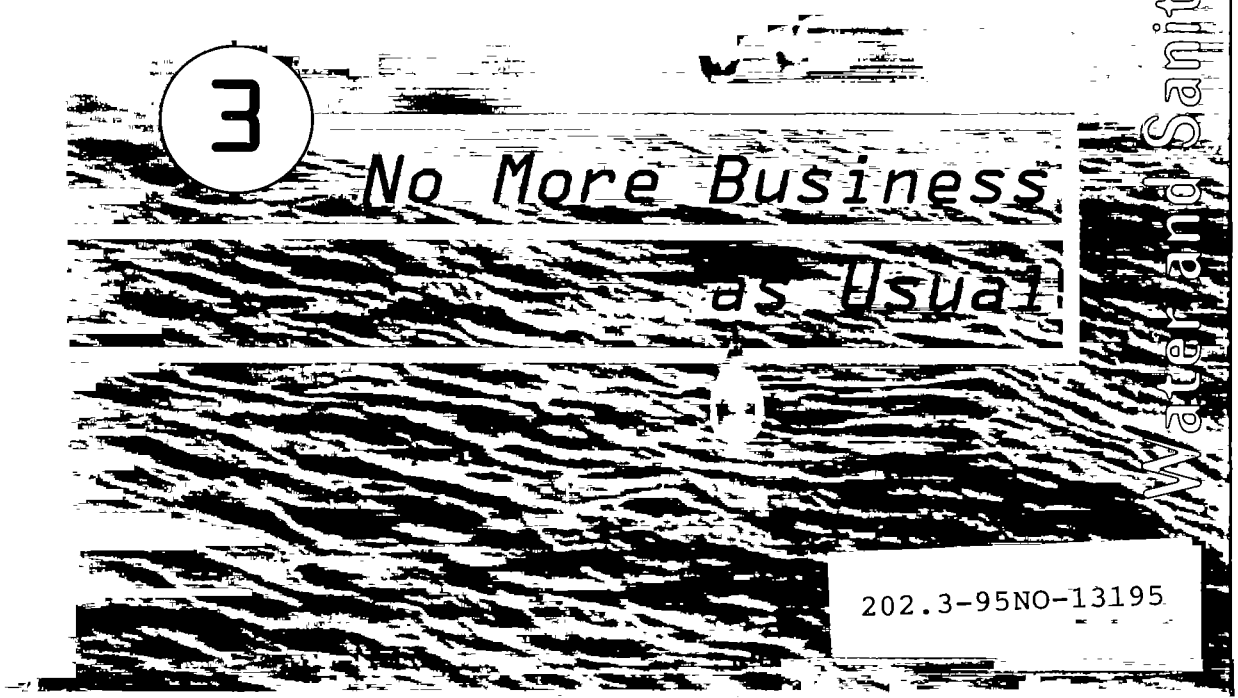
Water and Sanitation for All: A World Priority



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No More Business as Usual

In March 1994, the Netherlands Government hosted an international Ministerial Conference on Drinking Water and Environmental Sanitation under the auspices of the Ministry of Housing, Spatial Planning and the Environment (VROM) and the Ministry of Foreign Affairs. The aim of the conference was to ensure that there would be genuine follow-up to the recommendations set forth in the Freshwater Chapter (Chapter 18) of Agenda 21, the global programme endorsed by heads of government at the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992

The Noordwijk Conference was supported by a series of six key background papers, and resulted in a Political Statement and Action Programme, which were published in the Conference Proceedings

To make this information more accessible and more widely available, the Ministry of Housing, Spatial Planning and the Environment is now publishing *Water and Sanitation for All. A World Priority*, a series of three booklets based on the conference papers and other sources.
The aim is to encourage policy makers and managers to initiate and maintain follow-up actions in support of the Political Statement and Action Programme and so ensure that the benefits of safe water and adequate sanitation can be enjoyed by all

This initiative is supported by the following international and bilateral agencies:

United Nations Development Programme (UNDP)

United Nations Children's Fund (UNICEF)

Water Supply and Sanitation Collaborative Council

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IRC International Water and Sanitation Centre

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No More Business as Usual

Prepared by IRC International Water and Sanitation Centre

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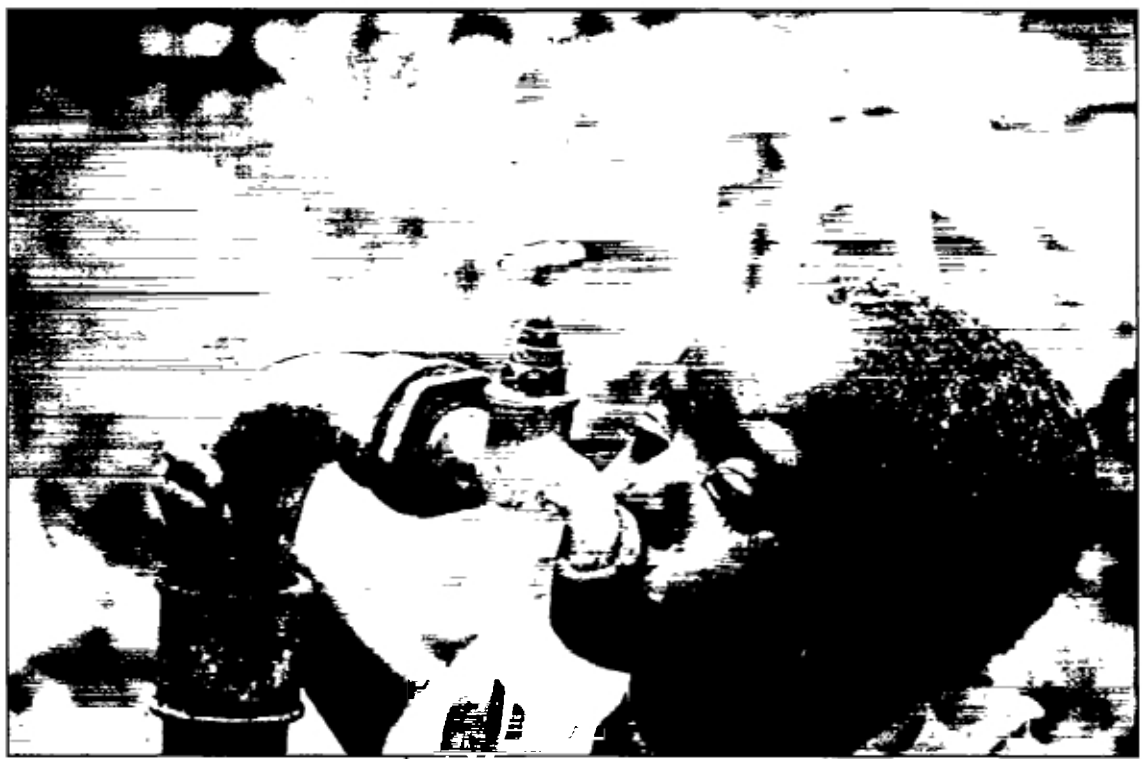

Photo IRC

What needs to be done to close the shameful water and sanitation gap? Clearly, 'business as usual' will not do it. James P. Grant, Executive Director, UNICEF.

All quotations featured in the text are taken from speeches and statements to the Noordwijk Conference

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SUMMARY

In developing countries, 2,000 million people are at risk from water-borne diseases. In industrialized countries, water resources and health are threatened by industrial and toxic waste. Yet the knowledge needed to bring safe water and sanitation to all already exists What is required is the political will to use it, and to mobilize the human and financial resources already available The Noordwijk Ministerial Conference on Drinking Water and Environmental Sanitation adopted an Action Programme to encourage governments to ensure that, in future, there will be 'no more business as usual' in dealing with the problems of the water and sanitation sector The Programme focuses on the need for change in four key areas and calls on the international community for support.

Water and People: bringing about partnership and behavioural change

Governments don't solve problems, people do The politicians' task is to mobilize the people in new partnerships for change, and to provide support through legislation and leadership. The essential condition for success is behavioural change, not only among users, but also among politicians, government officials, technical staff, community workers and others. To bring this about, governments should generate public awareness and social mobilization, and improve partnership and participation The challenge is to make the public aware of the developing crisis in water resources and help them understand how it can be averted through cooperation and partnership Communication is the key to success Partnership between people provides the essential basis for collaboration between agencies and institutions. Governments have a vital role in establishing the policy and legislative framework to enable community management to work Water and sanitation coverage statistics say nothing about people's behaviour, which is as critical as the provision of better services Objectives need to be defined in terms of behaviour, and progress measured in terms of behaviour change.

Water, Health and the Environment: integrating water policy

Access to adequate water and sanitation is a basic human need The challenge for governments is to ensure that the need is met It arises within the context of growing concern about water scarcity and environmental degradation, which has created a demand for the integration of water resources planning and development. A prerequisite is an institutional and legislative framework able to resolve conflicting demands and implement controls. A comprehensive policy framework, based on the rational and equitable allocation of resources, should give priority to the poor and unserved, set standards and targets and establish a monitoring system to use them as indicators

Policies and strategies for urban areas should assure cities of getting the right quantity and quality of water, while regulating their discharges so that similar assurances can be given to other cities downstream. Governments need pricing policies to promote the efficient use of water, based on criteria of affordability, resource conservation, and the 'polluter pays' principle. Agricultural water pricing can have an enormous impact on water scarcity.

Water resources assessments provide data on surface and groundwater resources. It is not enough to know what resources are available, they must also be conserved and protected. Water resources are polluted by domestic sewage, industrial wastes, surface runoff, and agricultural discharges. Pollution has to be reduced, waste disposal improved, and groundwater depletion reversed, before sustainability can be achieved A comprehensive water policy should rationalize competing demands from agriculture, industry and domestic users All concerned should use water efficiently, re-use and recycle effluents and dispose of waste in an environmentally-friendly manner. There is a widespread need to reduce the amount of water lost from distribution systems.

Water and Institutions: organizing service provision

Sector agencies have been too dependent on central government; water and sanitation are local issues requiring local initiatives from local people The organizational structure of the sector should aim to delegate responsibility to local authorities or utilities as much as possible. Governments find it increasingly difficult to provide water and sanitation services efficiently from the centre The role of the centre should be to create the conditions for providers and utilities to function effectively and devolve responsibility to the lowest appropriate level Central government should create the regulatory framework for providers and utilities to fulfil their responsibilities The centralized approach is a major constraint to achieving behavioural objectives. For governments to move away from the providing role does not hold the political dangers that might be assumed There are real political rewards in a policy that results in tangible improvements.

Many urban water supply and sanitation agencies operate very inefficiently Better use of financial resources and improved management can bring major gains in sustained coverage. The role of the private sector in water and sanitation is increasing It can overcome some of the constraints faced by public utilities Non-governmental organizations have important roles in piloting innovative approaches and supporting community management, while professional associations also play a major part in developing networking among sector professionals. Their links with international associations give access to a wide knowledge base and can help raise the status of national professionals and industries

Capacity building activities should ensure the active participation of women in all aspects of sector development, and women should be adequately represented at policy level. This does not mean neglecting the interests of men. Gender issues are important in water and sanitation programmes; the needs and interests of men and women differ considerably, and have important implications for the performance of the sector.
In most countries, responsibility for water supply and sanitation is shared among several organizations, often with no effective consultation and cooperation Unless appropriate policies are incorporated in a country strategy, this leads to duplication of effort and waste of resources. There is a need for greater collaboration among community groups, the private sector and NGOs. The benefits of collaboration include avoiding waste of resources, resolving conflicts and promoting integration, encouraging collective efforts, and helping to mobilize and deploy resources. Various collaborative mechanisms may be needed to realise these benefits.

As the role of government in providing services is reduced, the capacity of staff in utilities, communities and the private sector needs to be developed accordingly. Better performance depends on trained staff working in a positive environment Central government must provide such an environment, with delegation of power, information support, incentives and quality standards. In addition to the right training, staff need to be motivated and properly rewarded. Education is a key part of the new approach Schools offer a receptive audience for encouraging behavioural change through hygiene promotion.

Monitoring and evaluation are essential for updating strategies in line with progress. Nation-wide monitoring systems should be established, and managers made accountable for performance Information is a vital tool for management, planning and resource utilization, and central government should improve information management systems at all levels. Operational research is also vital to stimulate improvements in effectiveness

Water and Mobilizing Financial Resources: building assets for the future

Being able to demonstrate the effective use of existing resources is becoming a winning factor in the competition for the limited extra resources available, and also frees other resources for development. Resource allocations are most effective when priority is given to basic services for the unserved. Present levels of investment are too low to enable coverage to be significantly extended and existing systems

sustained To reduce the gap between what is needed and what is available, the sector needs access to new sources of capital.

Water is a social and economic good, and its value should be reflected in an appropriate price. The greatest single contribution that governments can make towards the sustainable development of water and sanitation systems is to empower local water utilities to charge a realistic price for water. Failure to cover the costs of operation and maintenance has led to rapid deterioration and ineffectiveness The long-term objective is full cost recovery through user charges which recover capital investments and provide sufficient funds for operation and maintenance. The application of the concept of water as an economic good has to take account of poor people who cannot pay the full costs of water supplies Tariff structures should provide for 'lifeline' supplies at reduced cost.

Governments need to develop guidelines for investments, giving priority to meeting the basic needs of the rural and urban poor. This would have a dramatic impact on coverage statistics, the alleviation of poverty, the improvement of the environment, and the health of the community Users should be allowed to choose from a range of technologies according to their preference and ability to pay. High rates of unaccounted-for water lead to high costs in transporting water from great distances Such institutional inefficiency deters investors. Tariffs for waste disposal should be based on the 'polluter pays' principle, there should be no assumed right to discharge wastes freely.

Governments should explore and develop new and innovative financing mechanisms for water supply and sanitation, including private sector funding, private management of public assets, international private sector finance, and debt swaps.

Water and the World: promoting international support

International, bilateral and regional organizations have a vital role to play in helping political leaders take action at the national level International agreements provide support to ministers in making key decisions and in competing for national resources The policies of external support agencies may sometimes seem restrictive to countries trying to develop their own capacities. Countries with limited resources can benefit from collaborating through regional institutions and international forums

The key to improving effectiveness in the water and sanitation sector lies with the politicians, who can release and guide available energy to apply known solutions to achieve the goals. To do this, new attitudes and new approaches are needed - there must, indeed, be no more business as usual!

RÉSUMÉ

Dans les pays en développement, deux milliards d'hommes et de femmes risquent de contracter des maladies d'origine hydrique Dans les pays industrialisés, les ressources en eau et la santé sont menacées par les déchets industriels et les déchets toxiques. Pourtant, les connaissances nécessaires pour distribuer partout l'eau propre et diffuser l'assainissement existent Mais il faut une volonté politique pour utiliser ce savoir-faire et pour mobiliser les ressources humaines et financières disponibles. La Conférence ministérielle de Noordwijk sur l'eau potable et l'assainissement de l'environnement a adopté un programme d'action pour encourager les gouvernements à garantir qu'à l'avenir, on ne fera plus comme si de rien n'était en abordant les problèmes de l'eau et de l'assainissement. Le programme met l'accent sur la nécessité d'un changement dans quatre domaines clés et appelle la communauté internationale à apporter son soutien.

L'eau et les populations : créer un partenariat et provoquer un changement de comportement

Ce ne sont pas les gouvernements qui résolvent les problèmes, mais les populations La tâche des politiciens est de mobiliser les populations à créer de nouveaux partenariats pour le changement et d'apporter leur soutien au moyen de la législation et des compétences des dirigeants La condition essentielle du succès est le changement de comportement, non seulement chez les s, mais aussi chez les politiciens, les représentants du gouvernement, le personnel technique, les travailleurs sociaux, etc Pour y parvenir, les gouvernements devraient aider à la prise de conscience du public, encourager la mobilisation de la société civile et améliorer le partenariat et la participation Le défi consiste à rendre l'opinion publique consciente de la crise imminente de l'eau et à aider à comprendre comment cette crise peut être évitée grâce à la coopération et le partenariat La communication est la clé du succès. Le partenariat entre les populations fournit la base d'une collaboration entre les organismes d'information et les institutions. Les gouvernements ont un rôle vital à jouer dans l'établissement d'une politique et d'un cadre législatif visant à permettre à la communauté de gérer efficacement les ressources en eau. Les statistiques de couverture en eau et en assainissement sont muettes sur le comportement des populations, alors que le comportement est tout aussi important que l'amélioration des services. Les objectifs doivent être définis en termes de comportement, et les progrès mesurés en termes de changement de comportement.

L'eau, la santé et l'environnement: intégrer la politique de l'eau

Avoir accès à de l'eau propre et à un assainissement adéquat est un besoin élémentaire pour l'homme Les gouvernements doivent relever le défi qui consiste à faire en sorte que ces besoins sont satisfaits, dans un contexte de préoccupation croissante pour la raréfaction des ressources en eau et pour la dégradation de l'environnement, ce qui a créé une demande visant à intégrer la planification et le développement des ressources en eau. Une condition préalable à cela est un cadre institutionnel et juridique permettant de faire face à des demandes concurrentes et d'effectuer des contrôles Un cadre politique étendu, basé sur une répartition rationnelle et équitable des ressources en eau, devrait donner la priorité aux populations pauvres et non desservies, fixer des normes et des objectifs et établir un système de suivi pour les utiliser comme indicateurs

Les politiques et les stratégies pour les régions urbaines devraient garantir aux villes une quantité d'eau équitable et de qualité, tout en réglementant leurs rejets d'eau résiduaire et polluée, de telle façon que d'autres villes en aval puissent recevoir les mêmes garanties. Les gouvernements ont besoin de fixer des prix pour encourager l'utilisation efficace de l'eau, basée sur les critères suivants: prix abordable, conservation des ressources et principe du pollueur payeur Fixer un prix pour l'eau utilisée dans l'agriculture peut avoir un impact énorme sur la raréfaction de l'eau.

L'évaluation des ressources en eau fournit des données sur les ressources en eaux de surface et en eaux souterraines. Il ne suffit pas de savoir quelles ressources sont disponibles, il faut aussi les conserver

et les protéger Les ressources en eau sont polluées par les eaux ménagères, les eaux usées industrielles, l'eau de ruissellement et les rejets agricoles Il faut réduire la pollution, améliorer l'évacuation des déchets et inverser la courbe de tarissement des réserves en eaux souterraines, si l'on veut parvenir au développement durable Une politique de l'eau globale devrait rationaliser les demandes concurrentes provenant de l'agriculture, de l'industrie et des ménages. Tous les acteurs concernés devraient utiliser l'eau efficacement, réutiliser et recycler les effluents et se débarrasser des déchets d'une façon qui respecte l'environnement. Il est grandement nécessaire de réduire la quantité d'eau gaspillée par les systèmes de distribution

L'eau et les institutions : organiser les services

Les organismes du secteur de l'eau ont été trop dépendants des gouvernements centraux, alors que l'eau et l'assainissement sont des questions locales, qui nécessitent des initiatives de la population locale. La structure organisationnelle du secteur devrait avoir pour but de déléguer le plus possible de responsabilité aux autorités locales ou aux services d'utilité publique locaux Les gouvernements ont de plus en plus de difficulté à fournir de l'eau et des services d'assainissement de façon efficace depuis le centre Le rôle du centre devrait être de créer des conditions favorables pour que fournisseurs et services d'utilité publique fonctionnent efficacement et de déléguer les responsabilités au niveau approprié le plus bas Le gouvernement central devrait instituer un cadre réglementaire pour que les fournisseurs et les services d'utilité publique remplissent leurs responsabilités L'approche centralisée est un obstacle majeur à l'obtention d'un changement de comportement Ne plus assurer le rôle de fournisseur n'empêche pas les gouvernements de devoir continuer à assumer les risques politiques nécessaires. Une politique qui donne des résultats tangibles en termes d'amélioration est récompensée au niveau politique.

De nombreux organismes d'approvisionnement et d'assainissement urbains fonctionnent de façon très inefficace Une meilleure utilisation des ressources financières et une amélioration de la gestion peuvent apporter des gains importants et durables en matière de taux de couverture. Le rôle du secteur privé augmente dans le domaine de l'eau et de l'assainissement. Il peut venir à bout de certains obstacles auxquels sont confrontés les services d'utilité publique. Les organisations non gouvernementales ont un rôle important à jouer dans le pilotage d'approches innovantes et dans le soutien de la gestion par la communauté, tandis que les associations professionnelles jouent un rôle considérable dans le développement de réseaux parmi les professionnels du secteur Leur liens avec les associations internationales leur donnent accès à un très large savoir et peut aider à relever le statut de professionnels et d'industries nationaux.

Les activités de création de capacité devraient s'assurer de la participation active des femmes dans tous les aspects du développement du secteur, et les femmes devraient être représentées en nombre adéquat au niveau de l'élaboration de la politique Cela ne veut pas dire que les intérêts des hommes seront négligés Les questions de genre sont importantes dans les programmes d'eau et d'assainissement; les besoins et les intérêts des hommes et des femmes diffèrent considérablement et ont des implications énormes sur les résultats du secteur

Dans la plupart des pays, les responsabilités en matière d'approvisionnement en eau et en matière d'assainissement sont partagées entre plusieurs organismes, qui souvent ne coopèrent ni ne se concertent efficacement. Cela conduit généralement à du travail fait en double et à un gaspillage des ressources, à moins qu'une politique appropriée ne soit incorporée dans la stratégie du pays Il faut que les groupes communautaires, le secteur privé et les ONG collaborent davantage entre eux. Cette collaboration aura comme résultats positifs d'éviter le gaspillage des ressources, de résoudre les conflits et de promouvoir l'intégration, d'encourager les efforts collectifs et d'aider à mobiliser et à déployer les ressources Divers mécanismes de collaboration seront nécessaires pour obtenir ces résultats

Si le rôle du gouvernement dans la prestation de services est réduit, les effectifs dans les services d'utilité publique, dans les communautés et dans le secteur privé devront être formés en rapport. Un personnel expérimenté travaillant dans de bonnes conditions donne de meilleurs résultats. Le gouvernement central doit créer un tel cadre de travail, en déléguant du pouvoir, en fournissant des informations, des stimulants et en définissant des normes de qualité. En plus d'une bonne formation, le personnel a besoin de motivation et d'être récompensé comme il faut. La formation est un élément clé de la nouvelle approche. Les écoles peuvent encourager un changement de comportement en promouvant l'hygiène auprès d'un public réceptif.

Le suivi et l'évaluation sont indispensables pour actualiser les stratégies en fonction des progrès. Des systèmes de suivi nationaux devraient être instaurés, et les gestionnaires devraient rendre des comptes sur les résultats. L'information est un instrument vital pour la gestion, la planification et l'utilisation des ressources, le gouvernement central devrait par conséquent améliorer les systèmes de gestion de l'information à tous les niveaux La recherche opérationnelle est également essentielle pour stimuler des améliorations de l'efficacité.

L'eau et la mobilisation des moyens financiers : créer un capital pour l'avenir

Être capable de prouver que les ressources existantes sont utilisées efficacement devient un facteur de réussite dans la compétition pour obtenir les ressources supplémentaires disponibles limitées et libère de plus d'autres ressources pour le développement L'allocation des ressources est la plus efficace lorsque la priorité est donnée aux services de base pour les populations non desservies Les niveaux actuels d'investissement sont trop faibles pour permettre une extension suffisamment importante du taux de couverture et la durabilité des systèmes d'approvisionnement existants Pour réduire le fossé entre ce qui est nécessaire et ce qui est disponible, le secteur doit avoir accès à de nouvelles sources de capital

L'eau est un bien social et économique, et sa valeur devrait se retrouver dans un prix fixé en conséquence. La plus importante contribution que les gouvernements puissent faire en faveur du développement durable des systèmes d'approvisionnement en eau et des systèmes d'assainissement est de donner aux services publics locaux le pouvoir de faire payer un prix réaliste pour l'eau. Le fait que les coûts d'exploitation et de maintenance n'étaient pas couverts a conduit à une détérioration rapide et à l'inefficacité L'objectif à long terme est de recouvrer l'intégralité des coûts grâce au prix payé par les utilisateurs, ce qui permet de rembourser les investissements en capital et fournit des fonds suffisants pour l'exploitation et la maintenance Appliquer à l'eau la notion de bien économique doit se faire en tenant compte des populations pauvres qui ne sont pas en mesure de payer le prix de revient complet de l'approvisionnement en eau La structure des prix devrait prévoir un approvisionnement minimal à un prix réduit.

Les gouvernements doivent élaborer des directives pour les investissements, en donnant la priorité à la satisfaction des besoins de base des populations rurales et urbaines pauvres Cela aurait un effet considérable sur les statisques de taux de couverture, sur l'atténuation de la pauvreté, l'amélioration de l'environnement et de la santé de la communauté. Les consommateurs devraient avoir le droit de choisir parmi toute une série de technologies, en fonction de leurs préférences et de leur pouvoir d'achat. Les taux élevés de distribution d'eau non comptabilisée entraînent des coûts de transport élevés pour acheminer l'eau sur de longues distances. Une telle inefficacité institutionnelle dissuade les investisseurs Les prix pour l'évacuation des déchets devraient être basés sur le principe du pollueur payeur, personne ne devrait supposer avoir le droit de déposer ses déchets n'importe où sans contrainte.

Les gouvernements devraient rechercher et mettre au point des mécanismes de financement innovants pour l'approvisionnement en eau et l'assainissement, comprenant des financements par le secteur privé, la gestion privée des investissements publics, un

financement privé international et des échanges de créances.

L'eau et le monde : promouvoir le soutien international

Les organisations internationales, bilatérales et régionales ont un rôle vital à jouer pour aider les hommes politiques à agir au niveau national. Des accords internationaux fournissent un support aux ministres pour prendre des décisions clés et pour rivaliser avec d'autres pays pour obtenir des ressources Les politiques des institutions externes d'aide peuvent parfois sembler restrictives aux pays essayant de développer leurs propres capacités Les pays ayant des ressources limitées peuvent tirer des bénéfices de la coopération par l'intermédiaire des institutions régionales et des forums internationaux.

Parvenir à améliorer l'efficacité dans le secteur de l'eau et de l'assainissement dépend avant tout des politiciens, qui peuvent libérer et capter les énergies disponibles pour appliquer des solutions connues afin d'atteindre les objectifs Pour ce faire, de nouvelles attitudes et de nouvelles approches s'imposent, il ne faut donc plus continuer à faire comme si de rien n'était!

RESUMEN

En los países en vías de desarrollo, 2.000 millones de personas están expuestas a enfermedades transmitidas por el agua En los países industrializados, los recursos de agua y la salud están amenazados por los residuos industriales y tóxicos. Pero ya existen los conocimientos necesarios para conseguir agua segura y saneamientos para todo el mundo. Lo que hace falta es la voluntad política para aplicarlos y para movilizar unos recursos humanos y económicos que también existen. La Conferencia Ministerial de Noordwijk sobre agua potable y saneamiento medio ambiental adoptó un plan de acción para animar a los gobiernos a garantizar que en el futuro no adoptarán la actitud de "hacer las cosas como siempre" al ocuparse de los problemas del agua y del sector de los saneamientos. El programa se centra en la necesidad de cambio en cuatro áreas clave y hace un llamamiento a la cooperación de la comunidad internacional.

Agua y gente: lograr la colaboración y el cambio de conducta

Los gobiernos no resuelven los problemas: la gente sí La tarea de los políticos es movilizar a las personas para que creen nuevas colaboraciones enfocadas al cambio y proporcionar apoyo a través de la legislación y el liderazgo La condición esencial para el éxito es el cambio de conducta, no sólo entre los usuarios sino también entre los políticos, los funcionarios gubernamentales, el personal técnico, los trabajadores de la comunidad y otros grupos. Para conseguirlo, los gobiernos tienen que generar conciencia pública y movilización social y mejorar la colaboración y la participación El desafío es conseguir que la población sea consciente de la crisis creciente de los recursos de agua y ayudarle a comprender cómo es posible evitarla a través de la cooperación y la colaboración La comunicación es la clave del éxito. La colaboración entre la gente constituye la base esencial para la colaboración entre organismos e instituciones Los gobiernos tienen un papel vital en el establecimiento de la política y del marco legislativo que permitan el buen funcionamiento de la gestión desde la comunidad Las estadísticas sobre la cobertura del suministro de agua y de los saneamientos no dicen nada de la conducta de la gente, que tiene tanta importancia como la provisión de unos servicios mejores. Es preciso definir los objetivos en términos de conducta, y medir los progresos en términos de cambio de esa conducta

Agua, salud y el medio ambiente: integrar la política del agua

El acceso a un agua y a unos saneamientos adecuados es una necesidad humana básica El desafío de los gobiernos es asegurar la respuesta a tal necesidad Surge en el contexto del aumento de la preocupación por la escasez de agua y por la degradación del medio ambiente, que ha dado lugar a la exigencia de que se integren la planificación y el desarrollo de los recursos de agua. Un requisito previo es un marco institucional y legislativo capaz de resolver las demandas enfrentadas y de poner en funcionamiento ciertos controles Un marco político completo, basado en la distribución racional y justa de los recursos, debería dar prioridad a los pobres y a los desatendidos, fijar normas y objetivos y establecer un sistema de control para usar tales normas como indicadores

Las políticas y estrategias para las zonas urbanas deben garantizar que las ciudades conseguirán agua en la cantidad y de calidad apropiadas, al tiempo que regulen sus vertidos, de forma que pueda ofrecerse la misma garantía a las ciudades que vayan a continuación Los gobiernos necesitan una política para fijar precios y promover el uso sensato del agua, tomando como base criterios de disponibilidad, conservación de los recursos y el principio de que "quien contamina, paga" El precio del agua para usos agrícolas puede tener una enorme repercusión en la escasez de agua

La valoración de los recursos de agua proporciona datos sobre los recursos superficiales y subterráneos. No basta con saber con qué recursos contamos· también hay que conservarlos y protegerlos. Los recursos de agua están contaminados por los vertidos domésticos, los residuos industriales, la evaporación superficial y los vertidos agrícolas. Es preciso reducir la contaminación, mejorar la forma de eliminar los residuos y acabar con el agotamiento de las aguas subterráneas para poder alcanzar el desarrollo sostenible. Una política completa para el agua debería

racionalizar las demandas enfrentadas de los usuarios de la agricultura, la industria y el sector doméstico. Todos los afectados deberían utilizar el agua con moderación, reutilizar y reciclar las corrientes y eliminar los residuos de formas que no dañen el medio ambiente Existe una necesidad generalizada de reducir la cantidad de agua que se pierde en los sistemas de distribución

Agua e instituciones: organizar la provisión de servicios

Las agencias del sector han dependido excesivamente del gobierno central· el agua y los saneamientos son cuestiones locales que precisan iniciativas locales de la gente del lugar La estructura organizativa del sector debe apuntar a la delegación de responsabilidades en las autoridades y los servicios de abastecimiento público de la zona en la medida en que sea posible Los gobiernos encuentran cada vez más difícil proporcionar agua y servicios de saneamiento de forma eficaz desde el ámbito central. El papel del gobierno central debería ser crear las condiciones para que los proveedores y los servicios de abastecimiento público funcionen con eficacia y trasladar la responsabilidad al nivel más restringido que resulte adecuado. El gobierno central debería crear el marco reglamentario para que los proveedores y los servicios públicos cumplan con su responsabilidad El enfoque centralizado es una de las grandes trabas para lograr los objetivos de cambio de conducta. El alejamiento de los gobiernos de su papel de proveedores no justifica hablar de los peligros políticos que podrían asumirse. Existen auténticas recompensas políticas en una política que se traduce en mejoras tangibles

Muchas agencias para el suministro de agua y los saneamientos en zonas urbanas operan de forma altamente ineficaz Un mejor empleo de los recursos económicos y el perfeccionamiento de la gestión puede dar lugar a grandes ventajas en la cobertura sostenida. El papel del sector privado en cuanto al agua y los saneamientos es cada vez más importante. Puede acabar con algunas de las limitaciones a que se enfrentan los servicios de abastecimiento público. Las organizaciones no gubernamentales tienen un papel destacado en el control de los enfoques innovadores y respaldando la gestión de la comunidad, en tanto las asociaciones profesionales también tienen una tarea importante en el desarrollo de una red de profesionales del sector Sus relaciones con las asociaciones internacionales permiten acceder a una amplia gama de conocimientos y puede contribuir a mejorar la situación de los profesionales y las industrias nacionales.

Las actividades para la creación de capacidad deberían garantizar la participación activa de las mujeres en todos los aspectos del desarrollo del sector Las mujeres, además, deberían estar adecuadamente representadas en el ámbito político. Ello no significa olvidar los intereses de los hombres Las cuestiones de diferenciación por razón de sexo son importantes en los programas de abastecimiento de agua y saneamientos, las necesidades y los intereses de los hombres y de las mujeres difieren considerablemente y tienen repercusiones de importancia en los resultados del sector.

En la mayoría de los países, la responsabilidad del suministro de agua y de los saneamientos se reparte entre diversas organizaciones, muchas veces ni consultas ni cooperación eficaces A menos que se incorporen unas políticas adecuadas en la estrategia nacional, el resultado será la duplicación de los esfuerzos y el despilfarro de los recursos Hay necesidad de una mayor colaboración entre los grupos de la comunidad, el sector privado y las ONG Las ventajas de esta colaboración son, entre otras, evitar la pérdida de recursos, resolver los conflictos y favorecer la integración, fomentar los esfuerzos colectivos y ayudar a movilizar y distribuir los recursos. Pueden ser necesarios diversos mecanismos de colaboración para hacer realidad tales ventajas

A medida que se limita el papel de los gobiernos en la provisión de servicios, la capacidad del personal de los servicios de abastecimiento público, las comunidades y el sector privado deberá ser desarrollada en consecuencia Un rendimiento mejor depende de que un personal cualificado trabaje en un entorno positivo. El gobierno central debe proporcionar este entorno, con delegación de poder, respaldo informativo, incentivos y normas de calidad

Además de la formación apropiada, el personal tiene que estar motivado y debidamente recompensado. La educación es una pieza esencial del nuevo enfoque. Las facultades ofrecen un público receptivo para fomentar el cambio de conducta a través de la promoción de la higiene.

El control y la evaluación son esenciales para actualizar las estrategias en línea con el progreso. Deben establecerse sistemas de control de ámbito nacional y los gestores deberán responsabilizarse de los resultados La información es una herramienta vital para la gestión, la planificación y la utilización de los recursos, y el gobierno central debe mejorar los sistemas de gestión de la información en todos los niveles. Las investigaciones operativas son también cruciales para estimular las mejoras de la eficacia.

Agua y movilización de los recursos económicos: crear capital para el futuro

Ser capaz de demostrar un uso sensato de los recursos existentes está convirtiéndose en factor decisivo de la competencia por los limitados recursos adicionales que existen, y también liberará otros recursos para el desarrollo. La asignación de recursos es más eficaz cuando se da prioridad a los servicios básicos para los más desatendidos Los niveles actuales de inversión son demasiado bajos para que la cobertura pueda ampliarse de forma significativa y para mantener los sistemas existentes Para reducir la diferencia entre lo que hace falta y lo que puede usarse, el sector debe tener acceso a nuevas fuentes de capital.

El agua es un bien social y económico, y su valor debe reflejarse en un precio ajustado. La mayor contribución que los gobiernos pueden hacer al desarrollo sostenible del agua y de los sistemas de saneamiento es dar poder a los servicios de abastecimiento de agua para cobrar por el agua un precio realista. La incapacidad para cubrir los costes de operación y mantenimiento ha conducido al deterioro rápido y a la ineficacia El objetivo a largo plazo es la total recuperación de los costes a través del precio que se cobra a los usuarios con el que se recuperan las inversiones de capital y se logran fondos suficientes para la operación y el mantenimiento. La aplicación del concepto del agua como bien económico debe tomar en consideración a los pobres que no pueden pagar todo el precio de los suministros de agua Las estructuras tarifarias deben facilitar unos suministros "de línea vital" a un precio reducido.

Los gobiernos tienen que elaborar directrices para la inversión, dando prioridad a las respuestas a las necesidades básicas de los pobres de las zonas rurales y urbanas. Ello tendría unas llamativas repercusiones sobre las estadísticas de cobertura, el alivio de la pobreza, la recuperación del medio ambiente y la salud de la comunidad. Los usuarios deberían tener la posibilidad de elegir de una gama de tecnologías, según sus preferencias y sus posibilidades económicas Las elevadas tasas de agua cuyo destino no se ha justificado producen costes elevados al tener que transportar el agua grandes distancias. Esta ineficacia institucional frena a los inversores Las tarifas para la eliminación de los residuos deben estar basadas en el principio de que "quien contamina, paga": no debe haber derechos aceptados a poder verter residuos libremente

Los gobiernos deberían explorar y desarrollar mecanismos de financiación nuevos e innovadores para el suministro de agua y los saneamientos, incluida la financiación del sector privado, la gestión privada de los activos públicos, la financiación del sector privado internacional y la condonación de la deuda

El agua y el mundo: promover la ayuda internacional

Las organizaciones internacionales, bilaterales y regionales tienen ante sí un papel primordial ayudando a los líderes políticos a pasar a la acción en el ámbito nacional Los acuerdos internacionales ofrecen respaldo a los ministros para la toma de decisiones clave y en su competencia por los recursos nacionales La política de las agencias de ayuda externa a veces puede parecer restrictiva a los países que tratan de desarrollar sus propias capacidades. Los países con recursos limitados pueden beneficiarse de la colaboración a través de las instituciones regionales y los foros internacionales

La clave para aumentar la eficacia en el sector del agua y de los saneamientos está en manos de los políticos, que pueden poner a disposición y gestionar las fuentes de energía existentes para la aplicación de soluciones ya conocidas a fin de alcanzar los objetivos propuestos.
Para ello son necesarias nuevas actitudes y nuevos enfoques ¡tiene que acabarse de una vez por todas el "hacer las cosas como siempre"!

CHANGE IS THE KEY

Photo: Mary Rosenfeld

The Political Statement issued by the Noordwijk Ministerial Conference recognized that many countries face a water crisis, and that, to satisfy at least the basic needs for water and sanitation, the crisis can and must be resolved This means that we need to use our resources - people, water and finance - more efficiently and effectively. To achieve this, change is needed, 'business as usual' is not enough.

The preparations for the Ministerial Conference drew upon a huge reservoir of knowledge and experience from sector professionals in all parts of the world. Their response demonstrated a powerful collective will to get on with the job, to put into effect the solutions developed during ten years of concerted effort in the International Drinking Water Supply and Sanitation Decade, and to reverse the devastating trends of human misery and environmental degradation that have plagued this planet for too long

The United Nations Conference on Environment and Development (UNCED) confirmed the political commitment of Governments to take decisive actions to improve drinking water and sanitation. The political mood change resulting from the endorsement of Agenda 21 by the world leaders meeting in Rio provides a golden opportunity to press forward with action programmes based on universally agreed technical and political approaches To set those programmes in motion, the political commitment needs to be converted into fundamental changes in approach. That requires some key political decisions at national level·

- A decision to put people first, in both urban and rural communities, by engaging in open dialogue about their attitudes and needs and on what they can manage, maintain and pay for. This requires changes in approach and behaviour at all levels, and the mobilization of all stakeholders as partners in water and sanitation development through nationwide programmes of social mobilization.

- A decision to change the role of central government from that of direct provider of water and sanitation services to that of enabler and regulator of other stakeholders, acting in partnership with them to deliver services at the local level. This means devolving responsibility for water and sanitation services to the lowest practical level, with central government being responsible for developing policies and strategies for the overall management of water resources and for establishing and enforcing legislation and standards to protect water resources and the environment for the benefit of all users.

- A decision to integrate the planning and development of water supply and sanitation into national programmes for water resources management and environmental protection. These programmes should incorporate a commitment to providing access to adequate water and sanitation services at affordable cost as a basic right, a right which must be accompanied by a corresponding obligation to use water efficiently and to dispose of wastes in a manner which will protect and sustain the environment for the benefit of future generations.

- A decision to review and, where necessary, revise existing national strategies for water supply and environmental sanitation, the management of water resources and the protection of the environment, to develop an integrated strategy based on principles of sustainable development consistent with Agenda 21.

- A decision to invest in the programmes for strengthening sector institutions and developing human resources which are needed to create organizational and management capacity at all levels

Converting these political decisions into concrete actions, the three principal thrusts at the operational level have to be.

- Social mobilization programmes to raise awareness among all the stakeholders of the government's commitment to the partnership approach, and the changed roles and responsibilities that result from that decision Communication and education initiatives to establish dialogues among potential partners, and strong advocacy from government of the environmental and health benefits expected to flow from the new approach.
- Development and implementation of national strategies for drinking water and environmental sanitation, integrated with strategies for water resources management and environmental protection (or review and improvement of existing strategies), to guide all stakeholders in the rational and effective provision and use of drinking water and environmental sanitation, and
- Capacity-building, designed to mobilize and equip all the stakeholders and to create competent institutions, provide adequate numbers of qualified staff, and enable communities to become full partners in the development of the sector.

Without these three fundamental activities other actions will fail The activities can be implemented without delay, because the capacity to design and implement them already exists. Successful completion of these tasks will improve the sector's capacity to provide better services, and increase its ability to attract capital for future expansion.

The tasks are great, but so are the resources which can be mobilized. Every well-managed water supply and sanitation institution is a potential participant in this effort to transfer and adapt water and sanitation management skills to less capable institutions Every NGO with successful experience in water supply and sanitation and/or community participation is a potential partner.

The Ministerial Conference adopted an Action Programme which focused on the need for change in four key areas and called for support from the international community for the implementation of these changes These topics are dealt with in the five chapters of the Action Programme, which in turn form the basis for the five central chapters of this booklet, as follows

1. Water and People: bringing about partnership and behavioural change

This chapter deals with the first, and most important, need for change - changes in the attitudes and behaviour of all those involved in the sector Governments, local authorities, utility operators and consumers all need to make greater efforts to enter into dialogue leading to partnership and be constantly aware of how vulnerable water resources and the aquatic environment are.

2. **Water, Health and the Environment: integrating water policy**
   In the context of the need for a stronger partnership approach, this chapter deals with the need to develop integrated water policies and strategies which combine water resources management and environmental protection with measures to meet the needs of all water users while protecting water quality and human health

3. **Water and Institutions: organizing service provision**
   To implement integrated policies and strategies effectively, there is a need to develop the capacity of institutions and individuals to do what is necessary This chapter calls for measures to ensure the development, both of sector institutions and of the human resources which make these institutions effective

4. **Water and Mobilizing Financial Resources: building assets for the future**
   To ensure that the sector functions effectively and efficiently, there is a need for more investment and better financing mechanisms, with new emphasis on making the most of local resources, involving the private sector and managing the demand for water through pricing policies and promoting re-use. These topics are reviewed in this chapter.

5. **Water and the World: promoting international support**
   To achieve the necessary changes in behaviour, policy, capacity-building and financing at the national and local level, there is a need for greater international cooperation and support for the sector.

The deliberations of the Ministerial Conference were based on a consideration of key issues and problems which were presented in six background papers The first of these, *Putting Agenda 21 to Work*, forms the basis for the first booklet in this series, entitled *A Developing Crisis* The second booklet, *Achievements and Challenges*, is a revised version of the second background paper of the same name This, the third booklet in the series, is based on the four remaining background papers The first three of these dealt respectively with *Effectiveness*, Finance, and *Collaboration*, these were summarized in a concluding *Synthesis* paper

The aim of this booklet is to encourage governments to implement the changes which are needed to ensure that, in future, there will be 'no more business as usual' in dealing with the problems of the water and sanitation sector. The key message is the need for change - *no more business as usual.* The urgent tasks of providing water supply and sanitation for all and protecting the world's water resources come at a time of increasing competition for global financial resources. However, a review of the considerable resources already being invested in the sector reveals a substantial amount of waste and a widespread lack of effectiveness. Improving effectiveness is not only good management, it also removes a

big impediment in the competition for more resources.

At first glance, the amount of money needed to meet the goal of universal water and sanitation coverage in the foreseeable future seems daunting. However, there is considerable scope for making better use of the resources already available, for recovering a more equitable share of the costs from users of water and sanitation services, and for managing these services (and water resources as a whole) in more cost-effective ways. To achieve the necessary improvements in financial performance, central governments will need to accept the new role of enabler and regulator, rather than provider, of services, and to delegate power and responsibility for service provision to lower levels. Politicians will also have to take the difficult - but necessary - decision to raise water charges to realistic levels and provide subsidies only for those in greatest need

Given the magnitude of the sector's unfinished tasks, and the limited prospects of increased resources being made available, collaboration and partnership between all those involved have become essential as means of achieving a concerted and coordinated approach to sector development Collaboration can be good politics It can promote the process of social mobilization and decentralization and avoid duplication of effort and waste of resources, it facilitates the integration of activities such as water resources management; and it leads to more efficient use of available resources It is largely through extensive global collaboration that the water and sanitation sector is able to speak with authority and confidence about the approaches needed to achieve accelerated and sustainable progress in future years

For twenty years or more, numerous international conferences and meetings have stressed the need to improve drinking water supply and sanitation around the world. Yet still, today, the situation in developing countries remains appalling. Two thousand million people are still at risk from water-borne and food-borne diseases -- the main cause of 5 million child deaths each year. In industrialized countries, water resources and human health are under continuous threat from the disposal of industrial and toxic waste.

The tragedy behind these disturbing facts is not just the level of human suffering they reflect; the real horror is that this suffering is completely unnecessary In contrast with diseases such as AIDS, for which solutions remain elusive, the knowledge needed to bring safe water and

WHAT IS SOCIAL MOBILIZATION?

Social mobilization is the process of bringing together all feasible and practical intersectoral social allies to raise people's awareness of and demand for a particular development programme, to assist in the delivery of resources and services and to strengthen community participation for sustainability and self-reliance.

McKee, Neill *Social mobilization and social marketing in developing communities: lessons for communicators. 2nd.ed.* Penang, Malaysia, Southbound, 1993 page 4.

adequate sanitation to all exists today No revolutionary new breakthroughs in science and technology are *needed for immediate action.* What is required is the political will to use the tools which already exist, and to mobilize the human and financial resources which are already available The aim of the Noordwijk Action Programme is to show how this can be done.

> ...water is the most precious and indispensable thing to our survival.
>
> Mr. B. Abdoulaye, Minister for the Environment and Protection of Nature, Senegal.

1. WATER AND PEOPLE:

bringing about partnership and behavioural change

Photo IRC

Governments don't solve problems, people do The environment is everyone's business and its protection ultimately depends on how both individuals and groups act in their daily lives. Yet the ability of men and women to protect their environment is often thwarted by a counter-environment - of poverty and powerlessness, cumbersome bureaucracy and obstructive legislation, outdated policies and vested interests, waste and ineffectiveness. This is particularly the case with what is, for millions, the biggest environmental issue of all - access to and protection of water The politicians' task in this respect is to mobilize the problem-solving energy and resources of millions of their fellow citizens, to harness them in new partnerships for change, and to support their efforts through enabling legislation and effective leadership Social mobilization promotes the kinds of partnership between stakeholders which provides the basis for sustainable development; and the essential condition for the success of these efforts is behavioural change at all levels

Water supply and sanitation are local issues which require local initiatives managed by local people In different situations, the leading role in planning and implementing improvements may be taken by the local community, local public or private sector agencies, a non-governmental organization, or a large urban water utility. The guiding principle is that any or all of these 'stakeholders' should have the opportunity to collaborate in a partnership approach to solving local problems Where legislative or institutional constraints hamper the necessary collaboration, central government may need to intervene to create the right enabling environment.

Partnership and behavioural change are the key objectives of the first chapter of the Ministerial Conference Action Programme. Agenda 21, the global action plan approved by the 1992 United Nations Conference on Environment and Development, had already pointed out that, for sustainable development, collaboration is necessary among all partners The Noordwijk Action Programme in turn emphasizes that

"The approach to collaboration has to start with an understanding of the real needs of users. Better collaboration will help to improve performance, to resolve conflict, and to foster integration".

The real needs of users can only be identified through dialogue; this in turn means that changes in behaviour are required, not only on the part of users, but also on the part of those responsible for helping to ensure their needs are met - politicians, government officials, technical staff and community workers, among others.

If all the potential partners, or 'stakeholders', are to work together towards the common objectives of partnership, behavioural change and sustainable improvements in water and sanitation services, they have to be aware of the mutual benefits of cooperating They have to assess water and sanitation needs alongside many other priorities, and they need convincing that it is worth investing their time and resources in these efforts

> The people-centred approach leads to active involvement of communities in the entire process of decision-making, implementation and management. Mr. Abonyai Kiogora, Kenya, representing the NGO community.

One of the most important conclusions of the International Drinking Water Supply and Sanitation Decade was that the success of projects depends to a large extent on involving users of water and sanitation services in decisions about their own future. Such partnership is not just a token; it helps to ensure that investments in water and sanitation are as effective as possible in improving the health and wellbeing of those involved Related goals may include cleaning up the environment, helping local people to generate income, and general social development. None of these goals can be achieved without changes in behaviour

What people do - their behaviour - is just as critical as the technical provision of better services.

What is needed to establish the necessary partnerships and bring about the necessary changes in behaviour? The Noordwijk Action Programme suggests that governments should take action in two main areas: first, generating public awareness and social mobilization, and secondly, improving partnership and participation. A number of actions to be taken at the regional and international level are also identified

GENERATING PUBLIC AWARENESS

The challenge for governments is to generate public awareness of the developing crisis over water resources and to promote understanding of how that crisis can be averted through cooperation and partnership Communities often put water supply at the top of their list of priorities, but the provision of water alone will rarely bring about the desired improvements in health. Indeed, it may even make things worse, since waterborne disease can spread more rapidly if shared water facilities are used in an unhygienic manner To be fully effective, the provision of water must be accompanied by measures to ensure the removal of wastewater and to promote hygiene and sanitation.

The staff of water and sanitation agencies and the people who are expected to benefit from water and sanitation improvements may have very different views on what to expect from the improved services Agency staff may consider improvements in health to be a major benefit, but this view is unlikely to be shared by those for whom the services are intended unless they understand that many of the diseases which they and their children suffer from can be caused by contaminated water and poor hygiene habits Similarly, industrialists attracted by the lure of cheap water and lax pollution controls may not immediately recognize the long-term benefits of adopting stricter measures to conserve water and prevent pollution.

Health benefits alone are thus unlikely to convince people of the need for improvements. Convenience, prestige and financial benefits may be more convincing reasons. The challenge is to mix hygiene promotion with awareness raising, so that people's willingness to pay for new services is accompanied by the behavioural changes needed to bring optimum health and environmental impacts

The Action Programme calls on governments to stimulate all stakeholders to understand each others' water problems and, in particular, to appreciate just how vulnerable water resources and the aquatic environment are. They should also make people aware that water resources are becoming increasingly scarce and need to be used rationally, taking steps to avoid pollution through using wastewater treatment

Investments in water supply and waste disposal are expected to bring many benefits - health, time saving, environmental protection, economic productivity and so on - but these benefits can only be realized if people behave in an appropriate way where water, sanitation and waste are concerned. This means taking care to protect water quality in the home, paying attention to handwashing after using latrines, taking steps to conserve water wherever possible; disposing of wastewater in a way which will not pollute the environment; and using latrines and toilets in a proper and hygienic manner.

The Action Programme also urges governments to help people realize that water is a social and economic good, and thus has an economic value which should be reflected by charging an appropriate price for it. Another kind of behaviour which urgently needs to be encouraged among people who are expected to benefit from better water and sanitation services is thus the willingness to pay for them Charging realistic prices for water and sanitation services encourages water conservation and reuse, protects the environment, and leads to more equitable and efficient use of resources. The question of pricing is considered in more detail in Chapter 4.

IMPORTANCE OF USER CHOICE

A willingness-to-pay study in Kumasi, Ghana, revealed that, on average, households are willing to pay almost the same amount per month for a ventilated improved pit (VIP) latrine as they would for a water closet connected to the sewerage system. Many households felt that factors such as increased water bills and the undependable nature of Kumasi's water supply system lowered their willingness to pay for a water closet.

Source: UNDP/World Bank, 1990

MOBILIZING COMMUNITIES THROUGH COMMUNICATION

Communication, more than any other single factor, is the key to successful change of approach and behaviour at all levels and thus ultimately to the achievement of targets. It is vitally important to make communication a two-way process; campaigns must be responsive to public opinion, not didactic or prescriptive in their approach. User associations and non-governmental organizations (NGOs) can help to increase the effectiveness of water and sanitation programmes by providing channels for negotiation and communication between users and providers or enablers They are also far more effective in ensuring that users comply with their obligations than any 'policing' by water utilities.

Successful communication requires information, understanding and technique Nationally, governments can have an enormous influence on public attitudes and awareness by sending out the right signals Public information campaigns, involving the media, schools, churches and other influential sources of public opinion, can stimulate effective demand for

water and sanitation improvements and encourage the changes in behaviour which are needed to bring the most benefits from these improvements.

To bring about the desired changes in behaviour patterns, and in planning, design, construction, operation and maintenance and revenue collection, the Action Programme calls on governments to formulate and implement participatory communication and education programmes. In order to develop the necessary capacities among technical and managerial personnel at all levels, governments are also urged to implement training programmes which will reflect these new approaches

PARTNERSHIP AND PARTICIPATION

The need for collaboration and partnership among those involved in the water supply and sanitation sector has received much less emphasis than, for example, financing, technology and institutional development. Given the magnitude of the unfinished tasks, and the limited prospects of increased resources being made available, collaboration and partnership have become essential to achieving a concerted and coordinated approach to the development of the sector Involving users in planning, implementing and managing water and sanitation services helps to create satisfied customers who are more willing to pay for the services they receive

The Action Programme lists four priority actions for governments to take in order to improve partnership and participation Three of these are dealt with in more detail in Chapter 3 below. They are

- developing the necessary legal and institutional framework

- developing plans for capacity-building through
  - — training and education at community level
  - — the representation of users on utility boards
  - — the establishment of consumer councils
  - — the development of consultation mechanisms with stakeholders

- providing access to information on projects, programmes and policies linked to accountable, transparent decision-making processes and water quality standards.

In this section, we focus on the first recommended action, encouraging policy makers, owners, contractors and operators of water supply and sanitation systems to involve local communities, user organizations, women and NGOs in planning and decision-making procedures. Partnership between people provides the essential basis for collaboration between agencies and institutions, which is also dealt with in Chapter 3

Community participation and community management

The concept of community participation or community involvement has been accepted for a long time as an important element in most forms of development. In water supply and sanitation, as in many other areas, this has often meant that the community has been seen simply as an extra resource - a source of local materials or labour The difference in recent years has been the recognition that users need to be the driving force behind improvements in water and sanitation services

The term 'community management' has come into use to refer to a wide variety of different partnership arrangements, all based on the common principle that the users are in charge of their own water supply and sanitation systems. A community's partners in the management of its water supply system may include government agencies, NGOs, the private sector, and, crucially, other communities A community's relationships with its partners will change as it develops greater capacity to manage its own affairs, and to choose for itself where to acquire the support services it needs to keep its water system functioning reliably Inter-community collaboration can add a new dimension, in terms of both resource sharing and replicability.

For community management to work most effectively it needs strong government support. Communities need to operate within a legal and administrative framework that encourages, rather than inhibits, their operations, and, at least in the initial stages, need access to timely technical backup and to training and information support.

With the right support, community management can be very effective, particularly in rural communities - the very places where centrally-managed systems are most difficult to sustain By encouraging and supporting community management, governments can spread their own resources further, as well as achieving more sustainable projects And, as the box shows, communities themselves can help to speed the replication of successful approaches.

There is a powerful logic to community management of water supplies The resource is local, its use is local and its effects are local Nevertheless, it has to be recognized that there are genuine fears among agency staff (and at higher levels of government) that empowerment of communities to manage their own systems may diminish the role of and respect for water agency staff, or conflict with national government priorities. In general, however, such fears have proved unjustified. Support for community managed water supplies has brought more effectiveness and greater job satisfaction in the implementing agencies, while the community water management organizations have remained non-political.

Community management does not mean less work for agencies. It means a greater emphasis on the development of supporting and enabling skills and less on routine management and maintenance. This frees institutional, human and financial resources, to enable agencies to reach more communities. Government has a vital continuing role in establishing the policy and legislative framework to enable community management to work. It also retains the duty to protect water resources and the environment, and to maintain public health standards.

WATER FOR THE PEOPLE IN GUATEMALA

From its small beginnings 20 years ago, the national NGO Agua del Pueblo has become a thriving model of how application of community management principles can lead to, in turn, successful projects, increased community self-sufficiency, widespread replication, and a growing self esteem and job satisfaction for the agency staff.

Since being officially ratified by the Guatemalan Government in 1981, Agua del Pueblo has supported the development of some 125 water systems, benefiting more than 90,000 people in 150 rural communities. Seventy of those communities act cooperatively in 5 community associations. With shared technical support and pooled resources, the associations themselves are able to initiate new projects and build the capacity of communities to manage them.

Agua del Pueblo operates a cadre of 'rural aqueduct technicians' who provide on-the-spot support when needed. In addition, the agency employs social workers, economists and agronomists who are available to any community needing such support, and who are regularly involved in community mobilization and support.

Community involvement can also be an effective way of ensuring that public and private organizations are environmentally responsible In cities, community participation, for example through community councils, can be an important instrument for increasing the accountability of supply organizations.

Community management is not self-starting; it has to be encouraged. To be effective, it also requires that the communities involved are made aware of the benefits they will achieve, and equipped for the roles they will be required to undertake. New attitudes and behaviour within communities are often necessary to promote the effective use of water, to stimulate demand for sanitation and to raise environmental awareness Within communities, women play a vital role in promoting improved hygiene behaviour. Women are thus both important targets for information campaigns and key agents of change.

The results of actions become more sustainable when the community is sharing ideas and experiences with the programme planners The two-way exchange of information, through people-friendly and gender-sensitive introduction, leads to projects which respond best to the real needs of users, and helps to promote the behavioural changes needed. Regular discussions among the stakeholders provide the opportunity for all voices to be heard In that way, for instance, women can be encouraged to play a more influential role in project planning, design and implementation, and the needs, aspirations and 'effective demand' of all different consumer groups can be taken into account.

Involving communities in decision making takes time and money in the early stages. Within communities, there is also often a need for skills training and the establishment of formal management bodies such as water associations or committees. The payback in sustainability and capacity building comes over several years

Water and sanitation objectives are most frequently expressed and measured in terms of standards and coverage In the developing world, the emphasis is on 'reasonable access' to clean water and sanitation facilities; but definitions of what constitutes 'reasonable access' vary widely, and the unscientific methods of determining coverage which are currently in use make most coverage statistics virtually useless The number of people who theoretically have access to a new water supply or latrine is not a very meaningful measure of investment success. In many cases, water has been supplied but with little indication of improvement in health, latrines have been built but are often not used, wastewater is treated but not sufficiently to meet pollution control standards Even where a facility is available, the objective behind providing it may not be achieved What people do - their behaviour - is just as critical as the technical provision of service.

Coverage statistics say nothing about people's personal behaviour, but personal hygiene practices are as important as the availability of adequate facilities, indeed, inadequate personal hygiene will reduce the health impact of safe water and sanitation facilities. This is particularly true in peri-urban and rural areas, where users have often had little exposure to modern practices and facilities Standards and coverage thus bear very little relation to outcome and hide ineffectiveness and wasted investment. If we are serious about improving effectiveness we should stop using them as the principal indicators.

What, then, has a more direct relationship to outcome than standards and coverage? Surely it is what men and women do, not what they have, which enables the intervention or investment to be effective For example, if they do not wash their hands, if they do not use the sanitary facility, if they allow drinking water to become polluted in the home, improved water and sanitation coverage will have little or no impact on health. There are proven links between the way people behave and the extent to which the desired outcomes of water and sanitation programme are achieved. The extent and nature of behavioural change is therefore one of the best available indicators of outcome and, thus, of the effectiveness of water and sanitation investments Behaviour measurement can be applied at all levels, from handwashing at the household level, to gender equity at the community level, to budget allocations for operation and maintenance at the utility level, to the policy formulation performance of ministries

To improve effectiveness, then, we need to set objectives in terms of behaviour at all levels, and measure progress in terms of behaviour change How much more useful than coverage is the following objective, stated in behavioural terms:

"To achieve the environmentally and socially sustainable and effective use of water and safe disposal of wastes, obtaining the maximum benefits, equitably distributed and at affordable cost"

While the precise wording of such a statement is best framed at country level, stating the objective in behavioural terms directly addresses the issue of effectiveness and automatically leads to a range of indicators with which to measure progress. The box lists a number of indicators which can be used to monitor behavioural change, depending on the situation in any particular country.

SUGGESTED INDICATORS FOR MONITORING BEHAVIOURAL CHANGES

Potentially useful indicators relating to the behavioural objective are given here. Actual choice of indicators should be made at the country level.

environmental sustainability indicators:

water table fluctuation, groundwater salinity; land subsidence due to groundwater extraction, downstream water quality.

social sustainability indicators:

existence of user associations; participation of women, user involvement in technology choice.

effective water use indicators:

handwashing, water quality protection in the home; per capita consumption, percentage water loss in distribution system; percentage of time the system is not functioning

safe waste disposal indicators:

percentage of population actually using a sanitation facility, percentage of industrial users meeting effluent standards.

equitable distribution indicators:

ratio of per capita consumption of richest 20 percent to poorest 20 percent, ratio of per capita subsidy of richest 20 percent to poorest 20 percent, percentage of population unserved in each social sector

affordable cost indicators:

willingness and ability to pay, operating cost per cubic metre produced; debt service as percentage of revenue; ratio of operating costs to operating revenue.

By defining objectives in terms of behaviour instead of coverage alone, we are directly addressing the issue of effectiveness, and by adopting behavioural indicators, we can more meaningfully measure progress. This does require a fundamental change of approach from one that is principally technical and supply-driven to one in which communication and social scientists are as important as technology and engineers, and where demand is the driving force. With their communication skills, politicians can do more than anyone to bring about these changes.

Chapter 1 of the Action Plan identifies five actions to be taken at the regional and international level. These involve

- developing programmes for the exchange of information and experience
- a range of actions to be undertaken by external support agencies (ESAs) for supporting and developing sector programmes
- the development of water and sanitation action programmes at all levels
- strengthening regional collaboration
- developing programmes dealing specifically with the problems of small island states.

These actions are considered in more detail in Chapter 5.

2. WATER, HEALTH AND THE ENVIRONMENT:

integrating water policy

Photo IRC

For many years, including most of the International Drinking Water Supply and Sanitation decade, water supply and sanitation were considered separately from other water resources and environmental issues One of the successes of the Decade was, in fact, that sanitation and hygiene education came to be seen more and more as essential complements to investments in water supply It was spreading concern about water scarcity and environmental degradation that brought demands for the wider integration of water resources planning and development

The Noordwijk Action Programme reiterates the statement in Agenda 21 to the effect that

"the planning and implementation of drinking water and environmental sanitation programmes should be carried out in the context of an holistic water resources development framework, taking an ecosystem approach to water resources development and management, including the health dimension".

The Action Programme identifies the major actions which governments are urged to take in this connection. These include measures to achieve, by 1997, the rational and effective provision and use of drinking water and environmental sanitation in accordance with the goals of the World Summit for Children. These include:

- protecting and enhancing human health through giving priority to populations at greatest risk
- ensuring that those concerned recognize the importance of health-related objectives in water supply and sanitation planning
- establishing realistic quality standards and criteria for drinking water, sewage effluent and recycled water
- developing and implementing.
  - — strategies to serve the poor and unserved
  - — investment strategies, including strategies to serve the poor according to their special needs
  - — a planning strategy based on an understanding of effective demand and the integration of water supply and sewage plans and programmes
  - — a planning strategy for more effective hygiene education.

A BASIC HUMAN NEED

During the 1980s, providing access to safe water and hygienic sanitation was heavily promoted as a vital contribution towards improving the health and wellbeing of poor people in rural and peri-urban areas. The International Drinking Water Supply and Sanitation Decade (1981-1990) was seen primarily as a global commitment to reducing the horrifying toll of death and disease caused by the widespread lack of these basic services.

> ...the need to make water management a global priority is now urgent.
>
> Mrs. E. Dowdeswell, Deputy Secretary General, UNEP.

The plight of the urban poor, in particular, is pitiful at the best of times. For many, it becomes appallingly worse when the surface runoff from rainstorms floods their homes and surroundings with filthy water, laden with uncollected garbage and human waste. Lack of sanitation or waste disposal provision means that open ditches and surface drains in many urban settlements become clogged with all kinds of waste and debris This leads to flooding, which devastates the area and causes gross pollution of the watercourse or aquifer which eventually receives the filth-laden flood water.

The Political Statement approved by the Ministers at Noordwijk clearly recognizes the urgent need for governments to offer

"new hope to the many millions of their citizens who suffer intolerable levels of disease, squalor and indignity because they lack access to a safe supply of drinking water and adequate means of sanitation"

The Statement noted the acute need to extend water and sanitation to the urban poor while continuing existing efforts to extend service to the poor in rural areas also. It states unequivocally.

"Access to adequate water and sanitation is a basic need which has to be met".

The challenge now is for individual governments to demonstrate that they recognize this need by taking concrete actions to ensure that it is met.

THE NEED FOR AN INTEGRATED APPROACH

Water resources management has a considerable influence on, and is significantly influenced by, activities in many other development sectors. Yet it is not uncommon for city water resources planning to be conducted quite separately from general development planning Typically, the water agency will be asked to look at the water needs and effluent discharge implications of a proposed industrial or housing development only after a considerable amount of pre-planning and resource commitment has already taken place

An integrated approach to water and waste management takes into account the needs of all sectors It includes assessment of the potential environmental and health impacts of water development and waste discharge proposals and strategies. Water supply and waste management planning and implementation are considered alongside other programmes, such as land use and housing. In areas which are short of water, it may mean a revised planning approach, with development being matched to available water supplies, rather than the other way round.

A prerequisite for effective and integrated water and waste management is an institutional and legislative framework able to resolve conflicting demands and including powers to implement any necessary controls The objective is not the integration of service institutions or service delivery; it is the integration of policies and legislation at national level and of planning at city level. Agenda 21 promotes the adoption at national and local level of land-use plans that give due consideration to water resources development.

The Freshwater Chapter of Agenda 21 reflects the overwhelming experience of recent years that for water and sanitation programmes to be successful and environmentally sustainable, they have to be planned within the context of overall strategies for the management of water resources. In that way, governments can help to ensure that scarce water resources are allocated fairly between the demands of water supply, sanitation, solid waste disposal and surface water drainage and those of agriculture and industry When resources are tight, this approach helps to identify the areas where investments will have the greatest beneficial impact (for example, in reducing disease and suffering, increasing human productivity, generating employment, promoting economic development, improving the environment and living conditions, and so on), and the least detrimental impact on the environment.

Experience has shown that without a comprehensive policy framework it is virtually impossible to ensure an integrated approach to water resource development and waste management, with rational and equitable allocation of resources, and giving priority to the poor and the unserved. The most effective policy frameworks recognize the longer term perspective of water as a finite and vulnerable resource, and address the whole water cycle, giving greater priority to sanitation and waste disposal than hitherto They also address key behavioural issues at all levels and, especially in developing countries, take account of the relative roles of women and men in water and waste management.

> ...appropriate policy frameworks and workable operational strategies are urgently needed.
>
> Mr. Juma H. Omar, Minister for Tourism, Natural Resources and Environment, Tanzania.

An effective policy framework should also include the establishment of standards and targets, as well as a system to monitor and use them as indicators for planning and management purposes. The Action Programme proposes that nation-wide drinking water and environmental sanitation monitoring systems should be established where they do not already exist, to monitor efforts made under the Action Programme itself, as well as other major objectives. National sector managers should be made accountable for performance against the objectives, standards and targets and indicators defined by such policies Based on the national policy framework, local, regional and national programmes can be developed and updated in an integrated way to match the strategic goals set and monitored at each level.

A national water and sanitation sector strategy should state the government's objectives for the sector, and the methods to be employed to achieve them. It will include investment and project development guidelines, which should aim to ensure that the development of water supply and sanitation reflects considerations of water resource

management and the environment, such as the equitable distribution of water resources and the prevention of pollution. It will also provide a framework for coordinating the inputs of external support agencies, to avoid duplication and encourage collaboration. The Action Programme recommends that all stakeholders should be involved in implementing strategies for the sector.

Urban policies

For national governments, which need the industrial output and tax revenue of their cities as the basis for continued economic development, a prime requirement is a water resources strategy which assures those cities of the right quantity and quality of water, and at the same time regulates their discharges in such a way that similar assurances can be given to cities further downstream. To do this, the allocation of water resources to each sector has to be done in accordance with national economic, social and environmental priorities. Charging structures and pollution penalties have to be established which will ensure the long-term sustainability of all water resources.

City planning policy can have an important influence on water demand. Industries with high levels of water demand or which produce highly polluting effluents are not appropriate in cities which face problems of water scarcity or pollution. Those which are able to show that they can use water economically and produce minimal discharge of residual wastes will generally be favoured.

SAVING WATER IN MEXICO CITY

With new water resource development putting up costs enormously, Mexico City introduced an 'Efficient Water Use Programme' in 1985. Since 40 percent of all water used in Mexico City is for domestic purposes (flush toilets, showers, sinks), emphasis was given to the adoption of water-saving fittings and fixtures, and to the training of plumbers in their installation. The plan was that low-water-use fittings and fixtures should be used by all consumers. It included:

(a) Mandatory installation of water-saving fittings and fixtures in all new houses;

(b) Their installation in existing unsewered houses prior to their connection to a public sewer;

(c) Promotion of their use in existing houses which had both water-supply and sewerage (some 75 percent of the total), and a revised tariff structure designed to encourage their installation.

Specially designed 4-litre flush toilets and low-flow shower-heads and taps are all of local manufacture. A vigorous public education programme is also in operation: slide shows, video-films, brochures, personal letters to consumers and car stickers have been produced to increase public awareness of the magnitude of the water crisis. Governmental and other public buildings all use only water-saving plumbing fixtures, and a pilot-scale study on domestic water use has shown that consumption can be decreased by as much as 35 percent, principally owing to the replacement of existing cistern-flush toilets (which use around 20 litres per flush) by 4-litre flush toilets. The programme was very successful and will continue at least for the immediate future.

Source. United Nations Centre for Human Settlements (Habitat). *The conservation of drinking-water supplies: techniques for low-income settlements.* Nairobi, 1989.

The proportions vary from city to city, but human waste generally accounts for a substantial part of the biological polluting load on both surface and groundwater resources. The Dublin conference recommended that, within ten years, programmes should be initiated 'to provide sanitary containment or treatment for at least 50 percent of the pollution load (biological oxygen demand) from domestic wastes.' If that could be achieved, it would have a major impact on the health and wellbeing of the urban poor. Even to approach the target, most urban water utilities will need to take maximum advantage of current knowledge of low-cost solutions for the collection, containment, transport and treatment of human wastes. In doing so, many will face a reversal of their past approaches to urban sanitation.

Where sewers do exist in Third World cities, they commonly serve the wealthier sections of the community, who live in high-cost, low-density settlements Yet economic analysis shows that the unit costs of a sewer network must fall as the population density increases It is in the low-density areas that low-cost alternatives to conventional sewers (such as pit latrines or septic tanks) are most cost-effective In medium and high-density settlements - exactly the places where on-site sanitation is hampered by lack of available space - shallow sewerage is both more appropriate and more economical

TREATMENT PLANTS IN BANGKOK

About a quarter of the heavy polluting load in Bangkok's Chao Praya river comes from industry Despite legislation, in force since 1970, imposing discharge quality limits on all manufacturing/processing plants, the National Environment Board estimates that only 60 percent of the industrial wastewater treatment plants are in operation With 70 inspectors supposedly monitoring some 80,000 factories, it is impossible to keep up with offenders

As part of a massive cleanup programme, which includes contracts for private companies to design, build and operate municipal sewage treatment works, the Bangkok Metropolitan Administration (BMA) is also building twelve specialist industrial wastewater treatment plants on estates earmarked for specific problem industries. Among the industries for which new treatment facilities will be provided are abattoirs, tanneries, food processing and dyeing.

The amount of human waste generated in a city cannot be controlled, it has to be managed The situation with industry is somewhat different. Variations in the manufacturing processes used can often result in considerable savings in both the amount of water used and the amount of waste produced. In the short term, pollution prevention is bound to put up costs. If that makes the industries concerned less competitive than their less environmentally-conscious counterparts in other countries, the pressure to continue pollution may be hard to resist. Uncompetitive prices are no more sustainable than contaminated water resources It follows that curbing industrial pollution cannot be left to industrialists alone

An appropriate combination of legislation, technological support and financial incentives has to be developed to suit the needs of each individual city. It must be accompanied by persuasive information for industrialists on the longer term benefits of water conservation and recycling, and by water charges which reflect the true costs of providing, treating and protecting water supplies in a sustainable way More and more cities are now recognizing the benefits of strategic land-use plans which earmark land and water resources for specific industrial applications. Industrial parks can then be designed with their own special treatment facilities (see box), and with manufacturers encouraged to adopt best water conservation and recycling practices.

Pricing policies

The Action Programme gives particular emphasis to the need for governments to establish pricing policies designed to promote the efficient use of water. These policies should be based on the criteria of affordability at all levels, resource conservation through demand management, and the application of the 'polluter pays' principle

Public awareness campaigns, backed by appropriate education of schoolchildren, can make a big difference in ensuring proper water use, but the most effective form of persuasion is water pricing Progressive tariffs which penalize excessive use have the double benefit of dampening demand and reducing waste.

Agricultural water pricing, in particular, can have an enormous impact on water scarcity Food self-sufficiency is often a high political priority for governments, but is massive subsidy of irrigation water supplies the best way to achieve it? Some 85 percent of the water consumed each day in the developing world is used to grow crops. It is provided at prices which bear no relation to the actual cost of production In consequence, it is used very inefficiently, depriving other potential users of a valuable resource.

In the past, governments have been happy to foster industrial growth, using a range of incentives Among these have been a plentiful supply of cheap water, and lax controls on effluent discharges Explosive urban growth has exposed the fallacy in this approach. Combined with the growing demands of agriculture and the drinking water needs of expanding urban populations, rapidly rising industrial water demand is forcing the exploitation of ever more distant and ever more costly water sources At the same time, the polluting load from industry and domestic consumers has passed the threshold of nature's recovery processes, with alarming consequences for the natural environment and for the health of urban residents.

This poses a dilemma. The costs of water supply and pollution for industry are relatively trivial compared to other costs, yet they are becoming overriding constraints on its expansion. National economic growth depends on that expansion continuing Rationalizing the competing demands from different sectors could include providing incentives to each kind of user, either through tariff structures or through carefully targeted subsidies, to encourage them to use water more efficiently.

The application of the 'polluter pays' principle and realistic water pricing will encourage conservation and reuse

WATER RESOURCES ASSESSMENTS

Before water resources can be managed effectively and in a sustainable way, we need to know what resources of surface and groundwater exist and how readily accessible they are This means carrying out a water resources assessment. Although the cost of effective programmes for the assessment of water resources is generally only a tiny fraction (often less than 1 percent) of total water sector investments in any country, water resources assessments have generally been neglected, particularly in recent years This neglect has had an impact, out of all proportion to the costs involved, on the effectiveness of management strategies in the water sector.

The integrated water resources management strategy of any country should include action programmes designed to ensure that its water resources are sustainable This means providing support to the establishment and operation of national hydrological monitoring and forecasting services. All water programmes should include provision for data collection and processing, as well as for the equipment and staff required to link them with national water resources assessment programmes, including national drinking water assessments Effective water resources assessment provides the data needed for the supply side of the water equation. Sustainability depends on matching that supply with long-term demands for water.

CONSERVATION AND PROTECTION

It is not enough simply to know what water resources are available; if they are to be sustainable, steps must be taken to ensure the conservation and protection of both the quantity and quality of water resources.
The Action Programme calls on governments to take steps to preserve the natural quality of both surface and groundwater, adopting a water basin approach if feasible Specific actions in this regard relate to·

- managing watersheds effectively
- establishing water protection and sanitary zones near sources of drinking water
- promoting agricultural practices designed to prevent the input of nutrients into water sources
- ensuring that the use of pesticides is properly controlled
- establishing wastewater treatment plants and promoting the environmentally sound use of recycled water.

To provide good quality water in a stable way is not an easy task.

Mr. Valeri Filonov, Deputy Minister of Health, Belarus.

Water resources are polluted and degraded by domestic sewage, industrial wastes, surface runoff, and agricultural discharges. The best starting point for any plan to combat this degradation is a set of realistic objectives for the future sustainable use of the receiving watercourse or aquifer These provide a basis for the establishment of water quality standards for the receiving water. Comparing these standards with the existing water quality makes it possible to identify the most critical contaminants which need to be reduced or eliminated by action programmes However, water quality and wastewater discharge standards need to be adapted to country conditions, taking account of affordability, availability of financial, technical and physical resources, and a realistic appraisal of health risks A careful balance needs to be struck when establishing wastewater discharge standards and treatment charges. The aim should be to encourage innovative and cost-effective technologies which conserve water, while discouraging the use of environmentally harmful processes or actions

Establishing priorities for such programmes will thus be based on dealing with the critical contaminants in the most cost-effective and timely way. In some cases, this may mean a crash programme of building sewers and sewage treatment plants; in others, action to reduce industrial pollution may be most effective, often, cities may have to call on government support to curb agricultural pollution or reduce agricultural consumption of water upstream

Sustainable development requires more than conservation of the present environment. Preserving the rivers and the living environment of poor urban settlements in their present state will not be enough to safeguard future water resources. Pollution has to be reduced, waste disposal has to be improved, and groundwater depletion has to be reversed, before sustainability becomes an acceptable goal

Pollution loads from untreated municipal and industrial wastes and from human waste carried away by unchannelled stormwater far exceed the self-cleansing capacity of recipient rivers. It is estimated that less than 2 percent of the domestic and industrial wastewater generated in developing countries receives any kind of treatment before being discharged to the surrounding land or water. By thus ruining the rivers as potential water resources downstream, developing countries deprive themselves of the types of strategies, based on multiple water use, which have enabled industrialized nations to cope with rising domestic and industrial demands. Major sewerage, sewage treatment and waste disposal programmes are a prerequisite for reversing present trends.

ALLOCATION OF WATER

One of the most important functions of a comprehensive water policy framework is to rationalize the competing demands from the agricultural, industrial and domestic sectors As demand for water grows, and water resources diminish, competition for the available resources is intensifying Governments face stark choices, with serious social, economic and environmental implications. It is this issue, more than any other, which has forced recognition of the principle that water should be considered as an economic good Along with that recognition comes a need to evaluate the costs and benefits of alternative water uses. The creation of a rational framework for the allocation of water among competing uses is thus another action proposed in respect of water resources management.

Current patterns of water use involve excessive waste. There is great scope for water savings in agriculture, in industry and in domestic water supplies. Irrigated agriculture accounts for about 80 percent of water withdrawals in the world. In many irrigation schemes, up to 60 percent of this water is lost on its way from the source to the plant More efficient irrigation practices could lead to substantial water savings.

In comparison with the demands of agriculture and industry, the amount of water needed by individual households is trifling. Only 5 percent of the water consumed every day in the developing world is used for drinking, cooking, bathing and other domestic needs of its inhabitants Yet it is the lack of water to meet those basic sanitary needs which accounts for such a dreadful toll of death and disease among the world's poor.

REDUCING WATER LOSSES

The need to reduce the proportion of water lost from distribution systems is also emphasized in the Action Programme Water supply utilities which expect their customers to practice water conservation and efficiency have a commensurate duty to cut down on water losses within the supply system. Sound management should be capable of keeping the proportion of water which is 'unaccounted for' down to 20 percent or less, but losses of 40 percent and more are not uncommon among today's Third World cities With such demonstrations of internal inefficiencies, agencies can hardly expect requests for prudence on the part of consumers to be taken seriously. It is also more economic in both water and finance to rehabilitate and improve the management of existing supplies rather than invest in new ones.

Water resources management activities should include measures to bring national water consumption into line with the available resources It is neither sensible nor sustainable to keep on increasing the amount of water available to meet projected future demand without doing something to improve existing levels of efficiency in water use Consumers need to be encouraged to use water more efficiently, to protect existing resources from further degradation, and to opt for agricultural or industrial practices which economize on water use Recycling could reduce the consumption of many industrial consumers by 50 percent or more, with the additional benefit of reduced pollution.

Measures designed to improve water resources management should aim to encourage all concerned to accept the obligation to use water efficiently, taking account of the reuse and recycling of effluents and the disposal of waste in an environmentally-friendly manner. The Action Programme urges governments to promote the design and use of water-saving and reuse technologies to reduce the consumption of water by industries, agriculture and households. As a way of ensuring that the best use is made of all available water resources, governments are also urged to promote the development and use of non-conventional water sources such as the safe reuse of effluents, rainwater harvesting, desalination of seawater and brackish water, and the conservation of traditional sources

The benefits of recycling cannot be overemphasized. Recycling rates (the number of times that each cubic metre of water is used before leaving the production plant) in the United States have increased enormously in the last twenty-five years, and are expected to grow at an even faster rate by the end of the century. Similar trends in manufacturing plants in developing countries would transform the pollution picture and have a huge impact on future water demand. Experiences in Europe, Japan and Latin America also demonstrate an enormous scope for recycling and reuse in many of the most polluting industries in the Third World, such as steel, pulp and paper, and coffee.

Three actions to be carried out at regional and international level are proposed in this section of the Action Programme:

- cooperating in river basin management, transboundary water resources management and pollution control
- promoting the transfer of technology in respect of loss reduction, water saving and reuse
- agreeing on indicators for water resources

3 WATER AND INSTITUTIONS:

organizing service provision

Photo: IRC

Excessive dependence on central government has been a common failing of water and sanitation sector agencies. One of the key lessons of the Decade is that water and sanitation are essentially local issues which require local initiatives managed by local people Approaches which place more emphasis on partnership and integrated water resources management have important implications for the institutional framework within which water and sanitation programmes are planned and implemented. They also mean that agencies need to recruit, train and retain staff who are able to establish effective working relationships, both with communities and with private sector organizations.

The organizational structure of the sector should reflect a country's culture and state of development, but *generally be based on the principle* of delegating responsibility to local authorities or utilities as much as possible, giving them authority to set tariffs, determine conditions of employment and enter into contracts. The private sector should be included in the institutional arrangements in an effort to increase the efficiency of the sector.

> The major challenge to be faced is undoubtedly that of providing rapidly growing populations with drinking water and adequate sanitation systems.
>
> Mr. M. Leke, Representative, African Development Bank.

Capacity-building is a fundamental activity for creating competent institutions, providing adequate numbers of qualified staff, equipping all the stakeholders and enabling communities to become full partners in the development of the sector Strong capacity-building programmes are required to create the intellectual and organizational infrastructure which the sector needs to perform its functions and accomplish the objectives set for it by the government.

In pursuit of this objective, the Noordwijk Action Programme recommended several tasks which should be undertaken by national governments, as well as some to be carried out at the regional and international level. Key elements of this chapter of the Action Programme are.

- the changing roles of various stakeholders - especially governments - in relation to the water and sanitation sector
- the decentralization of decision-making to the lowest appropriate level
- collaboration among sector agencies
- improving the performance of water utilities
- ensuring the availability of skilled personnel
- improving information management in sector institutions.

The Action Programme also calls on governments to strengthen health institutions which, in cooperation with water and sanitation authorities, implement hygiene education and support community involvement

Many of the actions proposed are interrelated, not only with others in this group, but also with tasks and actions defined in earlier sections of the Action Programme and discussed in previous chapters.

As conditions are constantly changing, governments need to be continually updating their approaches. A vital lesson from the past is that governments find it difficult to provide water supply and sanitation services efficiently from the centre There are many resources outside government which are rarely tapped if government tries to do everything itself, progress can be faster and more effective if governments move from a service-providing role to become the enabler and regulator of others who are able to meet the demand more efficiently The others can be the communities themselves, NGOs, local authorities, and the utilities in large towns and cities. The private sector can also play an important role.

The main role of the centre is to create the right conditions for the providers and utilities to function effectively A crucial condition is the decentralization of financial, managerial and political decision-making authority from the central government to the lowest level possible In larger urban situations, autonomy even from the local authority has been shown to enhance effectiveness. In small towns and rural areas, local authorities have proved more effective than the line ministries and other institutions of central government.

The overall objective is to devolve responsibility to the lowest level capable of assuming it. Central government remains responsible for policies, standards and overall sector planning, while local agencies are responsible for planning and constructing facilities and for their subsequent operation and maintenance. For decentralization to be successful, there is also a need for the devolution of decision-making and responsibility to be accompanied by effective support from higher levels Economies of scale and resource limitations may point to some key activities being implemented centrally (procurement, training, research, etc), though the concept of demand-driven decision-making remains fundamental Support services have to be both readily accessible and affordable, to establish the right conditions for effective decentralization

Many central governments, in both developing and industrialized countries, have already relinquished the role of provider to local authorities, often in partnership with the private sector. Governments are increasingly finding that they can establish the necessary regulatory and consumer protection mechanisms and pass the responsibility for building, operating and managing projects to local public or private organizations or to the communities themselves In general they have learned that this results in greater efficiency, less bureaucracy, and the mobilization of a greater range of available resources from public and private sectors. By decentralizing responsibility for service provision to local councils and autonomous utilities, by concentrating on providing the strategies, policies, and guidelines and by facilitating access to funding, the role of those governments has moved from being one of providing to one of enabling

The role of the community

Among all stakeholders in the water and sanitation sector, the need for a change of role is possibly greatest among communities of water users The need for local communities to change from being mere passive consumers of services provided by water authorities to becoming active participants in the management of water and sanitation facilities is of such fundamental importance that it has been given separate treatment in Chapter 1

The differing roles of women and men

Special attention needs to be paid to the need for changes in the roles of women at all levels in the water and sanitation sector Women are the primary users of water in the household. Their central part in the provision and management of household water and hygiene needs to be reflected in a more influential role at all levels in water and sanitation institutions and government departments In many countries, special efforts need to be made to enable women to occupy positions of authority and integrate them fully into the planning, implementation and management process, in both professional and community settings Capacity building activities should be designed to ensure the participation of women, and women should be adequately represented at policy level In short, the active participation of women in all aspects of sector development is essential if systems are to be effectively used.

Giving due attention to involving women in the development of the sector does not mean that the interests of men should be neglected. The needs and interests of men and women differ considerably, and both groups need to be sensitized to these differences and their implications for the performance of the sector. Gender issues are thus very important when water and sanitation programmes are being planned and implemented

The role of governments

One of the fundamental principles put forward in this section of the Action Programme is that of changing the role of governments from being providers of water and sanitation services to becoming enablers and regulators of other stakeholders.

With partnership and behavioural change as the key objectives, governments need to rethink their approach to water and sanitation. They have conventionally followed a supply-driven, service-provision approach. Planners and engineers, often without consulting those whom they wish to serve, have simply assumed that a service is needed and set about providing it, limited only by the funds available. The consequence has been that, in almost all countries, the public takes for granted that it is the government's responsibility to provide water and sanitation services - preferably piped water and sewerage. Politicians may even be elected on their promises to provide water to the voters.

The centralized, supply-driven, service-provision approach, followed with the best motives by many governments, is a major constraint on achieving behavioural objectives. First, it actively discourages self-help as

TEN MEASURES FOR A GENDER-SENSITIVE APPROACH IN DRINKING WATER SUPPLY AND SANITATION PROJECTS

Communities should decide on these points after explanation and discussion on the roles of men and women.

1. **Information**
   Make sure, by using suitable communication channels and methods, that project information reaches men and women (each group may need different channels) In data collection and analysis distinguish between information from men and women.
2. **Gender division**
   Assess with men and women what work and responsibilities they have in land and water use, care of traditional water sources, construction, care and upkeep of households/school latrines, family health and hygiene, communication with other men, women, and household finance.
3. **Meetings**
   Facilitate women's participation in meetings: time and place suitable for women, women informed and encouraged to attend, seating and language is so all can hear and react, speaking out by women is facilitated (sit together, breaks for internal discussion, choose spokeswoman, etc.). Insist that women can react in a mixed or separate meeting as a condition for project continuation.
4. **Planning**
   Give men and women a say to achieve acceptable solutions on design and location of the facilities, choice of local maintenance and management system, choice of committee members, mechanics, caretakers, health promoters, local financing system.
5. **Committees**
   Determine [by law] that a minimal proportion of committees is female. Enable men and women to choose their own representatives on trust and suitability for tasks. Encourage that women are chosen as treasurers (have proved to be most trustworthy). Committees should account for their proper management to male and female users Higher committees should include men as well as women.
6. **Hygiene education**
   Involve women as planners and change agents, not as passive audiences. Involve also men, for issues concerning men.
7. **Training**
   Make sure that men and women are trained for technical as well as managerial tasks. Adapt training provisions to the requirements of women (place, methods, literacy level). Train and reward women for new functions: waterpoint repair (they visit daily), latrine masons (they can work in homes), treasurers (they are trustworthy and can easily visit households for home collection), monitoring (Idem)
8. **Means**
   Ensure that credit, materials and skills are available to men and women to make their own improvements in water supply, sanitation and hygiene. Where feasible and relevant, undertake or link up with income generation projects.
9. **Gender-sensitiveness**
   Make project staff and management aware why gender is important and how a gender-sensitive approach is applied.
10. **Staffing**
    Employ female staff and equip them, as well as male staff, for dealing with gender issues. Work in case of shortage of female staff with gender-sensitive male staff and female intermediaries in the communities

Source. Heijnen, Els *and* van Wijk-Sijbesma, Christine. *Women, water, sanitation. a summary document, 1993.* The Hague, IRC, 1993.

men and women wait in the expectation that one day the government will 'provide' the service free or at subsidized cost. Secondly, it often leads to the biggest single problem with water supply and waste disposal systems the world over, namely, the failure to operate and maintain them. Where the system is based on supply rather than demand, the basic requirements of proper choice of technology, proper use, proper operation and maintenance, and the financial ability to meet at least recurrent costs are invariably not met.

In both industrialized and developing countries there is increasing competition for limited public funds, and governments no longer have the financial or technical capacity to provide such services. As a result, services in many industrialized countries have been deteriorating and in developing

DEVOLUTION IN GHANA

"Ten years ago the Government of Ghana took a bold decision to devolve administrative authority to the 110 districts in our country, placing primary responsibility on District Assemblies for the social, political and economic development of their areas of jurisdiction. The districts are empowered to take decisions, plan and implement programmes for sustainable development.

In such a decentralized environment, the central government has changed its role from providing services to that of a facilitator in the provision of services. This new role is evident in a National Community Water and Sanitation Programme launched by the Government, which has the following objectives.

- *providing water supply services to communities which can contribute towards the capital cost as well as paying the normal operations, maintenance, and repair cost, and collect revenue,*
- *ensuring sustainability of the facilities through private sector provision of the goods and services, and public sector promotion and support;*
- *maximizing health benefits by integrating water, sanitation and hygiene education interventions*

The programme uses the demand-driven approach, and certain criteria have to be met by prospective participants. For example

- *A community must first decide that it requires the service and would like to participate in the NCWSP.*
- *The community should be in a position to pay its stipulated share of the cost depending on the type of water system selected by the community*
- *There should be organized meetings involving the consumers.*
- *There should be at least one partner organization and one or two manufacturers' representatives to provide spare parts and after sales service.*
- *There should be Regional and District Water & Sanitation Teams in place.*
- *There should be a joint bank account for the community and the District Assembly for the project.*

The first phase of the programme involves a pilot project to provide water and sanitation facilities to selected small towns and communities in six of the ten regions in Ghana. The Government of Ghana recently obtained an IDA credit facility of US $ 21.4 million to fund the first phase, and sees the programme as a vehicle which, if carefully steered, will bring relief to the inadequately served and unserved in the area of water supply".

Source: Conference speech by Mr. C M.K. Sowu, Minister of Housing and Works, Ghana.

countries only a privileged few receive piped water and sewerage, usually at subsidized cost.

A large proportion of the world's unserved population lives in rural areas of developing countries, where the supply-driven, service-provision approach is even less appropriate A catalogue of derelict and disused water and sewerage systems has amply demonstrated that centralized organizations cannot provide the resources to operate and maintain dispersed services effectively.

Other sectors do things differently. Ministries of Agriculture, for example, do not provide food. They give advice and relatively limited inputs to enable households to improve what is often called 'household food security'. Similarly, in the health sector, there is a growing process of 'community-based health care' in which minimally-trained community health workers help communities to look after the 'security' of their own health. A similar concept of 'household water security' would effectively release the government from the millstone of having to provide water - instead, it could participate in and support the efforts of communities and households to fulfil their own responsibility to achieve and improve their household water security.

Such an approach also allows water supply to be treated in a more holistic manner, linking it with other features of daily life, especially agriculture. As men and women can choose for themselves, it is also a demand-driven approach, which is by definition more sustainable Simple and inexpensive improvements to traditional facilities and patterns of use can often provide an acceptable first step, which will stimulate effective demand for further improvements as the benefits become apparent

Some governments, especially in very poor countries, may still feel that it is politically difficult to change from their traditional providing role,

> ...water supply and sanitation problems are no longer technical; they are very largely political.
>
> Hans Alders, Minister of Housing, Spatial Planning and the Environment, The Netherlands.

believing that people are too poor to help themselves. It is also usually the poorest countries which are least able to satisfy the needs of their people from government resources, so that maintaining a policy of centralized service provision effectively condemns people to little or no provision at all Significantly, most studies have revealed that, contrary to the assumptions of politicians and bureaucrats, poor people are generally willing and able to pay something, provided they are confident of receiving a reliable service. Indeed, the poor are often already paying a lot for very poor service, sometimes even more than the rich. For governments to move away from the providing role does not, then, hold the political dangers that might at first be assumed. Indeed, there are real political rewards in a policy that results in tangible improvements instead of frustrated promises

The role of water utilities

The role of the provider or utility level is to create the right conditions to enable users to use water and dispose of wastes effectively. The most important conditions are:

- the communication necessary to support the correct installation, development and use of facilities
- the easy availability of adequate quantity and quality of water and of appropriate and environmentally sound waste disposal facilities
- the support of political leaders

These conditions are dependent on communication, technology choice and management, and require, at a minimum, close contacts with consumers, sector policy makers, NGOs and the private sector, as well as with agencies in other sectors

There is little doubt that a great many urban water supply and sanitation agencies operate very inefficiently. Better use of financial resources and improved management can bring major gains in sustained coverage. More efficient utilities are better able to extend affordable services to the poor, and supply institutions which can demonstrate responsiveness to consumer needs are also more attractive to potential financing agencies, public or private.

The effective management of water resources requires skilled people, working in an enabling environment of supportive policies, legislation and incentives, in institutions which have power, responsibility and financial viability The reality is very different. Water utilities in developing countries are typically badly staffed, under-financed and highly dependent on government subventions for their day-to-day operations. Responsibility for water supply is often separate from that for pollution control. Utilities

DECENTRALIZING IMPROVES REVENUE

Beginning in 1985, Sri Lanka's National Water Supply and Drainage Board decentralized to five regional service centres with progressively increasing financial and managerial authority. By 1990, compared with 1984,

- *billings had increased by 125 percent*
- *ratio of collections to billings had improved from 25 to 84 percent*
- *ratio of collections to O&M costs had improved from 31 to 99 percent*
- *consumer complaints were reduced from 10 to 3 percent of connections*
- *billed connections per employee had improved from 13 to 26*

Source Derived from: Final Report on Institutional Development of the NWSDB, August 1991, published in: WASH Technical Report No. 89, *Designing and implementing decentralization programs in the water and sanitation sector* July 1993

have little control over the charges they levy or the use of the revenue they collect. Undue dependence on central government leads to interference in the management and finances of utilities. Water and sanitation organizations need sufficient autonomy to control their own finances, to respond to local needs and to attract and retain good staff

> ...the vast majority of water supply agencies in developing countries are high-cost, low-quality producers of services. I. Serageldin, Vice-President for Environmentally Sustainable Development, The World Bank.

The Action Programme emphasizes the need for governments to help institutions to become more people-oriented by bringing ownership, decision-making and responsibility for planning and implementation to the lowest appropriate level nearest to the user. It accordingly recommends that governments create utilities that can operate autonomously with regard to financial management, general management and research. This will help to ensure sustainable and effective services which can gradually move towards cost recovery. Such utilities need financial autonomy and the power to fix water supply and wastewater treatment charges at levels which will ensure the effective management of their services They should be accountable to their customers and to the government for compliance with nationally set standards, providing access to information and to data on water quality and recognizing appeal procedures which will allow consumers to influence their decisions

The role of the private sector

Wherever the private sector may be able to offer competitive services, it should have the opportunity to do so, provided that private companies are subject to the same conditions of accountability and regulation as would apply to a public utility The roles of public and private organizations may often be complementary.

The role of the private sector in water and sanitation activities is increasing progressively. Many positive experiences have been reported, ranging from the financing and installation of 1.5 million suction tubewells by private contractors in Bangladesh to concessions for the distribution of drinking water and the building and operation of sewage treatment plants in Chile.

In general, the involvement of the private sector can help to overcome some of the constraints faced by public utilities - particularly those relating to salaries and working conditions linked to government terms Wider experience in the industrialized countries also indicates that fully privatized water services can bring positive benefits. However, such action must be accompanied by strong government legislation to assure quality and reliability and by consumer safeguards to prevent abuse of a monopoly position. The role of the private sector is considered further in Chapter 4 below.

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PRIVATE SECTOR PARTICIPATION IN DELIVERING WATER

Urban water supply services in the Côte d'Ivoire are among the best in Africa. They have been operated for the past 30 years under lease contracts and concessions by a private utility, SODECI

The company is owned by Ivoirian stockholders (52 percent) and French interests (48 percent). It was set up in 1960 to operate the Abidjan water supply system under a concession contract. In 1974 its role was extended through a lease contract for water supply in other urban centres, a maintenance contract for Abidjan sewerage and drainage, and responsibility for operating and maintaining rural water points.

By 1989, 72 percent of the urban population had access to safe water, compared with less than 30 percent in 1974. Unaccounted-for water was only 12 percent and the collection rate for private customers was 98 percent.

In the rural areas, however, a large proportion of the 13,500 water points equipped with handpumps were not maintained efficiently Centralized maintenance resulted in delayed and costly repairs, community development initiatives were not well organized, and villager participation was weak. Cost recovery policies were erratic.

The rural systems were subsidised by high urban tariffs and revenues fell as urban industries recycled water and used less-costly private sources

In 1987, the government moved rural service out of SODECI. The company now receives no operating subsidies, and all its new water supply investments are self-financed.

Sources Water and Sanitation Utilities Partnership Report #2, World Bank.
Thelma A. Triche. *Private participation in the delivery of Guinea's water supply services.* World Bank Working Paper; 1990

The role of non-governmental organizations

The term, 'non-governmental organizations' (NGOs) encompasses a wide variety of organizations in both rich and poor worlds which operate outside the formal structure of national or local government and so have the capacity to respond quickly and flexibly to changing needs, particularly at the local level. They include all kinds of voluntary organizations, women's organizations, youth organizations, religious and cultural groups, neighbourhood associations and so on. Usually, NGOs work mainly at the community level and generally have a lot of practical experience at this level. Many of them have demonstrated their capacity for community outreach and grassroots tasks, but this role is not always encouraged They have important roles to play in piloting innovative approaches and in

The role of professional associations As the Action Programme points out, professional associations have a *major part to play* in developing networking among sector professionals They can help sector development by establishing professional standards, and their workshops and publications give sector professionals an opportunity to share experiences and gain recognition for their work. They may often be able to assist with training curricula and courses. Governments and ESAs need to support the development of sector-related professional associations, enabling them to foster the profession and the industry Links with international associations give access to a wide knowledge base and can help to raise the status of national sector professionals and national industries.

THE LEGAL FRAMEWORK

If the role of government is to become more that of a regulator of other stakeholders, it will be necessary, as the Action Programme indicates, to develop an appropriate legal framework and ensure that water laws and regulations are effectively enforced. By developing legislation, independent 'watchdog' mechanisms, and systems for the participation of users (especially women) in decision-making, governments also fulfil the role of regulator to protect national interests and those of the users While such changes do not occur overnight, for them to take place at all requires a fundamental shift in policy.

In any process of decentralization there is a need for safeguards An important function of central government is therefore to provide the regulatory legal framework for providers and utilities to fulfil their responsibilities to users and other stakeholders To ensure accountability, the responsibilities for regulation and provision should be housed in separate institutions. As long as government still retains a role in service provision, the choice of regulatory institution may be difficult - another reason for government to phase out its role as a service provider An independent 'watchdog' mechanism can promote accountability to users and regulators, which is particularly important where commercial interests may clash with other considerations.

Legislation and contracts are required to cement the necessary linkages between central government and decentralized agencies, and to promote financial autonomy and accountability in local institutions To become effective and financially viable, local agencies, including utilities and community associations, need to have clearly defined authority to set and collect charges which will cover the costs of operation and maintenance and the recovery of capital, and to make management decisions. Central government will necessarily retain responsibility for establishing legislation and standards.

As noted in Chapter 1, a positive attitude towards partnership on the part of individuals provides the essential foundation for successful collaboration among sector agencies. Such collaboration is an effective way of transferring knowledge and experience and making the best use of resources. International collaboration contributes to the development of common approaches and can make additional resources available At the regional level, collaboration can include formulating policies for the exploitation and protection of boundary waters and shared river basins. However, the most important collaborative efforts are those made at country level. They include collaboration among country institutions and collaboration between country institutions and ESAs active in the country

In most countries, responsibility for water supply and sanitation is shared among several ministries and agencies, often with no effective arrangements for consultation and cooperation - indeed, often with conflicting responsibilities. Water resources management and responsibility for environmental protection are usually assigned to yet other ministries. Unless there are detailed policies incorporated in a country strategy, such dispersion and duplication of responsibilities will almost certainly result in duplication of efforts, and the misallocation and waste of financial resources The problem usually prevails both at national and local level, although at local level ad hoc collaboration does occur, mainly as part of project implementation Such collaboration usually is the result of individual initiative, rather than established institutional policies

Even where coordination is effective, existing institutional structures need to be reviewed in the light of the changing role of government. While it is usually neither possible nor wise to have all responsibilities housed in one government ministry or institution, it is important that one institution play an overall coordinating role, for which it needs the necessary authority. The experience of some countries suggests that for effective overall coordination it is sometimes best to choose a cross-sectoral ministry such as the one responsible for planning or local government.

> To achieve sustainable development, the principle of collaboration between all partners in the water supply and sanitation sector is of paramount importance.
>
> Mr. Nangolo Mbumba, Minister of Agriculture, Water and Rural Development, Namibia.

The need for greater collaboration exists, not only among ministries, but also among community groups, the private sector and NGOs, all of whom need to be aware of the importance of collaboration as a means of improving performance Collaboration is useful, indeed essential, to the decentralization process where the voice of local government, communities and the consumer must be heard for effective programming

Benefits of collaboration

Collaboration will achieve more for less. It helps to avoid waste of resources in duplicate efforts and in the application of inappropriate technology or approaches, where proven solutions have already been found It also enables joint monitoring and evaluation, thereby providing for a more efficient and rapid feedback.

Collaboration can resolve conflicts and promote integration With so many players, water supply, sanitation and the environment sectors are fraught with conflicting policies and priorities, duplication of effort and even competition among agencies Coordination is essential if optimal use is to be made of scarce resources. Integrated water management, a central theme in environmental management, cannot be accomplished without strong interagency collaboration

Collaboration encourages collective efforts, with enhanced benefits Good coordination between water, health, education and environmental agencies results in better utilization of the water and sanitation facilities and greater benefits through improved hygiene and sanitation in the home and community environments Collaboration helps in the mobilization and deployment of resources for sector 'public goods' like strategic investment plans, databases, research and development, information and networking mechanisms, and so on.

Up to now, the tendency has been for collaboration in the water and sanitation sector to be donor-led and international in nature. It is becoming clear, however, that many more substantive benefits can be achieved through collaboration at the country level. This is generally considered to be the most useful kind of collaboration for the development of the sector, but it still tends to be ad hoc and focused around one or more specific problems shared by a few agencies Collaboration between country institutions and ESAs, in particular, is frequently handicapped by the absence of a clear sector strategy

There have been only a few attempts to coordinate all sector activities through a single national focal point, despite the fact that the natural complementarity between many agencies working in the sector offers a good basis for partnerships Collaboration between ministries of national governments, in particular, is likely to be most effective at the country level. However, collaboration does not only involve federal agencies or ministries working together, but also collaboration at the sub-national (state, district) level or project level. It may also involve informal collaboration at the field level among sector professionals for solving particular problems

Despite the difficulties, successful examples of country level collaboration can be found They include the coordination of sector activities in Nepal, Pakistan's National Policy Workshop and Strategic Investment Plan, Indonesia's demand-driven sector planning, the National Action Committee in Zimbabwe, donor consultations in Sri Lanka, Guinea worm eradication programmes in Ghana and Nigeria, and hygiene education and environmental sanitation in the Gambia. The list highlights the considerable diversity in types of collaboration and the need to tailor the process to suit the particular situation.

EFFECTIVE COLLABORATION AT COUNTRY LEVEL

The effectiveness of country level collaboration is very much a product of the individuals participating in it and largely determined by their interest, openness and communications skills. The following criteria help to facilitate country-level collaboration

- *Any coordinating mechanism or body should be neutral and, in particular, not be controlled by the principal government agency or donor to the sector. It should restrict itself to overall policy and macro-planning and not be involved in implementation. It should act as a monitor of the process of coordination.*
- *Effective 'coordination' is best achieved by providing a service (such as sector planning and technical assistance) rather than coordination by control*
- *The coordinating body should have a secretariat (staffed by active, experienced and respected professionals) through which it can provide services to and coordinate the sector*
- *The collaborative process works best when all parties (including non-governmental and community) are involved.*
- *The emphasis must be on effective communications leading to attitudinal changes among individuals and organizations.*
- *Complementarity of needs enhances collaboration. Each party brings different resources and experience to the table. Where needs of one agency can be met by the resources of another, collaboration can be very effective.*
- *The underprivileged, such as the low-income and low caste groups, are frequently ignored. This is also true of women, who should play a central role in collaboration but are commonly left out of the dialogue. Participatory methods are now available to enhance their participation.*
- *Transparency of information is a key ingredient for project success. Working from a common understanding goes a long way to improving collaboration at the project level.*
- *NGOs are valuable assets to sector development yet they are too often perceived as being too independent and working undesirably outside of government policy and planning. The collaborative process is well suited to building trust and confidence between government and NGOs while at the same time drawing on their considerable knowledge and institutional resources for sector development. Support to NGOs which respects their individual interests and plurality of approaches goes a long way to reducing differences and encourages compatibility between programmes.*

A Working Group of the Water Supply and Sanitation Collaborative Council developed guidelines for effective country-level collaboration and these are summarized in the box above

As well as providing for more effective communication and accountability, enhanced collaboration can bring about community finance for installed facilities. It can also help to mobilize extra resources. Where external donors are involved, collaboration helps countries to rationalize their approaches and avoid the inefficiencies brought about by unnecessary competition or lack of uniformity in donor conditions

Collaborative mechanisms

To realize the potential benefits of collaboration, governments need to arrange or facilitate a variety of different collaborative mechanisms Those which have proved useful in developing countries include:

- formal and informal sector coordinating bodies on which all concerned parties are represented
- regular donor-sponsored consultations at central and project levels
- participation of local government communities and central or state departments in planning, budgeting, project selection, and design
- project steering committees
- task forces to deal with specific issues
- information and resource centres and databanks
- local, regional and national forums
- professional associations
- demonstration projects.

HUMAN RESOURCES

As government disengages from direct implementation of public works, the capacity of staff needs to be developed at the provider or utility level, at the community level, and in the private consulting and construction industries. Pre-service and in-service training is often out-dated and needs review. Government should encourage the formation of multidisciplinary teams, and provide orientation and refresher training, particularly in communication and behaviour change skills and in gender issues for engineers and managers. This can be done through skills transfer schemes, training opportunities and carefully targeted incentives An enabling government would also reward innovation and outstanding progress of individuals and institutions.

Strategies for the 1990s and beyond need to focus on people, rather than on technology or coverage Once countries have a critical mass of appropriately trained people within a sound institutional and policy framework, many of the sector's technical and managerial challenges can be met.

This section of the Action Programme emphasizes the importance of human resources development in ensuring that the wider aims can be attained and new approaches implemented successfully It calls on governments to increase their investments in capacity building programmes in order to create organizational and management capacity at all levels, and to ensure the availability of skilled personnel by supporting professional and technical education and training and career planning, the publication of suitable technical materials, an enhanced role for women, and the establishment of multidisciplinary professional associations.

Education and training

Better sector performance depends on correctly trained staff working in a positive environment. Financial and technical skills are both important, and they need to be accompanied by performance-related incentives and career paths. Central government must provide the enabling environment, including delegation of power, information support, incentives, and quality standards.

National training programmes help to ensure the availability of sufficient numbers of qualified staff in all disciplines Programmes should optimize the use of existing educational institutions and in-house training to avoid duplication of facilities. Training should particularly address the needs of rural and peri-urban communities and ensure that women become part of management and operations. Where appropriate and feasible, twinning with competent enterprises should be encouraged.

Successful training builds both competence and confidence A well-planned programme of human resources development, based on assessment of needs, should be at the core of any country's water resources strategy. It should reflect the need for partnership in sustainable sector development among government, communities, the private sector and non-governmental organizations, and build appropriate skills at all levels. It should also recognize the particular needs of women, and ensure equal training and employment opportunities.

Extension and utility staff need to be able to interact with men and women in a 'people-friendly' and gender-sensitive way. If they are to influence the behaviour of the users, the behaviour and skills of technicians themselves must change, which means appropriate training and education of staff.

> A prerequisite for more sustainable development is a sound knowledge base in the form of educated professionals and research capacity. Representatives of the scientific community; statement given by Professor G. Allaerts, IHE.

Improved performance at country level requires ongoing training External support agencies (ESAs) can make an important contribution towards the training and retention of sector professionals They can also contribute to national capacity building by promoting the employment of local consultants as much as possible in project preparation and appraisal Experience has shown, however, that training is not always effective. Trainees may find it too difficult or too costly to put into practice on the job the knowledge, attitudes and skills in which they have been trained. In many cases, training is not followed by effective supervision. Improving the effectiveness of training is a major priority for action at the international level.

Training programmes can benefit from recent developments in methods, media and materials. An important first step is to take stock of training tools and methods employed in the country, to reduce duplication and identify gaps which may have to be filled by developing new materials.

Participatory training techniques, where people learn through group involvement, are particularly important when dealing with sociocultural issues.

Education, too, is a key part of the new approach. Schools offer a large and receptive audience for promoting behavioural change through hygiene promotion. Polytechnics and universities are able to instil the right principles into future professionals, providing that their curricula are updated with current sector approaches. Scholarships, fellowships and travel grants help national professionals to broaden their experience They need to be accompanied, where possible, by incentives, such as re-entry grants, for qualified staff to return to employment in the sector

Career planning

Organizations need to start recruiting and promoting staff based on the overall requirements of the job, not just the technical ones. The shift of emphasis to behaviour and the measurement of change requires a fundamental change of approach and attitude in three respects:

- engineers and managers need to address the new concerns of environmental, technical and financial effectiveness
- social science professionals should become partners in every technical and management team, particularly to address user or consumer needs and behaviours and the measurement of behavioural change
- professionals and technicians at all levels need to become proficient in communication, which is the key to behaviour and attitudinal change at all levels.

In addition to the right training, sector staff need to be motivated and properly rewarded. Financial incentives are important, especially when there are attractive employment opportunities outside the sector Other incentives also motivate staff at all levels Responsibility, recognition, promotion opportunities and pleasant working conditions all contribute to job satisfaction for both men and women. Regular political interference is a strong disincentive, which can be avoided by devolving responsibility and authority to local management. Special incentives may be needed to encourage performance. These can include production bonuses, or inducements to central agency staff to relocate, particularly to more distant areas. It is important to ensure that incentive programmes have control procedures to prevent inequities and abuse Compensation, incentives and career development policies are needed to ensure that the sector is able to attract and retain competent staff

MONITORING

The need for national monitoring systems has already been mentioned in Chapter 2; this section of the Action Programme also notes the need for governments to be responsible for monitoring the performance of service providers and other stakeholders, as appropriate

Monitoring and evaluation are essential for the updating of strategies in line with actual progress. Progress should be monitored not only in terms of coverage, but in terms of the quality of coverage and the impact of investments on health and the environment. To profit from monitoring, the results need to be widely disseminated, and a system should be established to provide rewards for excellence in performance by individuals and organizations. Monitoring and reporting of performance and progress can usefully be undertaken by an independent organization, such as a National Resource Centre, to ensure impartiality and transparency.

INFORMATION MANAGEMENT

The implementation of sustainable water and sanitation programmes depends on continuous support and feedback. Implementing agencies need access to up-to-date information, based on national and international experience and research They need technical backup when dealing with new problems; and they need to contribute their own experiences and results into the national pool of data, for the benefit of others They need information from communities, about their needs, aspirations, and problems

Information is thus a vital tool for management at all levels from the user upwards Yet in most countries, information is very limited and much of it of poor quality For management to be effective, and particularly to enable rational planning and resource utilization, central government should establish or strengthen systems for information management at all levels.

Information has its greatest potential for use at the level at which it is collected This is not to understate its usefulness at higher levels, but to emphasize its even greater importance at the local level. The quality of information reaching the national level will depend on the value attached to it at each level. This means that information systems should not be established by a 'top-down' approach Each level should be assisted to identify its information needs and helped to develop a system to gather and use the information. The national level should play a vital role in harmonizing the various information needs at each level into a national information system, with feedback to lower levels and also to the international level Access to information on water quality, availability and pricing should be available to the public and to all partners in the development process.

The Action Programme urges governments to establish or strengthen the domestic resource centres which provide a focus for these activities of information collection and dissemination, applied research, and technical support for monitoring, to establish nation-wide information systems, and foster the sharing of information

RESEARCH

Operational research into improved technologies and methodologies is vital to stimulate improvements in effectiveness, and needs to be actively encouraged. Very often the appropriate research needs to take place in countries where scarce financial resources are already committed ESAs can therefore play a very important role, for example by allocating a proportion of overall support to be used for this purpose.

REGIONAL AND INTERNATIONAL ACTIONS

Four activities are called for at the regional and international levels

- promoting information exchange and networking among sector professionals, professional associations and NGOs, including twinning arrangements
- promoting effective collaboration with neighbouring countries in the management of transboundary water resources
- promoting the regional exchange of experience on institutional reform
- strengthening regional collaboration to enhance the capacity of NGOs in water supply and sanitation.

4. WATER AND MOBILIZING FINANCIAL RESOURCES: building assets for the future

Photo: IRC

However many new concepts and principles are adopted by sector specialists or ministers, the success of any action programme has to depend on the necessary finance being available. The Noordwijk Action Programme focuses strongly on ways of making more effective use of existing government and donor funds and on financing water and sanitation improvements through a range of innovative mechanisms, involving private sector and local community resources

A fundamental principle was enunciated at the International Conference on Environment and Development in Dublin in 1992 and endorsed in Rio, it states:

"Water has an economic value in all its competing uses and should be recognized as an economic good"

Within this principle it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize 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.

By applying this principle across all types of water use, including agricultural use, governments are able to bring about enormous changes in the patterns of use and the availability of water for beneficial purposes.

There is no need to abandon economic principles to justify investing in improved water supplies. Countless cost-benefit analyses have shown that the returns, in terms of improved productivity and stimulating income-generating activities, far outweigh the costs of installing and maintaining new supplies. That is without accounting for the undoubted, but more difficult to quantify, health benefits The 1991 cholera epidemic cost Peru an estimated one billion dollars in lost tourism and exports That same amount would have more than paid for the water and sanitation systems needed to prevent such an outbreak from occurring

> ...a fundamental restructuring of the way governments and donors apportion resources is clearly required.
>
> James P. Grant, Executive Director, UNICEF.

Resource allocations at the national and local level are most effective when priority is given to providing basic services for those who are at present unserved The benefits come in achieving more extensive behavioural changes to bring about health and environmental improvements and in lower unit costs and more rapid increase in coverage. Progressive tariffs can be used to ensure an affordable supply of water to meet the basic needs of the poorest settlements, with an element of cross-subsidy from those opting to use greater quantities

Present levels of investment are too low if coverage is to be significantly extended and present systems sustained Reducing costs is one solution, but this alone is not enough Governments and donors need to allocate more money to the sector They are more likely to do so if sector institutions can demonstrate that they are performing efficiently
Clear sector policies at national level which encourage the implementation of well-prepared plans at local level increase the likelihood that water and sanitation will be given priority by governments and donors in their budgetary allocations. Strong persuasion may be needed to obtain greater

political commitment to the development of the sector.

Strong arguments about the health improvements to be obtained from improved water and sanitation have been made, and were widely accepted during the 1980s; but, except in rare cases, they have not led to significant increases in sector investments The Dublin and Rio conferences have provided new and persuasive arguments for more money to be provided for water resources management. These environmental and economic arguments, coupled with the poverty alleviation benefits associated with water and sanitation improvements, strongly reinforce the health messages. They also switch the emphasis from social to economic aspects, and so demonstrate the penalty of inaction

To reduce the gap between what is needed and what is available for investment in the sector, it will need to gain access to sources of capital other than those it has traditionally used. To attract capital requires efficient and competent institutions, backed by government policies which give them the autonomy they need to recover costs through tariffs and fees, to enter into contracts, and to provide employment conditions good enough to attract and retain competent staff. At the same time, government policies should ensure that financial assistance is limited to supporting only those investments dedicated to serving low-income groups, and that tariffs reflect government social policies by providing lifeline tariffs for the poor, charging at least marginal cost at high consumption levels, and encouraging water conservation

While the struggle to obtain a greater share of resources for water and sanitation will continue, in the present global economic climate efforts to make better use of existing resources will usually release more resources more quickly than efforts to increase them overall. There is already a huge amount being spent on water, sanitation and other environmental services by governments, local authorities, the agricultural and commercial sectors, and particularly by families and individuals Yet all the evidence suggests that a major part of these resources is being used wastefully and ineffectively.

As was indicated in earlier chapters, the design of facilities should be based on effective demand (the willingness of people to pay for the service standards they choose) and on the participation of the user community in the choice of technology Moreover, hygiene education, by informing the people of the benefits of changing personal hygiene practices and the benefits of different facilities, is the key to securing user participation and to determining true effective demand. Without it, investments will not provide the benefits expected of them.

Some have argued that greater effectiveness through these measures, and rationalizing the use of existing resources, based on principles of equity, efficiency and effectiveness, would of itself enable us to achieve the goal of sustainable and environmentally sound water and sanitation for all.

Project design should consider conservation of water to reduce both demand on resources and wastewater disposal needs Similarly, reuse of wastewater should be considered as a disposal option, both for the potential benefits resulting from reuse and also as a more economically attractive disposal option

Improving the use of existing resources has two other important benefits. being able to demonstrate the effective use of resources is increasingly becoming a winning factor in the competition for the limited extra resources available, and it will unlock other resources for development, especially at the household level Improving effectiveness - achieving more with what we have - is not just a 'win-win' but a 'win-win-win' option!

Accordingly, the main emphases in this section of the Action Programme are on improving the equity and efficiency of financial management and on planning investments in the sector in such a way as rationalize the generation and use of resources. These and other actions proposed in this section re-emphasize and repeat actions already defined in earlier sections of the Action Programme and discussed in previous chapters.

FINANCIAL MANAGEMENT

Too many water and sanitation programmes involve investments which are not recovered from consumers and result in unsustainable costs for the upkeep of inappropriate services. The greatest single contribution that governments can make towards the sustainable development of improved water and sanitation systems is to empower and equip local water utilities to charge a realistic price for the water that they supply and to direct that revenue to the development, protection and upkeep of new and existing services.

Progress has been hampered where water has been provided as a free service The failure to cover the costs of operation and maintenance of systems has led to their rapid deterioration and ineffectiveness. Contrary to conventional thinking, even the poor have proved willing and

ACCESS TO LOANS AND TECHNOLOGY CHOICE CREATE EFFECTIVE DEMAND

In low-income barrios of Tegucigalpa, the capital of Honduras, the demand for improved sanitation appeared not to be high - people took out loans for other improvements, but not for latrines. The only latrines people knew were simple pit latrines which filled up quickly and were considered smelly and unsafe. Now the Cooperative Housing Federation (CHF), with the assistance of UNICEF, has started a sanitation loan programme offering people alternatives including the simple pit, ventilated improved pit (VIP), dry compost and pour-flush latrines. Offered a variety of options in a broad price range from US$100 to US$400 linked to well-managed credit programmes, families are now showing their demand for improved sanitation by taking out loans administered by three local NGOs. To ensure sustainability, interest is set at the market rate and the loans are repayable over three years The loans cover the cost of material, labour and hygiene education. Most of the promoters are local women who are paid a small stipend out of the interest charge, thus giving them an opportunity to generate their own income.

Source: 'CHF and UNICEF provide options for improved urban sanitation in Honduras', *Peri-Urban News*, May 1992

able to pay a significant contribution towards improved service, often because they are already paying even more to outsiders for an inadequate service. Where the poor are unable to pay the full cost, cross-subsidizing from richer to poorer users is often the best way to fill the gap

Though governments are no longer to be the sole source of funding, they are nonetheless expected to facilitate the mobilization of other resources. This can be achieved by adopting and enforcing some principles concerning who should pay for what The 'polluter pays' principle is one way of generating resources for wastewater treatment facilities. Another is the 'developer pays' principle, requiring developers to pay for the improved or enhanced public services on which the success of their development depends. Governments also need to facilitate access to credit or loans in packages suitable for households, utilities, local authorities (including those in rural areas) and the private sector

Equitable and efficient financial management of water supply and sanitation can be achieved, in part, by devolving decision-making and management to the lowest appropriate level and making sure that the poor and needy do not suffer from the introduction of water pricing and tariff systems. The Action Programme emphasizes the need to establish tariffs and pricing systems which will enable water and sanitation organizations to achieve financial autonomy while still reflecting the differing needs of different socio-economic groups.

Water pricing

Past failure to recognize the true value of water is a prime reason why an increasing number of countries are heading for water crises The symptoms are familiar: intermittent supplies, expensive investment in transferring water from distant sources, loss of agricultural production, threats to industrial supplies, and so on Then there is the equivalent wastewater problem, where inadequate control over polluting discharges makes rivers and groundwater unsuitable for further use, creating environmental nuisance and health hazards, and accelerating the need to turn to alternative sources.

Water pricing can influence water conservation and hence defer the need for the expensive development of new water resources, while users can obtain more dependable services which they will be willing and able to pay for In many cases, these benefits hinge on a government commitment to the two guiding principles.

- water as an economic good
- management at the lowest appropriate level

The adoption of these principles has profound implications for water resources management in all countries. For countries where agricultural, industrial and domestic consumers all pay unrealistically low prices for their water and suffer from inadequate and unreliable services as a result, their adoption may well involve political decisions at the highest level Without these key decisions, though, the commitments made in Rio will remain empty rhetoric With them, and with the institutional changes they

imply, governments can pave the way for making better use of available water and financial resources *In doing so, they will also make the sector* more attractive to external investors, be they donors or private sources

Low water tariffs encourage excessive use of water by consumers connected to public supplies, resulting in supply interruptions, inadequate revenues for the utility, breakdowns in service, and no resources to extend services to the unserved. Yet few countries have tariffs which yield even enough revenue for the routine operation and maintenance of their water systems New financing mechanisms, including realistic charges for water for different uses and for the treatment and disposal of liquid and solid wastes, can be important ways of managing the demand for water and protecting the environment. Together with measures to improve the performance of existing utilities, they bring sector goals within reach

The pricing mechanism

A review of water pricing mechanisms for agriculture and industry is one of the most effective options available to governments seeking to conserve scarce water resources. With agricultural water use accounting for more than 80 percent of total water use in the developing world, quite small increases in irrigation efficiency, coupled with more realistic payment for water consumed, could generate enough water and enough revenue to make substantial progress in providing drinking water supplies to unserved populations.

Agricultural water pricing is a highly sensitive political issue in most countries, linked as it is to national strategies for food security The fact remains that subsidizing food production by providing very cheap (sometimes free) water is both bad economics and bad water management, when more realistic water pricing could provide money to subsidize food production directly and save water.

The long-term objective is full cost recovery for water supply and sanitation services through user charges which recover the cost of capital investments and provide sufficient funds for proper operation and maintenance Subsidies, if any, are best limited to the provision of basic services to the poor, and these consumers should, as a minimum, pay operation and maintenance costs and, if possible, make at least a minimal contribution, in cash or in kind, towards investments Government-subsidized investment support should be provided for a specific period only, with the objective of progressively eliminating such support and replacing it by internal cross-subsidies

Cost recovery should be based on tariffs and other mechanisms which provide both 'lifeline rates' for low-income consumers and, at the highest consumption levels, charges which exceed the marginal cost of service, to finance cross-subsidies and maintain the financial viability of the enterprise In rural and peri-urban areas, cost recovery may be by any method that is locally acceptable, preferably one administered by local community organisations, charges need not necessarily be related to water consumption.

Cost recovery can be much enhanced if payment systems are designed to suit the income patterns of users (men and women) In some

cases, banks may offer more flexibility than water agencies, allowing people to make small contributions on a weekly or even a daily basis. In rural areas, payment for communal supplies from handpumps may be timed to coincide with harvests Women have an very important influence in payment collection and frequently make the best treasurers of water point committees

Opportunity cost

As the competition for available resources becomes more intense, so the concept of 'opportunity cost' and management of water as an economic good becomes easier to understand. When water is restricted, the 'opportunity cost' of the next thousand cubic metres of water to arrive is very high; the farmer who needs it to grow a tonne of grain and the industrialist who could produce an extra five tonnes of steel would bid considerably more in an auction for that water than they are accustomed to paying through the highly subsidized water charges prevalent in most developing countries On the other hand, if they were charged something approaching that cost for every thousand cubic metres of water, they would quickly find ways of using it more efficiently and reducing their demand

Lifeline supplies

The application of the concept of water as an economic good has to be accompanied by considerations of equity. The Dublin Principle stresses the basic right to water and sanitation at an affordable price. Some of the poorest rural and peri-urban residents would be further marginalized if they had to pay the full costs of improved water supplies - though many would not, as they are already paying excessive charges to water vendors for very inadequate supplies.

Well-designed tariff structures provide for 'lifeline' supplies at reduced cost, additional supplies at prices which reflect the true costs of providing and maintaining the service, and extra consumption at rates which discourage excess and provide the means to subsidize the lifeline rates

These principles are well established in most industrialized countries In the developing countries, however, water pricing is frequently a central government concern and governments frequently shirk the decision to put up prices, perceiving it as a vote loser or as detrimental to the poor In fact, the real vote loser is the inefficient and unreliable service resulting from inadequate cost recovery, and the poor suffer most from the low rates, because there is not enough revenue to extend services to them

The recommendation in the Action Programme that subsidies should be minimized while assuring that the most needy have access to safe water (see below) is not a contradiction Linked to the concept of 'effective demand', discussed later, it is in fact the logical route to sustainable supplies for all.

The Action Programme calls on governments to carry out a number of actions relating to the development of detailed guidelines for investments in the sector, in order to rationalize the generation and use of resources. They include:

- ensuring the continuing provision of domestic water and sanitation facilities for all sectors of society
- keeping subsidies to a minimum while ensuring that the most needy still have access to safe water
- encouraging investments which will at the same time save money, improve the situation of users and protect the environment
- giving priority in investment to cost-effective, appropriate and affordable technology and phasing out inappropriate technology
- rehabilitating and maintaining existing systems
- giving priority to investments in water supply and sanitation, particularly in urban and peri-urban areas.

Focused investment

To achieve universal coverage of water supply and sanitation within a reasonable timescale while continuing to aim at the high levels of service provided for the more affluent sections of society, total spending throughout the world would need to more than double The impracticality of attaining this level of spending simply reinforces the conclusion that 'business as usual will not work'. By adopting more realistic and more flexible approaches, 80 percent of the population in need could be served for only 30 percent of the investment needed to provide the highest levels of service to all - and even this figure is based on the assumption that half of the unserved urban population would be served by new high-technology schemes

The question politicians need to address is whether such schemes should have any place at all on the priority list while so many of the urban poor lack the most basic services. If improving the environment has any priority as a criterion for investment, sector action plans should be headed by projects for hygiene promotion, sanitation and least-cost appropriate water supplies in peri-urban areas, and by rural water and sanitation programmes In that way, the available funds will have the greatest impact on the proposed new basis for assessing success - behavioural change - as well as on the conventional indicator of progress - coverage.

Meeting basic needs

A change in focus, giving investment priority to meeting the basic needs of the rural and urban poor, would not only have a dramatic impact on the coverage statistics, but would also produce the biggest impact on the

alleviation of poverty, the improvement of the environment, and the health of the community. A move towards *adopting lower-cost solutions for* serving most sections of the urban community could enable services to be extended to many more people. For the amount of money needed to provide 1,000 people with a new urban sewerage system, 14,000 of their less fortunate neighbours could benefit from communal latrines or onsite sanitation, or as many as 35,000 of the rural poor could be helped to build their own simple pit latrines.

Effective demand

The term 'effective demand' was introduced by economists at the end of the 1980s to differentiate between the 'notional demand' commonly used by planners to determine investment needs and the true requirements of potential users, as expressed by their willingness to pay for water and sanitation services.

When applied in the planning stage, the concept of effective demand can have a marked impact on both the choice of technology and service levels and the prospects for cost recovery. Applying the concept through willingness-to-pay studies in communities seeking water and sanitation improvements can provide useful data for general sector planning. Such studies show that people without access to safe water generally give high priority to obtaining improved supplies Given the right information, most communities are able to agree on the most appropriate technology and service level to meet their needs, and are willing to commit themselves to pay quite large proportions of household income for reliable services.

During most of the 1980s, the prevailing view was that there was little demand for sanitation improvements among target populations, whereas improved water supply was a clearly perceived need. More recently, however, evidence has started to grow that, particularly in the squalid conditions endured by the peri-urban poor, hygiene education programmes rapidly lead to a demand from the people for the means to clear excreta and wastewater from their neighbourhoods. In view of the enormous impact which better environmental sanitation can have on the prevention of water pollution, the reduction of health risks and the improvement of the environment, the comparatively small investment needed for hygiene education interventions in high priority slum areas can pay great dividends.

The Action Programme also urges agencies to combine sector investments with income-generating activities and to improve access to credit for the poorest sections of society, as a means of limiting subsidies. Credit facilities should be established for low-income homeowners to permit borrowing for on-plot facilities, and land tenure should be formalized where this is required to facilitate borrowing

Bridging the gap

Though the gap between estimated investment needs and current levels of sector spending seems very large, the picture is somewhat distorted. Estimates of current spending include only investments by central governments and donors. They ignore the considerable amounts invested by people themselves, either to buy water from private vendors, or to add

their own backup systems to unreliable public supplies.

Planning on the basis of effective demand and developing partnerships with community groups will help water agencies to mobilize these local resources to invest in more sustainable services, and to recover regular payments for those services. When combined with improvements in efficiency and better targeting of investments, better use of available resources can help to make significant reductions in the coverage backlog.

Appropriate technology and service levels

Past projects have often been designed to provide service improvements to middle-class customers using conventional approaches. It is reported that, during the Decade, such schemes absorbed 80 percent of the available investment funds. Different priorities could have provided affordable basic services for many more people through the use of more innovative and cost-effective methods.

In spite of near-universal acceptance of the principle that the technology used in water supply and sanitation schemes should be as modest and low-cost as is appropriate for the setting, UNICEF estimates that only 5 percent of donor aid in the sector is invested in low-cost technology. More than 80 percent of those who presently lack adequate water and sanitation could benefit from low-cost technologies which are already available and proven.

Familiar technology may not be the best. The best technology should be 'people-friendly' and 'environment-friendly'. It should be based on meeting the effective demand at the lowest economic cost. It should be easy and cheap to operate and maintain. These may seem obvious requirements, but they are rarely fulfilled.

Where possible, users should be allowed to choose from a range of technologies according to their preference and ability to pay. Ideally, the technologies on offer should be such that they can be developed and improved upon at a later stage, both to maximize the return on the initial investment and to make people more willing to choose modest levels of technology at the outset.

> ...low-cost technological options must be a priority.
>
> Mr. A. Ligale, Assistant Minister for Land Reclamation, Regional and Water Development, Kenya.

A lot of research into low-cost technologies for rural areas was carried out during the 1980s, and communities can now be presented with a good range of choices. However, more research is needed into low-cost sanitation options for urban areas. Low cost is especially important in promoting sanitation programmes, given the inherent difficulty in persuading people of the benefits of hygienic waste disposal.

Sector institutions need to ensure the consistent application of technologies which are appropriate to *local cultural, financial and physical* conditions. In particular, technologies should be capable of being operated and maintained locally, either by the community or on its behalf, so as to reduce investment costs and ensure adequate operation and maintenance of the facilities For the same reasons, local labour and materials should be used as much as possible

Appropriate technology may also mean technology which is standardized for use in similar settings throughout a given country The India Mark II handpump is a well-known example of how standardization can achieve dramatic improvements in maintenance standards and system reliability.

It is a stark contrast with the problems of spare parts shortage, lack of suitably skilled mechanics and excessive pump downtime which plague many countries where a wide variety of different pumps have been installed (often with donor support).

Reducing waste

Assigning the right value to each cubic metre of water provides the incentive to tackle another critical problem facing urban water utilities throughout the world - excessive rates of 'unaccounted-for' water. The term refers to the difference between the amount of water drawn from the sources - boreholes, reservoirs or treatment works - and the amount for which the utility actually receives payment. It thus includes water which is lost through leaks in the transmission or distribution mains, water which is not metered, or incorrectly metered, and water which is either not billed, or billed but not paid for

VILLAGE WATER COMMITTEES IN PAKISTAN

Village water committees play a significant role in the detailed design of gravity schemes in northern Pakistan, with assistance from engineers from the Aga Khan Rural Support Programme (AKRSP) In the village of Gulkin, the water committee opted for a gravity scheme, with a yard tap for all 102 households As well as deciding on the service level, the water committee also prepared plans showing the desired routes for pipelines.

The water committee and AKRSP engineers prepared a detailed design, and submitted a joint project proposal to the Canadian High Commission and secured grant assistance to build the scheme. Construction of the scheme was undertaken almost entirely by the community, with local plumbers hired by the water committee. AKRSP made periodic site inspection visits to check on the quality of the work.

The project was completed in a year The new system replaced a poorly built scheme installed with donor assistance several years ago which did not provide a full service. The old scheme had broken down because the pipe trenches were too shallow and the pipes had frozen and cracked. The technical advice offered by the AKRSP enabled the villagers to build their own supply to a much higher standard, and achieve a service level which matched community needs

In some urban utilities, as much as 60 percent of water may be unaccounted-for, and rates of 40-50 percent are commonplace. Even in the industrialized countries, it is sometimes argued that it is more cost-effective to provide extra water than to take measures to cut unaccounted-for water to below 20-25 percent. The fact remains that some of the best-run utilities claim to have brought the rate down to 10 percent or less.

In countries where water is scarce, high rates of unaccounted-for water are grossly uneconomic, frequently leading to very high costs in transporting otherwise unnecessary water from great distances (only to throw half of it away). That is the kind of institutional inefficiency which deters investors. It is encouraged by low water tariffs, whereas realistic pricing puts a higher value on every cubic metre saved. If a utility brings its water losses down from 50 percent to 20 percent, revenue goes up by 60 percent.

The polluter pays

Tariffs for waste disposal should be based on the 'polluter pays' principle; there should be no assumed right to discharge wastes freely. Industries which have been attracted by low water rates and negligible discharge controls justifiably see realistic water pricing and pollution prevention as enemies of cost competitiveness.

The past emphasis on producing new water rather than protecting and conserving what we already have has resulted in a serious lack of people, institutions and mechanisms to implement environmental improvement programmes. The cost of dealing with the backlog is daunting - it may cost as much as five times as much to treat a community's wastewater to an acceptable standard as it does to produce that water in the first place.

Two matching strategies may be needed. For existing industries, which were established on the basis of previous laissez-faire attitudes to water management, governments should be ready to subsidize the necessary changes in production processes, or even the relocation of manufacturing sites, on the basis of the national interest. The establishment of new industries requires a different approach. Here the government has a strong case for imposing tight discharge controls and realistic charges from the start, and for ensuring that polluting industries are only permitted to start up in locations where their discharges will not result in damage to surface or groundwater resources.

The Action Programme calls on governments to explore and develop new and innovative financing mechanisms for water supply and sanitation These should include both private funding and harnessing local resources as much as possible

Private sector funding

For the water supply and sanitation sector, private sources of capital can be either domestic or external.

The domestic private sector participates either by lending funds to the central government or by investing in privately-owned water supply and sanitation facilities. Most of the direct private investment is 'informal' and is generally for private water pumping and distribution systems, private waste treatment for households and firms, and so on. It is difficult to estimate the true value of these investments, but it may be substantial. As an example, the Metropolitan Water Authority in Bangkok serves only half the households in the metropolitan area Almost all the remainder receive their water from private suppliers (see box)

In some developing countries, local authorities are beginning to rely more and more on borrowing to finance infrastructure projects. Up to now, however, water supply and sanitation systems have not been able to take advantage of such financing, except indirectly through the purchase of central government bonds. (These are normally of the 'General Obligation Bonds' category rather than 'Revenue Bonds' which are backed by the revenue stream of the project for which they are issued). Apart from bonds, pension funds and insurance companies are also emerging as important sources of investment capital in developing countries, but again they have hardly been exploited for water supply and sanitation.

PRIVATE SUPPLIES OFFER ECONOMIES IN BANGKOK

In the Thai capital, Bangkok, a common form of private supply consists of a small pumped well and piped distribution system serving a housing development. The system is installed by the developer and the capital cost is included in the selling price of the lots. The owners pay monthly for operating costs, which are on average about one fifth of the Metropolitan Water Authority tariff.

Potential external sources of private capital are of two types - private bank loans and private direct investments through either Build-Operate-Transfer (BOT) contracts or joint ventures. BOT arrangements are mainly for new infrastructure projects. They are implemented under private sector ownership and financing and involve establishing a new private sector company that owns, finances, and operates a project for a defined period (generally from fifteen to twenty years). The company's

shares are transferred to the host government authority at the end of the agreed operating term

Examples of BOT arrangements in the water sector include a large project covering 174 rural water supply systems in Malaysia and a water supply project for Surabaya, the second largest city in Indonesia. In general, however, BOT has made slow progress in the water supply and sanitation sector in developing countries for two reasons. first, BOT schemes work on the basis of full cost recovery plus profits, which means that they typically charge tariffs considerably higher than customers are used to paying under highly subsidized schemes; and secondly, they are vulnerable to risk and uncertainty over the extent to which their market will be protected from subsidized competition and political interference These problems often lead to lengthy negotiations between BOT consortia and host governments over government guarantees, 'take-or-pay' contracts and tariff setting regulations

Other forms of BOT are also emerging, including BOOT (Build, Own, Operate and Transfer) and DBOM (Design, Build, Operate and Maintain). Many of the initial problems and uncertainties are expected to be sorted out and this method of private flow of funds may be of great importance in the near future in the water supply and sanitation sector

Private management of public assets

The 'French concession model' has been successful in inducing private sector participation in the water supply and sanitation sector. Under such an arrangement, a private or a mixed enterprise assumes the responsibility for operating, maintaining and investing in fixed sector assets, which nevertheless remain the property of the public sector and must be returned to the appropriate public authorities in good condition at the end of the contract period - usually twenty-five or thirty years During this period the concessionaire assumes all commercial risks and most of the financial risks This model has been adopted in Buenos Aires, Argentina, and Caracas, Venezuela, while variations have also been in operation in Abidjan, Côte d'Ivoire, Gdansk, Poland, and Macão

International private sector finance

There are several methods for attracting private financial flows, such as bank lending, bond lending, and portfolio investment, but they are mostly used in the industrial sector where the return on investment is measured in money terms. Other, newer, forms of international financing are transnational venue capital and foreign direct investment. The water supply and sanitation sector could usefully experiment with these newer methods and also make every effort to join and take advantage of the 'credit enhancement' and 'co-financing schemes' of the World Bank and the Asian, African and Inter-American Development Banks, just like other directly productive sectors such as industry, agriculture, power and transport.

Debt swaps

International agencies have shown increasing interest in Debt-Conversion Programmes as a means of channelling funds to certain causes Several such techniques have been tried, such as debt-for-nature and debt-for-development swaps. UNICEF used such funds in 1988-89 for health care, water supply and tree planting processes in Central Sudan.

Debt swaps are not yet considered to be of great value to the water supply and sanitation sector, but with the growing trend towards commercialization, the sector may have to take more interest in these new concepts of international private capital

5. WATER AND THE WORLD:

promoting international support

Photo IRC

International and bilateral support agencies and regional organizations have a vital role to play in helping concerned political leaders to take action at the national level. International agreements and resolutions endorsed by national governments can provide support to ministers responsible for environment, water resources and health in making key decisions and in competing with other sectors for national resources.

The first four chapters of the Noordwijk Action Programme include a number of measures designed to stimulate action by the international community in support of country programmes. Chapter 5, Water and the World, lists further actions to be taken by the international community and makes recommendations concerning international programmes and conferences and the strengthening of global collaborative mechanisms These various actions are summarized below.

SUPPORT FOR ACTIONS AT COUNTRY LEVEL

The international community as a whole is called upon to

- support country-level collaboration as an essential tool for preparing successful sector strategies and social mobilization initiatives
- give special consideration to helping those countries whose national strategies incorporate the views of stakeholders and take account of local ecosystems and socio-economic structures
- focus on needy areas, giving special attention to Africa

There is also a call for the development of programmes, at both national and international levels, which will:

- present priorities for the sector
- advocate for the sector at all levels
- support sustainable water resources development and environmental sanitation in small island states.

In order to prevent a water crisis, there is an urgent need to mobilize adequate financial resources and develop appropriate programme delivery and loan mechanisms. The role and importance of international organizations and bilateral cooperation in supporting capacity building programmes in developing countries is emphasized, as is the need to promote and support national actions aimed at changing behaviour patterns and the roles of communities, government and other stakeholders.

> ...the exchange of experience on management and technologies in the framework of international cooperation is of vital importance.
>
> Dr. Janos Gyurk , Minister of Environment and Regional Policy, Hungary.

THE ROLE OF EXTERNAL SUPPORT AGENCIES

The contradictory policies of external support agencies (ESAs) can often be a major complicating factor at the national level Countries seeking the support of ESAs should develop guidelines to enable them to provide more coordinated support. A comprehensive policy framework which articulates the sector strategy is an essential prerequisite for developing such guidelines Regional organizations should play a leading role in ensuring that guidelines prepared by different countries are not contradictory For their part, ESAs should be willing to adapt their

approaches to accommodate the new role of central government - for example, by agreeing to contribute a proportion of project budgets to supporting the cost of providing guidance and regulation from the centre. External support agencies should also recognize that their policies can sometimes be seen as restrictive and over-demanding by countries which are endeavouring to develop their own capacities Donor assistance, like water supply, should be 'demand-driven'.

The Action Programme specifically calls on ESAs to

- provide support to public education and capacity building programmes
- implement transparent and accountable decision-making mechanisms within their own institutions
- promote public participation in all levels of project design, implementation and management
- give priority to projects which take account of economic and appropriate technology considerations
- assess the degree to which their programmes facilitate the integrated management of water resources and the strengthening of national institutions
- encourage the Water Supply and Sanitation Collaborative Council to study ways of strengthening and expanding its activities.

REGIONAL COLLABORATION

Countries with limited resources and similar conditions can benefit enormously from collaborating with each other through regional institutions in developing

- comprehensive national policy frameworks
- guidelines for ESAs
- training exchanges
- private sector collaboration.

Small groups of countries working together on common problems can be effective in advancing thinking in particular areas By sharing experience through demonstration projects, intercountry workshops and seminars, and the exchange of experts, countries can both extend their own capacity for research and development and contribute to the international knowledge pool

The least developed countries do not have frequent opportunities for regional collaboration. Care should therefore be taken to make the

most of such opportunities and the benefits they bring. To achieve this, collaboration should be focused, task-oriented *and specific to the region.* Examples include working tours and staff exchanges among projects which are introducing community management into water supply and sanitation as a means of increasing sustainability Regional collaborative activities must not be dominated by donors, whose interests are not always exactly the same as those of recipients Regional collaboration can help to strengthen the hand of member countries in negotiations with ESAs

It is preferable to work through regional associations such as the Association of Southeast Asian Nations (ASEAN), the Organization of American States (OAS), and similar bodies. However, such institutions for regional collaboration among developing countries may themselves need external support Non-governmental organizations should be included in regional collaborative activities in recognition of their capacity and expertise in implementing community-based projects

Several of the Action Programme's proposals relate to the need to improve and strengthen regional collaboration, especially among countries with comparable problems such as transboundary water resources, or comparable situations, such as small island states Collaboration is also needed to support the transfer of technologies for reducing water losses, for water-saving and for re-use and recycling It provides a means of exchanging experience on institutional reform, and of enhancing the capacity of non-governmental organizations to plan, manage and implement water and sanitation programmes. There is a call for the renewal of the collaborative mechanisms which support regional initiatives such as ASEAN. Finally, the role and interest of United Nations Regional Commissions in the field of water and environmental sanitation is acknowledged.

INTERNATIONAL MECHANISMS

International forums can help to mobilize resources, especially for regions with the least coverage and greatest poverty They are able to bring together a wide range of expertise to identify the key issues and critical bottlenecks in development and find joint means of resolving them They can help to transform conference resolutions, such as Agenda 21, into positive action and concrete achievements. Greater cooperation and more effective exchange of information between donors and recipient governments is a strong unifying force for concerted action

The Action Programme's general proposals for international action call for future international conferences to address water resources development and management issues - in particular, those related to water supply and environmental sanitation and the health dimensions of water quality. It is proposed that the United Nations Commission on Sustainable Development, at its 1997 review, should assess progress in implementing the recommendations of Agenda 21 concerning drinking water and environmental sanitation It is also recommended that international professional associations should help stimulate the establishment and development of national professional associations

Mechanisms for international collaboration should ensure that all key constituencies, including national governments of developing countries, multinational and bilateral ESAs, international NGOs, professional associations, resource centres and the private sector, are adequately represented. They should focus on broad issues of general interest and relevance at all levels of development and to all regions of the world, so as to ensure that consensus is evolved. International collaboration must maintain a proper balance between political and substantively-oriented action. Wherever possible, international collaborative activities should be funded collectively, to promote a sense of ownership and participation among all concerned

Typical mechanisms for international collaboration include special commissions or working groups focusing on specific tasks of international concern; donor consultations designed to promote donor-government collaboration through regular meetings, such as are held in most countries; international conferences and seminars which focus on common interests and often initiate actions to resolve outstanding problems and constraints.

Building on the experience gained through such mechanisms, the water supply and sanitation sector has, in fact, led the way in development circles in establishing a unique and well-respected collaborative mechanism for sector professionals at the international level. The Water Supply and Sanitation Collaborative Council (WSSCC) is an innovative mechanism which derives its mandate from a United Nations Resolution in 1991 (though it is not a UN body) It is neutral and devoid of bureaucracy, is able to involve and engage all agencies concerned with the sector (North and South, governmental and non-governmental, multi- and bilateral, research, information, professional and training, and public and private sector), to carry forward the momentum of the Decade and provide members with the means to develop and promote new and progressive concepts.

At its first Global Forum in Oslo, Norway, in 1991, the Council established Working Groups to deal with seven key issues: country-level collaboration; urbanization; operation and maintenance; applied research, information management; information, education and communication, and gender issues. The Working Groups are voluntary units comprising professionals from ESAs and developing countries The Groups reported to the second Global Forum in Rabat, Morocco, in September 1993, and the Council is now implementing a Rabat Action Programme to put into use the tools produced by the Groups (guidelines, manuals and strategies)

The Collaborative Council provides a unique springboard for developing effective collaborative mechanisms at all levels in the water and sanitation sector This and other international collaboration initiatives are important in bringing about continuous advocacy for the sector at the international or global level, to project the nature and magnitude of the urgent needs and unfinished tasks and place them high on the political agenda of international agencies, forums and governments.

The Action Programme includes a number of recommendations for specific actions to be taken at the international level

Several of these relate to water resources: the United Nations system is urged to continue to undertake a scientific global water resource assessment, including projections of water needs and availability, while the need to strengthen existing mechanisms for coordinating United Nations activities in the field of water resources is recognized. The need to agree on indicators for the state of water resources in relation to their functions and uses is also noted

> ...it is necessary for us to exchange experiences, in order to help each other.
>
> Mr. Jorge E. Lorini Saenz, Minister for Urban Health, Bolivia.

Other proposals are concerned with improving the exchange of information and experience, and technology transfer, at both regional and international levels. They include:

- developing programmes on the exchange of information and experience in respect of training, education, research, technology and the modalities of project design and implementation
- promoting information exchange and networking among sector professionals, professional associations and non-governmental organizations (including twinning arrangements)
- a request that the United Nations Commission on Sustainable Development consider how existing institutions can provide regional clearing-houses for the exchange of data and information

Three proposals refer specifically to finance They call for.

- consideration to be given to debt swap as a mechanism to generate funds
- discussion on the '20/20 approach', by which the allocation to social development, including drinking water and sanitation, of 20 percent of official development assistance, is to be matched by 20 percent of domestic budgetary resources devoted to the same area
- a request that the United Nations Commission on Sustainable Development consider how to strengthen the role of development cooperation and other support funds for drinking water and environmental sanitation.

CONCLUSION

The Ministers who met in Noordwijk approved a Political Statement which re-emphasized the urgency of the impending water crisis in the following words:

"Explosive growth of urban centres, unsustainable exploitation of natural resources, uncontrolled industrialization, increasing water demand for food production, and expanding populations lacking proper environmental sanitation have led to progressive depletion and degradation of freshwater resources Many current patterns of water use are not sustainable. Rising costs of developing ever-more-distant freshwater resources threaten economic development, while both the visible and the less visible effects of reckless waste disposal and inadequate environmental sanitation spread squalor, disease and death. Water scarcity, and the tensions which it engenders, especially in competing claims to transboundary water resources, are a potential threat to peace

The rapid deterioration of water quality and the reduced availability of fresh water is directly affected by natural processes and human activities. To safeguard the sustainable supply of safe drinking water and entire watersheds, concerted action is needed on all fronts, including agriculture, forestry, transport, industry, urban and spatial planning , population planning and electricity generation. Although cities are increasingly recognized as places of social progress and economic growth, millions of urban residents lack access to safe water and adequate sanitation. There is an acute need to extend sustainable water and sanitation coverage to the urban poor many countries also have large rural populations and efforts to extend service to the rural poor should be continued".

In asserting that 'the crisis can and must be resolved', the Ministers reaffirmed that

"The long-term objective continues to be 'safe drinking water supply and sanitation for all'. Access to adequate water and sanitation is a basic need which has to be met. It needs to be accompanied by an obligation to use water efficiently and to dispose of wastes in an environmentally sound manner for the benefit of future generations. This is a precondition for sustainable progress towards the common targets of health for all, poverty alleviation, environmental conservation and economic and human development. To achieve these goals, water and environmental sanitation programmes need to be tailored to the ability of the local environmental to support them, to local socio-economic and cultural conditions and needs, and to the availability of resources. Differences in the needs, work and influence of, and benefits for, men and women need to be taken into account".

In endorsing the Action Programme based on the principles set out in the Political Statement, the Ministers recognized that capacity-building is the key and that governments must take steps to

- generate awareness of the imminent water crisis
- set realistic targets for achieving the goal of safe water and adequate sanitation for all, and establish target dates for the execution of the Action Programme
- establish more efficient and effective systems for drinking water and environmental sanitation
- mobilize available resources from users and the private and public sectors, and through the 'polluter pays' approach, within a framework of self-sustaining systems of finance for water supply and sanitation services
- enhance the mobilization of international financial resources and the transfer of technology to complement and support domestic resources

They also recognized the need to give special attention to:

- integrated water management
- creating partnerships among all stakeholders
- modifying behaviour patterns in respect of clean water and hygiene, and changing the role of governments
- managing water resources as a social and economic good
- searching for innovations to protect water resources and bridge the gap between the available physical, human and financial resources and the growing demand for water and sanitation brought about especially by urbanization and industrialization in the developing world.

It is thus clear that the key to improving effectiveness in the water and sanitation sector lies with the politicians. *While most of the proposed* actions are not new, knowledge of them has often been limited to sector professionals who have generally been unable to put them into effect. Politicians can release and guide available energy to apply known solutions to achieve the goals set at Rio; but to do this, new attitudes and new approaches are needed - there must, indeed, be no more business as usual!

Ministerial Conference On Drinking Water And Environmental Sanitation - implementing UNCED Agenda 21

22 and 23 March 1994, Noordwijk, the Netherlands

POLITICAL STATEMENT

We, the Ministers, meeting at Noordwijk, the Netherlands, on 22 and 23 March 1994, for the Ministerial Conference on Drinking Water and Environmental Sanitation, having reviewed and discussed the issue, on the basis of the documentation for the Conference as listed in Annex 2,

1 REAFFIRM THAT

Our task is to find ways to help our governments to implement Chapter 18 of Agenda 21

1.1 In that context, we stress the need for integrated water resources management. Chapter 18 calls for

- holistic management of freshwater as a finite and vulnerable resource and integration of sectoral water plans and programmes within the framework of national economic and social policy, and
- perception of water as an integral part of the ecosystem, a natural resource and a social and economic good, whose quantity and quality determine the nature of its utilization

1.2 In the particular context of drinking water and environmental sanitation, we draw attention to Chapter 18's affirmation of the need, identified at the Global Consultation in New Delhi in 1990, to provide, on a sustainable basis, access to safe water in sufficient quantities and proper sanitation, emphasizing the approach of "some for all rather than more for some" Chapter 18 commits governments to New Delhi's four "Guiding Principles"

- protection of the environment and safeguarding of health through the integrated management of water resources and liquid and solid wastes,
- institutional reforms promoting an integrated approach and including changes in procedures, attitudes and behaviour, and the full participation of women at all levels in sector institutions,
- community management of services, backed by measures to strengthen local institutions in implementing and sustaining water and sanitation programmes, and
- sound financial practices, achieved through better management of existing assets and widespread use of appropriate technologies

1.3 As mechanisms to implement programmes based on these principles, Chapter 18 stresses the need to·

- build capacities, at all administrative levels, involving institutional development, co-ordination, human resources, community participation, health and hygiene education and literacy, which is one of the underlying keys in implementing strategies,
- identify means of financing the substantial costs involved;
- adopt technologies that are responsive to the needs, and constraints imposed by conditions of, the community concerned

2 RECOGNIZE THAT

Many countries face a water crisis.

2.1 Explosive growth of urban centres, unsustainable exploitation of natural resources, uncontrolled industrialization, increasing water demand for food production, and expanding populations lacking proper environmental sanitation have led to progressive depletion and degradation of freshwater resources Many current patterns of water use are not sustainable. Rising costs of developing ever-more-distant freshwater resources threaten economic development, while both the visible and the less visible effects of reckless waste disposal and inadequate environmental sanitation spread squalor, disease and death Water scarcity, and the tensions which it engenders, especially in competing claims to transboundary resources, are a potential threat to peace

2.2 The rapid deterioration of water quality and the reduced availability of fresh water is directly affected by natural processes and human activities To safeguard the sustainable supply of safe drinking water and entire watersheds, concerted action is needed on all fronts, including agriculture, forestry, transport, industry, urban and spatial planning, population planning and electricity generation Although cities are increasingly recognized as places of social progress and economic growth, millions of urban residents lack access to safe water and adequate sanitation There is an acute need to extend sustainable water and sanitation coverage to the urban poor Many countries also have large rural populations and efforts to extend service to the rural poor should be continued

To satisfy, at least basic needs for water and sanitation, the crisis can and must be resolved.

2.3 The commitments made by Governments in Chapter 18 of Agenda 21 offer new hope to the many millions of their citizens who suffer intolerable levels of disease, squalor and indignity because they lack access to a safe supply of drinking water and adequate means of sanitation The average global death toll of six thousand children every day due to lack of safe water and environmental sanitation is a tragic reminder of the urgent need to turn the Rio and World Summit for Children commitments of Heads of States into positive and concerted action

2.4 The long-term objective continues to be 'safe drinking water supply and sanitation for all' Access to adequate water and sanitation is a basic need which has to be met It needs to be accompanied by an obligation to use water efficiently and to dispose of wastes in an environmentally sound manner for the benefit of future generations This is a precondition for substantial progress towards the common targets of health for all, poverty alleviation, environmental conservation and economic and human development To achieve these goals, water and environmental sanitation programmes need to be tailored to the ability of the local environment to support them, to local socio-economic and cultural conditions and needs, and to the availability of resources Differences in the needs, work and influence of, and benefits for, men and women need to be taken into account

Change is needed; business as usual is not enough.

2.5 The International Drinking Water Supply and Sanitation Decade (1981-1990) resulted in a proportional increase in coverage, but made only a marginal impact in reducing the total number of unserved people The main reasons have been identified as: population growth, lack of political support, inadequate community involvement, limited mobilization of resources for infrastructure projects particularly in urban areas, poor operation and maintenance of installed systems, and, in a number of cases, inadequate attention to small-scale, low-cost approaches where these would have been more appropriate than large infrastructure projects In many countries, sanitation, communication and hygiene education, necessary to achieve the behavioural changes needed to obtain optimum benefits from improved water supplies, remained low priorities The Decade taught all those involved that water and environmental sanitation programmes need to be based on partnerships involving all stakeholders (users - especially women, community associations, local, regional and central government, public and private sector agencies, non-governmental organizations) Government's role is to establish the regulatory and support framework This includes the determination and enforcement of drinking water and effluent standards, and the support needed, at appropriate levels, to enable local partnerships to deliver local services in accordance with the expressed needs and willingness to pay of all users, and facilitate a balanced distribution of contributions, influence and benefits A key role of domestic financial institutions and external support agencies is to support strategies to assist the underprivileged These strategies should be cost-effective, based on the real needs of communities, and designed to protect critical aquatic ecosystems and water source catchment areas

We need to use our resources - people, water and finance - more efficiently.

2.6 Lessons learned from the International Drinking Water Supply and Sanitation Decade (1981-1990) give cause for confidence that, on the basis of the Rio commitments, the right changes can be made, sufficient resources can be mobilized and action programmes can be initiated to bring more effective, appropriate and sustainable progress towards national goals of water and sanitation for all Bridging the gap between needs and available funds means change Six changes will go far towards reaching these targets.

- directing investments towards affordable and environmentally sound approaches to serve the unserved,
- increased efficiency in the use of available funds and mobilizing additional funds from existing and new sources including government and external support agencies, the private sector and consumers,
- mobilizing local communities for self-help;
- pricing water and sanitation services realistically for all users, according to capacity to pay;
- cutting down on the high levels of water wasted in many cities and in agricultural and industrial use, and
- promoting water conservation through recycling and reuse of water, recognising that treated wastewater is a potentially valuable water resource, and combating industrial pollution

It is also essential that international bodies and governments attach higher priorities to research and development activities directed towards achieving breakthroughs in finding more appropriate water and environmental sanitation technologies

2.7 Ineffective delivery of water and sanitation services to households and the urgent water scarcity and contamination problems around the world demand an immediate response. Though water supply and sanitation problems vary in their exact nature and manifest themselves primarily at the local and regional levels, they are issues of global concern Hence, a concerted and coordinated international response is needed to make the most effective use of water and financial resources.

3 ACCORDINGLY, TRANSLATING THESE VIEWS INTO ACTION IN OUR OWN COUNTRIES, OR THROUGH INTERNATIONAL COOPERATION, WE:

3 1 re-emphasise the commitment to implementation of Chapter 18 of Agenda 21, and the crucial role that improved water supply and sanitation programmes will play in health improvement, the protection of freshwater resources and the achievement of sustainable development, urge that water resources management in general, and drinking water and environmental sanitation and education aimed at achieving behavioural change in particular, be given the financial support needed, as vital components in achieving the mutual and multiple benefits of reducing disease, preserving the environment, and stimulating economic and human development, address the issue that although international funding resources in support of feasible water and environmental sanitation projects have increased, there are still factors impeding the flow of resources to the developing countries, and these issues need to be addressed, along with others, in the framework of general discussions on international cooperation,

3 2 encourage the development and implementation of strategies for drinking water and environmental sanitation, at all appropriate levels, including the international level, develop these sector strategies in the context of broader strategies for sustainable water resources management and environmental protection and ensure that they are coordinated at national and local level with activities in health, education, agriculture, forestry, industry, energy, urban and rural development, and other relevant sectors, to safeguard the quality and quantity of water resources worldwide,

3 3 stress that behavioural change, development of the knowledge base, education of experts, partnership of stakeholders, full commitment of all partners, and capacity building, are essential for success, seek to accelerate moves to develop enabling, supporting and regulatory frameworks which facilitate the maximum involvement of local agencies and individuals in programmes to improve the living environment, seek enhanced priority for institutional strengthening and human resource development programmes which will create organizational and management capacity for local delivery and upkeep of water and environmental sanitation services,

3 4 advocate the application of sound economic principles to the allocation and pricing of water, based on the principle that water is a social and economic good, while recognizing that it is a basic human need, seek to make more effective use of available water and financial resources by directing these resources towards projects that best meet the objectives of sustainable development i.e which are technologically appropriate, economically feasible, environmentally sound and socially acceptable, enable water providers to set equitable tariffs for agricultural, industrial and domestic water, to encourage conservation and efficient use, seek ways in which local communities can be given improved access to financial resources and encouraged to undertake community management of water and environmental sanitation services, *encourage potential private sector involvement in financing,* constructing, operating and maintaining water and sanitation services, encourage external support agencies, including multilateral and regional development banks, to adopt water and environmental sanitation sector investment guidelines which are consistent with the policy guidance of Chapter 18 of Agenda 21,

3 5 to avoid costly future remedial actions, adopt programmes for waste reduction and pollution prevention at source and for protection of catchment areas to safeguard water supply sources, water quality, aquatic ecosystems, and fisheries and for reducing wastage of water to conserve future resources, implement tariff structures which reduce wastage, increase cost recovery, and prevent pollution, such as progressive block rate fees, sewage and wastewater treatment fees, and fines for non-compliance, supply water to meet new demands by environmentally sound methods, including water conservation, demand management and reuse, particularly in the irrigation sector.

4 WE, THE MINISTERS, THEREFORE

4.1 ENDORSE FOR RAPID EXECUTION THE ATTACHED ACTION PROGRAMME as a further step towards sustainable development of drinking water and environmental sanitation services.

This programme learns from the experience of the International Drinking Water and Sanitation Decade and puts into practice Chapter 18 of Agenda 21. The main lessons are that capacity-building is the key and that we must:

a. generate public and political awareness of the importance of the imminent water crisis,
b. set realistic targets on the route to the overall goal of safe water and adequate sanitation for all, have relevant target dates set by governments to execute the Action Programme,
c. establish more efficient and effective systems for drinking water and environmental sanitation in all our countries,
d. mobilize the available resources within each country, from users and the private and public sectors and through the "polluter pays" approach, within self-sustaining systems of finance for water supply and sanitation services;
e enhance the mobilization of international financial resources and the transfer of technology to complement and support domestic resources

The programme also incorporates the new approaches brought about by Agenda 21 We must give special attention to

a. the integrated management of water, taking into account all the implications that water has for health, for the environment, for social and economic policy and for spatial planning;
b. creating partnerships among all stakeholders, which reflect the different needs of men, women and youth and involve all sections of society in resolving the problems that affect them,
c. modifying patterns of behaviour towards clean water and hygiene, and

changing the role of governments, to make the best use of available resources, to enable the integrated management of water at the lowest appropriate level and to move to a system of demand-driven management;

d putting into practice the management of water resources as a social and economic good,

e searching for innovations, technological and non-technological, to protect our finite and vulnerable water resources and to bridge the gap between the physical, human and financial resources and the escalating demand for water and need for sanitation brought about especially by urbanization and industrialization in the developing world.

IN ADDITION WE

4 2 Note that a meeting of experts on water and health in underprivileged urban areas held in Sophia-Antipolis, France, from 21 to 23 February 1994, has adopted recommendations to be submitted by the participants to the Commission on Sustainable Development at its 2nd session in May, 1994

4 3 Transmit, in view of the special problems of the small island states this Statement and Action Programme for consideration at the United Nations Conference on the Sustainable Development of Small Island Developing States to be held in Barbados from 24 April to 6 May 1994

4 4 Recommend that, in order to prevent a water crisis, there is an urgent need to mobilize, within the framework established by Chapter 33 of Agenda 21, adequate financial resources, through using all available sources and mechanisms and maximizing the availability and smooth flow of additional resources to execute this Action Programme.

4 5 Recommend in view of the need to coordinate, concentrate and consolidate the many international activities relevant to drinking water and environmental sanitation, within the context of integrated water resources management.

a. consideration of steps to enhance this process, particularly by the Commission on Sustainable Development,

b the strengthening of existing institutions and organizations which are contributing to this goal, in accordance with the Action Programme

4 6 Recommend that this Action Programme be considered for adoption by the Commission on Sustainable Development at its 2nd session in May 1994

ACTION PROGRAMME

I WATER AND PEOPLE - bringing about partnership and behavioural change

As Agenda 21 states, for sustainable development, collaboration is necessary among all partners The approach to collaboration has to start with an understanding of the real needs of users Better collaboration will help to improve performance, to resolve conflict and to foster integration

To enable and support this partnership approach, water supply and sanitation decisions must be based on a dialogue about the attitudes and needs of people in rural and urban communities, and on what they can manage, maintain and pay for Behaviour at political and governmental level, as well as in the water supply and sanitation sectors, must change as required.

Accordingly, at the appropriate level, governments should

I generate public awareness and social mobilization towards drinking water and environmental sanitation by

a. stimulating mutual understanding by government, local authorities, utility operators, consumers, especially women, youth and other stakeholders of the water problems and the vulnerability of water resources and the aquatic environment,

b. raising awareness among all stakeholders of the fact that water resources are becoming increasingly scarce and that it is necessary to use them in a rational economical way, to instal or improve wastewater treatment systems to prevent pollution of water resources and to adopt appropriate sanitation habits which prevent microbiological pollution,

c ensuring a basic knowledge about the conservation and use of water, giving priority to health issues;

d enhancing realization that water is a social and economic good and has an economic value to which an appropriate pricing policy needs to be applied, including the use of economic instruments,

e. formulating and implementing participatory communication and education programmes aimed at bringing about changes in behaviour patterns, in planning, design, construction, operation and maintenance processes and revenue collection;

f providing training programmes according to regulated standards for all levels of personnel responsible for management of drinking water, sanitation and waste water treatment in all relevant authorities, reflecting new approaches and principles,

2. improve partnership and participation, therefore taking the following priority actions

a. encouraging the policy makers, owners, contractors and operators of water supply and environmental sanitation systems to involve local communities, user organizations, women and non-governmental

organizations in the planning of, and decision-making procedures about those systems, so as to make use of local knowledge, special skills and different viewpoints;

b developing the legal and institutional framework to support such participation and partnership,

c. developing plans to build up the capacity of all stakeholders, including the empowerment of communities, in particular the women, through proper training and education at community level, representation of users on Utility Boards, the establishment of Consumer Councils and the development of consultation mechanisms with stakeholders;

d providing access to information on projects, programmes and policies, recognizing the rights and responsibilities of citizens and communities, and providing accountable, transparent decision-making processes and water quality standards with opportunities for appeal and independent review;

3 at the regional and international level

a develop programmes on the exchange of information and experience, especially on training, education, research, technology and modalities of project design and implementation,

b seek to ensure that external support agencies support public education and capacity building programmes, implement transparent and accountable decision-making mechanisms within their institutions, and promote public participation in all levels of project design, implementation and management;

c. develop programmes, both at national and international levels, presenting priorities for the water and environmental sanitation sector and develop coordinated action programmes to advocate for the sector at all levels - political, public, technical, and financial;

d strengthen regional collaboration, especially among countries with comparable problems such as transboundary water resources, or a comparable situation such as that of the small island states,

e develop concerted programmes at national and international levels in support of sustainable water resources development and environmental sanitation in small island states

2 WATER, HEALTH AND THE ENVIRONMENT - integrating water policy

As Agenda 21 states, the planning and implementation of drinking water and environmental sanitation programmes should be carried out in the context of an holistic water resources development framework, taking an ecosystem approach to water resources development and management, including the health dimension

Accordingly, at the appropriate level, governments should.

1 undertake a water resources assessment in order to produce an inventory of the current situation and to identify problems and constraints in providing water supply and environmental sanitation services,

2. develop, review or revise, in the context of a national sustainable development strategy consistent with Agenda 21, *measures for water* resource management, environmental protection, including drinking water and environmental sanitation, aimed at:

a a recognition that access to adequate water and environmental sanitation services is a basic human need,

b the need for conservation and protection of the quantity and quality of water resources, taking into account water quantity and quality requirements for the functioning of ecosystems

c. an obligation to use water efficiently, taking into account the re-use and recycling of effluents, and disposal of waste in a manner which conserves the environment for the benefit of future generations,

d a framework for a rational allocation of water among competing uses, including drinking water, industry, agriculture and hydro-power;

e. bringing national water consumption into line with the available resources,

f. supportive policies and policy instruments to support the best possible water use and sustainable management of freshwater resources,

g. recognition of health-related objectives in water supply and sanitation planning

3 develop, review or revise by 1997 and implement, in the context of a national sustainable development strategy consistent with Agenda 21, measures for drinking water and environmental sanitation, taking into account the goals set by the World Summit for Children, with a view to achieving rational and effective provision and use of drinking water and environmental sanitation, these measures should include

a strategies to serve the poor and unserved,

b investment strategies, including strategies to serve the poor according to their special needs in rural and peri-urban areas,

c. a planning strategy based on an understanding of effective demand and integration of water supply and sewage plans and programmes,

d a planning strategy for more effective hygiene education,

e establishing realistic quality standards and criteria for drinking water, for sewage effluent and for recycled water;

f the protection and enhancement of human health through giving priority to populations at greatest risks

4. involve in the implementation of strategies all stakeholders, such as consumers, non-governmental organizations, scientists, women's organizations, local entrepreneurs, professionals and professional associations,

5 establish, where it does not yet exist, a nation-wide drinking water and environmental sanitation monitoring system to monitor the efforts on this action programme as well as other major objectives, making full use of available open-ended monitoring and information support systems being developed by the existing WHO/UNICEF Water Supply and Sanitation Monitoring Programmes,

6. establish pricing policies aimed at promoting the efficient use of water, according to the following criteria
a. affordability at all levels, taking into account health impact considerations;
b resource conservation through demand management,
c. utilization of the polluter pays principle,

7. reduce the proportion of water put into the distribution system that is lost and does not serve an end-use, and assess institutional, management, organizational and operational aspects of water agencies to identify the factors affecting the existing levels of unaccounted-for water;

8 promote the design and use of water-saving and re-use technologies in order to decrease the consumptive uses of water by industries, agriculture and households,

9 preserve the natural quality of both surface and groundwater, if feasible by a water basin approach, including:

a. maintaining effective watershed management and establishing water protection and sanitary zones adjacent to the sources of drinking water supply with regulations governing special natural resources use and conservation practices to minimize the input of problem substances and other impacts from industry, agriculture and households,
b preventing nutrient input into groundwater and other water bodies by using the land in accordance with sustainable agricultural practice,
c. applying pesticides properly and in accordance with provisions of legislation, continuously looking for the least harmful pesticides and eliminating those proven to be harmful to surface and ground water; promoting and implementing sustainable agricultural techniques,
d. establishing waste water treatment plants and the use of recycled water within an environmentally sound system, their planning to be accompanied, where appropriate, by environmental impact assessment;

10 promote the appropriate development and use of non-conventional sources of water supply, such as the safe re-use of effluents, rainwater harvesting, desalination of sea water and brackish groundwater and conservation of traditional sources,

11 strengthen health-data collection and analysis to assist in prioritizing and targeting water and sanitation,

12 promote, where they do not exist, the adoption of appropriate country-specific standards or guidelines on drinking water quality, taking into account the World Health Organization's drinking water guidelines.

At the regional and international level

1 enhance cooperation in river basin management, transboundary water-resources development and pollution control,

2 promote the transfer of technology, in particular on a regional basis, in the field of loss-reduction strategies, water-saving and re-use technologies,

3. agree on indicators for the state of water resources in relation to their functions and uses

3 WATER AND INSTITUTIONS - organizing service provision

As Agenda 21 states, capacity building is a fundamental activity to create competent institutions, to provide adequate numbers of qualified staff, to equip all the stakeholders and to enable communities to become full partners in the development of the sector.

Accordingly, at the appropriate level governments should

1. change the emphasis of the role of governments, as appropriate, as related to water and environmental sanitation services to an enabler and a regulator of other stakeholders by:
a taking responsibility for organizing monitoring, establishing nation-wide information systems, preparing national drinking water assessments and setting policies and sector guidance,
b strengthening the role of the government in developing legal frameworks and as a regulator, ensuring effective enforcement of water laws and regulations;
c. taking the responsibility for adequate performance monitoring of activities of all service providers and other stakeholders as appropriate,
d considering the possibilities of private sector participation (particularly in the operational parts) of water supply and sanitation, with the proviso that, among others, quality, effectiveness, availability at fair prices and the recognition of social concerns are safeguarded by appropriate regulations to protect the users;

2. establish coordinating mechanisms, at the appropriate level, to enhance cross-sectoral collaboration, establish uniform policy, improve planning and foster the sharing of sector relevant information,

3 increase investments in capacity building programmes necessary to create organizational and management capacity at all levels, including institutional strengthening and human resources development with specific attention to gender;

4 identify, support and provide necessary incentives for institutions to become more people-oriented. ownership, decision-making and responsibility for planning and implementation should be brought to the lowest appropriate level nearest to the user;

5. create utilities for water supply and environmental sanitation that can operate autonomously, in particular with respect to financial management, overall management and research, ensuring the sustainability and effectiveness of the services which can progressively attain cost recovery,

6 improve the overall and financial performance of utilities which are more accountable and more transparent to the public, including providing access to information and quality data, and allow for appeal procedures by the public in connection with their decisions,

7. develop or strengthen incentives to ensure the availability of skilled personnel needed for the planning, management and operation of water supply and environmental sanitation systems to:

a. encourage professional and technical education and training;

b establish career planning and appropriate salary levels to retain technical and professional staff,

c. ensure the publication of the technical material needed to support professional expertise, the efficient management of utilities and the participation of non-governmental organizations,

d enhance, based on a proper gender analysis, the role of women in planning, management and operation and increase the active involvement of women in decision-making about water and environmental sanitation issues at the micro and macro level,

8 encourage the establishment of multidisciplinary professional associations as major aids to networking, particularly to participate in formulating national standards and to organize the dissemination of know-how on a national basis and to join the international professional associations and profit from their support,

9 stimulate by 1998 the development of key indicators, other than coverage, such as indicators relating to health, environmental impact and behaviour of users,

10 establish or strengthen domestic resource centres, including domestic institutions for information collection and dissemination, applied research and technical support for monitoring;

11. strengthen the appropriate health institutions which, in coordination with water and sanitation authorities, implement hygiene education and support community involvement.

At the regional and international level.

1. promote information exchange and networking among sector professionals, professional associations and non-governmental organizations, including twinning arrangements,

2 promote effective collaboration with neighbouring countries in the management of transboundary water resources,

3 promote regional exchange of experience on institutional reform;

4 strengthen regional cooperation that enhances non-governmental organizations capacity and involvement in drinking water and environmental sanitation, in order to improve programme planning, management and implementation

4. WATER AND MOBILIZING FINANCIAL RESOURCES - building assets for the future

As Agenda 21 states, in order to enable drinking water supply and environmental sanitation facilities to operate on an economically sound basis, it is crucial to aim for the most efficient and effective use of the available funds, particularly in view of the increasing global demand for drinking water and environmental sanitation and the trend towards decreasing availability of external funds for the sector

Accordingly, at the appropriate level, governments should

1 ensure equitable and efficient financial management of water supply and environmental sanitation systems by.

a progressively devolving decision-making and management down to the lowest appropriate level having sufficient qualified staff,

b as soon as possible, organizing a tariff system in such a way (cross-subsidization), or setting prices at such a level, that water supply and environmental sanitation organizations can operate autonomously in financial terms without this impacting adversely on the basic supply to the most needy,

c. in the light of the potential impacts on the poor, enabling them to benefit from the changes envisaged,

2 develop detailed guidelines for investments in the drinking water and environmental sanitation sector in order to rationalize resource generation and use, aimed at, amongst other things.

a. ongoing provision of water and environmental sanitation for domestic use to all sectors of society,

b minimizing subsidies but taking into account special needs of the most needy to assure their access to safe water;

c. encouraging mutually beneficial investments, whereby money is saved, the position of the user is improved and the environment is protected,

d. targeting investment priorities at cost-effective, affordable and appropriate technology;

e phasing out inappropriate technology,

f rehabilitation and maintenance of existing water supply and environmental sanitation systems,

g. giving priority to more and sufficient investments in water supply and environmental sanitation, particularly in urban and peri-urban areas, including both physical facilities and education to promote better personal/family hygiene and the best use of water supply and environmental sanitation,

3 explore and develop new, innovative financing mechanisms, including private funding and harnessing of local resources to the maximum extent possible,

4 stimulate integrated approaches including income-improving activities for the peri- and semi-urban and rural poor, through mechanisms for access to credit, land distribution and security of land tenure, so as to reduce the need for subsidies,

5 encourage tariff systems, in different socio-economic settings, in different service demand settings and through different collection mechanisms, with a view to introducing cost recovery into water supply and environmental sanitation programmes and in particular with a view to charging the user for the costs of environmental sanitation (either by incorporating this factor into drinking water prices or in some other way),

6. study and promote more efficient use and re-use of water by means of economic incentives and including environmental costs into prices for drinking water and water used for other purposes,

7 study the possibilities of re-using treated waste water for agriculture or as a supplementary water resource;

8 accept temporary variations in the level of service provided in different areas so as to achieve the greatest possible coverage as early as possible, and then improve those levels to a uniform level as resources permit,

9 emphasize the importance of operational and maintenance considerations being incorporated into the design of projects.

At the international level it is urged that

1 the external support agencies, including the World Bank and regional banks, give priority, as appropriate, to projects aimed at more extensive coverage, both in drinking water supply and in environmental sanitation and to projects which tend to at least maintain the existing coverage, with economic and appropriate technology considerations,

2. consideration is given to debt swap as a mechanism to generate funds to the sectors;

3 discussion is encouraged on the 20/20 approach, as initially proposed by UNDP and UNICEF, by which 20 percent of official development assistance (ODA) and 20 percent of domestic budgetary resources are devoted to social development, including drinking water and sanitation

5 WATER AND THE WORLD - promoting international support

In order to facilitate the implementation of national activities, the international community is urged to

1. support country-level collaboration as an essential tool for the successful preparation of sector strategies and social mobilization initiatives,

2. give special consideration to assisting countries that have developed or are developing national strategies for water resources management that incorporate the views of stakeholders and fully consider the ecosystems and socio-economic structures,

3 focus on needy areas, recognizing that special attention should be given to Africa,

4. stress the role and importance of international organizations and bilateral cooperation in supporting capacity-building programmes in developing countries and request the Executive Board of UNDP to consider in the context of UNDP Capacity 21 Programme, a water and sanitation component,

5. request the UN Commission on Sustainable Development to consider how existing institutions can provide regional clearing-houses for the exchange of data and information and how to strengthen the role of development cooperation and other support funds for drinking water and environmental sanitation,

6 renew collaborative mechanisms towards support of increasing regional initiatives like SAARC, OAU, ASEAN, LAC, and promote joint collaboration in achieving goals,

7. promote and stimulate the role of, and the interest shown by, UN Regional Commissions in the field of water and environmental sanitation, without prejudging the outcome of the ongoing decentralization process under the responsibility of the Secretary-General,

8. promote and support national actions
- aimed at bringing about changes in behaviour patterns, and
- regarding roles of communities, government and other stakeholders

Furthermore it is recommended that

9 future international conferences, such as the World Summit for Social Development, the Conference on Population and Development, the Fourth World Women's Conference, HABITAT II and others address relevant water resources development and management issues, and in particular those related to water supply and environmental sanitation and the health dimension of water quality,

10 the UN Commission on Sustainable Development, at its 1997 review, should assess progress in the implementation of the recommendations of Agenda 21 concerning drinking water and environmental sanitation,

11 the UN system continues to undertake a scientific global water resource assessment including projections of water needs and availability;

12 recognizing the positive contribution of the Water Supply and Sanitation Collaborative Council as a global forum and a partnership among professionals from countries and from external support agencies, non-governmental organizations, professional associations and information, research and academic institutions, assistance is provided for strengthening the Council and enhancing its advocacy role,

13 in order to prevent a water crisis, there is an urgent need to mobilize, within the framework established by Chapter 33 of Agenda 21, adequate financial resources, through using all available sources and mechanisms and maximizing the availability and smooth flow of additional resources to execute this Action Programme,

14 the UN Commission on Sustainable Development, at its second session, considers the need to strengthen the existing mechanism for the coordination of activities of the UN system in the field of water resources with a view to help implementing the Action Programme adopted by this conference, taking into account the primary responsibility of the Secretary-General for interagency coordination, and that the Commission on Sustainable Development recommends ECOSOC to consider this issue at its coordination segment in 1995;

15. international professional associations such as IWSA and IAWQ stimulate the establishment and development of national professional associations,

International support agencies are invited to

16. assess the degree to which their programmes effectively facilitate:
a the integrated management of water resources,
b the strengthening of national institutions,

17. develop programme delivery and loan mechanisms which need to take into account the water supply and environmental sanitation crisis,

18. Encourage the Water Supply and Sanitation Council, in association with interested public bodies and non-government organization concerned, to undertake necessary studies toward strengthening its activities and when appropriate, to take necessary steps for expanding its activities or establishing itself as a more comprehensive world water forum or Council involving the various aspects of water sector, and also encourage the Council to submit its report to its members by April 1995 on any progress achieved on this issue

A CREATIVE CASCADE FOR THE CONFERENCE

The preparatory work for the Noordwijk Conference was carried out under the guidance of an International Steering Committee comprising some 48 members representing 29 countries and agencies UNICEF contributed to the process with its experience in the World Summit for Children.

The six background papers for the Conference were prepared through what became known as the 'cascade' process - a participatory process whereby some 120 expert resource persons and 35 resource institutions in both developing and industrialized countries were invited to contribute and comment on ideas and insights from the field. These ideas were grouped into six main themes, which formed the basis for the background papers.

During the process of preparation, the authors and editor of the background papers played a significant role in cross-review of their work at various stages. The principal review of the papers was carried out by the International Steering Committee, supplemented by internal and external reviewers. This process resulted in the production of the six background papers which form the basis for the three booklets which comprise Water and Sanitation for All. A world priority

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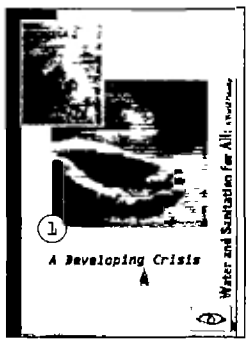
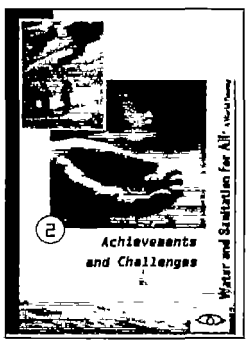
WATER AND SANITATION FOR ALL: A WORLD PRIORITY

This series is based on the six background papers prepared for the Ministerial Conference on Drinking Water and Environmental Sanitation held in Noordwijk, the Netherlands, in March 1994. The series comprises three illustrated booklets, as follows.



1. *A Developing Crisis*
This is based primarily on background paper no. 1, *Putting Agenda 21 to Work*, and seeks to bring home the urgency of the conference's call for action, the validity of the new approaches proposed, and the scale of the potential benefits if prompt and concerted action is taken



2. *Achievements and Challenges*
This is a revised version of background paper no. 2, of the same name It is a scene-setting paper which reviews progress achieved during the International Drinking Water Supply and Sanitation Decade, summarizes analyses of past successes and failures, and links these to the urgent needs recognised by the 1992 Earth Summit in Rio de Janeiro.

3. *No More Business as Usual*
This is based mainly on the remaining four background papers for the Ministerial Conference, namely: no. 3, *Effectiveness,* no. 4, *Finance,* no 5, *Collaboration;* and no. 6, *Synthesis*; with additional material from other key documents. The aim of this paper is to encourage governments to implement the changes which are needed to ensure that, in future, there will be 'no more business as usual' in dealing with the problems of the water and sanitation sector. It includes the full texts of the Political Statement and Action Programme approved by Ministerial Conference, a brief account of the 'cascade' process by which the original background papers were prepared, and a complete list of the names and addresses of the conference participants and resource persons.

Ministry of Housing,
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