

The way forward





Sudip Sarkar, Sishu Mahal School, Jalpaiguri, India

The way forward

Developing mechanisms for action

This Framework for Action addresses itself to all parties and persons who are committed to act to achieve the Vision. The last four chapters have highlighted many actions in the water domain that need to be taken to help achieve a sustainable water future and the effective management of water resources for social and economic development. These actions form the centrepiece of the Framework for Action to be presented at the World Water Forum in The Hague, March 2000.

The success of international conferences and forums relies on the existence of a route map of follow-up actions, programmes and implementation mechanisms. Implementation on the ground is the only true measure of success – but experience shows that translating resolutions agreed at international meetings into activities that make a difference can be painfully slow. This part of the report, therefore, contains recommendations for what needs to be done immediately and invites the key players to pledge themselves to take action after the World Water Forum is over.

Thus the Framework is intended as a launch pad for local and country-level action of all kinds, with active, strategic support from international and regional players. Everyone concerned with the future of the world's water – individuals and governments, civil society and private enterprise, water operators and international organisations – is invited to adopt and adapt the proposed actions to their circumstances. Much action can begin immediately and an array of immediate and medium-term priorities is given in the previous chapters. At the same time this Framework needs to be used to develop action programmes at local, national and regional level.

Consensus is needed on three fronts. First, agreement on a set of water security targets and milestones. A process for agreeing the targets is presented, along with a draft logical framework for the actions needed. Second, consensus on a process for the formulation of action programmes immediately after the World Water Forum. This will form part of continued Framework for Action work, and a draft timetable is proposed. Third, mutual agreement about who will do what. Suggestions on this are presented with the aim of promoting self-pledging by the concerned players.

Completing the mandate

Agreeing water security targets

Targets, milestones and indicators are vital to any effort to promote water's political visibility and attract financial resources, and to monitoring outputs and impacts from those investments. A universally agreed set of global water security targets will highlight water's political importance as a life-giving and vulnerable resource in immediate need of better management and effective use. They are an essential ingredient to achieving the international development targets for 2015.

The indicative water security targets shown overleaf represent a synthesis of the deliberations of the many hundreds of people who have been involved in the Vision to Action process.

“The time for talk is over – now is the time for action. Not by a single group of water managers or a single nation. No, all individuals, peoples and nations have to reconsider their relationship with and behaviour towards water resources.”

Water and Nature Vision



Each government is therefore urged to develop their own national water security targets based on the global targets.

Indicative global water security targets

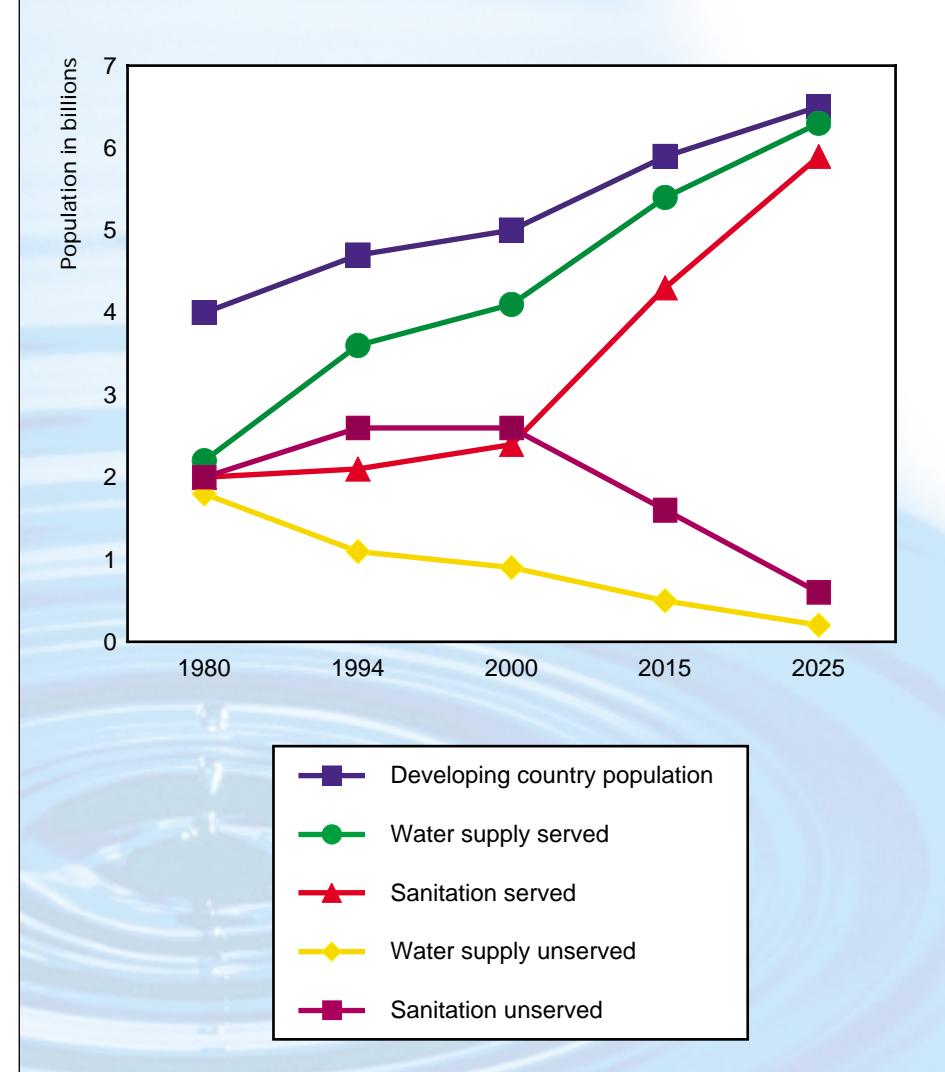
- 1 Comprehensive policies and strategies for IWRM in process of implementation in 75% of countries by 2005 and in all countries by 2015.
- 2 Proportion of people not having access to hygienic sanitation facilities reduced by half by 2015.
- 3 Proportion of people not having sustainable access to adequate quantities of affordable and safe water reduced by half by 2015
- 4 Increase water productivity for food production from rainfed and irrigated farming by 30% by 2015.
- 5 Reduce the risk from floods for 50% of the people living in floodplains by 2015.
- 6 National standards to ensure the health of freshwater ecosystems established in all countries by 2005, and programmes to improve the health of freshwater ecosystems implemented by 2015.

These indicative global water security targets will be discussed at the World Water Forum and the Ministerial Conference. They should then go forward to the OECD/DAC for consideration. The targets need the backing of clear definitions and indicator sets for such areas as IWRM policy implementation and resource and eco-system protection. Other sub-sets of targets will also be needed, for example on hygiene education, pricing and shared waters. Similarly, a system will be needed to monitor progress towards the targets and this should be done by the UN Administrative Co-ordination Committee (ACC) Sub-committee on Water Resources as mandated by the UN Commission for Sustainable Development. The ACC-SCWR should work with partners such as the GWP.

Much work has been done on assessing progress of coverage for drinking water supply and sanitation and the figures are presented in the graph below. This indicates that the targets are achievable for drinking water as long as the present momentum is continued. Recent indications are that sanitation coverage over the last six years has been much higher than hitherto, which gives greater confidence that the target can be achieved by 2015 even though a much greater effort will be needed. The other targets are relatively new and data must be collected to establish baselines for future assessment.

To be effective, the global targets must be replicated at the national level. Each government is therefore urged to develop their own national water security targets based on the global targets. 'Water security' should be nationally defined, and a consultative process established to set targets and milestones. The process should include regional consultations to ensure that targets are commensurate with regional water availability. Governments should use the global model and insert its own percentages or absolute numbers to suit its own conditions. National, regional and international reporting mechanisms for monitoring progress toward meeting the targets will be needed; the proposed *World Water Development Report* should thus include progress on achieving the global, regional and national targets.

Projected coverage for sanitation and drinking water supplies



The proposed World Water Development Report should include progress on achieving the global, regional and national targets.

The following process is suggested for finalising targets:

- ▶ Discuss the indicative global targets at the World Water Forum and the Ministerial Conference with the aim of establishing them as a basis for national targets and for further consideration by the OECD/DAC.
- ▶ Invite countries to formulate their own targets to be included as a first draft for presentation at the Stockholm Water Symposium in August 2001.
- ▶ The culmination of this process is scheduled for the Rio+10 meeting to be held in 2002 and the preparatory meeting in Bonn (so-called Dublin +10) in January 2002. By this time national targets should have been finalised and established within national Programmes for Action.
- ▶ Following the Rio plus ten meeting a monitoring system will be established and progress on meeting the targets reported in the proposed *World Water Development Report*.



Publication of a World Water Development Report

To sustain the momentum of The Hague meeting, there will need to be a recurrent focus on world water issues. The water movement will periodically need to remind itself of where it stands with respect to the ambitions of the World Water Vision, and to review the challenges that still lie ahead.

The proposed biennial United Nations *World Water Development Report* will provide this regular up-date and reminder. The Report will present the state of fresh water affairs in transparent and non-technical terms. Progress on meeting the targets will be a major feature. An index will also be developed to rank countries according to their water insecurity. This index can draw on DFID-supported research work on a Water Poverty Index, work in Sweden on a Social Water Scarcity Index that allows for both water availability and the social capacity to adapt to water stress, and the human water index developed by the Water Supply and Sanitation Collaborative Council.

Experts will further work with other stakeholders to develop a variety of detailed water indicators. These may include, for example, water use per capita and per US\$ of GDP, water pollution per capita, crop production per drop, the water ecological footprint, water victims (water borne diseases, floods, pollution), effective coverage of water and sanitation services, fish life indicators and aquatic bio-diversity, water financial flows, condition of lakes and aquifers, and water quality.

The Report will also bring together and analyse water statistics collected by national governments and international programmes, such as the work of the Global Environmental Facility, the Global International Water Assessment documenting coastal zone management (UNEP/GEF), the Global Plan of Action, the Water Resources Statistics (FAO), the Water Archive (WMO), the GEMS/ Water Programme, the World Conservation Monitoring Centre and the Water Supply and Sanitation Joint Monitoring Programme (WHO/UNICEF). Important reports on water topics will be summarised and reviewed.

To make global comparisons more meaningful, the Report staff, working with the ACC Sub-committee on Water Resources (ACC-SWR) and its members, will develop standardised water definitions and seek ways of making water data from different national sources compatible. The *World Water Development Report* will be prepared by the UN under the co-ordination of the ACC-SWR and in collaboration with others, such as the World Water Council.

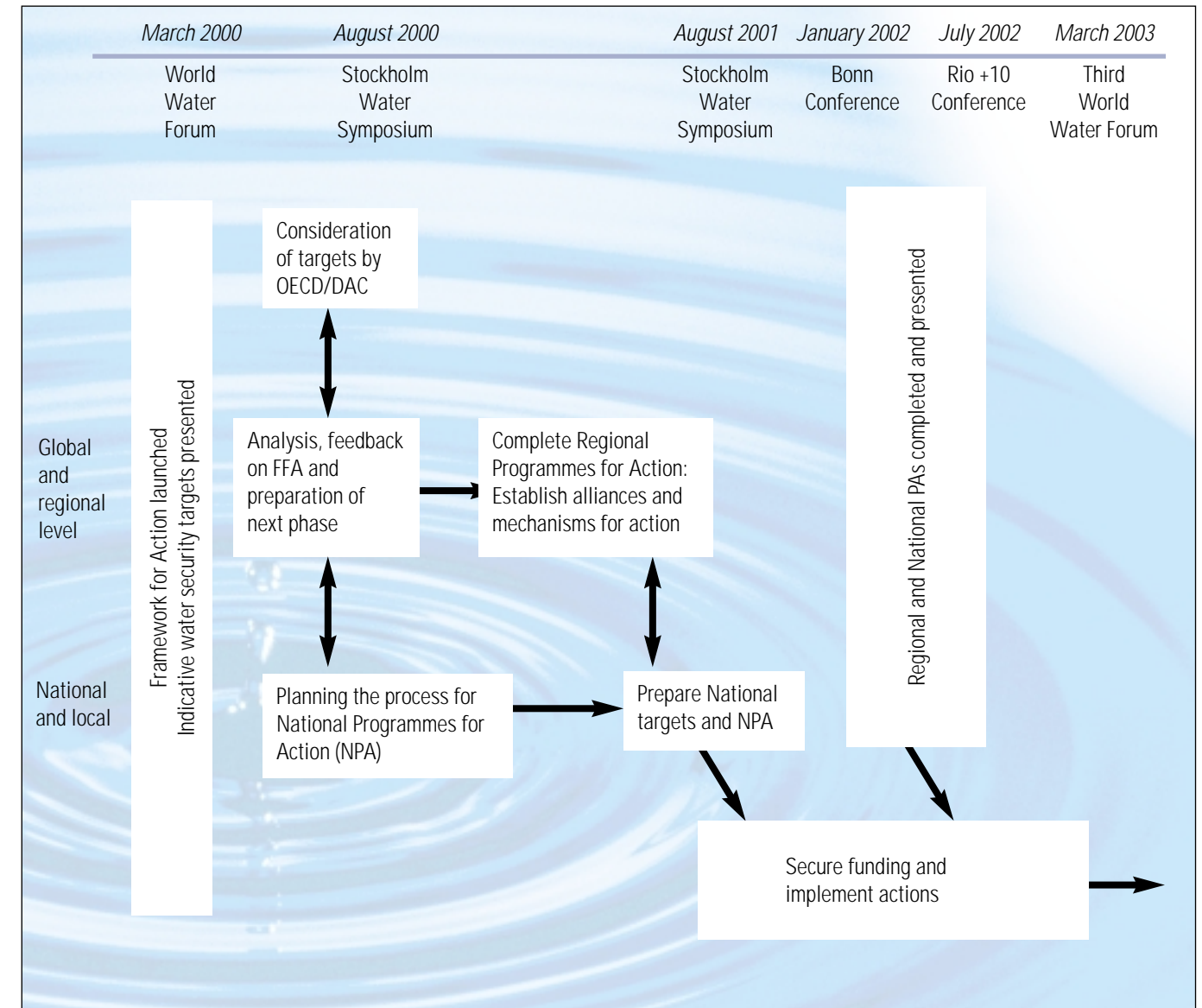
Completing the Framework for Action

The Framework for Action is a work in progress. This document is the working document for a wide-ranging discussion to be held at the 'Framework for Action Day' on 21 March 2000. Based on that discussion, the Framework will be finalised by the Global Water Partnership, working with its members and the wider water community.

Completing the mandate will require:

- ▶ Finalising the targets and logical framework in the light of the discussions at the World Water Forum.
- ▶ Completion of the IWRM Toolbox.
- ▶ A more detailed analysis of investments and financial flows at a central and regional level.
- ▶ Working with others to prepare detailed specific initiatives.
- ▶ Development of detailed Regional Programmes for Action by the Regional Technical Advisory Committees and other regional groups.

The Framework for Action is a work in progress. This is the working document for a wide-ranging discussion on the 'Framework for Action Day', 21 March 2000.



▶ Assisting countries in the preparation of National Programmes for Action.

The main points of this Framework for Action are given in a draft logical framework included as Annex IV. This will form the basis for the development of the detailed FFA. The diagram opposite shows an outline timetable of activities after The Hague Forum.

Various world conferences scheduled in the coming years will provide politicians and water professionals with opportunities to move the process forward. These events should be focused towards actions and mechanisms for action rather than principles. By August 2001 regional and national Programmes for Action will be completed and steps taken to secure adequate funding by 2002. In the meantime, immediate actions will commence and momentum will be developed. This initial period should see a mobilisation of the political will and the public demand needed to accelerate action to achieve the Vision to secure and the investment needed. Parallel to this process, community initiatives should be developed with NGO and donor support where requested.



The global Framework for Action will help to catalyse international action, but concrete action must take place at local and country level.

Preparing National and Regional Programmes for Action: the essential next step

The global Framework for Action will help to catalyse international action, but concrete action must take place at local and country level. The next step will be for countries to complete the Regional Programmes for Action (RPA) and prepare National Programmes for Action (NPA) with specific targets, logical frameworks, action mechanisms and investment planning. This should commence immediately after the World Water Forum. The Regional TACs of GWP will be able to assist Governments and others in this key activity. This process will be designed immediately after the Forum and completed ready for review at the Bonn and Rio plus ten meetings in 2002.

The preparation of these NPAs and RPAs requires commitment from governments to their development and subsequent implementation. The regional TACs have already established links with regional inter-governmental bodies, such as ASEAN and SADC, and with regional development banks such as the Asian and African Development Banks. The Regional Vision to Action reports have been presented and discussed, thus laying the foundations for immediate follow up. This is the first test of the political will of nations to really do something about the world water crisis.

The NPAs should be as wide-ranging as possible, to cover such politically hot topics as institutional reform, decentralisation, water pricing, private sector involvement. Governments and external financing agencies are encouraged to prepare programmes with the widest possible involvement of stakeholders. Civil society and community-based partners and the private sector are invited to develop their programmes of action in addition to, but consulting with, government administrations. Donors and governments should help community-based initiatives but not take over control. Investment will be forthcoming if contentious issues are debated openly in each country and timetables set for overcoming conflicting views.

Implementation: country and local level

Progress towards achieving water security targets will be made primarily at national and local levels, so the principal actors will be governments and communities. It is their responsibility to manage their own country and locality. But they will need help from a long supporting cast of actors, including NGOs, financing institutions, international organisations, research and training institutes, consultants, municipal authorities, private suppliers and operators (both local and international), networks, professional associations, and charitable bodies. Complementary and mutually supporting bottom-up and top-down approaches will be required to achieve a balanced approach and partnerships and coalitions will be needed.

Providing leadership – modernising government:

The achievement of targets will almost always require the involvement of governments in one form or another. Even when government is not the implementor, its policies can either facilitate or frustrate the initiatives of communities or the involvement of the private sector. Politicians react to public pressure, popularity and votes. They also take note of international concerns and exhortations. The Forum is an opportunity for governments to commit themselves to act to solve their country's water problems and prepare the required actions. For example, they should make more strenuous efforts to honour their commitment to the 1989 Convention on the Rights of the Child which articulates the right of every child to have access to safe water and adequate nutritious food.

Many governments began to address their water-related responsibilities following UNCED's 1992 Agenda 21 (Chapter 18), but progress is slow and often dependent on initiatives from external rather than internal agencies. Nevertheless, some impressive examples are beginning to emerge even from the poorest countries; Uganda and Burkina Faso, for example, are working to put IWRM into practice. Similarly in Nigeria, the newly elected government, through the Ministry of Water Resources, aims to establish pilot programmes in two northern water-scarce river basins, and South Africa is starting to operationalise the requirements laid out in its new water laws. Many other countries, Namibia for example, are preparing or revising policies and laws for water.

Where change has been slowest, however, is in institutional reform to revise the role of governments from direct action towards facilitating and regulating. Such changes are politically tough and require strong and visionary leadership and the proposed NPAs should identify lead groups who can push through the needed reforms.

Traditionally, governments have assumed the role of providers of services to the people. Even with the best intentions, this has often not worked because the approach is economically impractical and has stifled local ingenuity and led to inefficient and bureaucratic management. It is fair to say that the last decades of the 20th century saw a trend towards 'smaller government' with a shift from centralised to decentralised forms of administration and service delivery. This decentralisation has given rise to expanded roles for local governments, civil society and the local private sector; as already noted, it is these actors who will bear the burden of most of the practical actions advocated in this Framework.

Commitment to adopting new approaches for water management applies to industrialised and developing countries alike. The effectiveness of the new European Union Framework Directive on Water, an impressive piece of legislation enshrining many of the points promoted by the Vision and Framework for Action, may be weakened as different member states seek amendments to suit local political expediency. In the USA, tough decisions – for example on the Ogalalla aquifer – are often avoided and financial support to international agencies attempting to solve water problems delayed or never provided.

Local action – community management:

People – whether poor or rich – want to improve their own lives. A notable feature of the changing roles of the past decades has been the recognition that all people are active participants in their own development and cannot be treated only as passive beneficiaries. Every day, water and sanitation services and water resources systems around the world are improved through local action. This may be done by communities themselves, but is usually the product of external motivational, technical or financial support. Organisations, be they part of local government, civil society or the private sector, must be there to help.

Action at the community level enables local people to take the lead in making decisions that affect their lives and to design services that actually meet their needs. It makes use of local knowledge, resources and wisdom and generates a sense of ownership, which in turn leads to a commitment to pay for and look after them. It reduces people's dependence on governments as providers, and enables governments to focus on more strategic issues. Successful community action is often emulated by other communities, building local level confidence and strengthening skills to achieve further

“For common water resource management co-operation, strategies need to be developed. The Mediterranean region should look towards increasing regional and global co-operation not only on water issues but also on energy and markets.”

Mediterranean Vision



Opening water service delivery to private groups brings additional financing, shifts risk, and encourages competition and stronger regulation.

social and economic development. Exchange schemes can help to promote successes: 'seeing is believing'. A genuine acceptance of the virtue of community action requires government to devolve real decision-making power over activities at the local level.

Most well known examples of community action concern water supply and sanitation, but there are others. Local Agenda 21 initiatives under the Local Agenda 21 Programme, organised by the International Council for Local Environmental Initiatives (ICLEI), are underway in more than 2,000 local governments in 73 countries; many involve local water management programmes. Local government, civil organisations and water operators are encouraged to form partnerships and develop and implement tangible improvements in local water management. The participating organisations are supported through experience-sharing mechanisms, training and capacity building. The programme needs to be expanded to cover all regions of the world, with local partnerships learning from each other. Possible programme activities include local river clean-up projects, water saving projects and improved multi-functional irrigation operations.

Private sector – force for change

In a country where all water services (for domestic purposes or irrigation) are public, the burden of financing and risk falls entirely on the public sector and thus the public at large. Opening water service delivery to private groups brings additional financing and shifts part of the risk. It also brings competition and stronger regulation, which compels the public sector to improve. The private sector, operating in a sound legal and regulatory framework, has been the engine of growth in the developed world and in newly industrialised countries. In many countries, telecommunications and other services have improved and prices been reduced as a result of private sector involvement. The same can happen for water, with increased involvement of the private sector proving an engine for action to achieve the water security targets. As already emphasised, increases in private sector investment are essential to reach water security targets and attain the Vision.

The private sector comes in many forms and too often is perceived in the guise of large corporations. In most countries, smaller companies and the local private sector are equal if not more important than larger corporations. The latter tend to operate in the safer and wealthier environments where the operating conditions offer reduced risk and good returns. However, in many countries an industry has to be created from nothing and major international utility companies have provided the impetus and skills and created markets for urban water services in several countries (for example, Guinea and Argentina). A similar push is needed for irrigated agriculture.

Attracting private capital replaces funding that would otherwise have to be found from public sources or from borrowing. Thus, with better-off urban areas supplied by the private sector, government can focus on improving public services for the poorer rural population and urban slums. With good governance this benefit could extend to many more countries. Local smaller scale enterprises can grow and spread water services to areas where others – the public sector or the corporate sector – are unlikely to operate.

Implementation: international and regional level

Actions to improve allocation, management and use of water at the country and local levels can be greatly facilitated by policies and investments at the regional and international levels. Where the capacity is insufficient to tackle the urgent actions required, governments and communities need additional technical, managerial and capacity-building support from the international community or from regional neighbours. The wealth of expertise and examples of good practice that exist throughout the world must be made available to those who need it. Implementing the FFA and achieving the Vision will require a concerted effort from the international players to provide adequate support.

Global Water Partnership as a facilitating network for promoting action:

A body wholly focused on water in all its diverse functions is needed to provide a forum for co-ordinated action to deliver water security. The GWP has been created to play this role. The GWP, however, is a partnership not an implementing agency. It aims to facilitate and promote good water governance and get action implemented through its Associated Programmes. The GWP will continue to work with and through the widest possible set of partners (including people from civil society groups, UN organisations, government offices, financing agencies, business, regional entities, recipient groups, professional associations and international NGO's and resource centres) in building on the Framework and to support the development and implementation of action programmes.

Sustaining momentum after the Forum will mean ensuring continued active participation of all the members of the Partnership. GWP will continue to act as an umbrella for the growing number of coalitions and networks working towards global water security. GWP will, together with its partners, identify action programmes, provide a market place for matching financiers and providers of services and document progress. The on-going international push for water will be maintained through the Bonn conference in January 2002 (Dublin plus 10) and at the Rio plus 10 meeting in mid 2002. Completing the Framework for Action will be a significant contribution to these events.

During 2000, the Partnership intends to further develop the capacity of its regional coalition partners to contribute to the achievement of the Vision. In particular, the GWP Regional Technical Advisory Committees (RTACs) are seeking to evolve into Regional Water Partnerships and in some areas spin-off National Water Partnerships. These Water Partnerships will have a far wider representation and larger membership, ideally suited to helping to convert into action the recommendations of the World Water Forum and foster regional co-operation. The Regional Water Partnerships are envisaged as self-sustaining networks developing and promoting region-specific actions in support of water targets, under the Global Water Partnership umbrella. In some regions they may link with regional economic councils, as is already happening with the ASEAN Network of Water Resource Agencies. The regional focus of the GWP will also be able to promote and provide support for the programmes of action at all levels.

“International organisations should increasingly be directing their limited resources to those countries that have embarked on paths of equitable and sustainable reform.”

World Water Commission



The Financial Support Group of the GWP will bring together concerned financing agencies in support of post-Hague developments.

At the same time, the Financial Support Group (FSG) of the GWP will bring together concerned financing agencies in support of post-Hague developments. The FSG provides a mechanism for getting co-ordination on actions to be taken by financing agencies and stimulating funds for the implementation of the FFA. Co-ordination of external funding will maximise cost-effectiveness. The creation of Regional Financial Support Groups could extend this co-ordination to the regional level and improve access to external funds for implementing programmes for action. The FSG can add important strategic funding to boost sound government strategies but should not be seen as the main source of investment.

The World Water Council: think-tank for the water future

The World Water Council convened the 2nd Water Forum and the World Commission on Water to raise the political and public profile of water. They will continue to work towards raising awareness of critical water issues based on the Vision. They will also organise a 3rd World Water Forum in 2003 to follow up progress on achieving the Vision, highlighting a topic that has been of particular prominence at The Hague. The WWC will also take a special interest in promoting the Vision and orchestrating the water movement to raise awareness. The latter can be done in partnership with the GWP Regional TACs giving wide access at regional and national level.

External support agencies and intergovernmental organisations:

Among the many vital external agencies that need to play their part in supporting actions at the country level, the UN organisations and International Financing Institutions will have a special role. They carry considerable political and financial weight and often set the global agenda for action. However, these institutions are not homogeneous, nor do they always act in concert; the fragmented nature of water management within governments is mirrored within the international community.

The UN organisations provide a wide range of expertise on many aspects of water and have helped to develop international consensus on policy principles. Different UN organisations pursue specific programmes linked to their comparative advantage. Over time, and with the creation of new organisations, many mandates have become blurred, with resulting overlaps. Organisations often compete for scarce resources, which works against UN family cohesion. Stronger co-ordination can most aptly be provided by the ACC Sub-committee on Water Resources; helping to overcome duplication or conflicting approaches.

The UN organisations could use their considerable weight to raise awareness and political will within member countries to give water a higher profile and status at national government level. The political clout of the UN could be applied to help solve shared water problems at the regional level and strengthen regional bodies.

Examples of UN regional support:

The UN Commission for Latin America and the Caribbean (ECLAC) has been instrumental in advising and facilitating the introduction of water laws, water markets and river basin management in several member countries, recently working with the Brazilian government on its water reforms.

The UN Economic Commission for Europe (ECE) has worked tirelessly to establish the European Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992) which has now been endorsed by the member countries.

Within External Support Agencies (ESAs) water resources issues are often spread between several departments. Structures are needed so that a single entity co-ordinates all water-related activity, providing co-existence between ensuring specificity and ensuring a holistic view. Co-ordination should overcome the undesirable forcing together of all water-using departments; these have many other important links such as water services with urban finance, irrigation with agriculture, hydropower with the energy sector. ESAs should thus make efforts to co-ordinate and apply IWRM as the strategic approach to decision-making.

There are many examples of such co-ordination mechanisms. The World Bank, for example, is creating a formal 'water resources sector board', with responsibility for ensuring that all activities on water resources are consistent; it has also recently created 'lead regional water advisors'. The Inter-American Development Bank has created an Office of the Water Advisor. The European Commission and EU Member States have established a Water Expert Group. This group meets twice yearly and brings together water advisors from EU donor countries. ESAs have a special responsibility to ensure that major water development projects – such as for multi-purpose dams – do not cause macro-economic distortions, but instead are adequately integrated and have a healthy multiplier effect on the local economy.

Alliances for water:

There are far too many important international and regional players involved in water to mention each one individually here; there is important work for all of them in translating vision to action. The very large number of actors in the water domain means that alliances and partnerships will need to be formed to tackle problems holistically. Two areas where such partnerships will be of special importance will be for conflict resolution and for capacity building, to enable national and local institutions improve their capability to adopt new IWRM approaches and to champion efforts to spread 'water wisdom' in the wider society.

There are many existing networks and linkages that can serve as the basis for new alliances and partnerships. Many have been mentioned earlier in the report; some specially useful examples are described below.

Partnerships at geographic Levels.

Partnerships have crucial and specific roles to play at the international, regional, national and local levels and the Global Water Partnership and World Water Council are key institutions for the promotion of alliances. Many international NGO, notably IUCN, were involved in the Vision exercise, and are becoming increasingly involved in dialogue with sectoral organisations to broaden participation. The Ramsar Bureau are working with a range of partners to establish a River Basin and Wetlands Initiative. Other international NGOs are encouraged to play their part in developing linkages in the search for ways to achieve the Vision.

Many problems exist at the regional level. Partnerships at this level include the regional UN bodies (ECA, ECLAC, etc.) and the regional TACs of the GWP discussed above. They provide a forum for exchange of ideas among water experts and decision makers and serve as venues for exchange of regional experience on cross-boundary water issues. The value of such opportunities for dialogue and problem resolution is echoed at the national level. National partnerships in some countries are providing advice to decision-makers and raising public awareness of water management issues. Successful national partnerships bring together local water management experts, politicians and policy makers; groups may be started by professional associations, water research centres or NGOs.

"There has been recognition of joint responsibility for integrated management of Australia's water resources, marked by partnership agreements and joint ventures between the public and private sector, and water-using communities."

Australian Vision



Local partnerships of municipalities, water operators, NGOs and citizen groups can work together to find local solutions for local issues.

Local problems are of the most direct relevance to the general public. Local partnerships of municipalities, water operators, NGOs and citizen groups can work together to find local solutions for local issues. The groups established by the Water Supply and Sanitation Collaborative Council and the implementation of local Agenda 21 projects provide excellent models for such grassroots partnerships.

Private-Public Partnerships.

Partnerships that bring together private and public entities have the potential to lead to strong water sector reforms. Two examples that have identified the value of efficient business practices are the *World Business Council for Sustainable Development* and the *Chief Executive Officer panel*, established as part of the Vision exercise. Another model of private-public partnerships involves people from commercial water businesses, members of civil society and public sector employees. An example is the *Business Partners for Development*, established with the collective aim of improving access to safe water and effective sanitation in developing countries. The *Business Partners for Development, Water and Sanitation cluster* have worked in Argentina, Bolivia, Colombia, Haiti, Indonesia and South Africa to introduce a range of water-wise initiatives such as tax credits for infrastructure development in poor neighbourhoods and more effective health and hygiene education. Similar programmes have recently started under the GWP in Africa and Asia through the *Water Utilities Partnership*.

Professional partnerships

Professional associations have been active in the Vision process. In future they can mobilise their members to adopt and promote the ideas and actions proposed in the Visions and Frameworks for Action. Groups with a particular focus, such as gender, can work together to strengthen individual group efforts. An umbrella organisation is needed for water and gender actions, building on existing gender networks, this could be formed under the auspices of the Global Water Partnership in order to mainstream gender issues related to water.

Inter-disciplinary partnerships can bring social science and technology closer. For example, a proposed new programme called HELP (Hydrology for Environment, Life, and Policy) will adopt a new approach to hydrological problems by integrating three communities (scientists, water managers, and policy makers) as part of the UNESCO International Hydrology Programme. This model can be replicated in other water domains.

The future development of the Framework for Action and its conversion into concrete action at the local level depends on such alliances and partnerships as there is so much to do in such a short time. All will need to assist governments and communities to achieve their visions for 2025.





Debashri Ghosh, Kadamtala Girl's High School, Jalpaiguri, India

Annexes

ANNEX I

International Conference on Water and the Environment – Dublin 1992

GUIDING PRINCIPLES

- Principle No 1** **Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment**
 Since water sustains life, effective management of water resources demands a holistic approach, linking social and economic development with protection of natural ecosystems. Effective management links land and water uses across the whole of a catchment area or groundwater aquifer.
- Principle No 2** **Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels**
 The participatory approach involves raising awareness of the importance of water among policy-makers and the general public. It means that decisions are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects.
- Principle No 3** **Women play a central part in the provision, management and safeguarding of water**
 This pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources. Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them.
- Principle No 4** **Water has an economic value in all its competing uses and should be recognised as an economic good**
 Within this principle, it is vital to recognise first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognise the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.



ANNEX II

Introducing the IWRM Toolbox

What is the IWRM Toolbox?

The rationale for the Framework for Action is to provide a structured process for changing the world from the current global scenarios to the Vision for the future. In order to achieve this, many things need to happen: some investments will be necessary and people's behaviour will need to change as they become more aware of the global water crisis and respond to its challenges.

There is a wealth of experience worldwide in actions, investments, policies and options for improving water resources management; options range from social change tools to infrastructure building and the application of new technologies. This experience and knowledge is held variously by practitioners, policy makers, theorists, experts and users of water – and not all these groups can be aware of all the options. The aim of the Toolbox is to bring together this global experience into an accessible and helpful compendium of options, to support the Framework for Action process and the people who must carry it out.

The Toolbox offers a listing of policies and actions which can be taken; more importantly it shows where these tools have been used, and builds on the global experience. The Toolbox provides ideas and experience to water management for the future. Thus the Toolbox is not prescriptive; it does not say this action will achieve this result – and should therefore be used worldwide. What it does say is: here are various things which can be done, and this is where they have worked, as well as some of the things to be aware of in using these tools. The Toolbox will be further developed after the Forum and, building on experience, it will be set up on the Web so that it is widely accessible. This will enable comments and experience to be added so that it develops over time with participation of all the members of the Vision and Framework for Action process.

What does the Toolbox contain?

The Toolbox is organised in a series of tables on the following topics:

- Administrative changes
- Economic instruments
- Social change instruments; information, education and communication
- Regulatory frameworks and legal instruments
- Investment and financial instruments
- Technology and infrastructure
- Capacity building.

A draft of a page from the section on economic instruments is shown opposite. Under each heading, there are a number of possible 'tools' or actions – each has a reference number and these can be used to cross-

The Toolbox offers a listing of policies and actions. More importantly it shows where these tools have been used, and builds on experience.

Ref	Tool	Characteristics and application	Lessons and actions	Case studies and references
2.3	Economic instruments for reducing polluting discharges			
2.3.1	Charging on the basis of pollutants discharged	Charges can be levied on pollutant discharges on basis of <i>load</i> or <i>concentration</i> , either to raise revenue for environmental management and/or to provide incentives to reduce polluting discharges and hence reduce burden of charge.	Most effective when the charge rate is closest to the cost of pollution control. Charge schemes may be structured to tackle a wide range of pollutants; but costs of administration rise with complexity. Useful for giving signal to polluters of damages they impose.	In Europe – used in Netherlands, Germany, France. Also widely used in FSU and Eastern Europe, and China. Sunman et al – Practical Application of Market Based Instruments for Environmental Management, DFID 1999
2.3.2	Tradable discharge permits	Individual polluters can be allowed the right to buy and sell quotas of emissions subject to an overall upper quota on total emissions.	Can be effective in reducing overall level of pollution to specific areas (lake or estuary). Need to ensure that initial allocation of rights or permits is equitable. Trading costly in information/enforcement.	Not much used for water pollution although often discussed. In use in Shanghai.
2.3.3	Taxing or price reform on certain pollution substances	Examples include introducing charges/taxes or removing subsidies on persistent pesticides to reduce their application	Sometimes price reform/change happens for other reasons (eg shortage of foreign exchange) so reduced pesticide use improves water quality without reducing agricultural output.	Indonesia reduced subsidies on pesticides from 85% of retail price in 1985 to zero by 1988 – pesticide use fell by 90% and rice yields rose by 20%. Carruthers, Wye College, London University

reference between tools and – ultimately – outcomes. The first column names the tool or action; the second column summarises the characteristics of the action; and the third suggests some of the lessons arising from experience and appropriate actions. The final column gives an indication of where the tool has been used, and points to other reference sources.

The last column is perhaps the most important. Learning from the experience of others, both good and the bad, is a potent means of communication and the aim is to build up a series of profiles of best practice for the various tools.

The Toolbox will evolve over the coming year and will only be as good as the inputs provided by the wealth of experienced people. It is everybody's toolbox and a process will be established after the Forum to develop it as a truly practical aid to achieving the Vision.



ANNEX III

Note on assumptions made estimating the costs of achieving the World Water Vision

Introduction

There are many unknowns and uncertainties in estimating not only the level of financial flows to the water investments and operations at present but also in assessing the costs that may be involved in trying to achieve the Vision over the coming 25 years. Nevertheless it is vitally important to try to assess financial resources needed so that policy shifts and actions can focus on mobilising resources, overcoming shortfalls and removing blockages. It is recognised that resources include community participation as well as money. However, even in community built projects time has opportunity cost and therefore it is appropriate to consider global costs in terms of dollars. It is also clear that the type of technical approach to delivering water services and the absorptive capacity of communities varies widely between and within regions.

The report includes some very broad estimates of costs of the Vision. These are very broad brush, scarcely more than 'back of the envelope', but they form the basis for more careful analytical and strategic work over the coming months. This note sets out the main sources of data and assumptions made. It is in the nature of this exercise that assumptions can be changed and tested. At present all the analysis has been based on global figure, distinguishing only between populations in the developing and developed world and rural and urban communities.

Within the water world there are a number of estimates of access to services. A degree of rigour has been applied to the estimating process using numbers transparently. This has been done with the scenario development team of the Vision Management Unit to ensure as far as possible that data are consistent. Although the scenario development modelling process took longer than anticipated, basic data such as population, population trends, and access to water services were assembled by the modellers, notably Kassel University and the Stockholm Environment Institute. In the next phase of analysis this work will be refined. The specific sources and assumptions/approaches are noted below.

Estimated global population billion (work in progress)

	1995	2025	Notes
World population	5.6	7.4–8.0	
Developed world	1.0	1.0–1.2	
Developing world	4.6	6.4–6.9	Growth at about 1.32%
Of which urban	1.8	3.6–4.0	Growth at about 2.66%
Rural	2.8	2.7–2.9	Growth at about 0.1% pa

Vision Scenario Development Panel, November 1999

It is clear that the absorptive capacity of communities varies widely between and within regions.

Access to drinking water and sanitation

Access to drinking water derived from World Resources Institute, the Joint Monitoring Programme (JMP), and UNICEF statistics. Data are not available for all countries, so they have been aggregated by region (the 18 SDP regions) and a broad assessment of the access to drinking water as an approximate weighted average.

For sanitation, the same level of data is not available, but recent data from the JMP suggests that the number of people without access to sanitation is in the order of 2,400 million. Taking this as a baseline, the numbers have been distributed by region assuming that access to drinking water and access to sanitation would be distributed in a similar pattern.

Business as Usual and the Vision scenarios

Access to drinking water has been growing at about 90 to 100 million people served per year over the past decade. This is assumed to continue. The Vision scenarios are from Vision 21 – 95% of the population with access by 2025. This could be achieved earlier but indications are that some current data on service coverage is over-estimated. Also it is reasonable to assume that the marginal cost of water supply will be rising as those populations for whom it is least cost or easiest are likely to be served before those where access is technically or geographically more difficult or where there is greater poverty.

For sanitation, access is lower and has been barely keeping pace with population growth. This is reflected in growth of 6-8 million extra people covered per year from 1984-1994. Vision 21 aims for 90% coverage by 2025 and this is the assumption used here for the cost of the Vision.

Wastewater treatment is essential for the restoration of surface and ground water quality. In the absence of 'current situation' data, it is assumed that 10% of effluent is treated before discharge to water bodies at present; the Vision scenario is based on 20% wastewater treatment as a target for 2025. There is even less data about industrial effluent treatment; and the costs and coverage are assumed to be half that of municipal type waste in order to make some indicative estimate. More work will be done on this after the Forum.

Costs and technical solutions

In order to achieve the Vision, there are a number of technical and management options that can be used. They have different costs and the ideal would be to seek a least cost strategy for achieving goals. As a first step, an estimate of the types of technical options for water supply, sanitation and wastewater treatment has been made based on the proportion of the population served by different methods. (eg pit latrines may be cheap but they are not very useful in densely settled urban areas, and nor efficient where there are existing sewers nearby.) The following table summarises the different techniques and costs, an estimate of the percentage of population served by each and a capital cost per unit used. An estimate of 15% of capital cost is added to cover O&M and replacement.

The sources of the data are shown in the tables – they are partial and open to suggestion, strengthening and debate, providing merely a starting point.



Considerably more investment will be needed for drainage and reclamation of degraded lands and on upgrading and modernising systems .

Cost assumptions for water supply and sanitation provision

URBAN	Cost US\$ per person	% Applicable
New sewerage	300	25%
Basic pit latrine	25	25%
Condominial investments	75	25%
Extensions to existing sewer	150	25%
Water supply Standpipe	50	75%
Household connection	200	25%
RURAL		
Sanitation and hygiene	10	100%
Potable water	15	100%
Costs of treating municipal sewage		
Low cost, small town (1)	27	20%
Low cost, village (1)	140	20%
Urban, population 2 mn (2)	50	60%
Weighted average	63	
O&M cost at 15%	10	

(1) Costs for low cost modular small scale treatment plants, costs from Biwater Ltd, as used in 1998 in ERM 1998, Syria NEAP

(2) Derived from Howard Humphrey Ltd, Damascus sewerage project 1997 and ERM Pollution Abatement Cost estimation, 1991, and Ashact Ltd

Agricultural development

Information on irrigated agriculture, a major water-related cost item, is not readily available. Considerably more work is needed to develop better estimates. Present funding is estimated to be US\$30–35 billion per year and will have to increase to US\$40 billion per year, but these figures are very tentative. Although investment on new area development is likely to be less than in the past, considerably more investment will be needed for drainage and reclamation of degraded lands and on upgrading and modernising systems to more water efficient methods. More work will be done on estimating costs after The Hague Forum.

Tentative cost estimates for irrigated agriculture

Item	Area	Unit cost	Cost
	Million ha/year	US\$/ha per year	US\$bn per year
New development based on 10% increase in irrigate area in 25 years	1.1	10,000	11.0
Drainage and reclamation based on estimates of 30 to 35m ha over 25 years	1.4	2,500	3.5
Rehabilitation and modernisation assuming 25 year life for systems and 40% in need of modernisation	4.4	2,500	11.0
Productivity improvements/upgrading needed on half of existing area	5.4	1,250	6.7
Marketing and institutional		Say 10% of total	3.2
Operation and maintenance		Say 15% of total	4.8
Total			40.2

Estimates based on present irrigated area of 270 million ha

Regional costs

Global costs are a useful indication but more important are regional figures. The Framework for Action Unit has worked with the GWP South Asian TAC to develop a first estimate of costs for the South Asia region as a case study. This will be included in the South Asia Vision. The outline study will form the basis of a more detailed estimate after the Forum. Similar estimates will be needed for the other regions.



ANNEX IV

First Draft of Global FFA Logical Framework

Intervention logic	Targets
<p><i>Goal:</i> Economic well-being and social development under environmental sustainability and regeneration improved</p>	<p><i>International development targets met, in particular:</i></p> <ol style="list-style-type: none"> 1 The proportion of people living in extreme poverty in developing countries should be reduced by at least one-half by 2015 (Copenhagen) 2 The death rate for infants and children under the age of five years should be reduced in each country by two-thirds the 1990 level by 2015 (Cairo) 3 There should be a current national strategy for sustainable development, in the process of implementation, in every country by 2005, so as to ensure that current trends in the loss of environmental resources are effectively reversed at both global and national levels by 2015 (Rio) 4 Reduce by half the number of undernourished people on the earth by 2015 (Rome)
<p><i>Purpose:</i> Global water security provided through efficient, equitable and sustainable management and use of water.</p>	<p><i>Global water security targets achieved:</i></p> <ol style="list-style-type: none"> 1 Comprehensive policies and strategies for IWRM in process of implementation in 75% of countries by 2005 and in all countries by 2015. 2 Proportion of people not having access to hygienic sanitation facilities reduced by half by 2015 3 Proportion of people not having sustainable access to adequate quantities of affordable and safe water reduced by half by 2015 4 Increase water productivity for food production from rainfed and irrigated farming by 30% by 2015 5 Reduce the risk from floods for 50% of the people living in floodplains by 2015 6 National standards to ensure the health of freshwater ecosystems, established in all countries by 2005, and programmes to improve the health of freshwater ecosystems implemented by 2015
<p><i>Outputs:</i> Political will to mobilise people and resources secured</p>	<ol style="list-style-type: none"> 1.1 Complete targets and logframe for water security by August 2000 1.2 Regional and National Programmes for Action completed by August 2001 1.3 Programmes for Action discussed at the Bonn Conference (Dublin+10) in January 2002 1.4 Programmes for Action and national targets prepared by governments before the Rio plus ten meeting in mid 2002. 1.5 Third World Water Forum (on a major water issue arising from the Second World Water Forum) held in March 2003 1.6 First edition of <i>World Water Development Report</i> published March 2002
<p>Effective water governance for IWRM realised</p>	<ol style="list-style-type: none"> 2.1 IWRM mainstreamed in policy and strategy implementation processes in all countries by 2005 2.2 Co-operation mechanisms between riparian states in all major river basins developed and strengthened by 2005, and shared waters agreements formulated by 2015 2.3 The economic value of water recognised and reflected in national policies and strategies by 2005, and mechanisms established by 2015 to facilitate full cost pricing for water services 2.4 GWP Toolbox of options for water management developed by 2001
<p>Effective water wisdom generated</p>	<ol style="list-style-type: none"> 3.1 Water Awareness initiatives instigated in all countries by August 2001 3.2 Capacity for informed decision-making at all levels and across all stakeholders increased by 2005 3.3 Investment in research on water issues increased by August 2001 3.4 Hygiene education in 80% of all schools by 2010

<p>Solutions to urgent water priorities prepared: protecting the resource, enhancing crop productivity per drop, improving sanitation, urban upgrading, improved flood management.</p>	<ol style="list-style-type: none"> 4.1 Programmes to tackle urgent priorities formulated, resourced and under implementation in all countries by 2005 4.2 Action programmes to protect surface and groundwater resources prepared and in process of implementation by 2003, and defined standards achieved by 2010 4.3 Task force on food-water security reports by end 2001 and action programmes for enhancing crop per drop prepared and in process of implementation by 2003 4.4 Action programmes for sanitation formulated and in process of implementation, and knowledge/information about good hygiene practices made universal by 2003 4.5 Action programmes to integrate water needs (supply and waste) with spatial planning and social and economic needs prepared and in process of implementation by 2003 4.6 Action programmes for flood preparedness and protection formulated and under process of implementation by 2003
<p>Investment needs for water security identified and agreed</p>	<ol style="list-style-type: none"> 5.1 Investment needs for closing the resources gaps identified and (indicative) investment plans developed in all countries by 2002. 5.2 Mechanisms for mobilising new financial resources identified and under process of implementation by 2003 5.3 Investments committed to the water domain doubled by 2005 5.4 Private sector-led International Research Foundation established by 2002
	<p><i>Activities:</i> Detailed activities will be developed as part of the continuing work to complete the framework for action.</p>



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