



INNOVATIVE STRATEGIES FOR WATER AND SANITATION
FOR THE POOR: ACCESS AND AFFORDABILITY

Thematic Background Paper

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EXECUTIVE SUMMARY

Can new “people-centred” approaches bring about a sanitation revolution and transform the lives of billions of people in a generation. A growing band of committed individuals is confident that such a revolution is indeed possible. They are the “ambassadors” for Vision 21 – Water for People, which was launched at the Second World Water Forum and Ministerial Conference in The Hague in March 2000, and is now being converted into action programmes in the participating countries.

At the heart of the action programmes are strategies for mobilising the energy and creativity of individuals and communities to plan and direct their own drinking water, sanitation and hygiene improvements. Such improvements are invariably based on affordable and locally sustainable systems and mobilise local resources to the optimum extent. The strategies involve some fundamental changes in approach by all stakeholders involved in the water and sanitation sector. Not least they require liberalising and empowering measures by governments to enable local actions within new regulatory frameworks. The changes need to merge local water and sanitation initiatives into integrated basin-wide water resources management strategies – a major institutional and legislative challenge. Although these improvements and changes present new ways of ‘doing business’ they are essential prerequisites for sustainable forms of development. Throughout the discussion below, key components of sustainability are underlined, including effectiveness, equity, efficiency and replicability.

In this paper we look first at the current situation in relation to water supply and sanitation service coverage, the problems associated with the huge numbers of unserved poor, and the types of responses which could have a significant impact on coverage in the coming years. This is followed by examples of interventions that have proved successful in addressing water and sanitation problems in recent years. Finally we examine in more detail, the changes needed to accelerate provision of affordable water and sanitation systems, and the implications for policy makers seeking to achieve the goal of universal coverage by 2025. The focus of the paper is VISION 21, as this provides a common platform for individual and partnership initiatives.

1. TODAY'S SITUATION, TRENDS AND TARGETS

The poor pay a terrible price for their poverty. Squalor, disease and death in and around Third World cities are daily reminders of the societal divide that condemns more and more people to a marginal and undignified existence. Inadequate water and sanitation services add to the indignity, increase the disease burden and make it ever more difficult for the deprived to escape the poverty trap.

WHY? Why do politicians, the media, civic leaders and other opinion formers in society stand by while 6,000 people die every day from diarrhoeal disease? Why do we continue to pay the heavy price in health care, lost productivity and environmental degradation, rather than the lesser cost of fostering improved health and hygiene through sustainable water and sanitation services?

Policy makers may justifiably answer that slow progress in providing satisfactory services for the poor is not blind acceptance of the inevitable. Certainly there have been many past efforts to accelerate the provision of water and sanitation services. By labelling the 1980s the International Drinking Water Supply and Sanitation Decade, the United Nations focused government and donor attention on the sector. Many more people have benefited from improved services in the last two decades than in any previous ones. But the pace remains too slow. There are still 1,100 million people without access to an acceptable supply of drinking water and a shameful 2,400 million without hygienic means of sanitation. Improvements are barely matching population increase. Business as usual will not achieve fast enough progress.

2.1 Behind the statistics

In November 2000, the World Health Organization, UNICEF and WSSCC published up-to-date figures on the global situation. *Global Water Supply and Sanitation Assessment 2000 Report (Assessment 2000)* records that throughout the 1990s an average of 224,000 people a day gained access to improved water supplies and 205,000 people a day had improved sanitation. Over the same period though, the world's population grew by 216,000 each day.

When the figures are projected forward though and demographic trends are taken into consideration, the picture changes dramatically. Of the present world population of 6.05 billion people, 3.2 billion (53%) live in rural areas and 2.85 billion in urban areas. By the year 2025, according to the Population Council, the rural population will be virtually unchanged at 3.3 billion¹, while urban dwellers will by then number over 4.5 billion (58% of the 7.8 billion total). Clearly, the challenge of overcoming the large backlog in improved rural services is more than matched by that of keeping pace with urban growth.

The twin challenges of reaching present and future unserved populations with acceptable water, sanitation and hygiene services were addressed in VISION 21, the *Water for People* component of the World Water Vision presented at the Second World Water Forum in The Hague in March 2000. VISION 21 includes indicative water and sanitation coverage targets for 2015 and 2025². The aim is to halve the percentage of people unserved by 2015, and by 2025, everyone should have access to safe water and adequate sanitation. These targets have subsequently been endorsed (for water supply and implicitly for sanitation) at the Millennium Summit.

To reach the 2015 target means that an additional 1,018 million urban dwellers and 581 million rural inhabitants will need to have improved water supply services during the next 15

¹ There is a diminishing rate of increase in rural populations until about 2020, after which it begins to decline and all growth is in urban areas.

² In VISION 21, communities, cities and countries are expected to set their own targets.

years. That means improved services for 292,000 people a day, a 30% increase on the progress achieved in the 1990s. The sanitation target implies improved facilities for 1,085 million urban and 1,089 million rural people. That converts to 400,000 improved services a day in all, almost doubling the progress achieved in the last decade.

The trends and targets are illustrated graphically in the series of graphs on the following pages. Note the steepening trend lines, indicating the acceleration needed to meet the sanitation goals. In particular, the graphs indicate progress achieved in the 1990s and the progress needed to achieve the indicative targets in VISION 21 (halving the percentage unserved by the year 2015 and universal coverage by 2025)

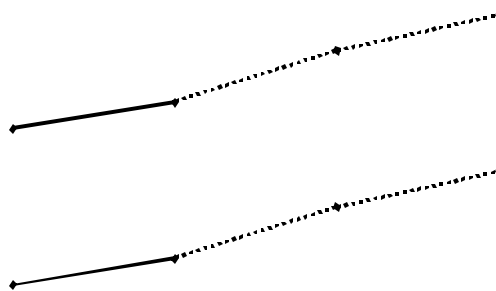
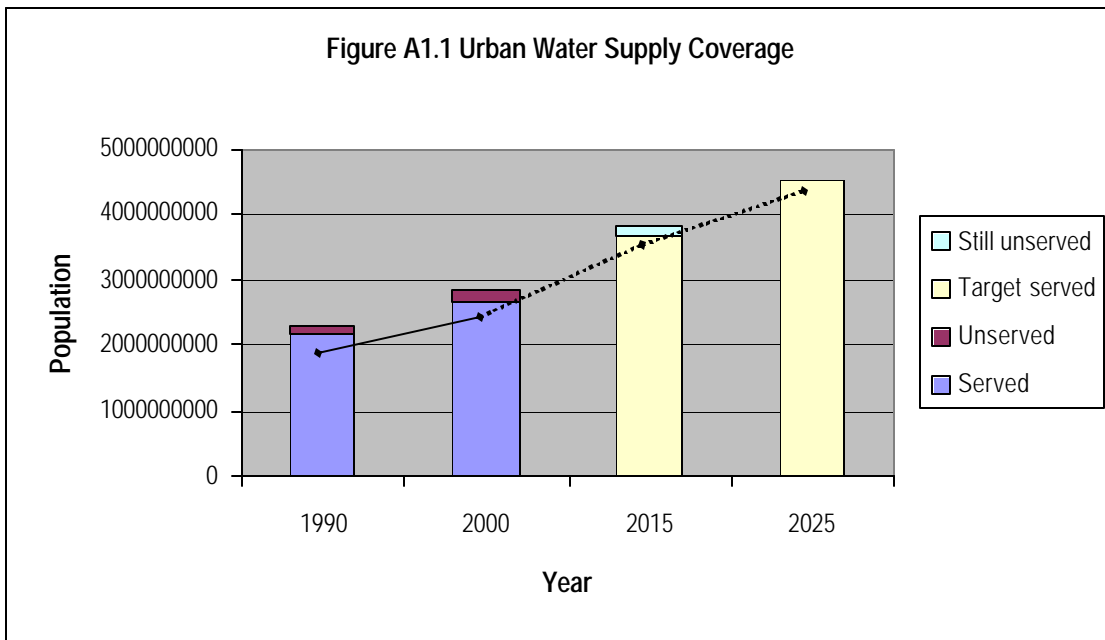
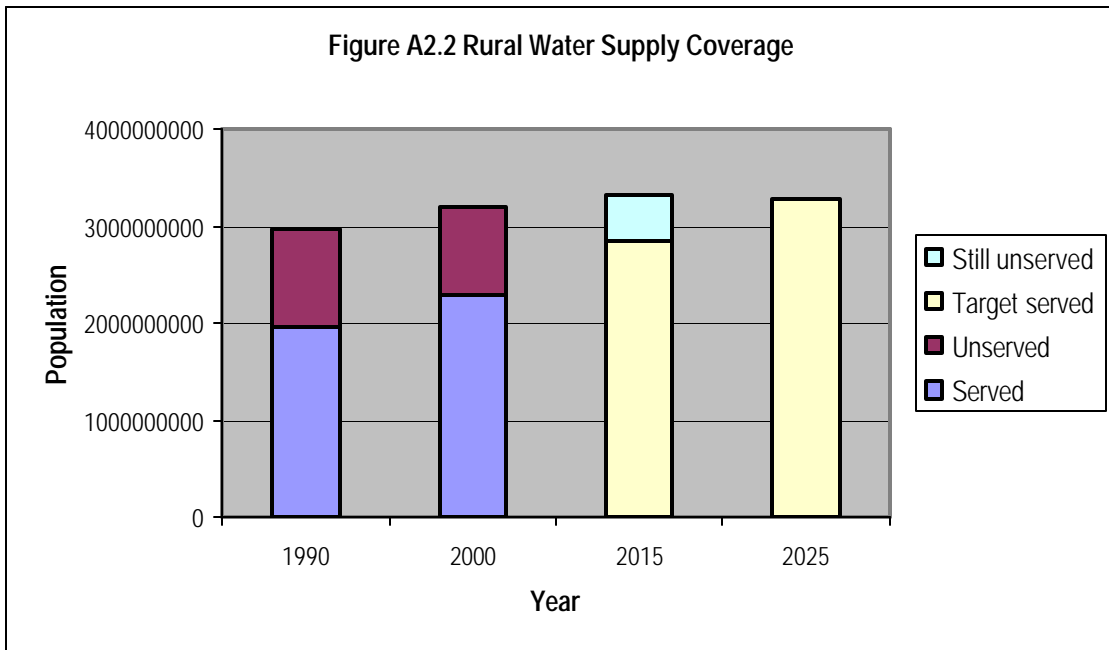
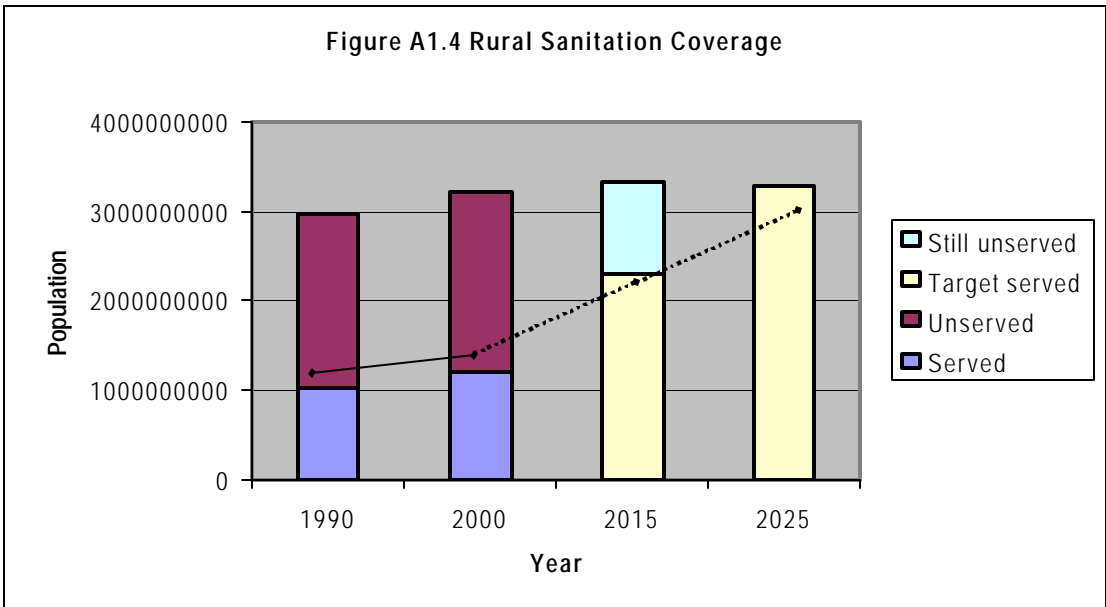
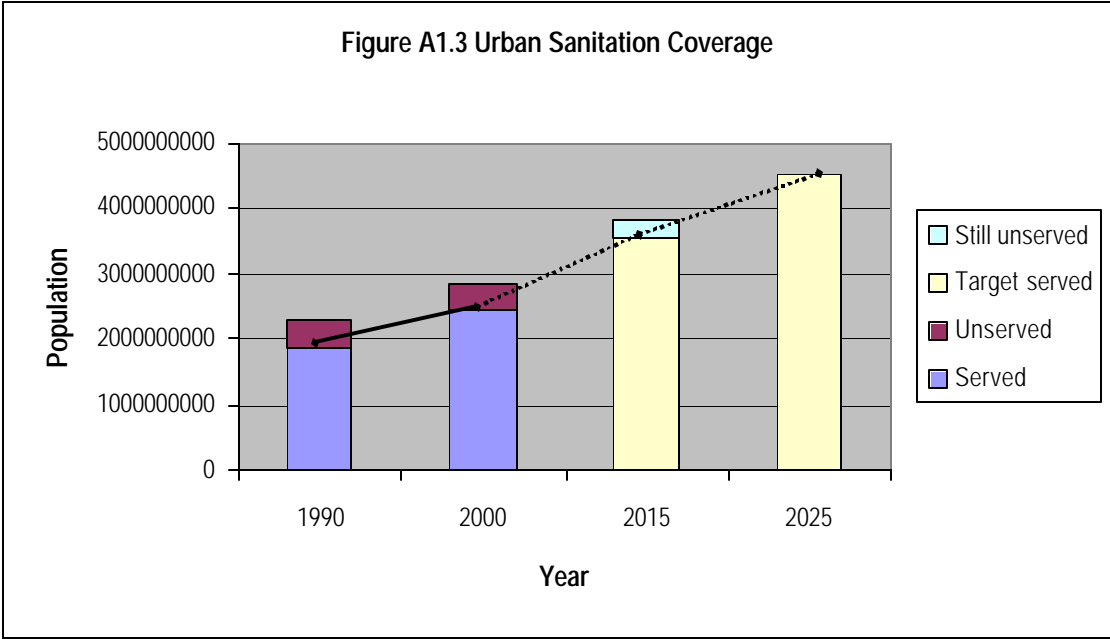


Figure A2.2 Rural Water Supply Coverage





From Annex 1 (a detailed breakdown of *Assessment 2000* figures), it is clear that the vast majority of the unserved are in the developing countries of Asia, Africa and Latin America & the Caribbean. The country-by-country figures confirm the close correlation between the state of a country's economy and the availability of basic water and sanitation services, or between poverty and lack of access to safe water and hygienic sanitation. Future progress depends on breaking the vicious circle in which the poor cannot afford to pay for the basic services to help them out of poverty. That means, crucially, that the need to improve water and sanitation services for the poor must be on the poverty eradication and economic growth agendas of governments and international development agencies. With so much of the future population growth concentrated in the informal settlements or shanty towns on the fringe of large cities, innovative solutions are needed to combat the health risks and environmental degradation from congested, filthy living environments.

Past severe under-investment in the water and sanitation sector has left a legacy of rivers and groundwater contaminated by untreated municipal and industrial wastewater. The cost of remedying past neglect adds to the investment needed to meet the aspirations of future generations and the growing demands from industrial expansion in developing countries. The Global Water Partnership's Framework for Action³ to implement the World Water Vision puts the annual investment needs for the complete water sector at \$180 billion. This is a huge increase on current public and private investments in the sector and requires much greater commitments by governments at all levels, as well as major resource mobilisation through the private sector. Of this total the FFA estimated that some \$30 billion, including operation and maintenance costs, would be needed annually for domestic water supply and sanitation, including rural and urban, piped and non-piped systems.

In the context of this paper, it is crucial to note that the costs of providing affordable basic water and sanitation services for the unserved poor over the next 25 years were estimated in VISION 21 at \$225 billion, or \$9 billion a year. It is evident that a major impact on the health, well-being and socio-economic development of both urban and rural communities can be achieved by giving priority to innovative financing mechanisms and credit arrangements designed to facilitate services for the unserved poor.

2.2 VISION 21: An agenda for change

Ever since the declaration of the International Water Supply and Sanitation Decade at the UN Water Resources Conference in Mar del Plata, Argentina, in 1977, water supply and sanitation (WSS) sector professionals have fought hard to gain greater priority from governments and donors for serving the unserved poor. Though the goal of achieving universal coverage in water and sanitation has

The essence of VISION 21

The four key elements, forming the essence of the VISION 21 approach are:

- **Building on people's energy and creativity at all levels**, requiring empowerment and building the capacity of people in households and communities to take action, and applying technologies that respond to actual needs.
- **Holistic approach**, acknowledging hygiene, water and sanitation as a human right, and relating it to human development, the elimination of poverty, environmental sustainability and the integrated management of water resources.
- **Committed and compassionate leadership and good governance**, changing long-accustomed roles, leading to new responsibilities of authorities and institutions to support households and communities in the management of their hygiene, water and sanitation, and in being accountable to users as clients.
- **Synergy among all partners**, encouraging shared commitment among users, politicians and professionals; requiring professionals within the water and sanitation sector to combine technical expertise with an ability to work with users and politicians and with the sectors of health, education, environment, community development and food.

³ *Towards Water Security: A Framework for Action, GWP March 2000*

featured in the Mar del Plata Declaration, in the Convention on the Rights of the Child (1989), in the New Delhi Declaration (1990), in Chapter 18 of Agenda 21 (1992), in the follow-up Environment Ministers Meeting in Noordwijk, the Netherlands (1994), and repeatedly in the Commission on Sustainable Development follow up on Freshwater Management, progress has always been limited, with sanitation neglect becoming a growing crisis.

The two year “visioning” exercise that led up to the Second World Water Forum achieved a new and fundamentally different consensus on the way forward. From the inclusive participatory process that began at community-level and involved a wide range of stakeholders, VISION 21 emerged with an optimistic and enticing picture of the water and sanitation world in the year 2025: *“A clean and healthy world: A world in which every person has safe and adequate water and sanitation and lives in a healthy environment”*.

Achieving that vision depends on new approaches, putting people’s initiative and capacity for self-reliance at the centre of planning and action. Since the Second World Water Forum, many individuals and agencies have committed themselves to putting the vision approach into action and have shared positive experiences of the application of VISION 21 principles in their own work. WaterAid, WSP, UNCHS (Habitat), ISW, WSP, WHO and UNICEF all have major programmes emphasizing people-centred approaches and these are reinforced by local efforts often coordinated by national or local NGOs in individual countries. In November 2000, participants in the Water Supply and Sanitation Collaborative Council’s Fifth Global Forum, in Foz do Iguaçu, Brazil, reached agreement on an *Iguaçu Action Programme*, with activities for different stakeholders and in different regions. The Bonn Conference now provides a golden opportunity to reinforce that Action Programme with political support, and to link it firmly into the wider water sector and to national programmes for sustainable development.

2.3 From Vision to Action – the key issues

Experience during the development and subsequent application of the Vision has helped to clarify the critical issues in any action programme. The progress in the Indian State of Gujarat, described in more detail in Annex 2, is giving clear pointers on both incentives and barriers to progress, while case studies provided by dozens of agencies encourage others to adopt the new approaches. A key lesson learned is that Vision 21 is relevant at the local level and can be effectively translated to local realities.

At governmental level, the key responses needed and amplified in the remainder of this paper are:

- ❑ **Access, equity and affordability**
Recognise the basic right of all people to have access to affordable hygiene, sanitation and water services and redress the present imbalances by focusing on helping the unserved poor to gain such access.
- ❑ **Governance and empowerment of local stakeholders**
Enable communities, CBOs, local entrepreneurs and other stakeholders to develop locally sustainable solutions within a supportive regulatory framework. Take positive action to promote gender equity and encourage women to take leadership roles.
- ❑ **Poverty reduction and human development goals**
Incorporate access to hygiene, sanitation and water services as key entry points for poverty reduction and human development and allocate appropriate resources to foster improved access. Ensure that a sanitation component is included in national *Poverty Reduction Strategic Programmes* (PRSPs)
- ❑ **Integrated water resources management**
Link water and sanitation improvements directly with the development, protection and improvement of freshwater resources, and recognise the contribution that informed and

empowered communities can make to resource protection, demand management and drought-proofing.

- ❑ **Capacity building and institutional reform**
Foster social mobilisation initiatives through power-sharing and inclusive institutional frameworks that stimulate and respond to community-centred approaches in both rural and urban settings (different solutions).
- ❑ **Priority for sanitation and hygiene**
Proclaim improved hygiene and sanitation as a high priority and recognise the need to stimulate demand for improvements through advocacy and education campaigns. Collect and use data on hygiene improvements. Develop cadres of hygiene professionals.
- ❑ **Technology choice**
Encourage the use of a wide variety of appropriate household- or community-based sanitation and water supply technologies and support research and pilot programmes to adapt proven technologies from other countries/regions.
- ❑ **Mobilising financial resources for affordable services**
Facilitate and encourage the mobilisation of local resources, taking advantage of the lower costs associated with community-driven programmes. Focus cross subsidies on assisting the very poor. Employ financing and cost-recovery systems that both protect the poor and encourage private initiative.

In all these aspects of government policy, the key learning in recent years is the power of dialogue and cooperation among partners at every level, to overcome constraints and develop sustainable solutions.

2. SUCCESS STORIES AND LESSONS FROM RECENT EXPERIENCE

During the development and subsequent application/testing of VISION 21, active sector agencies have contributed examples of successful application of the new approaches. Many are contained in the VISION 21 document published at The Hague Conference⁴ (V21 in subsequent cross-referencing). Others have emerged from E-mail conferences and discussions at the WSSCC Fifth Forum in Foz do Iguaçu.

The most comprehensive and highly instructive application of VISION 21 has been in the Indian State of Gujarat. It is a double tragedy that the disastrous earthquake which struck Gujarat in January did so on the very day that the comprehensive Jal-Disha 2010 Programme for a multi-million dollar investment in improved WSS services, based on the VISION 21 follow-up, was due to be discussed at the highest levels of State Government. At the same time, it is highly encouraging that the social mobilisation experience from the vision exercise and Jal-Disha 2010 is now contributing to the earthquake rehabilitation operations. A brief summary of the Gujarat experience is included in Annex 2, and regular reference is made in this section of the report. The complete document *Gujarat Jal-Disha 2010*⁵ contains substantive discussion of the key issues identified in this paper, and is a rich source of guidance on how they may be addressed.

⁴ *VISION 21: A Shared Vision for Hygiene, Sanitation and Water Supply and A Framework for Action*, Water Supply and Sanitation Collaborative Council, Geneva, March 2000.

⁵ *Gujarat Jal-Disha 2010: A Vision of a Healthy and Equitable Future with Drinking Water, Hygiene and Sanitation for All*, A report by a working group constituted by the Gujarat State Drinking Water Infrastructure Co. Ltd, through the National Institute of Design, Ahmedabad, December 2000.

3.1 People-centred approaches

VISION 21 began as an exercise to gather views from affected people on their ambitions and hopes for the future. It rapidly demonstrated that this empowering process is also the key to bringing those hopes to reality. Invariably, the plans emerging from local stakeholder meetings are highly focused and cost-effective. They are also less costly, more equitable and significantly more sustainable than centrally produced master plans.

The Gujarat Case study described in Annex 2 demonstrates how rapidly a locally driven visioning exercise can develop into a state-wide programme full of innovative ideas. The conquest of Guinea worm in India and in other countries demonstrates the effectiveness of people-centred approaches in bringing beneficial behavioural change. In support of the people-centred approach, WSSCC's Working Group on Community Management and Partnerships with Civil Society has prepared a Code of Ethics on Community Management of Water and Sanitation Services (Annex 3). This can be a helpful tool in establishing the framework for multi-stakeholder partnerships.

3.2 Leadership and governance

It is self-reliant communities and households that must be the foundation for managing equitable access and affordability. This demands institutional change and capacity building that starts at household/neighbourhood level, with the ripples of leadership extending outwards. Good leadership removes some of the political and bureaucratic obstacles to the empowerment of men and women to participate in improving their communities. Examples abound of inspirational leaders creating the environment for community-driven water and sanitation improvements. One quoted in VISION 21 is the National Technology Mission in India, inspired by Rajiv Gandhi, and accomplishing rapid progress in extending coverage to 165,000 "problem villages" using participatory processes (Annex 4). Another is China's "latrine revolution" led by "Mister Latrine", the physician Dr Song Lexin (Annex 4). This is also a gender issue, as there is a considerable gender imbalance at all leadership levels and women face serious obstacles in gaining access to decision-making power. In many ways, the WSS sector has led the field in promoting gender-sensitive approaches to sector development. Nevertheless, policy-making and management remains very male-dominated. All sector agencies are being urged to support the newly formed *Gender and Water Alliance* and actively to seek ways of increasing the influence of women at all levels in their action programmes.

The Gujarat experience has underlined how difficult it is for existing institutions to implement the new participatory approaches. Jal-Disha 2010 addresses this issue head on and proposes a new statutory body (Gujarat Water and Sanitation Authority) with representatives from NGOs and sector experts appointed alongside those from central and local government. Utility Service Organisations at different levels will be responsible for operationalising policy, and their composition will include a broad range of stakeholders. Both the GWSA and the USOs will have a quota (at least one third) of women members.

3.3 Priority for hygiene and sanitation

Historically, water supply has fared better than sanitation in the allocation of developmental resources, with hygiene education a poor third. The GWP's FFA highlighted sanitation and hygiene education as one of five urgent priorities for the water sector. The huge backlog in sanitation coverage is the clear result of this distorted priority. Yet it is known that clean water alone brings only limited health improvement. In emphasising hygiene and sanitation, VISION 21 promises concerted advocacy and information campaigns. It has also pioneered

the innovative Household-centred Environmental Sanitation (HCES) approach⁶, which focuses on resolving environmental sanitation and waste management problems at the lowest possible level and with water used minimally to transport waste. To help governments and support agencies to overhaul their policies, the Environmental Sanitation Working Group of the WSSCC has prepared *The Bellagio Principles* (Annex 4) and the Iguaçu recommendations encompass these principles as a basis for national sector strategies. It also urges that all investments in improved drinking water supply should be accompanied (or preceded) by commensurate investments in hygiene and sanitation improvements.

There is an encouraging spirit of collaboration among the many agencies active in the environmental sanitation field. Encouraged by the Global Environmental Sanitation Initiative (GESI), the agencies are committed to information sharing and joint advocacy campaigns. One extremely useful output of the collaboration is the web-based knowledge network entitled "Sanitation Connection" (www.sanicon.net). It draws together knowledge and experience in the broad sanitation field through an alliance of many agencies, and enables users to find relevant documents on their own topic of interest whichever agency holds them.

There is considerable and growing interest in eco-sanitation, though some controversy remains about the efficacy of the approach in which urine and faeces are never mixed and no water is used. The issues are discussed in a paper by Esrey and Anderson.⁷

Other examples of good practice include the Uganda national guidelines and Schools Programme, Burkina Faso's Saniya Programme and the FRESH multi-agency initiative on school sanitation.

3.4 The urban challenge

The case for special attention to the water and hygiene needs of the urban poor is overwhelming. There are presently little or no incentives for public or private utilities to deliver services to the poor. Land tenure issues and inadequate legal and regulatory frameworks create barriers rather than incentives. Inefficient management and operation of urban water networks leads to substantial waste of precious water, with as much as half of the water unaccounted for in many cities. By promoting, rather than inhibiting, the development of properly regulated small-scale independent providers, municipal authorities and national governments have the chance to reverse the trend in which private operators further marginalize the poor by focusing on people's ability to pay for premium services.

VISION 21 contains several examples of innovative ways of providing services to informal settlements through intermediaries (NGOs, CBOs and private vendors). They include NGO-supported water committees distributing bulk supplies to unconnected families in Port-au-Prince, Haiti. (Annex 4). The families use the savings from previous vendor charges to construct drains and showers. The Orangi Pilot Project in Karachi is a well-documented example of community driven sanitation/drainage improvements (Annex 4). In Iguaçu, Brazil's PROSANEAR Programme received acclaim for pioneering the use of innovative technology and community participation to provide services for the urban poor on a large scale, with promising results. This case study includes discussion of drawbacks and implementation problems. The E-conference which preceded the Iguaçu meeting had many more helpful examples (<http://www.jiscmail.ac.uk/lists/sup.html> – see archived files under September and October 2000).

A well-established Network on Services for the Urban Poor, managed by CERFE in Rome, distributes a regular newsletter. In Africa, information on improved demand management and protection of water resources is being shared via a UNCHS (Habitat) sponsored *Water for*

⁶ Two papers on the HCES model are published on the WSSCC Website (<http://www.wsscc.org/vision21/docs/doc09a.html>)

⁷ *Environmental Sanitation from an Eco-Systems Approach* (<http://www.wsscc.org/vision21/docs/doc39.html>)

African Cities Network. Business Partners for Development (BPD) is currently involved in research that documents many of the issues listed above, including inter alia governance structures, regulatory frameworks and securing NGO and civil society involvement.

Following a suggestion from Robert McNamara at the Second World Water Forum, a project is being developed to test Vision 21 approaches on a full-scale basis in two major cities in India between themselves and with a city in another continent (Calcutta, Pune and Mexico City).

Typically, any discussion of rainwater harvesting reminds us of rural water supply needs and groundwater recharging for agricultural needs. However, a significant challenge for urban areas is how best to utilise traditionally used rainwater harvesting designs to augment the water supply needs for times of drought, lean seasons and for security needs. The temple designs of Southern India, the urban house designs in arid zone areas of Western India, rooftop harvesting in Thailand, and rainwater harvesting designs in Namibia are all examples of successful application to the urban context. However, the technique has not been given serious consideration or support by many local municipal authorities. There is an urgent need to promote proper technical designs, to develop and publish appropriate standards, and to encourage and motivate people to incorporate rainwater harvesting structures while building urban houses. Why can the sector not raise awareness and attention of financial agencies to accept and to support these types of structures?

A partnership between urban town planners, architects, rainwater harvesting specialists and the private sector is essential in making information available, creating public awareness and in facilitating decision-making in this area. Urban rainwater harvesting is a high priority issue and exposure at leading consultations (such as the Mayors' Conference) and by UN organisations (such as UNCHS (Habitat)) will help develop appropriate development programmes.

3.5 Mobilising financial resources

Although VISION 21 approaches can be expected to bring down the unit costs of water and sanitation improvements for the poor, there is no doubt that mobilising sufficient investment to achieve the vision targets is a formidable challenge. All potential sources need to be tapped, with a focus on innovative credit arrangements for the poor, carefully targeted cross-subsidies, and extensive use of well-regulated small-scale independent service providers. The Grameen Bank in Bangladesh (Annex 4) is a well-known example of successful credit provision for the poor, especially rural women's groups.

Financing sanitation and hygiene improvements may be the greatest challenge of all, though there are some helpful examples of success in this field. The Orangi Pilot Project (Annex 4), already mentioned, showed how charismatic leadership of local communities resulted in progressively improving sewers and drains at a fraction of the cost of an alternative government scheme. In India, the Sulabh movement has shown that clean well-maintained community toilets can be self-financing and bring significant social benefits. Sulabh toilets are used by 10 million people each day (Annex 4).

Investment costs and maintenance needs of water and sanitation systems are closely linked to the choice of technologies and service levels. Given the opportunity to choose for themselves, poor communities will usually opt for systems that are affordable and locally sustainable. Thus, in Gujarat, heavy dependence on water transported via the massive Narmada water transfer project is being mitigated by an increasing focus on water harvesting (it is significant to note here too that the communities where the people-centred approaches advocated in Vision 21 had been in operation were best equipped to cope with the severe drought which hit the State in the year 2000). In Laipurkharka, Nepal, the water, health and sanitation project has public tapstands and individual latrines, financed and maintained locally and generating credit financing for other community development projects (Annex 4).

3.6 Integrated water resources management

Effective freshwater management and allocation is a prerequisite of equitable access to sustainable water and sanitation services. Water and sanitation agencies should work in partnerships with other sector agencies to ensure integrated action programmes. In Gujarat, the first issues in addressing access and affordability were joint watershed management, shared water resource management, and the need to establish equitable ownership of surface and groundwater.

At the heart of *VISION 21* is a commitment to building on people's energy and creativity. This implies the development of community-based approaches to water supply and sanitation in both urban and rural areas, in which householders and communities take important decisions and actions. A variety of social-marketing and participatory approaches have been developed, both within the water supply and sanitation sector and more broadly into health and other development sectors. The challenge is now to see how these techniques can be mainstreamed.

The trend towards degradation of groundwater resources, and diminishing dry season surface water resources can be mitigated through strong programmes of groundwater recharging. Examples from drought prone districts of Western and Southern India have demonstrated that the poor are prepared to offer their labour, time and skill to this cause. However, this effort needs to be accompanied by adequate legal protection of people's right to the water they conserve and protect. Problems such as arsenic contamination in Bangladesh can be arrested through the application of rainwater harvesting approaches and development of adequate sanitation to protect vulnerable surface waters.

Integrated water resources management is not possible without the involvement of the community in protecting, developing and extracting water resources. Poverty cannot be eradicated without ensuring the right of people to water and their appropriate management of this resource. The Collaborative Council supports community-level monitoring of water quality and quantity, and community-level management of the water environment, which includes soil, land, water and forestry management.

The link between sanitation and water quality protection is often and easily overlooked. The Umgeni Water Company in South Africa promoted upstream rural sanitation in order to protect downstream water quality and reduce the cost of treatment. Their vision paid off through positive stock market responses and wider ecological protection. Similar or greater dangers are posed to river bodies from biological pollution from industrial waste, as demonstrated by the Ganga Action Plan evaluation.

Illustrative examples of effective integrated water resources management come from Armenia, Colombia (Annex 4), where public action has helped to transform damaged micro-basins, from South Africa where catchment councils have been formed, and from Gujarat (Utthan, SEWA) where check dams and percolation tanks have resulted from women-led community concerns on reliability of water supplies.

3. ISSUES AND POLICY IMPLICATIONS

It is clear that water and sanitation agencies have recognised *VISION 21* approaches as a basis for meeting their formidable challenges. The experiences in Gujarat and elsewhere have validated the people-centred approaches and are starting to demonstrate how progress can be made if government has the political will to make the necessary policy changes. Following the Iguazu Forum of the WSSCC, the sector is committed to a major advocacy campaign to foster that political will.

How should governments respond to the growing lobby for equitable access, power-sharing and capacity-building, and what are the key issues yet to be resolved if the enticing Vision of

a clean and healthy world is to be achieved in the next 25 years? The first crucial action is to kick-start activities with a national proclamation of the Vision goals and a government commitment to achieve them. The subsequent desirable responses were listed in Section 1.3. Here we look under each heading at the actions recommended for governments in the Iguazu Action Programme.

4.1 Access, equity and affordability

- ❑ Affirm the basic right of all citizens to have access to affordable hygiene, sanitation and water services. Set a national goal for achieving full coverage (before 2025) and realistic intermediate targets.
- ❑ Conduct public information campaigns on water and sanitation issues and advocacy campaigns that focus on demand-driven, social-marketing approaches. Use genuinely participatory and gender-sensitive approaches to develop sector policies.
- ❑ Link the right to affordable services with a responsibility to conserve and protect water resources and sustain the services.
- ❑ Review policies for privatisation of urban water and sewerage services, to ensure that they favour rather than marginalise the poor. (Note this is a priority issue for research into effective mechanisms to protect the poor)
- ❑ Establish monitoring and reporting systems that indicate progress towards the goals, with disaggregated data to identify the trends in achieving priority for serving the unserved poor. Employ local participatory monitoring and reporting systems.

4.2 Governance and empowerment of local stakeholders

- ❑ Ensure that national agencies endorse and advocate widespread adoption of participatory approaches and the Code of Ethics in sector planning.
- ❑ Establish inclusive institutional structures at national, district and local levels to give voice to communities, NGOs, the private sector and other stakeholders in decision-making about water and sanitation services. Base the planning structure on a bottom-up approach, starting at the household/neighbourhood level, with decisions taken at the lowest appropriate level. Encourage and support local NGOs as facilitators of stakeholder workshops to stimulate community-level planning.
- ❑ Adapt the regulatory and legislative framework to give optimum freedom to local initiatives while maintaining government's essential role in protecting public health and safeguarding the environment.
- ❑ Review ongoing projects and programmes, to seek ways to introduce people-centred approaches and a pro-poor focus.

4.3 Poverty reduction and human development goals

- ❑ Review national strategies for human development and poverty reduction and adapt them to recognise access to hygiene, water and sanitation services as key entry points, reinforcing the crucial importance of gender equity as a development goal. Incorporate the WSS coverage targets in human development goals and PRSPs
- ❑ Foster alliances between agencies responsible for water sector issues and those supporting the human development and human rights agendas. Encourage external support agencies to link human development and WSS sector support.

- ❑ Recognise the delivery of affordable water and sanitation systems to the poor as basic social services in respect to the 20:20 initiative (further research needed to define which services may be classified as “basic”).

4.4 Integrated water resources management

- ❑ Promote rainwater harvesting structures as a high priority, and explore their application to the urban environment.
- ❑ Bring the priority for delivering affordable water and sanitation services to the poor into national water resource planning, so that it influences the allocation of water and financial resources. Complement the treatment of water as an economic good with the need for social equity and poverty reduction, and protect the allocation for basic household needs before assigning water for agriculture and industry.
- ❑ Recognise the contribution that local communities can make to resource protection, demand management and drought-proofing, and stimulate this contribution through information campaigns and incentive schemes.
- ❑ Establish institutional links between the locally based decision-making processes of the water and sanitation sector and the agencies responsible for basin-planning, watershed protection and pollution control.
- ❑ Foster cooperation and synergy among supporting organisations working at country and regional level on WSS and IWRM issues (e.g. WSSCC, GWP, WWC (World Water Council), WSP (Water and Sanitation Program), along with UN agencies and international NGOs).

4.5 Capacity building and institutional reform

- ❑ Develop training in people-centred approaches and integrated water resources management for sector professionals and managers in new institutions
- ❑ Select national resource centres as learning institutions and initiate “learning projects” to spread the capacity for scaling up from local to national planning. Designate one national institution as a “champion” for VISION 21.
- ❑ Use regional roving seminars for advocacy and capacity building on people-centred approaches.
- ❑ Ensure that capacity building extends to household/community level, equipping all those involved to play an informed and effective part in the decision-making process.
- ❑ Ensure that appropriate training precedes decentralisation initiatives.
- ❑ Use quotas or other incentives to ensure that women are well represented throughout the decision-making processes.
- ❑ Involve representatives of civil society and other stakeholders in consultations on utility reform and regulatory procedures. Find locally appropriate ways to institutionalise people-centred, demand-driven approaches.

4.6 Priority for hygiene and sanitation

- ❑ Declare publicly that improved hygiene and sanitation are high development priorities (linking the basic rights approach to the need to compensate for past neglect). Establish investment and performance targets and monitor achievements. Urge external support agencies to accept sanitation programmes as priorities for support. Incorporate budgets

for hygiene promotion in poverty-reduction programmes. Advocate sanitation and hygiene promotion within the sector

- ❑ Commit to the concept of household-centred environmental sanitation (HCES) and implement demonstration/learning projects to develop appropriate local solutions.
- ❑ Initiate a participatory process to develop a national sanitation strategy based on the Bellagio Principles and the HCES approach. Include private sector partners in these deliberations and seek ways to serve the poor effectively through public-private-NGO-community partnerships
- ❑ Accept that community demand for sanitation improvements has to be stimulated through hygiene education and advocacy campaigns using all available media.
- ❑ Make school sanitation an individual priority and use it for hygiene advocacy (child to parent). Recognise the educational and social benefits of stimulating great attendance of girls at schools through the provision of separate latrines for girls and boys (Gujarat has a priority action to achieve at least two latrines per school (one for boys, one for girls) by the year 2010).
- ❑ Adopt and promote the concept of waste as a resource and foster recycling and new sanitation technologies

4.7 Technology choice

- ❑ Review existing norms and standards and ensure that they do not inhibit the use of innovative water and sanitation technologies appropriate for community management.
- ❑ Sensitise technologists to the social dimensions of their work and the need to be flexible in the selection of appropriate technologies.
- ❑ Encourage applied research and demonstration, including South-South technology transfer (particularly in relation to issues such as arsenic, fluoride, desalination and rainwater harvesting).

4.8 Mobilising resources for affordable services

- ❑ Reflect the priority for meeting the basic needs of the unserved in budgetary allocations for the sector.
- ❑ Provide seed money to encourage local-level stakeholder consultations that will develop WSS programmes less dependent on central support.
- ❑ Promote and support new ways of providing credit for local WSS activities.
- ❑ Focus subsidies on those who cannot afford even basic services and ensure effective cost recovery from those with ability and willingness to pay for reliable services of their own choice. Use local community knowledge to help to direct subsidies/resources in the most equitable ways.
- ❑ Direct external funds towards catalytic support for planning and implementing community-driven programmes that can be funded primarily from local resources. and better management.
- ❑ Outstanding issues requiring further
- ❑ Reform local legislation to enable small-scale private service providers to operate effectively in low-income urban areas and ensure that regulatory frameworks protect the public without inhibiting private operations.

- ❑ Stimulate private sector investment in water and sanitation programmes through new forms of public-private partnership which safeguard the poor. Recognise that efficient public utilities have access to the same financial sources as private ones.
- ❑ Discourage direct subsidy and promote cost recovery as much as possible. Make WSS services available at an affordable price through cost effective technologies discussion/research

4.9 Outstanding issues requiring further discussion/research:

The people-centred approaches at the heart of VISION 21 demand some fundamental changes for past ways of working. Though many elements have been tried individually in the past, some are being implemented for the first time and will need to evolve as experience is gained. This is particularly true of the institutional frameworks that will most effectively mobilise local initiatives and incorporate them into national strategies in a participatory way.

Some of the key issues still to be resolved are:

- ❑ **Social mobilisation**
What are the crucial facilitating mechanisms that will build self-reliant empowered communities and provide the catalytic or technical support they may need from time to time? Existing institutions and legislative frameworks are not suitable. More participatory structures are needed at all levels, and it is vital that test beds such as Gujarat should be well documented and circulated for the benefit of all. The adoption of Vision 21 principles, largely grounded in a rural experience, needs further development and lesson learning from the urban environment.
- ❑ **Availability of proven sanitation technologies**
Particularly in densely populated low-income areas, piped sewerage and wastewater treatment are unaffordable options. Condominial sewers have proved more cost-effective in Brazil and elsewhere, but, without treatment of the waste, they are not a complete solution. There is growing experience of eco-sanitation systems, which achieve total recycling of human waste, but still controversy over their acceptability in different socio-cultural settings, and debate continues about potential health risks. Urgent applied research is needed on innovative sanitation options for urban areas, and results need to be disseminated through effective sanitation networks. Ideally, communities need to be presented with a range of technical options and supporting information that outlines the operational, financial, technical and social dis/advantages of each.
- ❑ **Indicators and monitoring**
Present monitoring methodologies are much improved on the past, and include feedback from users in addition to official statistics. However, it is still difficult to separate the statistics to reveal trends in serving the poor. Work is in hand to develop and test new indicators and monitoring methodologies that will disaggregate data and provide accurate figures for advocacy and progress reporting. Lack of appropriate indicators to measure hygiene improvements is a serious obstacle.
- ❑ **Institutional models for advancing sanitation and hygiene**
Too often, agency responsibility for hygiene and sanitation is divided between the health and water sectors. Consequently, it falls through the cracks in planning and budgetary priorities. The HCES approach will encourage households and communities to initiate self-help sanitation programmes, but these need to be monitored and regulated through appropriate participatory structures for which few models are currently available. What support and framework will be required to encourage the private sector to reach out to the rural areas without losing their profitability or efficiency? Should the Public-Public Partnership should be encouraged more?

□ **Human rights**

What are the incentives and barriers to seeking formal explicit definition of affordable hygiene, sanitation and water services as a basic human right? Should it be attempted on a global basis or left to individual countries to make it explicit? What roles and responsibilities need to accompany the right?

□ **Finance**

Which are the most appropriate financing mechanisms for improving access of the poor to improved water and sanitation services? What is the role and potential of micro-financing initiatives, especially for the urban poor? There is a need for critical analysis of costs in the sector, linking the demand for different levels of service with perceived and actual costs. What are the mechanisms and experiences with making cheap loans available to the poor for installation of better sanitation facilities?

4. CONCLUDING REMARKS

Although the paper ostensibly addresses access and affordability issues, such a discussion cannot be divorced from the wider concerns of sustainable development and the need for greater complementarity between WSS sub-sectors. Indeed, the key issues listed in section 1.3 and discussed further from sections 2.1 are fundamental to achieving sustained development. These principles clearly have resonance beyond the water and sanitation sector, and can apply equally to the Water for Nature, or Water for Food debates. If stronger emphasis can be placed on learning between sectors, and working together to achieve broad sectoral goals, then some concrete steps can be taken in our shared goal of poverty reduction, improved service delivery and more sustained development.

Likewise, the Bonn International Conference can and must play a critical role in stimulating enthusiastic follow-up by governments based on these key recommendations.

ANNEX

A) Water supply and sanitation coverage for 1990 and 2000 by region

| REGION | 1990 Population (millions) | | | | 2000 Population (millions) | | | |
|------------------|--|-------------------|---------------------|-----------|--|-------------------|---------------------|-----------|
| | Total population | Population served | Population unserved | % served | Total population | Population served | Population unserved | % served |
| GLOBAL | (76% of global population represented) | | | | (89% of global population represented) | | | |
| Urban supply | 2 292 | 2 179 | 113 | 95 | 2 845 | 2 672 | 173 | 94 |
| Rural supply | 2 974 | 1 961 | 1 013 | 66 | 3 210 | 2 284 | 926 | 71 |
| Total supply | 5 266 | 4 140 | 1 126 | 79 | 6 055 | 4 956 | 1 099 | 82 |
| Urban sanitation | 2 292 | 1 877 | 415 | 82 | 2 845 | 2 442 | 403 | 86 |
| Rural sanitation | 2 974 | 1 028 | 1 946 | 35 | 3 210 | 1 210 | 2 000 | 38 |
| Total sanitation | 5 266 | 2 905 | 2 361 | 55 | 6 055 | 3 652 | 2 403 | 60 |
| AFRICA | (72% of regional population represented) | | | | (96% of regional population represented) | | | |
| Urban supply | 197 | 166 | 31 | 84 | 297 | 253 | 44 | 85 |
| Rural supply | 418 | 183 | 235 | 44 | 487 | 231 | 256 | 47 |
| Total supply | 615 | 349 | 266 | 57 | 784 | 484 | 300 | 62 |
| Urban sanitation | 197 | 167 | 30 | 85 | 297 | 251 | 46 | 84 |
| Rural sanitation | 418 | 206 | 212 | 49 | 487 | 220 | 267 | 45 |
| Total sanitation | 615 | 373 | 242 | 61 | 784 | 471 | 313 | 60 |
| ASIA | (88% of regional population represented) | | | | (94% of regional population represented) | | | |
| Urban water | 1 029 | 972 | 57 | 94 | 1 352 | 1 254 | 98 | 93 |

| | | | | | | | | | |
|------------------|-------|-------|-------|-------|-----------|-------|-------|-------|-----------|
| supply | | | | | | | | | |
| Rural supply | water | 2 151 | 1 433 | 718 | 67 | 2 331 | 1 736 | 595 | 75 |
| Total supply | water | 3 180 | 2 405 | 775 | 76 | 3 683 | 2 990 | 693 | 81 |
| Urban sanitation | | 1 029 | 690 | 339 | 67 | 1 352 | 1 055 | 297 | 78 |
| Rural sanitation | | 2 151 | 496 | 1 655 | 23 | 2 331 | 712 | 1 619 | 31 |
| Total sanitation | | 3 180 | 1 186 | 1 994 | 37 | 3 683 | 1 767 | 1 916 | 48 |

LATIN AMERICA (77% of regional population represented) (99% of regional population represented)

AND THE CARIBBEAN

| | | | | | | | | | |
|------------------|-------|-----|-----|-----|-----------|-----|-----|-----|-----------|
| Urban supply | water | 313 | 287 | 26 | 92 | 391 | 362 | 29 | 93 |
| Rural supply | water | 128 | 72 | 56 | 56 | 128 | 79 | 49 | 62 |
| Total supply | water | 441 | 359 | 82 | 82 | 519 | 441 | 78 | 85 |
| Urban sanitation | | 313 | 267 | 46 | 85 | 391 | 340 | 51 | 87 |
| Rural sanitation | | 128 | 50 | 78 | 39 | 128 | 62 | 66 | 49 |
| Total sanitation | | 441 | 317 | 124 | 72 | 519 | 402 | 117 | 78 |

OCEANIA (64% of regional population represented) (85% of regional population represented)

| | | | | | | | | | |
|------------------|-------|----|----|---|------------|----|----|---|-----------|
| Urban supply | water | 18 | 18 | 0 | 100 | 21 | 21 | 0 | 98 |
| Rural supply | water | 8 | 5 | 3 | 62 | 9 | 6 | 3 | 63 |
| Total supply | water | 26 | 23 | 3 | 88 | 30 | 27 | 3 | 88 |
| Urban sanitation | | 18 | 18 | 0 | 99 | 21 | 21 | 0 | 99 |
| Rural sanitation | | 8 | 7 | 1 | 89 | 9 | 7 | 2 | 81 |
| Total sanitation | | 26 | 25 | 1 | 96 | 30 | 28 | 2 | 93 |

| EUROPE | | (15% of regional population represented) | | | (44% of regional population represented) | | | | |
|-------------------------|-------|--|-----|---|--|-----|-----|----|------------|
| Urban supply | water | 522 | 522 | 0 | 100 | 545 | 542 | 3 | 100 |
| Rural supply | water | 200 | 199 | 1 | 100 | 184 | 161 | 23 | 87 |
| Total supply | water | 722 | 721 | 1 | 100 | 729 | 703 | 26 | 96 |
| Urban sanitation | | 522 | 522 | 0 | 100 | 545 | 537 | 8 | 99 |
| Rural sanitation | | 200 | 199 | 1 | 100 | 184 | 137 | 47 | 74 |
| Total sanitation | | 722 | 721 | 1 | 100 | 729 | 674 | 55 | 92 |
| NORTHERN AMERICA | | (99.9% of regional population represented) | | | (99.9% of regional population represented) | | | | |
| Urban supply | water | 213 | 213 | 0 | 100 | 239 | 239 | 0 | 100 |
| Rural supply | water | 69 | 69 | 0 | 100 | 71 | 71 | 0 | 100 |
| Total supply | water | 282 | 282 | 0 | 100 | 310 | 310 | 0 | 100 |
| Urban sanitation | | 213 | 213 | 0 | 100 | 239 | 239 | 0 | 100 |
| Rural sanitation | | 69 | 69 | 0 | 100 | 71 | 71 | 0 | 100 |
| Total sanitation | | 282 | 282 | 0 | 100 | 310 | 310 | 0 | 100 |

The table above, taken from the JMP Global Assessment 2000 report, shows the ten-year coverage trends region by region. It also demonstrates well the differences between rural and urban areas and between water supply coverage and that for sanitation. In percentage terms, 94% of the urban population are deemed to have access to safe water, compared with 71% of rural dwellers. For sanitation, the figures are 86% urban coverage and just 38% rural. Numerically it means that 2,000 million of the 2,400 million people lacking access to hygienic sanitation live in rural areas, and more than 900 million of the 1,100 million lacking access to safe water are also rural dwellers.

B) Gujarat Case study

GUJARAT JAL-DISHA 2010: An Introduction

Gujarat Jal-Disha 2010 is the outcome of an effort to put VISION 21 and the Iguacu Action Plan to work in western India, a region that combines mature experience in water and sanitation with the challenge of prolonged drought and scarcity. Jal-Disha is a powerful demonstration of the WSSCC's collaborative culture and processes. The effort has brought together some thirty institutions and individuals. They represent government and non-government agencies, research institutions, donors and volunteers. Together, they have shared the range and depth of their experience, worked toward consensus on difficult issues, identified areas for immediate joint action, and developed strategies for future research and experimentation. Gujarat Jal-Disha 2010 is already informing a number of planning and implementation efforts in Gujarat state, as well as a wider consultation on India's future in safe water, hygiene promotion and sanitation.

As part of the social mobilization process which led to VISION 21, the Council's 'Vision' Co-ordinator visited Gujarat in 1998. Rainfall in that year had been inadequate. In a region where drought is never unexpected, many communities were facing an acute shortage of drinking water. Local activists were quick to respond to the VISION 21 initiative which had emerged from the 1997 WSSCC Global Forum at Manila. Many of them were experienced in India's massive water and sanitation programme. Despite its status as one of the largest efforts of its kind anywhere in the world, many citizens were still without access to these basic facilities. There was thus considerable interest in the Manila outcome, relayed to a group of activists in Gujarat by a WSSCC facilitator based in Ahmedabad. The Vision 21 Co-ordinator's visit to the city helped catalyse an initiative within which the Gujarat group decided to actively support the global process which was to lead to VISION 21. It also decided that it would simultaneously conduct a 'vision' exercise of its own for Gujarat, using the VISION 21 approach and keeping contact with the WSSCC team. A network of almost forty institutions and individuals came together in this exercise, in what was to be the first step in the WSSCC's process of social mobilisation around the world. Communities in every part of Gujarat joined in dialogue with specialists inside and outside the state. A picture emerged of the many ways in which community groups would like to see their water, sanitation and hygiene situation change in the next generation. Lessons learned for the past were drawn together, and priorities selected. Social issues of equity, ownership, empowering women toward change, and of transforming the role of authorities and institutions emerged as major concerns.

This dialogue culminated in "Gujarat 2010: A Vision of Safe Water, Hygiene and Sanitation for All". The document became the focus for a WSSCC Global Consultation held in Ahmedabad in November 1999 to review progress toward VISION 21, in a setting of drought within which major elements of its approach were already being tested. Another opportunity for review emerged at the March 2000 Second World Water Forum and Ministerial Conference in The Hague. The Forum was impressed that VISION 21 had not only been tested and found practical, but also that this experiment had been conducted in a year of unprecedented scarcity.

A special session heard Gujarat activists recount their experience in putting VISION 21 to work amid crisis conditions. Government of Gujarat representatives at The Hague spoke of the need in the state to now bring official and NGO aspirations more closely together. This process began immediately after the Forum, culminating in Gujarat Jal-Disha 2010.

In April 2000, the State Government called a meeting in the capital city of Gandhinagar to reflect on lessons learnt in fighting drought across Gujarat, and from the deliberations that had led to "Gujarat 2010" and to WSSCC's VISION 21, and at The Hague Forum. Assisted by the Government of The Netherlands, long a partner in Gujarat's water efforts, the meeting called for applying the VISION 21 approach toward a long-term strategy involving all

stakeholders, including Government departments and research institutions. A working group was established for this purpose, coordinated by local WSSCC volunteers through India's National Institute of Design. Its mandate was to draft a Vision of water, hygiene and sanitation in the state in the year 2010, with practical recommendations on how to achieve it. Another terrible summer that year was offering important lessons on alternative means for 'drought-proofing' Gujarat and building on the demonstrated capabilities of its communities.

Several months of intensive research and discussions commenced, drawing in partners from all over the state and elsewhere in India and overseas. The outcome is Gujarat Jal- Disha 2010 (which translates as 'Flow 2010'). The report demands significant changes in the way authorities and people have thought and functioned so far. Empowering community institutions and placing them in the centre of decision-making (using the opportunity of recent and important Constitutional amendments) is seen as a key instrument of change. VISION 21's emphasis on access to water and sanitation as a human right is translated into a strategy that draws on existing laws, opportunities and partners. Transforming Government's role to that of a facilitator, and innovating institutions that can accept and implement new roles and responsibilities, is a major area of discussion and recommendation. The report also examines the importance of building community and private sector capacities for such change. Partnerships are advocated that can put water, sanitation and hygiene improvement at the core of Gujarat's strategies for human development and poverty alleviation. Water is accepted as an economic resource, and Gujarat Jal-Disha 2010 concentrates on the need for both awareness and application of principles of ability and willingness to pay, as well as for the development of safety nets to ensure equity and protection for those most in need. A major contribution of the report is its emphasis on improving financial viability within the sector. It introduces the concept of 'drought-proofing' communities through concerted advance action that can decentralize decision-making and action in both rural and urban communities.

The report examines important options such as priority for rainwater harvesting, protecting surface water, participatory water resource management through a river basin approach, a portfolio of technologies in water and sanitation (to cope with the wide range of conditions and needs in Gujarat), the challenge of rapid urbanization, and the need for a massive effort at hygiene education in schools. A Framework for Action by stakeholders sets out next steps in these directions.

Gujarat Jal-Disha 2010 takes strength from other studies conducted during this period. These include studies on water resources by the Gujarat Ecology Commission, a 'vision' for 2020 articulated by the state's Social Infrastructure Development Board, and an important White Paper on drought-proofing in Gujarat commissioned by UNICEF through the Institute for Rural Management (Anand). The Jal-Disha team drew upon and contributed to these partner efforts. All of this experience was recently brought together at a state level seminar organized by the International Water Management Institute (IWMI), where the Jal-Disha approach was recognized as one of utmost significance. This consultation was preceded by a meeting on January 25 which brought sector representatives together with WSSCC's Executive Director, in a discussion on how best to move ahead with Jal-Disha's recommendations and partnerships. The devastating earthquake, which shook Gujarat the next day, postponed a further round of consultation with stakeholders. Instead, the Jal-Disha team moved into relief and rehabilitation work, applying its approach and priorities to the earthquake aftermath. Consultations with communities involved with the Jal-Disha process have now been resumed. They reveal the enormous challenge of transforming so many attitudes and practices inherited from the past. First steps have been taken toward bringing together a countrywide consultation which can draw on Gujarat Jal-Disha 2010 and the global VISION 21 effort, toward articulating a national approach that can finally deliver safe water, sanitation and hygiene to all of India's citizens. The experience so far indicates that it can and must be done. It also underlines Jal-Disha's collaborative culture as the most effective resource now available for the tasks that lie ahead.

C) Code of Ethics

PREAMBLE

This code of ethics is a statement of principles and ethics providing guidance to all interveners and communities involved in hygiene, sanitation and water supply schemes. The Code is based on the recognition of access to safe water and sanitation services as fundamental human rights, and of hygiene as a prerequisite. The Code puts households and communities in charge of their own development and services with the support of other interveners.

The Code is aimed at interveners participating in community projects and at communities initiating their hygiene, sanitation and water supply schemes or participating in interveners' schemes.

The Code is the results of meetings held by the Water Supply and Sanitation Collaborative Council's *Working Group on community management and partnerships in civil society* in Africa, Asia and Latin America. The Code is in line with Vision 21 brought out by the Water Supply and Sanitation Collaborative Council.

The Code is part of the redefinition of interveners' role where:

- a reversal in prevalent directions of thinking and action is needed, starting at the level of households or neighbourhoods, working up from there to community and higher levels, while requiring enabling actions from the government;
- the role of the state remains indispensable to provide legislative and institutional arrangements that will foster access to an hygienic environment, safe water and sanitation to all citizens;
- the partnership between the community and other interveners is based on mutual trust, clear roles and responsibilities of each partner and fair rules of the game;
- community involvement is a gradual learning process which must be envisaged with a long-term perspective.

Principles stated in the Code are inspired by the *Montreal Charter on Drinking Water and Sanitation*. If these principles are met, communities will be in a better position to manage hygiene, sanitation and water supply schemes and pay for services.

GENERAL OBJECTIVE

To get communities and interveners to agree upon and honour the following principles based on equal and gender balanced partnership.

SPECIFIC OBJECTIVES

- To contribute to ongoing efforts by practitioners involved in hygiene, sanitation and water supply scheme towards greater self-reliance, self-respect and equity, as well as commitment to the sound use of water resources.
- To encourage local organisations to develop a collective capacity for advocacy, so as to articulate the felt needs of the constituencies they serve.
- To serve as a guide for improving the partnership between communities and interveners by setting out modalities that will foster a rapid shift from money-dominated relationships to a partnership approach.
- To foster a genuine commitment on the part of all interveners to recognise the importance of a locally-driven approach to the challenges of any hygiene, sanitation and water supply scheme, and to focus their attention on the felt needs of communities.
- To encourage dialogue among interveners and communities on potential conflicts related to hygiene, sanitation and water supply schemes.

THE PRINCIPLES

- 1- Communities are the core of any initiative in hygiene, sanitation and water supply scheme and they need means of empowerment to make it possible. Their needs, role and contribution are clearly defined in a partnership agreement.
- 2- When undertaking hygiene, sanitation and water supply schemes, interveners put an emphasis on affordable and adequate service level measured by indicators of health, well-being, self-reliance and equity.
- 3- Adequate sanitation and hygiene practices receive equal importance and are made integral part of hygiene, sanitation and water supply schemes.
- 4- Integrating gender equality into planning and action is a key factor to ensure sound performance of hygiene, sanitation and water supply schemes.
- 5- Community organizations get a legal status within an enabling environment allowing them to operate in security, own the assets or control the source.
- 6- Communities along with other interveners have access and right to all information concerning hygiene, sanitation and water supply schemes to achieve an equal and transparent relationship.
- 7- Indigenous leadership whenever available is strongly encouraged and supported in all stages of hygiene, sanitation and water supply schemes.
- 8- Communities and interveners incorporate traditional/local knowledge, skills and socio-cultural practices available within the community to maximize the effectiveness of hygiene, sanitation and water supply schemes.
- 9- Communities are supported by interveners to foster the use of local know-how and strengthen their capacities and institutions in order to assure an efficient and sustainable management of hygiene, sanitation and water supply schemes.

- 10-The choice of the most appropriate sanitation and water supply technology, hygiene practices and service level is discussed and decided between interveners and communities previously informed about the various options.
- 11-Water and sanitation pricing and tariffs are based on equitable and non-discriminatory water consumption patterns among users.
- 12-Communities and interveners decide together on the ownership, operation and maintenance of the assets created.
- 13-Interveners give priority to basic domestic and productive needs of people unserved and/or poorly served by hygiene, sanitation and water supply services before exploiting water resources for other purposes.
- 14-Communities and interveners assure that any hygiene, sanitation and water supply scheme safeguards a clean environment and quality of sources. Environmentally sound treatment, recycling and re-use of domestic waste and wastewater and disposal of human excreta are primary concerns.
- 15-We the interveners and communities agree to abide and honor the above mentioned principles and ethics.

D) Selected case study tables

Rapid progress in extending coverage to 165,000 'problem villages'

India's Technology Mission: Mobilising Society for Change

In 1986, India's Prime Minister Rajiv Gandhi introduced a National Technology Mission for Rural Drinking Water Supply and Sanitation. The goal was to cover 165,000 "problem villages" within a period of five years, and to do so through mobilising every section of society. Decentralisation, access to technologies of choice, cutting red tape and involving women as leaders and the local knowledge of NGOs were among the features of the Mission culture. Regions with particular challenges (such as fluoride, salinity ingress, guinea-worm infestation and groundwater depletion) were identified as the focus of Mini-Missions. Communication models were developed with local and professional expertise. Policies and programmes were drastically modified on the basis of research into prevailing levels of knowledge, attitude and practice. Integrated water resource management was introduced in areas of scarcity and models developed to study the impact of groundwater withdrawal and other environmental factors. The importance of understanding gender issues was addressed in project design, and particular attention paid to involving media in both understanding and evaluating these efforts.

The Mission achieved almost 95 percent of its goals within the given time frame. It was further extended on the basis of its successful demonstration. In later years, the challenge remained of sustaining leadership and political will that could ensure the permanence of genuinely participatory processes. The Mission experience has helped quicken a national conviction that sustainability depends most of all on communities that are empowered at the local level, where people must contend with age-old attitudes and practices, and with vested interests that are threatened by change.

Source: G.Ghosh/A.Chatterjee

China's latrine revolution

Participation and Leadership

A "latrine revolution" in China's Henan Province has provided an outstanding example of political commitment and strong local leadership. It started in 1987 in a few villages in Yucheng County because of the efforts of "Mister Latrine," the physician Dr. Song Lexin. It became a provincial programme in 1989 with full support of the Provincial Governor. By 1995, nine of the ten counties most advanced in latrine coverage in China were in Henan Province.

Dr. Song went from village to village on his bicycle, discussing the benefits of his latrine with the villagers. After the villagers experimented with a demonstration latrine, they gradually saw that the manure from this latrine made their apples grow larger and sweeter. Conviction that the latrines had made their villages richer was evident even eight years after the "revolution" began. Most of the latrines were still found to be kept very clean, thanks to the efforts of village women. In most cases, the communities themselves pay 90 percent of the total costs of their improved latrines. Efforts were underway to develop a revolving fund and other credit options to help spread latrine improvement to poorer villages in the province.

Source: IRC Water Newsletter, Dec 1995

The Bellagio Principles

1. CLEAN, HEALTHY AND PRODUCTIVE LIVING:

2. A NEW APPROACH TO ENVIRONMENTAL SANITATION*

*In the world today, 1.2 billion people are without access to safe drinking water, 3 billion are without proper sanitation, and 50% of solid wastes remain uncollected. Meeting at Bellagio from 1-4 February 2000, an expert group brought together by the Environmental Sanitation Working Group of the Water Supply and Sanitation Collaborative Council agreed that current waste management policies and practices are abusive to human well-being, economically unaffordable and environmentally unsustainable. They therefore called for a radical overhaul of conventional policies and practices world-wide, and of the assumptions on which they are based, in order to accelerate progress towards the objective of **universal access to safe environmental sanitation, within a framework of water and environmental security and respect for the economic value of wastes.***

- *Human dignity, quality of life and environmental security at household level should be at the centre of the new approach, which should be responsive and accountable to needs and demands in the local and national setting.*
- *In line with good governance principles, decision-making should involve participation of all stakeholders, especially the consumers and providers of services.*
- *Waste should be considered a resource, and its management should be holistic and form part of integrated water resources, nutrient flows and waste management processes.*

NGO supported water communities in Port-au-Prince, Haiti

Innovation in Urban Water and Sanitation

In Port-au-Prince, Haiti, the public water supply contains enough water for everybody, but only 12% of families are connected to the mains supply. Others have to buy water at higher cost from various private tanks, trucks or carriers. NGO's have therefore established locally based water committees to take responsibility for water distribution within particular neighbourhoods, using a single point supply from the water company. Each committee constructs and operates its own secondary network within a neighbourhood and charges an agreed tariff to the users to cover both the water company's bill and the cost of running the secondary network. The results to date include:

- *10% more of the city's population (specifically in poor neighbourhoods) receive a good water supply*
- *those people pay much less for their water than previously*
- *the water committees are using surplus funds to construct other community facilities (e.g. drains, showers, meeting rooms)*
- *there are good relations between the NGO's, the water committees and the water company, which will lead to more similar systems in future*

Source: Hydro -Conseil

Urban Innovation: The Orangi Pilot Project

Urban Innovation: The Orangi Pilot Project

The Orangi Pilot Project (OPP) operates in an area of Karachi, Pakistan, in which about a million people live. Since 1980, OPP has been helping the people of Orangi to construct their own latrines and local sewers, which discharge into the main Karachi sewers that run through the area. The people pay the capital costs of their infrastructure themselves, not depending on an outside agency. OPP has also carried out hygiene education and various training programmes for the people.

The results of OPP's work are impressive: in Orangi, more than 90 % of households have built their latrines, lane sewers and over 400 collector sewers. They have invested about US\$1.5 million in this work, which is less than 15% of the cost originally estimated by government agencies for a conventional sewerage system. Infant mortality has fallen from 130 per 1000 in 1984 to 37 per 1000 in 1991. In the same manner the Orangi schools, without assistance from the government or donors, have raised the literacy of residents to over 78% (compared to an estimated Karachi average of 62%).

The main components of OPP's approach are: to build on people's perceived needs, priorities and capabilities; to give priority to affordable systems and improvement of existing systems; to develop local teams of professionals, social organisers and technicians bound together by a common vision and strong ethical values; to support people in improving services rather than to impose a "project" perspective.

OPP keeps detailed accounts to help future extension or replication of its work and to ensure transparency and accountability. It collaborates with official agencies to promote new sewerage systems that divide responsibility between internal development (communities finance, build and operate the house latrines and local sewers) and external development (the government finances, builds and operates the trunk sewers and treatment plants).

Source : Arif Hasan, Akhtar Hameed Khan and the OPP; City Press, Karachi, 1999

The Grameen Bank in Bangladesh

Bangladesh: Grameen Bank' Credit for the Poor

The Grameen Bank is well known as a provider of credit to more than 2 million poor and landless people in Bangladesh. A large proportion of the clients are women. The bank's great innovation has been to find an alternative to traditional forms of collateral. The key principle is that if any borrower defaults, the group to which that borrower belongs is no longer considered creditworthy and is no longer eligible for loans.

In recent years, the lending of the Grameen Bank for rural water supplies has risen dramatically. Since early 1992. The bank has provided loans for about 70,000 tubewells. In 1993, it lent about US\$16 million. The interest rate charged on loans for tubewells is 20 percent, repayable over two years in weekly installments. The handpumps are procured locally by the borrowers, either from the Public Health engineering Department or from local private manufacturers.

Source: UNICEF data as cited in: Ismail Serageldin, Water Supply, Sanitation, and Environmental Sustainability: The Financing Challenge. Directions in Development. (Washington, DC: TheWorld Bank, 1994)

Sulabh toilets

No-Subsidy/Low-Subsidy Sanitation in India

The Sulabh movement created by Dr B Pathak and a small group in Bihar state in 1973 as a microlevel project for social reform and cost-effective sanitation has evolved into a major movement. Its prime mission is to uplift the miserable conditions of millions of scavengers who traditionally have cleaned human excreta manually. Sulabh developed and introduced a system of pay-and-use community toilets with additional facilities for bathing, washing and 24-hour attendant service. Soap powder is supplied for hand washing. Users have to pay a nominal charge for toilets while children, the disabled and the poor enjoy free service. Use of the urinal is free. This zero-subsidy system is a unique example of community awareness and participation, which has extended to the development of other low-cost, water-saving and user-friendly sanitation technologies. The result of Sulabh's efforts is a dramatic decline in open-air defecation, the conversion of some one million dry latrines into Sulabh toilets used by over 10 million people each day, and employment opportunities for 50,000 persons in this commercially viable enterprise. Resettlement in other employment has been achieved for 50,000 scavengers through education and training schemes for them and their families.

Source Sulabh Sanitation Movement, New Delhi

Community managed O&M

Community-managed Operation and Maintenance

The Laipurkharka water, health and sanitation project in Nepal was completed in June 1997. People from 33 households obtain safe water from 5 public tapstands. Every household has an improved latrine and a drying rack for dshes. The tapstands are cleaned regularly, and two caretakers maintain the water system. The Project Management and Maintenance Committee (which comprises people from the village and which supervises the caretakers) collected initial lump -sum payments from each group of tapstand users and now collects a fixed monthly sum from each household. Each household also provides two containers of grain for the caretakers twice a year after harvest.

The maintenance funds are deposited in the bank but are not just left there. They are used to promote other development in the community in two ways: the Committee gives loans to community members at below -commercial rates; and the Committee has loaned money for a village shop run on a co-operative basis and returning 15 percent of its turnover to the maintenance fund.

This system of community-managed operation and maintenance which also promotes local development is typical of many NGO-promoted small water projects.

Source: Newah

Effective integrated water resources management, Colombia

Integrated Water Resource Management, Armenia, Colombia

Armenia is a medium sized city of 283,000 inhabitants covering an area of 121km². In the recent past, Armenia has suffered from extensive contamination of its micro-basins from unplanned and haphazard urbanisation. Following interventions by the community through the facilitation of CINARA, Armenia's water resources have been transformed. This was achieved by:

- Visualising the city as an integrated system;
- Visualising the micro-basins as an integrated system;
- Considering water supply and sanitation as a cross-cutting issue;
- Integrating water supply, sewerage and wastewater treatment

Source: CINARA

Universal sanitation - Thailand's experience

Universal Sanitation

Thailand has achieved a remarkable success on the coverage of safe drinking water and sanitary means of excreta disposal in the rural areas. By 1999, 91.94 % rural population has access to safe drinking water supply and 98.11% rural families have built and use sanitary latrines after more than five decades' endeavour with support from WHO, UNICEF, UNDP and USAID in the early years.

The success in providing safe drinking water and improved environmental sanitation is greatly attributed to the farsightedness and determination of the Thai Government for sustainable development of rural areas and the protection of environment. Strong political will and commitment of government functionaries at all levels to implement the rural water supply and environmental sanitation programmes strengthened with intensive health education for behaviour change added momentum in achieving the universal sanitation before the dawn of the 21st century.

Source: UNICEF East Asia and Pacific Regional Office