclusive dependence on chemical fertilisers in rainfed areas has depleted the nutritional status of the soil and the enhanced rates of soil erosion have aggravated the situation further.

From Debt Trap to Death trap

Consequent to HEIA cultivation, the RPFs in rainfed area are trapped perpetually into debt by the local merchant lobby who supply the chemical inputs. Inputs such as seed, manure and pesticides for HEIA are procured as a loan from these merchants with interest rates of about 48% per annum. As the failure of crop in terms of economics is low due to enhanced vulnerability due to drought and pest attack, the RPF have no way to walk out of the debt trap but to commit suicide. Suicides due to crop failures have become a common incidence today, noticeable especially after each harvest season.

Farmers look forward to:

(i) Low external input and low - export sustainable agriculture

To reduce the vulnerability to crop failures and debt trap the farmers in the river basin of Cauvery look forward to such an agriculture which enhance the sustainability of livelihood through low external and low export agriculture. This is visualised through cultivation of coarse grains in the rainfed region along with rebuilding soils by higher dependence on locally available resources such as silt from tank and bio-pesticides prepared from locally available plant materials.

Restoration of water bodies to their original capacities is regarded as the only option to enhance the area under irrigation in each settlement and also the quick way to rebuild soils as protection from short droughts. An experiment conducted in the upstream of the river proves that after the application of silt, crop production can be enhanced from four quintals per acre to eight quintals of coarse grain per acre. The family can have sufficient pulses required for the year (three quintals). Harvesting and conservation of every drop of rain at the point within the farm has been proved to enhance the soil moisture holding capacity. Methods visualised are, application of silt, soil and water conservation structures, enhancing organic matter content in the soil by incorporating compost prepared out of locally available bio-mass and above all cultivating mixed crops to achieve good soil nutrition balance within the field.

(ii) Reduced cultivation costs as a way out of debt trap

The biological pesticides and repellants prepared from local plants have been effective in controlling several diseases and pests. The cultivation cost per acre has come down from Rs.2300 to Rs.500. Dependence on the seed available locally and reviving norms of traditional seed market (pay back twice the quantum you have borrowed) is visualised as another way of reducing the cost of cultivation and a way to move out of debt trap and to prevent suicides.

(iii) Reduced area under exportable commodities

To conserve every drop of rain water harvested, the vision of RPF is to reduce the area under those crops which are grown solely for export or for industrial uses. The vision is not only to enhance levels of livelihood but also to check heavy withdrawals of ground water. It also encourages such cropping patterns wherein productivity is not based on the unit of water consumed but on the basis of units of water conserved.

(iv) Reduced demand for water and incidence of pollution

This vision plans to reduce the centralised demand for water and source of pollution. The present system of large scale processing at a centralised point is regarded as one that not only demands huge quantities of water but also acts as point distributed point sources of water pollution. To avoid this the vision to decentralise at least the primary processing to the community level so that the demand for water is spread out within the basin and pollution is reduced to such levels wherein it is not ecologically harmful.

(v) Policies and Institutional structures required

The vision seeks policies that can enable the resource poor farmers to plan on the basis of hydrological units so that the entire community bears the responsibility to conserve and manage the entire hydrological unit. Policies that restrict development to a limited area or limited number of beneficiaries should be replaced by policies which take care of the entire river basin.

The vision highlights a demand that the financial and institutional support for exportable crops be replaced by those that enhances the livelihood options withing the basin.

The crucial output of the vision is let people ensure that they achieve higher livelihood for every drop of water.

Water as basic need: The case of Ewaso Ngiro in Northern Kenya

Prepared by Daoud Tari Abkulla, Friends of Nomads, Kenya

Introduction

I am from the Boran pastoral people, living along the Ewaso river in the dry part of Kenya. Yearly rainfall is 150 mm which means that the Ewaso river is very important for the pastoral people.

Traditionally use of the water and the pastures was by traditional rule called Chaffa. Traditional chiefs and elders executed this system to the interest of all Boran. After independence a water crisis emerged, which severely hit the Boran. The Ewaso river dried up and pastoral people started fighting among each other, which caused hundreds of deaths already. The pastoral people have no power and live around the lower part of the river, which makes them vulnerable to everything that happens upstream. The Kenyan government destroyed the traditional Chaffa system by appointing strange chiefs in the Boran area and by supporting irrigated agriculture.

Background

The Ewaso Ngiro River is the lifeline to the economic and social well-being of the Boran pastoral Community of Isiolo District in Northern Kenya.

These pastoral people, who are famous for strong attachment to livestock, have been grazing the floodplains of Ewaso River for the past two centuries. Their pastoral economy has been a thriving enterprise, because Ewaso River provided the necessary water requirements and pasture for livestock.

The River basin acted as reservoir against drought for the dry season and during the wet season the pastoralists did not allow herds to graze along the River, as resources close to the River are preserved for the dry season, when pasture and water have been exhausted from plain lands further away.

The Chaffa pastures were divided into 14 units called Deda, who are managed by an official called Jallaba. All the 14 Deda are managed by a council of Deda elders. They decide about water and pasture rights, watering holes, etc.

The traditional management systems to govern and administer these resources, allowed the Boran and their neighbours to utilize the resource on sustainable basis for years. Conflicts were low, because of the elaborate community-based access rules that were followed by all users of the River.

After Kenya attained independence from the British, the institutions of Nation-State became assertive within the area. The new representatives from Government structures, who are loyal to a far distant power and derive their rules and authority from institutions that are alien to the local people, became well-established in the region. The old power structure of the Community became severely eroded and the Government representatives, who are mostly corrupt, replaced the traditional pasture and water managers.

As a result of the breakdown in traditional governance mechanisms, conflicts over resources are now a common occurrence. Arbitrary access to the River resources were given to neighbouring pastoralists, so causing violent conflicts with local people, resulting in severe loss of life and property. Due to unregulated resource use and overgrazing leading to desertification, conflict resulting in cattle rustling

and loss of life became rampant. Up to today, this region is engulfed in a circle of endemic violence between the pastoralist communities living in the area.

Irrigated Agriculture

As early as 1975, UNDP, EEC and FAO in cooperation with the Kenya Governments executed irrigation schemes in the Chaffa of the Boran. The driving ambition was to settle the nomadic pastoralists and turn them into food producers. The schemes were arrogantly planned and executed by learned technicians, backed with imported machinery to pump water and regulate canals. Large tracks of land were cleared and livestock pasture destroyed.

After the first 3 years the donor funding dried up and the project was expected to be self-sustaining. Of course it collapsed miserably, because the canals burst their banks, the machines could not be repaired and pastoralists were no farmers. The highly mechanised irrigation system was quite inappropriate for the local situation. What remains is land use, which has been wrecked by an intervention that has been based on wrong premise from the very beginning.

Upstream activities

Since 1984, the Ewaso River has been drying up apart from during the rainy season. The pastoralists, who are the end users, only receive flood-waters. This has been occasioned by various demands and activities that are taking place upstream.

Intensive small-scale agricultural irrigation farmers have settled along the River and water demand from industries in upstream towns has exerted pressure on water in the River. This has been aggravated by large-scale, capital intensive farming, that irrigates huge land mass to grow flowers, vegetables and coffee for European markets. The activities of the large-scale flower farmers have completely depleted a resource already under pressure from other competing needs.

Upstream abstraction of water by the powerful has caused deaths, human and livestock, to the pastoralists, especially during frequent periods of drought. Also reduced water availability has led to conflicts among pastoralists, farmers and all users in the River basin. Today, these pastoralists depend on shallow wells for their water.

Strategies for improvements - Back to the Chaffa

At a stakeholder meeting by Friend of Nomads International, the decisions taken were out with the foreign herds, and to form a coalition against irrigated agriculture.

1. Community empowerment programmes through organisational development, within the community-based institutions.
2. Advocacy by the Community to stop illegal abstraction of River water by large-scale farmers in the upstream.
3. An appropriate land and resource tenure system, that gives space and empowers the traditional authority structures of the pastoralists.
4. Awareness-raising through civic education amongst various basin users.
5. Poverty reduction programmes by initiating income-generating activities in the area.

Prepared by Peter Howsam, Cranfield University, Silsoe, United Kingdom

Introduction

Over 50% of the populations of the poorer nations still lack adequate water supplies and sanitation facilities, one has to conclude that previous international declarations were simply propaganda; and that in reality many people and states have other priorities, such as economic development and more recently conservation of the environment. Furthermore as an excuse for lack of action people tend to hide behind the complexity and criticality of global water resources.

The people who can make a difference and who prioritise economic and environmental issues are not the poor but people who live relatively comfortable lives. It is understandable that the poor feel demoralised by their actual and perceived status but it must be so much worse to realise that many of their fellow citizens are more concerned about the well being of a dragon-fly than that of a fellow human being.

In many relatively prosperous countries the philosophy behind legal measures for the protection of the rights of the environment (i.e. legal provisions to control pollution) would appear to be stricter than that applied for the protection of human life.

A point that came out strongly in the Africa study was the lack of national political will. National political will can be influenced by internal and external pressures. In the latter case conditions can be placed on loans; donors can decide on debt relief measures etc; However there is a degree of hypocrisy over this, in that when it comes to tackling issues such as water supply and sanitation for the poor, many conveniently regard this as a national and not an international problem; but when economics and power come into the frame then suddenly many suddenly talk in terms of global priorities to justify intervention and sometimes exploitation. If we are honest we simply have to admit that there has not been the political (and social will), to tackle human circumstances which should be socially and morally unacceptable.

This paper deliberately tries to raise the profile of those without adequate water and sanitation and to prick the consciences and question the priorities of the better off. It is suggested that as many countries in the last decade have addressed or are in the process of addressing national water policy and the associated legislation, an opportunity now presents itself to redress current misguided priorities. (1999 Africa Study).

Africa study

A short study was recently conducted by lawyers/engineers in 5 African countries. The aim of the 6 month scoping study, funded by DFID (UK), was to identify the constraints and enabling conditions provided by existing water laws (statutory and customary) with regard to the poor having access, or being entitled, to a safe and reliable supply of water and sanitation facilities. In simple terms, the key constraint, especially under statutory legal systems, is the lack of an accessible and effective legal means of redress for the poor, who do not have the adequate water and sanitation. The inadequacy may lie in the legislation itself but more often than not it lies in the implementation and application.

A summary of the constraints identified reveals an emphasis on wider factors outside the narrow field of legal provisions. The prime ones being:

- Inadequate political will.
- Inadequate capacity and funding.
- Inadequate information awareness and understanding.

The study identified clear signs that enabling conditions are emerging and are being supported:

- Raised awareness.
- Moves to democratisation.
- Community cooperation and cost sharing.

General points from the study

Socially and politically acceptable legally based mechanisms are needed. To provide an individual with accessible means of legal redress if his/her entitlement to water and sanitation is not met; and on to provide a means to enforce the obligations of water and sanitation providers.

Control should be in the hands of those closest to the issue, i.e. people and local communities with the state (and international agencies) providing only a co-ordinating, educating and information disseminating role.

Customary water laws which tend to support only water rights related to land ownership and occupancy are not sustainable in their current format and cannot on their own provide the solution. But customary laws or traditional rules relating to land and water rights still, in some places, have a significant influence on day-to-day practice, especially in rural communities. Traditional customary rules are not widely documented and therefore there is considerable lack of awareness and understanding. Better knowledge and understanding are required in order to evaluate the part customary rules might play in future legal systems, especially in the current climate of encouraging local community participation in water supply and water resource management.

Statutory laws have in the past provided for state control of water, but in retrospect, can be seen to have neither served the best interests of the water environment nor been able to provide for basic individual water needs. The trend to state control of water has cut out local decision making and allowed the introduction of externally generated priorities.

However that said, national statutory legislation will provide the principle legal framework for tackling the issue of the poor who lack of adequate water supply and sanitation, while some aspects of customary law could make a useful contribution and the impact of international law relating to shared water resources cannot be ignored. The absence or effectiveness of transboundary water treaties can have a significant impact on the feasibility of any national water resource allocation and management strategy and supporting legislation.

International law addresses the subject of Human Rights. On initial reflection one would assume that rights to basic water and sanitation would be an obvious specified priority in the 1948 UN Universal Declaration of Human Rights, but this is not the case. Only in the later 1989 UN Convention on the Rights of the Child, is water and sanitation given specific mention (Art.24).

Water supply and sanitation is such a basic fundamental need it must be a fundamental right which should be of such a high priority that it becomes the global priority overriding any other level of national interest.

The water resources required to meet all basic needs is not a lot and is available in the vast majority of situations, as are, on a global scale, the financial resources - do not believe otherwise; Those that say there is not enough money should explain that what they really mean is that there is not enough money left after most of the available international or national financial resources have been spent on other priorities - change the priorities and suddenly it's affordable.

What message for instance, should UK politicians take from the fact that they on behalf of their citizens decide to spend £5M to help Mozambique deal with its current flooding disaster, whilst the citizens themselves volunteer nearly 3 times that amount.

Recommendations

- Lobby politicians directly, and indirectly via their public, to have water and sanitation specifically and formally declared as a fundamental human right within the Universal Declaration of Human Rights - which in turn should encourage and prioritise constitutional recognition of the right of all citizens to basic water supply and sanitation needs.
- The legal measures to support entitlement and enforce obligations can only be developed by the people of the countries and communities themselves. They should not be imposed by outside agencies, but those outside agencies can help with resources to help with national attempts in capacity building.
- Lawyers from the poorer countries should be enabled to work together to find answers to questions such as:
 - What rights do people have to have access to a clean and reliable water supply and to sanitation? and specifically are the poor included or excluded?
 - What "rules" govern those rights and what mechanisms exist to apply and enforce them?
 - Do public or private sector bodies exist which are under legal obligations to provide water and sanitation?
 - What are those obligations? and are they monitored and enforced?
 - What legal redress is available to an individual or community for a breach of those obligations? and specifically is that legal redress accessible to the poor?
 - Where the poor are particularly neglected is there the political will and the appropriate mechanisms to introduce a better system?

And then to develop, introduce and apply effective, accessible and enforceable legal systems.

- For the International community to work with national governments to help with provision and funding of a legal aid system which provides the poor with the access to the law to protect their rights and entitlements with respect to water supply and sanitation.
- For the international community to continue to support the work of national and community agencies and NGOs in their efforts with the funding and provision of water supply and sanitation infrastructure.

Recommendations of the NGO workshops

These recommendations are limited to those topics discussed during the NGO workshops at the Second World Water Forum

Water as a basic need

- Water is a basic right, whether this is formally recognised internationally or taken through struggle at the local level, and NGOs can encourage this through a culture of compliance.
- Declaring water as a basic right provides an aid for the protection of vulnerable groups - but needs to be coupled with improved access to justice.
- Customary water laws have an important influence in many regions and should be incorporated as part of a wider synthesis of modern ideas with traditional know-how and practices.
- In many regions access to water depends upon who holds power rather than anything to do with rights. Thus, a serious attempt for everyone to have access to water will require an adjustment of power relations.

Water and agriculture

- The link between water - trade - food security needs greater emphasis and research.
- The important focus must be to improve people's livelihood per drop of water rather than 'more crop per drop'.
- Water is not to be used to make money as a commodity, but to improve peoples' livelihoods.

Governance and Participation

- Improving the transparency of knowledge, information and decision making processes.
- To create political space in civil society; to involve all stakeholders in decision making and to encourage the participation of vulnerable groups and women.
- Capacity building is the foundation for better engagement with government at all levels.
- To participate in river basin management, communities as well as governments need to communicate across borders.
- Global institutions must be made more transparent and accountable to local communities.

Hazards

- Environmental hazards are part of the standard development model.
- In a hazardous situation, reducing the impact on human health must be the prime consideration to control an economic disaster as well as an environmental one.
- Human activities are causing long-term creeping hazards, e.g. Aral Sea, desertification. This must be prevented by action taken now in an integrated and participatory manner.
- The particular vulnerability of poor communities and refugee settlements needs highlighting.

Water as a social and economic good

- There must be continued development of people's empowerment to control and management the resource - popularising the approach to water management where communities organise and negotiate their needs.
- To tread carefully with privatisation and private sector participation. An overemphasis on the private sector as providers of water services is worrisome, particularly in light of the poor record of existing private utilities.

- Economic Pricing and valuation of water must consider the needs of the poor.
- Promotion of different types of partnerships to manage water services, such as between civil society and government or a Northern and a Southern public authorities.

Integrated Water Resource Management (IWRM)

- The present discussions around IWRM are too technocratic and the approach needs to become more participatory.
- Water management is about democracy and participation, not just about consultation.
- Micro-level experiences must be connected to the macro-level.
- Corruption and debt must be addressed as they are barriers to solving the water crisis.
- NGOs must enter a dialogue with decision makers and find a way to influence the process.

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Appendix 2

Some useful web addresses

Biotica Ecological Society

Conservation and environmental legislation in Moldova and regions.
www.scils.rutgers.edu/~olejka/biotica

BothEnds

Environment & Development service for NGOs in developing countries, includes full version of the People Orientated River Basin Management an NGO Vision.
www.bothends.org.areas/areas.htm

Centre for Science and Environment

Campaigns, research, publications, news.
www.cseindia.org

Centre for Action Research and Training

www.kalinga.net/cart

Council of Canadians

Citizens interest group on social and economic issues.
www.canadians.org

Global Water Partnership

Governing body of the Framework for Action.
www.gwpforum.org

IIED

www.iied.org

International Network for Participatory Irrigation Management

www.inpim.org

International Rivers Network

Supports local communities working to protect rivers and watersheds.
www.irn.org

IRC International Water and Sanitation Centre

Research, training and information on low cost water supply and sanitation in developing countries; includes Streams of Knowledge global coalition of resource centres.
www.irc.nl

International Water Management Institute

Research and capacity building agency of CGIAR.
www.iwmi.org

Medicins Sans Frontiers Aral Sea Area

www.msf.org/aralsea

NGO Steering Committee to UN C.S.D

www.igc.org/csdngo

Rainwater Harvesting

Research, reports, case studies, links on rainwater harvesting in the humid tropics.
www.rainwaterharvesting.com

Self Employed Womens Association

www.sewa.org

Vision for Water and Nature

Documents from the World Water Council vision process.
www.waterandnature.org

WaterAid

Water supply and sanitation development charity working through partners in Africa and Asia.
www.wateraid.org.uk

Water Research and Training Centre for a New Burma

Links, technologies, ethics, sustainable development & gender.
www.wrtcburma.org

World Water Forum

www.worldwaterforum.org

World Water Council

www.worldwatercouncil.org

World Wide Fund for Nature

www.panda.org/livingwaters

World Supply and Sanitation Collaborative Council.

www.wsscc.org

World Commission on Dams

www.dams.org

UNED Forum

- **Roadmap to 2002**
www.earthsummit2002.org/roadmap/default.htm
- **Stakeholders Toolkit for Women**
www.earthsummit2002.org/toolkits/women.index.htm
- **Freshwater**
www.uned-uk.org/freshwater
www.earthsummit2002.org/freshwater

Appendix 3

Ministerial Declaration of The Hague on Water Security in the 21st Century

1. Water is vital for the life and health of people and ecosystems and a basic requirement for the development of countries, but around the world women, men and children lack access to adequate and safe water to meet their most basic needs. Water resources, and the related ecosystems that provide and sustain them, are under threat from pollution, unsustainable use, land-use changes, climate change and many other forces. The link between these threats and poverty is clear, for it is the poor who are hit first and hardest. This leads to one simple conclusion: business as usual is not an option. There is, of course, a huge diversity of needs and situations around the globe, but together we have one common goal: to provide water security in the 21st Century. This means ensuring that freshwater, coastal and related ecosystems are protected and improved; that sustainable development and political stability are promoted, that every person has access to enough safe water at an affordable cost to lead a healthy and productive life and that the vulnerable are protected from the risks of water-related hazards.
2. These threats are not new. Nor are attempts to address them. Discussions and actions started in Mar del Plata in 1977, continued through Dublin and were consolidated into Chapter 18 of Agenda 21 in Rio in 1992. They were reaffirmed in Paris 1998, CSD-6 and in the Second World Water Forum and Ministerial Conference. The process will continue in the meeting in Bonn in 2002 (“Dublin+10”), through the 10-year review of implementation of Agenda 21, and beyond. These and other international meetings have produced a number of agreements and principles that are the basis upon which this and future statements should be built. The goal of providing water security in the 21st Century is reflected in the unprecedented process of broad participation and discussion by experts, stakeholders and government officials in many regions of the world. This process has profited from the important contributions of the World Water Council, who launched the World Water Vision process at the First World Water Forum in Marrakech, from the formation of the World Commission on Water in the 21st Century and from the development of the Framework for Action by the Global Water Partnership.

The Main Challenges

3. To achieve water security, we face the following main challenges:
 - Meeting basic needs: to recognise that access to safe and sufficient water and sanitation are basic human needs and are essential to health and well-being, and to empower people, especially women, through a participatory process of water management.
 - Securing the food supply: to enhance food security, particularly of the poor and vulnerable, through the more efficient mobilisation and use, and the more equitable allocation of water for food production.

Protecting ecosystems: to ensure the integrity of ecosystems through sustainable water resources management.

Sharing water resources: to promote peaceful co-operation and develop synergies between different uses of water at all levels, whenever possible, within and, in the case of boundary and trans-boundary water resources, between states concerned, through sustainable river basin management or other appropriate approaches.

Managing risks: to provide security from floods, droughts, pollution and other water-related hazards.

Valuing water: to manage water in a way that reflects its economic, social, environmental and cultural values for all its uses, and to move towards pricing water services to reflect the cost of their provision. This approach should take account of the need for equity and the basic needs of the poor and the vulnerable.

Governing water wisely: to ensure good governance, so that the involvement of the public and the interests of all stakeholders are included in the management of water resources.

Meeting the Challenges

4. We, the Ministers and Heads of Delegation, recognise that our gathering and this Declaration are part of a wider process, and are linked to a wide range of initiatives at all levels. We acknowledge the pivotal role that governments play in realising actions to meet the challenges. We recognise the need for institutional, technological and financial innovations in order to move beyond “Business as usual” and we resolve to rise to meet these challenges.
5. The actions advocated here are based on integrated water resources management, that includes the planning and management of water resources, both conventional and non-conventional, and land. This takes account of social, economic and environmental factors and integrates surface water, groundwater and the ecosystems through which they flow. It recognises the importance of water quality issues. In this, special attention should be paid to the poor, to the role, skills and needs of women and to vulnerable areas such as small island states, landlocked countries and desertified areas.
6. Integrated water resources management depends on collaboration and partnerships at all levels, from individual citizens to international organisations, based on a political commitment to, and wider societal awareness of, the need for water security and the sustainable management of water resources. To achieve integrated water resources management, there is a need for coherent national and, where appropriate, regional and international policies to overcome fragmentation, and for transparent and accountable institutions at all levels.
7. We will further advance the process of collaboration in order to turn agreed principles into action, based on partnerships and synergies among the government, citizens and other stakeholders. To this end:
 - We will establish targets and strategies, as appropriate, to meet the challenges of achieving water security. As part of this effort, we support the development of indicators of progress at the national and sub-national level. In carrying this forward, we will take account of the valuable work done for the Second World Water Forum.
 - We will continue to support the UN system to re-assess periodically the state of freshwater resources and related ecosystems, to assist countries, where appropriate, to develop systems to measure progress towards the realisation of targets and to report in the biennial World Water Development Report as part of the overall monitoring of Agenda 21.
 - We will work together with other stakeholders to develop a stronger water culture through greater awareness and commitment. We will identify best practices, based on enhanced research and knowledge generation capacities, knowledge dissemination through education and other channels and knowledge sharing between individuals, institutions and societies at all appropriate levels. This will include co-ordination at regional and other levels, as appropriate, to promote arrangements for coping with water-related disasters and for sharing experiences in water sector reform. It will also include international co-operation in technology transfers to, and capacity building in, developing countries.
 - We will work together with stakeholders to increase the effectiveness of pollution control strategies based on polluter pays principles and to consider appropriate rules and procedures in the fields of liability and compensation for damage resulting from activities dangerous to water resources.
 - Against the background of the preparatory work for and discussions in The Hague, we will work within multilateral institutions, particularly the UN system, International Financial Institutions and bodies established by Inter-Governmental Treaties, to strengthen water-related policies and programmes that enhance water security, and to assist countries, as appropriate, to address the major challenges identified in this Declaration.
 - We call upon the Secretary General of the United Nations to further strengthen the co-ordination and coherence of activities on water issues within the UN system. We will adopt consistent positions in the respective governing bodies to enhance coherence in these activities.
 - We call upon the Council of the Global Environmental Facility (GEF) to expand activities that are within the mandate of the GEF in relation to freshwater resources by catalysing investments in national water management issues that have a beneficial impact on international waters.
 - We welcome the contribution of the World Water Council in relation to the Vision and of the Global Water Partnership with respect to the development of the Framework for Action. We welcome follow-up actions by all relevant actors in an open, participatory and transparent manner that draws upon all major groups in society.

- We note the statements (attached to this declaration) made by the representatives of the major groups and welcome them as a clear reflection of their readiness to work with us towards a secure water future for all
8. Recognising that the actions referred to in paragraph 7, including progress on targets and strategies, are important and ambitious, we will review our progress periodically at appropriate fora, including the meeting in Bonn in 2002 and the 10-year review of the implementation of Agenda 21.
 9. The Ministerial Conference acknowledges with appreciation that a range of issues were discussed during the Second World Water Forum, and that the Chair of the Forum presented these issues to the Ministerial Conference. The importance of these issues is unquestionable; we will raise them for further consideration in relevant fora in the future and will consider their implications for our individual national situations.
 10. The challenges are formidable, but so are the opportunities. There are many experiences around the world that can be built on. What is needed is for us all to work together, to develop collaboration and partnerships, to build a secure and sustainable water future. We will, individually and acting together, strive to achieve this and stimulate and facilitate the contributions of society as a whole. To this end, we note with appreciation that pledges were made at The Hague (attached to our declaration). This Declaration reflects the determination of our governments and represents a critical step in the process of providing water security for all.
 11. We, the Ministers and Heads of Delegation, thank the government and people of The Netherlands for their vision and for their hospitality in hosting this conference and forum.

Agreed to on Wednesday 22 March, 2000 - In The Hague, The Netherlands

Appendix 4

Panellists at the NGO sessions

Integrated Water Resource Management

Turkil Jonch-Clausen - Global Water Partnership
Austen Davies - Medicins Sans Frontiers - Holland
Rocio Cordoba - IUCN Central America - Costa Rica
Ranil Senanyake - Neosynthesis Reseach Centre -
Sri Lanka
Reema Nanavathy - Self Employed Womens
Association - India

Water as a Social and Economic Good

Jim Lamb - Severn Trent plc - UK
Libby Wood - IIED - UK
Jon Briscoe - World Bank
Steve Bloomfield - UNISON/PSI - UK
Vijay Paranjypte - Econet - India
Medha Patkar - Narmada Bachao Andolan - India

Governance and Participation

Duman Thapa - Mountain Resources Management
Group-Nepal
Judith Thompson - Pronet - Ghana

Hazards

Ian Small - Medicins sans Frontiers - Aral Sea
Vyacheslav Magmedov - Ecote - Ukraine
SMA Rashid - NGO Forum for Drinking Water
Supply and Sanitation - Bangladesh

Water and Agriculture

Somashekara Reddy -Kudumbam- India
Oswald Quintal - Kudumbam - India
Fatima Jawara - Catholic Institute for International
Relations - UK

Water as a Basic Need

Peter Howsam - Cranfield University, UK
Daoud Tari Abkulla - Friends of Nomads
International - Kenya
Seydou Zone - Green Cross Burkina Faso

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