

Water Cluster Implementation Strategy
United Nations System-wide Initiative on Africa (UNSI A)

UNSI A Water Cluster:

Priorities and Strategies for Water in Africa



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**UNSI A WATER CLUSTER:
PRIORITIES AND STRATEGIES
FOR WATER IN AFRICA**



UNITED NATIONS SYSTEM-WIDE INITIATIVE ON AFRICA (UNSI A)
WATER CLUSTER IMPLEMENTATION STRATEGY



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PREFACE

MOBILISING COMMITMENT FOR THE WATER CLUSTER OF THE UNITED NATIONS SYSTEM-WIDE SPECIAL INITIATIVE ON AFRICA (UNSI A)

This document lists the priorities, and the necessary strategies for their implementation, for the UNSIA Water Cluster. It is based on the outcomes of agency consultations at the Second World Water Forum, held in the Hague in March 2000, and the meeting of the UNSIA Water Cluster Technical Working Group (TWG), which met at UNEP in Nairobi, on May 4–5, 2000. The consultations among the agencies underscored the need for more vigorous efforts and concentrated approaches in implementing the Cluster's goals.

The TWG meeting recognised that many urgent water and water-related issues compete for attention within the framework of the UNSIA and within individual agency water programmes. In recognition of this, the TWG agreed to concentrate on three main priorities:

1. Improving water management wisdom, with a special focus on water-related assessments.
2. Strengthening governance of water resources by promoting equitable access to and sustainable use of water resources.
3. Meeting urgent water needs.
 - (a) Assuring household water security.
 - (b) Assuring water for food production.
 - (c) Managing water for African cities.

The strategy draws on the strengths of, and is inspired by, the African Water Vision, which calls for an Africa where there is equitable and sustainable use and management of water resources for poverty alleviation, socio-economic development, regional cooperation, and improving the environment.

The strategy advocates for activities with significant prospects for much broader United Nations System-wide collaboration. It calls for action in areas where the United Nations system can bring about greater impetus and provides scope for concerted agency support towards successful initiatives and/or unfolding programmes to which the United Nations can bring about added value.

The meeting identified benchmarks and milestones for the 2000–2001 biennium. Achievement of these benchmarks will depend on the collective will of the members of the Water Cluster.

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1 FOREWORD

We, the co-chairs of the UNSIA Water Cluster (the United Nations Environment Programme, the World Bank, and the World Meteorological Organisation), are encouraged by the renewed United Nations efforts to address Africa's water management challenges. In Africa water is *the* key natural resource; it is the principle priority challenge for policy-makers. Water quality reveals everything, right or wrong, that we do to our environment. Its abundance is an indicator of social development. Its lack is an indicator of poverty.

Water is life. Every year, more than five million people die worldwide as a result of poor water quality—ten times the number killed in wars. More than half the victims are children. The centrality of water in our social, economic, political and spiritual lives cannot be overestimated. Nearly every decision we make is directly linked to the use and availability of water. An adequate supply of clean water is crucial for maintaining the ecological systems that support all life and for sustaining development that will ensure a better existence for present and future generations.

Although abundant on a regional scale, water in Africa is unevenly distributed by nature and unfairly allocated by humans. While a few countries have high annual averages of water per person, many others face water stress. By 2010 an estimated 400 million people in at least 17 African countries will be living in conditions of water scarcity. Their lack of water will seriously undermine food production, environmental conservation and economic development.

Water is essential for national development in every African country but is rarely confined within the boundaries of a single country. Most water is shared by two or more countries. Africa has over 80 major international river and lake basins, yet most are without any agreements on equitable use or environmental protection. Few have effective institutional arrangements for consultation or cooperation. Procedures for avoiding or resolving international disputes over water are largely lacking.

With recurring droughts and chronic water shortages in many areas, the majority of countries and people in Africa pay an increasingly high price for water *and* for the lack of water. The poor majority, especially women and children, usually pay the highest price. They pay more in cash to buy small amounts of water, expend more in calories carrying water from distant sources, suffer more in impaired health from contaminated or too little water, and lose more in diminished livelihoods and lost lives. Today over 300 million people in Africa still lack reasonable access to safe water. Even more lack adequate sanitation.

THE CENTRALITY OF WATER IN OUR SOCIAL, ECONOMIC, POLITICAL AND SPIRITUAL LIVES CANNOT BE OVERESTIMATED. NEARLY EVERY DECISION WE MAKE IS DIRECTLY LINKED TO THE USE AND AVAILABILITY OF WATER. AN ADEQUATE SUPPLY OF CLEAN WATER IS CRUCIAL FOR MAINTAINING THE ECOLOGICAL SYSTEMS THAT SUPPORT ALL LIFE AND FOR SUSTAINING DEVELOPMENT THAT WILL ENSURE A BETTER EXISTENCE FOR PRESENT AND FUTURE GENERATIONS.

Many aquatic species, habitats and ecosystems in Africa are also at risk as water demand increases to meet the growing needs of agricultural production, industrial expansion and urban growth. More water to meet human needs leaves less water for maintaining aquatic ecosystems and the many essential environmental services they support.

To tackle these problems, a new approach to water resources management is needed. The new implementation strategy of the Water Cluster of the United Nations System-wide Special Initiative on Africa will help the United Nations to respond comprehensively to the challenges of sustainably managing Africa's water resources.

The United Nations supports a "fair share" water strategy at the national, subregional and regional level. It calls for a fair share for the poor; a fair share among competing uses; a fair share for local communities, for women and children, and for future generations. It also emphasises the need for education and capacity building.

However, we recognise that overall progress in sustainably managing and equitably distributing Africa's water resources has been neither sufficient nor comprehensive enough. Sandra Postel, director of the Global Water Policy Project, has stated that we need a "water ethic"—a guide to right conduct in the face of complex decisions about natural systems. This is something we should all strive for in the next decade.

Our efforts in the UNSIA Water Cluster should be people-centred and all-encompassing. They should focus on water quality, water use, human health impacts and river basin management. The UNSIA Water Cluster must help African countries improve their monitoring, assessment and reporting capacity, and it must itself produce a regional water development report. In this way, we will build a truly regional picture of the state of freshwater and its management.

The African Water Vision presented at the second World Water Forum in 2000 has provided impetus to the goals of the UNSIA Water Cluster. Now is the time to move beyond protocols, declarations and conventions. It is time to move from vision to action.

Let us think of the poor man whose crops wither on a parched plot of land. Or of his wife, who walks five kilometres or more daily to collect a few pots of water. Or of their children, racked by water-borne diseases. The United Nations family is committed to ending their plight, fulfilling the vision of Agenda 21, and ensuring the security of Africa's water resources.

2 AFRICA'S WATER RESOURCES: THE CHALLENGES AHEAD

At first glance, Africa appears to have abundant freshwater resources. It has 17 rivers with catchment areas greater than 100,000 square kilometres and more than 160 lakes with areas over 27 square kilometres, including Lake Victoria, the world's second largest freshwater lake. It has vast wetlands and limited but widespread groundwater resources. However, there are great disparities in water availability and use within and between African countries because the continent's water resources are so unevenly distributed—for example, the Congo river watershed contains 10 per cent of Africa's population but accounts for about 30 per cent of the continent's annual run-off. Consequently, although Africa uses only about 4 per cent of its renewable freshwater resources, water is becoming one of the most critical natural resource issues in Africa.

The African continent as a whole is one of the two regions in the world facing serious water shortages. Currently, 14 countries in Africa are subject to water stress or water scarcity, with those in northern Africa facing the worst prospects. A further 11 countries will join them in the next 25 years. Rising demand for increasingly scarce water resources is leading to growing concerns about future access to water, particularly where water resources are shared by two or more countries. About 50 rivers in Africa are shared by two or more countries. Issues of access to water from any of these shared rivers could provoke conflict, particularly in the Nile, Niger, Volta and Zambezi basins.

Access is another major issue in Africa. More than 300 million people in Africa lack reasonable access to safe water. Even more lack adequate sanitation. In sub-Saharan Africa, only about 51 per cent of the population have access to safe water, and 45 per cent to sanitation. Moreover, there are great variations throughout the continent. Almost all the people of Libya and Mauritius have access to safe water and sanitation, compared with only about a quarter of the populations of Chad, Ethiopia and Madagascar. Additionally, urban residents generally have better access to safe water and sanitation than those living in rural areas. For example, in 1994 only 30 per cent of the rural population in Uganda had access to safe water compared to 60 per cent in urban centres.

Nowhere is the water challenge more complex and demanding than in Africa's rapidly growing cities. At 5 per cent per annum, Africa is today the fastest urbanising region in the world. Africa's urban population is projected to nearly quadruple from 138 million in 1990 to 500 million in 2020. By concentrating demand, large cities pose

THERE ARE GREAT DISPARITIES IN WATER AVAILABILITY AND USE WITHIN AND BETWEEN AFRICAN COUNTRIES BECAUSE THE CONTINENT'S WATER RESOURCES ARE SO UNEVENLY DISTRIBUTED. RISING DEMAND FOR INCREASINGLY SCARCE WATER RESOURCES IS LEADING TO GROWING CONCERNS ABOUT FUTURE ACCESS TO WATER, PARTICULARLY WHERE WATER RESOURCES ARE SHARED BY TWO OR MORE COUNTRIES.

enormous pressure on water resources. The freshwater for many African cities, such as Johannesburg, Gaborone and Dakar, already has to be conveyed great distances. Other cities like Abidjan, Addis Ababa and Lusaka are abstracting water from their aquifers at rates much faster than they can be recharged.

Most freshwater in Africa comes from seasonal rains, which vary with climatic zone. The greatest rainfall occurs along the equator, especially the area from the Niger delta to the Congo river basin. The Sahara desert has virtually no rain. Northern and southern Africa receive 9 and 12 per cent respectively of the region's rainfall. In West and Central Africa, rainfall is exceptionally variable and unpredictable; while the Sahelian countries have limited supplies of freshwater, most countries in the humid tropical zone have abundant water. The availability of water varies considerably even within countries and the situation is further complicated by frequent droughts and inappropriate water management programmes.

Groundwater resources are crucial for many countries and people in Africa, particularly during the dry season and in large arid zones. Groundwater is a main source of water in many rural areas, including, for example, nearly 80 per cent of the human and animal populations in Botswana and at least 40 per cent in Namibia. In Libya, groundwater accounts for 95 per cent of the country's freshwater withdrawals, while in areas such as the Pangani basin of Tanzania groundwater is a significant source for irrigated agriculture. In many parts of the continent groundwater resources have not yet been fully explored and tapped.

The demand for water is increasing rapidly in most countries due to population growth and economic development. Although some African countries have high annual averages of available water per capita, many others already or soon will face water stress (1,700 cubic metres or less per person annually) or scarcity (1,000 cubic metres or less per person annually). It has been estimated that by 2025 up to 16 per cent of Africa's population (230 million people) will be living in countries facing water scarcity, and 32 per cent (another 460 million) in water-stressed countries. The availability of water in Africa on a per capita basis is estimated to have declined by as much as 50 per cent since 1950.

As in other dry regions, agriculture is the largest user of water in Africa, accounting for 88 per cent of total water use. However, with only 6 per cent of crop land under irrigation, there is considerable potential to increase food production through irrigation, so demand for water for irrigation will continue to grow. Between

MORE THAN HALF THE PEOPLE OF AFRICA STILL LACK REASONABLE ACCESS TO SAFE WATER AND SANITATION. THE WATER CRISIS IS OFTEN A CRISIS OF GOVERNANCE. GOOD WATER GOVERNANCE MEANS ESTABLISHING AN EFFECTIVE POLICY AND LEGAL FRAMEWORK TO ALLOCATE AND MANAGE WATER IN WAYS RESPONSIVE TO NATIONAL SOCIAL AND ECONOMIC NEEDS AND TO THE LONG-TERM SUSTAINABILITY OF THE RESOURCE BASE.

40 and 60 per cent of the region's irrigation water is currently lost through seepage and evaporation. This contributes to serious environmental problems such as soil salinisation and waterlogging, although water lost in this way may end up in aquifers from where it can be pumped to irrigate nearby fields.

Freshwater fisheries are the main source of income and protein for millions of Africans. The annual freshwater fish catch is estimated at about 1.4 million tonnes, with Egypt alone contributing about 14 per cent. However, the damming of the Nile and the disposal of untreated sewage and industrial effluents has endangered species and reduced the fish catch in many regions, including the Nile Delta and Lake Chad.

Industrial wastes are still discharged without treatment into rivers and lakes in most African countries, causing a major and persistent health problem. Untreated effluent and agricultural run-off are also contributing to a growing eutrophication problem. Another major threat to water quality in Africa is the proliferation of invasive aquatic plants such as the water hyacinth *Eichhornia crassipes* and the weed *Salvinia molesta*. The water hyacinth has seriously affected most water bodies in the region, including Lake Victoria, the Nile River and Lake Chivero. As no effective means of controlling this weed has yet been found, water hyacinth will continue to affect water quality and disrupt water transport, water supplies to urban areas, the fishing industry, power generation and the livelihoods of many local communities.

Saltwater intrusion into surface and groundwater sources is also a major problem, especially along the Mediterranean coasts and on oceanic islands such as the Comoros, which are highly dependent on groundwater resources and at risk from sea-level rise. A related problem is the high level of dental and skeletal fluorosis that occurs in several areas, particularly along Africa's eastern coasts.

Other factors affecting water quality and availability in Africa include inadequate water resources assessment and a lack of data, inadequate technical and institutional infrastructure, and insufficient investment in water resource development. These factors have combined to aggravate natural water resources problems in Africa. A number of international agents are involved in providing technical assistance to African governments to address these problems. The United Nations, with its mandate on development, cannot stand on the sidelines, hence the establishment of the United Nations System-wide Initiative on Africa.

CHALLENGES AND GOALS FOR THE UNSIA WATER CLUSTER

IMPROVING WATER WISDOM

- Ensure appropriate water resources assessment.
- Establish a sustainable system for data collection, management and dissemination, including standardising and harmonising data.
- Build institutional and human capacity for effective water management.
- Conduct research and development on water resources issues.
- Facilitate access to Internet services at local levels.
- Incorporate gender and youth concerns in all activities.

STRENGTHENING GOVERNANCE OF WATER RESOURCES

- Encourage institutional reforms at transboundary water basin levels.
- Enhance collaboration and cooperation at transboundary water basin levels.
- Use the water basin as the unit for water resources management.
- Strengthen river basin and aquifer management.
- Create an enabling environment for cooperation between countries sharing international water basins.
- Involve management at the lowest appropriate level and create institutional arrangements for full stakeholder participation.
- Liberalise water markets while meeting the basic needs of the poor.

MEETING URGENT WATER NEEDS

- Expand safe water supply and sanitation services to meet basic human needs.
- Ensure adequate water for sustainable food security.
- Ensure that water for the environment is adequate in quantity and quality.
- Ensure adequate water for economic development in the areas of agricultural production, energy and hydropower production, industry, tourism and transportation.
- Manage the growing urban water crisis.
- Manage climate variability and change, including drought, desertification, and flood.
- Conserve and restore ecosystems.
- Protect watersheds and control siltation of hydraulic structures.
- Meet the needs of rural energy supply.
- Develop non-conventional resources such as desalination and re-use of water.

3 THE UNSIA WATER CLUSTER: ADDRESSING AFRICA'S WATER CRISIS

THE UNITED NATIONS SPECIAL INITIATIVE ON AFRICA

The United Nations Special Initiative on Africa (UNSI) was launched in March 1996 in recognition that Africa represents the foremost challenge of global development and "is a test case for international cooperation and development and for the United Nations". The UNSIA "was designed to strengthen the coherence of United Nations assistance to Africa, including that of the Bretton Woods institutions, through more effective coordination, capacity building, and facilitating the formation of genuine partnerships."

The UNSIA was established with two specific goals: to help Africa to help itself to address the root causes of the continent's problems, and to honour the commitment of the United Nations system to support African development efforts in Africa-identified priority areas through appropriate country and regional programmes. The UNSIA vision is to promote ownership and leadership of the development process by Africa, and to ensure that activities are responsive to African demand. It is an opportunity to clearly establish the supportive role of donors in Africa by reinforcing the message that African women and men must be at the centre of their own development.

The UNSIA has a two-fold challenge: to carry out, congruent with Africa's priorities, the best supportive actions to stimulate development in Africa, and to mobilise political support to remove the obstacles facing Africa's development. As the United Nations Secretary-General, Mr. Kofi Annan, stated at the April 1997 ACC meeting: "The effectiveness of the Special Initiative will be judged in terms of its contribution to poverty reduction, peace-building and stability in Africa."

Africa lives today on the edge of survival. If current trends continue its prospects are frightening. The two fundamental survival issues confronting Africa are sustainable food and water security. The issue for each is not so much one of technical approaches but of adding political and social urgency to reversing the current poor prospects in food and water security.

The United Nations has an important role in supporting the development of practical measures that will maintain ecologically functional freshwater systems. One means of fulfilling this role is to facilitate exchanges of experience among member governments on actions that have been taken to deal with specific freshwater management issues. It is also the United Nations' goal to add value to governmental contributions to this dialogue with analysis and interpretation, by defining best

THE UNITED NATIONS SUPPORTS A "FAIR SHARE" WATER STRATEGY AT THE NATIONAL, SUB-REGIONAL AND REGIONAL LEVEL. IT CALLS FOR A FAIR SHARE FOR THE POOR; A FAIR SHARE AMONG COMPETING USES; A FAIR SHARE FOR LOCAL COMMUNITIES, FOR WOMEN AND CHILDREN, AND FOR FUTURE GENERATIONS.

practices, and by disseminating the results of the dialogue to members. In addition to providing useful, concrete outcomes on freshwater management, a substantial long-term benefit of success in such a process will be increased confidence in the United Nations on the part of member governments. In turn this will lead to growth in the programme and greater commitment from member governments.

THE UNSIA WATER CLUSTER

In putting together the United Nations System-wide Special Initiative on Africa, five working groups were originally established, namely Water, Food Security, Governance, Social and Human Development, and Resource Mobilisation. Water is one of the five clusters originally established for UNSIA. (The other four are Education, Health, Governance, and Harvesting Information Technology for Development.)

The Water Cluster is made up of all agencies of the United Nations system and the Bretton Woods institutions that operate in the water sector in Africa. It has a Technical Working Group coordinated jointly by UNEP, the World Bank and WMO. It has ten other agency members: UNDP, WHO, UNICEF, FAO, WMO, UNDESA, UNCHS, UNECA, IAEA, and UNU.

From its inception, the Water Cluster has been guided by the following four objectives:

- Assuring sustainable use of, and equitable access to, freshwater.
- Household water security.
- Freshwater assessments.
- Water for food production.

For various reasons, the Water Cluster is believed to have been problematic from the start, since it cuts across many other priority issues such as environment, health and food production.

There are numerous technical constraints to addressing water resources issues in Africa. The most complex are:

- The multiplicity of transboundary water basins.
- The high variability in time and space in the occurrence and amount of rainfall. This poses high risks of flooding in some parts of Africa and of growing water scarcity and drought in other parts.
- Pollution and eutrophication of water bodies and the proliferation of invasive aquatic plants such as the water hyacinth.

In addition to these technical constraints, a number of institutional constraints have limited the achievements of the UNSIA Water Cluster. These include:

- No common communication strategy for the Initiative as a whole.
- A dearth of reliable information.
- No benchmarking system for monitoring and measuring progress.
- A gap between expectations and actual flow of pledged financial resources.
- A lack of clarity about resource mobilisation strategy.

This document sets out a new strategy for the UNSIA Water Cluster that takes into consideration past constraints and the imperatives and opportunities that have been created by recent developments. The new strategy is based on the outcomes of agency consultations held in The Hague in March 2000 and the meeting of the Technical Working Group of the UNSIA Water Cluster held in Nairobi at UNEP headquarters on May 4–5, 2000.

The proposed strategy builds on what has worked well in the past, and calls for a variety of partnerships within the Cluster and between the UNSIA Clusters, as well as building on existing partnerships with other entities. It also calls for the adoption and promotion of a shared vision and common principles by Cluster members. It further calls for the rationalisation of existing structures and coordinating entities, including the Inter-agency Group for Water in Africa (IGWA), the ACC Working Group on Water, and the UNSIA. Finally, it calls for the establishment of a web-based information system for effective communication, planning of projects and programmes, tracking progress, sharing information on best practices, and for storing and disseminating data on water.

BUILDING ON PAST ACHIEVEMENTS

The UNSIA has been in existence for four years. For most of this time, Cluster members have had to rely on existing agency budgets for assistance. For the most part, early pledges for financial flows have not materialised. This absence of additional finances has influenced the progress and nature of achievements in the Water Cluster. In particular, there have been very limited Cluster-led programmes of assistance other than a common adherence to the principles of Integrated Water Resources Management (IWRM). On the other hand, there have been a variety of assistance programmes led by individual Cluster members or by self-selected groups of Cluster members coming together in programme-based partnerships. Furthermore, there have been alliances with bilateral donors and NGOs on the basis of common interests.

Individual Cluster Member Assistance Programmes

All Cluster agencies have been involved in extensive programmes of assistance organised and implemented without significant coordination between, or inputs from, other Cluster members operating in the same countries or regions. All of them are

INTERNATIONAL AND REGIONAL MEETINGS FOCUSING ON WATER 1972–2000

The global significance of achieving sustainable freshwater management has been recognised for more than thirty years since the UNESCO International Hydrological Decade, 1965–1974. Since then, water issues have regularly been the focus of world attention.

1972 UN Conference on the Human Environment

1977 UN Water Conference

1990 Global Consultation on Safe Water and Sanitation for the 1990s

1992 UN Conference on Environment and Development

1992 International Conference on Water and the Environment: Development Issues for the 21st Century

1993–2000 A series of Annual Technical Conferences on the Nile

1994 Inter-ministerial Conference on Drinking Water Supply and Environmental Sanitation

1995 WMO/ECA Regional Conference on Water Resources Assessment

1998 Sixth Session of the UN Commission on Sustainable Development

1998 International Conference on Water and Sustainable Development

2000 Second World Water Forum

presumed to endorse the principles of IWRM. However, there is no mechanism in place to ascertain the extent to which these principles have been promoted in such projects. Nevertheless, the development impact of these individual programmes of assistance is considered substantial. It is conceivable that their impacts could be very easily enhanced in a significant way simply by ensuring coherence and synergy through coordination within and between countries.

In addition to individual agency assistance, there have been a number of successful project-based partnerships between small groups of Cluster members that have come together for specific projects and programmes. There are several ongoing programme-based partnerships within the UNSIA Water Cluster. Examples of programmes with these types of partnerships include the African Water Resources Management Initiative, Management of Water for African Cities, Water Supply and Sanitation for the Urban Poor, and the HYCOS Programme.

Africa Water Resources Management Initiative

A notable example of project-based water partnerships is the Africa Water Resources Management Initiative (AWRMI) launched by the World Bank. The focus of this initiative is participatory policy reform aimed at developing national policies and strategies for water resources management at local, state, national and international levels. Under this initiative, support is being provided to 15 African countries. In addition, transboundary work is underway in the Nile basin (under the Nile Basin Initiative), in the SADC region and in the Senegal, Volta and Okavango River basins.

This programme has led to a growing water resources partnership that includes

the World Bank, UNDP, UNECA, UNDESA and FAO. The partnership also extends to NGOs like IUCN, and to bilateral donors from Canada, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden, the United Kingdom and the United States of America. Key features of this programme include capacity building through learning by doing, and African ownership and leadership.

Management of Water for African Cities

A second example of programme-based water partnerships is the Management of Water for African Cities. It operates at the regional level and in seven countries (Côte d'Ivoire, Ethiopia, Ghana, Kenya, Senegal, South Africa and Zambia). It aims at addressing three complementary priorities:

- Improving efficiency of water use in urban areas.
- Mitigating the environmental impact of urbanisation on freshwater and aquatic ecosystems.
- Enhancing the flow of information and best practices on urban water resources management among African cities.

This programme, too, is leading to a growing partnership that includes UNCHS, UNEP, the World Bank, UNECA, UNESCO and WHO. Its core funding is from the Turner Foundation; there is also significant funding from participating countries.

Water and Sanitation for the Urban Poor

This is a poverty-focused programme that aims at promoting water supply and sanitation services to the poor through policy support, demonstration, knowledge management, and investment support. It operates throughout Africa. The programme entails partnership with numerous agencies, bilateral agencies and NGOs. UNSIA member partners include the World Bank, UNDP, UNICEF, WHO, and UNCHS.

The Hydrological Cycle Observing System (HYCOS) Programme in Africa

This programme is designed to provide the international community with basic data for monitoring and managing water resources through observations of the hydrological cycle and at the same time to meet the need for innovative technology required for obtaining accurate data. The World Hydrological Cycle Observing System (WHYCOS) is intended to stimulate water resources assessment activities, capacity building and strengthening basin-wide, regional and international cooperation in the field of integrated water resources management. It was also designed to improve cooperation at grassroots and on a global level in establishing and improving reliable water resources information systems for enhancing sustainable development. It is based on a global network of reference stations transmitting real-time hydrological and climatic data via satellite, ensuring high quality data for updating national and regional databases.

The World Meteorological Organisation (WMO), initially with the support of the World Bank and currently with the European Union, launched the WHYCOS programme for monitoring the hydrological cycle in 1993. Most African countries have been covered by regional components of this programme, which are at different stages of implementation (SADC-HYCOS for the southern African countries; Med-HYCOS for the North African countries; AOC-HYCOS for West and Central African countries; IGAD-HYCOS for the East African countries; and Congo-HYCOS for the Congo basin countries). In this programme, regional preferences determine the design and operational details for the collection and transmission of data. Hence the HYCOS programme is consistent with the concepts behind the establishment of UNSIA.

NEW OPPORTUNITIES

At about the same time that UNSIA was launched, two new international water organisations were also established: the World Water Council and the Global Water Partnership. The former was legally incorporated in June 1996, with its secretariat in Marseilles, France. It is an international water policy think-tank mandated to focus on long-term water issues and to encourage national leaders to promote water sector reforms, prioritise investments, sustain water management and to facilitate the necessary partnerships.

The Global Water Partnership (GWP) was also established in 1996. It is an international network¹, open to all organisations involved in water resources management. It was created to foster an understanding and use of Integrated Water Resources Management (IWRM). IWRM aims at coordinated development and management of water and related resources by maximising economic and social welfare without compromising the sustainability of vital environmental resources.

A key feature of the GWP is the establishment of Associated Programmes. These are inclusive networks designed to provide strategic assistance to governments and agencies on various aspects of IWRM. In addition to global level Associated Programmes, a number of Associated Programmes have been established specifically for Africa, with which the Water Cluster can establish partnerships. Examples include:

- Waternet, a regional network in Southern Africa for education, training, and research on IWRM.
- SAWINET, the Southern Africa Water Information Network.
- SADC-HYCOS, a programme for enhancing the effectiveness of real-time and near-time hydrological monitoring across the SADC region for national and regional water resources management.
- SADC Programme for Means for empowering women in water resources.
- A network for green water harvesting in East and southern Africa.

Another feature of the GWP is the establishment of Regional Technical Advisory Committees, or RTACs, around the world to facilitate access to strategic assistance and

to provide help in the application of IWRM at regional and national levels. The GWP membership includes many of the agencies in the UNSIA Water Cluster. Hence the Cluster can take advantage of the technical information made available through the GWP's Associated Programmes and RTACs.

THE AFRICA WATER VISION

Every three years the World Water Council organises a World Water Forum to coincide with the World Water Day. The first took place in Marrakech in March 1997, and the second took place in The Hague in March 2000. The Second World Water Forum was an occasion for launching a World Water Vision and a number of regional and sectoral water visions. One of these was the Africa Water Vision.

The Africa Water Vision was presented at a special Africa Caucus organised during the Forum. Its preparation was an excellent example of coordination and partnership between a number of self-selected UNSIA Water Cluster members. The preparation was coordinated by the ADB, UNECA and the OAU, with support from the World Bank. UNESCO, FAO, UNEP, WHO and other Water Cluster members participated in the consultation processes that were used to prepare the Vision.

The Africa Water Vision was based largely on regional and national water visions. The regional visions that were used as inputs were those prepared for the western Africa region, southern Africa region, and northern Africa. Other inputs included the Water Visions prepared under the Nile Basin Initiative, the Chad Basin Commission, and the Niger Basin Commission. The preparation of the regional water visions entailed a number of national level consultations.

An upshot of the Vision process is the emergence of an unofficial technical partnership between the OAU, ADB and UNECA. The three agencies have drafted a

THE AFRICAN WATER VISION

- To urgently provide safe and adequate water and sanitation for all.
- To make equitable and sustainable use of Africa's water resources.
- To ensure sustainable development and management of water resources for all.
- To use water resources wisely to promote agricultural development and food security.
- To develop water resources to stimulate socio-economic development.
- To treat water as a natural asset for all in Africa.
- To share management of international water basins to stimulate efficient mutual regional economic development.
- To ensure adequate water for life-supporting ecosystems.
- To manage watersheds and floodplains to safeguard lives, land and water resources.
- To price water to promote equity, efficiency and sustainability.

resolution on the Africa Water Vision for consideration at the next Summit of the African Heads of State scheduled for July 2000. They have also agreed on shared responsibilities for implementing the framework for action for the Vision.

It is apparent that the Africa Water Vision, along with the national, sub-regional, and transboundary water basin visions are all Africa-owned. Hence it provides a frame of reference for the programme of assistance by the UNSIA Water Cluster. At the same time, it gives rise to new challenges for the Cluster. The elements of the Vision are shown below. A comparison between the goals of the UNSIA Water Cluster and those of the Africa Water vision is given on page 19.

UNSIA WATER CLUSTER: THE CHALLENGES

The UNSIA Water Cluster Strategy is designed to address the technical and institutional challenges facing African governments and the institutional and financing challenges facing the UNSIA Water Cluster and other External Support Agencies.

As well as the technical challenges posed by the multiplicity of transboundary water basins and those posed by the high variability of rainfall in time and space, African governments face a number of institutional challenges in implementing their water visions at national, regional and Africa-wide levels. These include:

- Inadequate capacity for developing and implementing national water visions.
- Gaps in hydrological data and information on best practices for planning and development.
- Difficulty in securing sustainable financing for water projects.
- Difficulty in securing financing for essential but non-revenue yielding water resources development activities.
- Lack of incentives for cooperation between riparian countries in transboundary water basins.

The new opportunities listed above also create challenges for UNSIA. Examples of these challenges include:

- Constraints imposed on Cluster members as a result of prior commitments to ongoing and new projects, making a timely response to demand for assistance difficult.
- Lack of additional new funding for non-budgeted assistance programmes, making it difficult to establish Cluster-wide facilities for supporting Cluster members and national governments.
- Mismatch between supply and demand for strategic assistance at national and international river/lake/aquifer basin levels.
- Difficulty in providing strategic assistance at the Africa-wide level, due again to lack of additional funding.

With these considerations in mind, the UNSIA Water Cluster has had to identify an appropriate strategic response.

THE UNSIA WATER CLUSTER: A STRATEGIC RESPONSE

To respond to these challenges, the UNSIA Water Cluster has identified some broad goals and a set of Cluster guidelines that should underpin the strategic assistance provided by all Cluster agencies. In addition, it has defined a toolbox of Cluster strategies for use in appropriate circumstances.

Cluster goals

The UNSIA Water Cluster will focus on three goals:

1. Improving water management wisdom, with a special focus on water-related assessments.
2. Strengthening governance of water resources by promoting equitable access to and sustainable use of water resources.
3. Meeting urgent water needs.
 - (a) Assuring household water security.
 - (b) Assuring water for food production.
 - (c) Managing water for African cities.

Cluster guidelines

The Cluster Guidelines are:

- Adherence to the principles of IWRM.
- Treatment of the river/lake/aquifer basin as the basic unit for water resources management.
- Promotion of regional cooperation and economic integration between riparian countries sharing international river basins.
- Promotion of ownership, commitment and leadership of national governments in assistance programmes.
- Emphasis on institutional reform and legal framework.
- Support for capacity building through hands-on experience.
- Promotion and support for sustainable financing and diversification of financing sources.
- Promotion of diversification of water sources, and sites for food production, energy production, commodities and labour.

Cluster Strategies

In pursuing Cluster goals, the following Cluster strategies will be followed:

- Build on what is working well by strengthening self-selected programme-based partnerships between Water Cluster agencies.
- Build partnerships and alliances with agencies in other UNSIA Clusters, and with bilateral donors, CSOs and NGOs.
- Develop a limited programme of strategic cluster-wide initiatives.

UNSIWA WATER GOALS (1996) AND THOSE OF THE AFRICA WATER VISION

UNSIWA GOALS

AFRICAN WATER VISION GOALS

Equitable access to
and sustainable use of water

Equitable access and sustainable use of water for socio-economic
development i.e. improved governance of water resources:

- Comprehensive policies for institutional reforms at the national level.
- Enabling environment for international cooperation.
- IWRM capacity building.

Household water security

Meeting urgent water needs:

- Reducing the proportion of people without access to safe and adequate water supply and sanitation.

Water for food production

Meeting urgent water needs:

- Water for agriculture and hydropower production, industry, tourism and transportation.
- Conservation and restoration of the environment, biodiversity and life-supporting ecosystems.
- Effective management of drought, floods and desertification.

Water assessments

Improving water wisdom:

- Systems for information generation, assessment and dissemination.
- Sustainable financing for information generation and management.

Resource mobilisation

Strengthening the financial base for a desired water future:

- Financing for water supply and sanitation.
- Securing sustainable financing for institutional reform.
- Securing sustainable financing for information and management.
- Increasing private sector participation in financing.
- Establishing mechanisms for sustainable financing of water resources management.

4 THE UNSIA WATER CLUSTER: WORKING TO ACHIEVE ITS GOALS

A IMPROVING WATER WISDOM

CHALLENGES

Effective development and management of water resources is dependent on appropriate water resources assessment. This in turn requires adequate manpower to perform the task, and the availability of appropriate data and information to make it a success. Water resources assessment has been defined as the determination of the sources, extent, dependability and quality of water resources for their utilisation and control. Therefore there is an urgent need for better data on the stocks and flows of water, especially water and aquatic environmental quality, groundwater, and ecosystem health at the basin level. These issues are matters of life and death in many communities around Africa: witness the issues of heavy metals or land-based pollutants finding their way into the water in many African countries with inadequate wastewater treatment programmes.

In arid regions, a shortage of data limits the optimum use of what little freshwater is available. The lack of information on past flooding encourages people to settle in flood-prone lands. Thus it is equally important that the raw data be publicly available and that reliable processed data be made public in forms that facilitate public understanding of water issues and public participation in water management.

Accurate information on the quantity and quality of freshwater in relation to present and future demands is the basis for resolving issues of equitably sharing water amongst different users. Thus, water resources assessment is a prerequisite for all cross-sectoral development of a country's water resources, and consequently was included in Programme Area B of Chapter 18 of Agenda 21.

Assessment of water resources is a country responsibility, therefore any review of its extent at the national level is also the responsibility of individual countries. To assist African countries to carry out this task, WMO organised, jointly with ECA, the *African Conference on Water Resources: Policy and Assessment*, in Addis Ababa, March 1995. The heads of the National Water Resources Assessment Programme who attended the conference developed a strategy and action plan for water resources assessment in Africa that provides concrete measures for developing sustainable water resources assessment. The thrust of this initiative is to break the dependency syndrome by enabling the participation of little-used but abundant local expertise to carry out the assessment of water resources at national, shared river/lake basin and regional levels.

STRATEGY

The UNSIA Water Cluster can play an important role in promoting awareness and generating information about the state of Africa's water resources. Generating water wisdom among all stakeholders is a precondition for improved decision-making. The key challenge is to build and share knowledge about water and to raise public awareness about the importance of water and what must be done to achieve water security.

Since water resources should be managed on the basis of the river/lake basin or aquifer, the UNSIA Water Cluster should generate and disseminate information to reflect that strategy. Where appropriate, specific river/lake basin and catchment organisations should be set up, or their capacities enhanced. Experience shows that if users are empowered through aquifer associations or river/lake basin associations they will demand more and better data. Stimulating the demand for information will lead to a major increase in funding for data collection and in making such data useful and broadly available to users.

There are also strategic considerations to be taken into account with regard to United Nations system-wide support to the Global International Waters Assessment project (GIWA), the GEMS/Water Quality Monitoring Programme, the World Hydrological Cycle Observing System (WHYCOS) and the recently introduced World Water Development Report.

WORK PLAN AND EXPECTED OUTPUTS

The UNSIA Water Cluster Technical Working Group should:

- Collaborate within the framework of the existing sub-regional Hydrological Cycle Observing Systems (HYCOS), the UN GEMS/Water Quality Programme, (which is currently being vitalised), the Global International Waters Assessment project and other assessment programmes of the United Nations.
- Prepare a Regional Water Development Report as a contribution to the World Water Development Report.
- Follow up on the African Water Vision exercise and carry out water awareness activities.
- Embark on a Water Awareness Initiative to highlight problems, present practical solutions and promote water-wise behaviour.
- Collaborate within the framework of strengthening African capacity for evaluating and reviewing national and regional capabilities for assessing water resources through a range of capacity building programmes.
- Establish a website to provide an avenue for data and information exchange.

B MAKING WATER GOVERNANCE EFFECTIVE: EQUITABLE ACCESS TO AND SUSTAINABLE USE OF WATER

CHALLENGES

The water crisis is often a crisis of governance: a failure to integrate policies and practices related to the management of water resources. Good water governance exists where government bodies responsible for water establish an effective policy and legal framework to allocate and manage water in ways responsive to national social and economic needs and to the long-term sustainability of the resource base.

Throughout Africa, and especially in areas of water stress or scarcity, the dominant challenge for policy makers and planners is the equity issue of ensuring that everyone gets reasonable access to and a fair share of safe water. For decades the poor majority in Africa have received far less than their fair share of safe water. Today more than half the people of Africa still lack reasonable access to safe water and sanitation. Current statistics suggest that those in cities generally have greater access than in rural areas. However, as those statistics combine the urban rich and urban poor in a single average, they disguise the harsh reality of the poor urban majority in large slums who lack reasonable and affordable access to safe water. The urban poor also pay an unfair price for their small share of water. As most buy their water in small containers, the urban poor often pay 4 to 10 times more per litre than the metered rates of their wealthier neighbours.

Although they get far less than their fair share of water, the poor make good use of what they get. By circumstance and choice, the poor are experts in conserving and recycling water through multiple uses. They rarely share in the benefits of the large-scale water supply, sanitation, irrigation and hydropower projects that dominate investment in the water sector in most African countries. They are rarely connected to water and electricity supply systems, nor can they afford the prices charged. Moreover, it is the poor who are displaced by large-scale water projects, who are exposed to water borne diseases spread through badly managed irrigation systems, who suffer impaired health because of industrial and agrochemical pollutants, and who sustain serious losses to their livelihoods due to reduced flows (e.g. floodplain farmers) or increased siltation (e.g. riverine fishermen).

The efficient and equitable use of water resources is the second of 24 priority programmes in the 1992 African Common Position on the African Environment and Development Agenda. In April 1993, African governments met to prepare new African strategies for the implementation of Agenda 21. They consolidated the original 24 priority programmes into 7 priority areas, with the efficient and equitable use of water resources in third place. They also prepared a detailed programme of action that identified 16 priority activities for improving integrated water resources management in Africa.

STRATEGY

Recognising that water is a matter of life and death in Africa and that it is vital for the region's socio-economic development, the African Water Vision outlines opportunities for cooperation, especially in the continent's international waters. The members of the UNSIA Water Cluster will work together to encourage dialogue and cooperation on the management of shared waters. Where waters are shared, action should be taken to build confidence among riparian states, enabling them to accept some form of restricted sovereignty concerning their common resource, based on the principles of equitable utilisation and regional cooperation. The performance of mechanisms between nations in all major river/lake/aquifer basins should be regularly reviewed.

Southern Africa

The southern African sub-region covers an area of 9 million square kilometres and is home to approximately 180 million people. Current problems include a rapidly growing and urbanising population, widespread abject poverty, insecure food supplies and pollution. Water resources throughout the region are very variable and increasingly under stress. Water demand in the Southern Africa Development Community (SADC) region is projected to rise by at least 3 per cent annually until the year 2020, a rate about equal to the region's population growth rate.

The United Nations, under the leadership of UNDP, has collaborated with the SADC governments to develop a sub-regional strategy for water resources management. The Zambezi River Action Plan and the SADC Protocol on Shared Watercourse Systems provide a basis for United Nations system-wide collaboration. Based on the recommendations of the Sub-Saharan African Hydrological Assessment, the SADC-HYCOS (Hydrological Observing System for the SADC sub-region) has also been developed and implemented with assistance from the EU and WMO. The main objectives of this project are strengthening capacity building for the development of regional water resources information systems and encouraging cooperation and information exchange among participating countries.

West Africa

The West African sub-region consists of 16 countries with 230 million inhabitants (1995 figures). The actual growth rate reached a level of 5 per cent in 1997 and the population is expected to reach 500 million by 2025. Environmental challenges include soil degradation, regular droughts and inappropriate management of natural resources, which all affect the availability and quality of water resources for all purposes.

The over-exploitation of water resources, silting of wetlands, pollution, and the general preservation of water resources must be addressed with particular care at the regional level. Therefore, the establishment of agreements and actions for water resources management in all shared river/lake basins should be considered by

governments as well as being included in the programme of work of the UNSIA Water Cluster Technical Working Group. The UNSIA Water Cluster Technical Working Group can contribute towards the implementation of existing agreements and the development of new ones.

Central Africa

The Lake Chad Basin is facing a critical scarcity of water. Lake Chad is the main body of water in the basin and the only lake in the Sahelian zone. It is a freshwater lake with no outlet to the sea. Lake Chad represents a wetland ecosystem rich in biodiversity, but the lake is rapidly disappearing. The GEF implementing agencies have secured funding for a project to address the above and other related problems, thus providing opportunities for United Nations system-wide action within the UNSIA framework.

Nile River Basin

The Nile is one of the world's great rivers, with a long and rich heritage of use. It plays a vital role in the livelihoods of the people and nations along its length. The management of this river presents formidable challenges to the riparian states as well as to the United Nations. The recent Nile Basin Initiative provides an additional impetus to, and a unique opportunity for, United Nations system-wide collaboration in support of the efforts of the countries concerned.

WORK PLAN AND EXPECTED OUTPUTS

The UNSIA Water Cluster Technical Working Group should:

- Assist African governments to strengthen or set up more effective basin-wide and regional agreements for avoiding conflicts over equitable access to and sustainable use of their shared water resources. The approach could include workshops on conflict resolutions, establishment of a panel of legal experts and advocacy measures to promote cooperation.
- Take stock of the lessons learned from the Southern African Development Community (SADC) and other initiatives on shared waters and investigate the possibilities of applying such practices in other basins/regions.
- Identify the need for water protocols—as adopted within SADC—in other sub-regions of Africa.
- Demonstrate progress in United Nations system-wide support for the strengthening of inter-governmental efforts in the management of at least one lake or river. For example, the Water Cluster can help sustain the efforts of the SADC governments in the management of shared waters in southern Africa.
- Secure regional cooperation on water quantity and quality issues.
- Mobilise political will, create awareness and secure commitment to the goals of the UNSIA and the African Water Vision.

C MEETING URGENT WATER NEEDS

C1 MEETING URGENT WATER NEEDS: WATER FOR FOOD PRODUCTION:

CHALLENGES

During the past three decades, agricultural production in Africa has increased at an average of less than 2 per cent per annum, while its population has risen at about 3 per cent per annum. Under current demand and supply trends cereal imports are expected to rise from the current 10 million metric tonnes per annum to 30 million metric tonnes in 25 years. Much of this can be explained by the fact that about one-third of the people in the region live in drought-prone areas.

With water shortages recorded regularly in a growing number of countries in Africa, increased attention is needed on the management of available water resources. Food production is dependent upon reliable supplies of water. Improved water management practices are particularly necessary as Africa makes, as it must, wider use of agricultural inputs and the findings of agricultural research.

Agriculture uses more water than any other area of human activity. Food and water security are therefore inextricably linked, and can only come from concerted efforts to achieve more crop productivity from every drop of water used for agriculture, especially in the light of population growth. Increased water productivity is a key element in achieving both water and food security. However, production is only part of the story and food security in many African countries will increasingly depend on food trade. This highly political and complex international issue needs to be addressed urgently by the UNSIA Water Cluster and it must include the critical linkage to water security.

STRATEGY

A Special Initiative for Africa on Land And Water was launched in 1999 in a strategic partnership between UNDP, UNEP and the World Bank under the framework of the Global Environment Facility (GEF). At the OAU meeting held 4–6 July, 1999, in Algiers, the Executive Director of UNEP presented the GEF Initiative, and UNEP and the GEF were invited to attend the annual meetings of the OAU's regional coordination mechanism on desertification in Africa as observers. A meeting of all partners involved was convened on the fringe of the Third Meeting of the Conference of the Parties to the Convention to Combat Drought and Desertification to identify areas of collaboration.

The process continued with the identification of gaps and priority needs for Africa on issues pertaining to land degradation and freshwater. The first step in this process was the launch of an electronic forum on the degradation of land and water in Africa. The aim is to bring together the scientific community in an electronic forum to identify how to deal with these priority issues.

Finally, on 26 May, 2000, on the fringe of the Conference of Parties to the Convention on Biological Diversity, a workshop was convened under the leadership of UNEP and the World Bank to finalise a plan of action and a framework for collaboration among the various organisations entitled "Integrated Land and Water Management for Africa." This document details the specific challenges of land and water management in Africa and the expected outputs of the programme.

WORK PLAN AND EXPECTED OUTPUTS

The UNSIA Water Cluster Technical Working Group should support the implementation of the Integrated Land and Water Management Action Programme for Africa, whose work plan and projected outputs include:

- Establishing and practicing fail-safe procedures in integrated land and water management experiences in Africa and throughout the world.
- Supporting the development of cooperation and exchange at the river/lake/aquifer basin level.
- Supporting high-level policy dialogue within Africa on integrated land and water management practices.
- Supporting institutional strengthening in basin states.
- Implementing up to five pilot projects.
- Developing and consolidating mechanisms to perpetuate long-term strategic partnerships.

C2 MEETING URGENT WATER NEEDS: HOUSEHOLD WATER SECURITY

CHALLENGES

Household water security, which includes household drinking water and sanitation, is seriously deteriorating in Africa. The priority issues to be addressed include:

- Expanding safe water supply and sanitation services in the urban, peri-urban and rural areas to meet basic human needs and reduce poverty.
- Ensuring that water for households is of adequate quantity and quality.
- Promoting cooperation, coordination and networking at all levels among governments, international organisations, external support agencies, NGOs and the private sector.
- Building national and regional capacity on sector monitoring, information management, education and communications.
- Intensifying the mobilisation of resources for implementing priority activities in selected countries.

STRATEGY

The agencies participating in household water security, (UNICEF, WHO, UNDP, and the World Bank Regional Water and Sanitation Group) have made significant progress in implementing joint activities in the following areas:

- Community management of water supply and sanitation systems.
- Promoting hygiene education and sanitation transportation methodology.
- Coordination and monitoring.
- Capacity building (training at local level in operation and maintenance, water quality monitoring and developing tools and guidelines).

The strategy is to improve collaboration among United Nations agencies in support of those countries implementing ongoing programmes and initiatives and to monitor their progress. Efforts will be made to strengthen collaborative frameworks in order to bring about visible results on the ground in pursuit of UNSIA Water Cluster Goals and to promote cooperation, coordination and networking at all levels.

WORK PLAN AND EXPECTED OUTPUTS

The UNSIA Water Cluster Technical Working Group should work to:

Expand safe water supply and sanitation to meet basic human needs and reduce poverty:

- Continue advocacy at regional, sub-regional and national levels to create political commitment to sustainable access to safe and adequate water supply and sanitation, particularly in communities where water scarcity and poverty are serious threats.
- Build capacity at national and local levels to develop appropriate policies, strategies and programmes for implementing priority activities.
- Promote community management and empowerment with a particular focus on women and children by popularising the participatory hygiene and sanitation transformation approach that has been successfully used in several countries of the region.
- Promote the development of tools and guidelines for priority activities.
- Support research and training in identified priority areas by strengthening established regional networks for water and sanitation development.

Ensure that water for households is of adequate quantity and quality:

- Develop guidelines for assessing adequacy and quality.
- Make available relevant standards for drinking water quality control and guidelines for surveillance.
- Promote community-based water quality monitoring through training and the provision of equipment.
- Support actions that reduce water pollution that is threatening human health.

Build capacity:

- Develop guidelines for coordination and networking at country level.
- Support countries to establish a national coordination body / unit for water supply and sanitation with small project funds.
- Designate a United Nations agency / focal point to coordinate water supply and sanitation projects / programmes of all United Nations organisations at country level.

Strengthen national and regional capacity on sector monitoring, information management, education and communication:

- Support country-level data collection, analysis, storage, retrieval and dissemination of valuable information as needed on specific areas by providing limited project funds.
- Develop materials for public education and communication to encourage public awareness of water and sanitation programmes.
- Support training in information management and public communication at national levels.

Mobilise resources for priority activities in selected countries:

- Support individual countries in the preparation of project documents for external assistance on priority areas.
- Establish measures for donors to support the implementation of projects.
- Advocate for a special need to allocate a proportion of existing national and international funds for priority activities identified in assuring household water security.

C3 MEETING URGENT WATER NEEDS: MANAGING WATER FOR AFRICAN CITIES

CHALLENGES

Africa is witnessing an unprecedented urban transition as it enters the twenty-first century. The region, which until recently was predominantly rural, is experiencing the world's most rapid rate of urbanisation—nearly 5 per cent per annum. Africa's urban population will nearly quadruple from 138 million in 1990 to 500 million in 2020, with increasing concentrations in medium and large cities. By 2020, two-thirds of Africa's population will be living in cities.

The pace of urbanisation is exacerbating problems of urban water management, especially because the countries in which the process is most dramatic are those with fewest resources. Meeting the competing demands of domestic, industrial and commercial use is a daunting challenge for African cities. Faced with a rapidly escalating demand, many cities are forced to convey freshwater from great distances (for example Johannesburg brings water from the Lesotho Highlands, some 600 kilometres away) or abstract water from deep aquifers at an unsustainable rate. Cities

are also discharging ever increasing volumes of waste into freshwater bodies, threatening water quality and aquatic ecosystems.

Water scarcity in African cities is also a potential source of social and political conflict. More than half the inhabitants of African cities lack access to municipal supplies. The urban poor are forced to pay street vendors 5 to 20 times as much as for a litre of water as their affluent neighbours pay for municipal supplies. Someone living in a low-income settlement in Nairobi pays as much as five times the price paid by the average U.S. citizen for a litre of water.

The paradox is that, in this background of scarcity, often more than 50 per cent of the water treated at a high cost in these cities remains "unaccounted for" because of leaking pipes and pilferage. Better maintenance and management of urban water systems is a strategic investment that can bring down this loss considerably.

Much more needs to be done to ensure that urban water and waste management are seen as vital components of urban planning. At a practical level, public-private partnerships and cost-efficient management practices are required. The provision of urban services needs to move away from a model where public water service authorities provide all services to a structure where different parties, including non-formal operators and communities, provide and manage them. Levels of service should be differentiated according to capacity and willingness to pay.

STRATEGY

The Sustainable Cities Programme of Habitat/WHO, the Water Utilities Partnership Cities Alliance and other initiatives provide mechanisms to tackle urban challenges in Africa. Such initiatives, and the proposed City Alliance Trust Fund, should embrace urban water management as a priority and provide support for financing, planning, management, operation and training.

The Water for African Cities Programme provides a good example of how UNSIA Water Cluster coordination could support African countries in effectively managing the growing urban water crisis. The programme addresses three priority areas of the UNSIA Water Cluster, namely:

- Assuring sustainable use of and access to freshwater.
- Household water security.
- Freshwater assessment.

The programme, implemented jointly by UNCHS and UNEP, operates at both country and regional level, is fully funded (mainly by UNFIP), and enjoys strong political support in the participating countries (Côte d'Ivoire, Ethiopia, Ghana, Kenya, Senegal, South Africa and Zambia). A number of United Nations agencies, notably the World Bank and UNDP, are already participating in the programme. The programme is also included in the Strategic Action Plan for the Water Sector prepared by UNDP for the SADC region.

Coordination support by UNSIA could help extend the benefit of the programme to additional countries, particularly in the SADC region. The programme could also benefit from the participation of other specialised United Nations agencies with comparative advantage (e.g. UNECA in advocacy, UNESCO in water education, WHO in monitoring water quality, and WMO in water resources assessment).

The UNSIA coordination effort could initially focus on enhancing region-wide information exchange through the established website of the programme (WACWEB) and its Internet-based network activities by linking them to the planned UNSIA Water Cluster website, and promoting joint training activities with support from an increased number of agencies. Expansion of programme activities in SADC and other African regions should also receive priority. Through such actions, UNSIA could also demonstrate the effectiveness of coordinated system-wide efforts in producing a visible impact in the participating countries over a relatively short time frame (2–3 years).

WORK PLAN AND EXPECTED OUTPUTS

The UNSIA Water Cluster Technical Working Group should work to:

- Promote the adoption of an integrated approach to managing urban water resources, by stressing the links between water, urban development and the environment.
- Support ongoing sector reforms to ensure more active private sector participation in the urban sector with a view to achieving performance gains and a larger investment flow.
- Promote improved efficiency of water use in urban areas, both in the productive and domestic sectors, through the introduction of water demand management measures at the city level.
- Support the assessment and mitigation of the environmental impact of urbanisation on freshwater resources and aquatic ecosystems.
- Support an enhanced flow of information and good practices on urban water resource management among African cities.
- Build regional capacity for managing urban water resources.
- In seven selected cities:
 - a Develop a strategy for integrated urban water resources management.
 - b Develop strategies and implement related work plans for urban water demand management.
 - c Develop strategies for the assessment and mitigation of water pollution from urban land use activities.
- Develop regional capacity for urban water management in two regional resource centres (one for Anglophone and one for Francophone countries).
- Establish an online network in the region for city managers to share information and disseminate good practices on urban water management.

5 THE WAY FORWARD

Implementation on the ground is the only true measure of the success of the Water Cluster goals. The strategy is a first step, but there must be clear institutional arrangements for implementing the strategy, and the roles of the agencies must be comprehensively determined. Everyone concerned with the future management of Africa's water—governments, international organisations, NGOs, representatives of civil society, even householders—has a role to play.

The UNSIA Water Cluster Technical Working group intends to make tangible progress in the following areas:

- *Encouraging the proposed African Ministerial Conference on Water to promote water policy development:* The Water Cluster Technical Working Group will explore the feasibility of organising regional ministerial forums on water.
- *Instituting a Regional Water Forum on the African Water Vision:* The African Water Resources Secretariat, based in the World Bank Offices in Nairobi, can serve as a useful vehicle for promoting dialogue on the various facets of water security in the region. The Secretariat can play a useful advocacy role and can help mobilise the region's scientific and technical strengths in the field of water resources in support of the activities of the Water Cluster. This will ensure the direct participation of African experts and institutions in the UNSIA Water Cluster's work.
- *Keeping the state of Africa's water resources under review:* The UNSIA Water Cluster Technical Working Group will produce annual regional water development progress reports. The framework for the preparation of such reports could include the outputs of the Global International Waters' Assessment, the Land-based Assessments of Sources of Pollution, agency inputs to the World Water Development Report, and the water assessments initiatives of agencies.
- *Coordination:* The UNSIA Water Cluster Technical Working Group and the Inter-Agency Working Group for Water in Africa (IGWA) are working out modalities for joint actions or for a merger of the two in order to bring about greater coherence. They will jointly convene the meetings of the Water Cluster and in the immediate future IGWA could perform the role of the Technical Working Group for the Water Cluster.
- *Best Practices:* The UNSIA Water Cluster Technical Working Group will organise workshops and consultations on best practices in water policy reforms and water resources management.

- *Website:* The water cluster will put in place a website to help promote awareness of United Nations system-wide activities in the water sector in Africa.
- *Preparing for the 2002 Earth Summit:* The UNSIA Water Cluster Technical Working Group will conduct a 10-year review of United Nations assistance to Africa in the water sector, by 2002. The outputs will include a report entitled "Water, Africa and the United Nations (1992–2002)". The report will be the UNSIA contribution to Africa's preparations for the 2002 Earth Summit.

Other UNSIA Water Cluster priorities include:

- *Building awareness and consensus:* There is an immediate need to create awareness and consensus at all levels about the UNSIA Water Cluster goals and those of the African Water Vision.
- *Creating an enabling environment for international cooperation:* The management of international waters has been identified as a priority by the UNSIA Water Cluster due to the multiplicity of international waters in Africa. To respond to this, early action will be taken to develop a framework and an enabling environment for cooperation among United Nations organisations in the management of international water basins. Good models that have been cited include the Nile Basin Initiative, the Protocol on Shared Watercourse Systems, the SADC Zambezi River Basin Action Plan, the Lake Chad Basin Commission, and the Niger Basin Authority. The UNSIA Water Cluster will target one or two of these basins for concerted support.
- *Creating frameworks for integrated water resources management:* A prerequisite for successfully addressing pressing water problems is to change from the fragmented approach to water resources management to an integrated approach. This calls for an understanding of the Dublin-Rio principles. It also calls for a programme of gap analysis to determine the types of strategic assistance needed at country level for implementing integrated water resources management. The UNSIA Water Cluster will promote dialogue in this area.
- *Building capacity:* One of the major constraints to the development of water resources in Africa is inadequate human and institutional capacity in the water sector for integrated water resources management. Capacity building in this area will be supported by the members of the UNSIA Water Cluster.
- *A UNSIA Water Cluster Trust Fund:* The Trust Fund will help finance the core activities of the Water Cluster, especially those listed above. The African Development Bank and the members of the UNSIA Water Cluster are expected to provide start-up funds.

DEVELOPING CLUSTER PERFORMANCE CRITERIA

Based on the rationale for establishing UNSIA, the following evaluation criteria have been identified for assessing the progress and efficacy of Cluster assistance:

- The extent to which there has been coordination or partnership between Cluster agencies at country and regional levels.
- The extent to which coherence of assistance has been strengthened through effective coordination, capacity building, and facilitation of genuine partnerships.
- The extent to which ownership and leadership of projects have been promoted in developing the process.
- The extent to which United Nations support has been made in Africa-identified priority areas.
- The extent to which projects have been demand-responsive.
- Progress in addressing the root causes of water problems in Africa.
- The extent to which Water Cluster activities have contributed to poverty alleviation, peace-building, and stability in Africa.

DEVELOPING TRANSITIONAL ARRANGEMENTS

Given the imperatives of budgetary constraints and commitment to projects in the pipeline, the Water Cluster plans to adopt the following transitional arrangements:

- Intensify ongoing programmes of assistance, harmonise them with Cluster guidelines and strategies, and at the same time extend partnerships, where appropriate.
- Develop and implement agreed mechanisms for coordination at national and regional levels to capture efficiency gains and possible savings for governments and Cluster members.
- Identify priority areas for new Cluster activities to meet stated African needs.
- Use savings and new funds to provide strategic assistance for the implementation of water visions at national, regional, and Africa-wide levels.

THE MAIN THRUSTS OF ACTIONS / PROGRAMMES UNDER THE UNSIA WATER CLUSTER

CHALLENGES

ASSURING SUSTAINABLE USE OF, AND ACCESS TO, FRESHWATER

- Equitable and sustainable use of freshwater resources (over-arching strategic approach to integrated water management).

HOUSEHOLD WATER SECURITY

- Greater UN system-wide collaborative efforts on water supply and sanitation including community management of the water environment, watershed protection, pollution control, and water governance.

FRESHWATER ASSESSMENT

- Expanded freshwater assessment with special focus on qualitative and quantitative hydrological data, social, economic and health-related information/data, and assessment of the state of both surface and groundwater in Africa.

WATER FOR FOOD PRODUCTION

- Enhance rainfed and irrigated food production, cropping intensification to increase efficiency, water harvesting, small scale irrigation, and soil conservation.

ACTIONS

- Reviews conducted by the Inter-Agency Working Group for Africa whose secretariat services are provided by the UNSIA.
- UNEP/UNDP/World Bank/GEF International Waters Portfolio.
- UNEP Fair Share water strategy.
- UNEP/WMO proposals on water assessment and environmental technology.
- World Bank/UNEP 1999 Conference on African Water Policy.
- World Bank/UNDP International Water Partnership Agreement on the Nile Basin Initiative.
- UNEP/UNDP/World Bank Global International Waters Project with components for Africa.

- UNICEF and WHO regional programmes dealing with water and sanitation.
- UNEP Regional Source Book for Africa on water augmentation technologies.
- UNICEF Water Supply and Collaborating Council.
- UNICEF African Professional Working Group on Water Supply and Sanitation.
- UNEP/UNCHS Water for African Cities.
- UNDP/World Bank Water and Sanitation Programme.
- World Bank/Water Utility Partnership.

- WMO/WHYCOS observing systems and other freshwater assessment programmes conducted in collaboration with UNESCO and other agencies.
- WMO/ECA Conference on Water Resource Assessment.
- UNDP/World Bank Project on Sub-Saharan Africa Hydrological Assessment.
- Working Group on Hydrology of the WMO.
- African Water Resources Assessment Action Plan of the WMO Hydrology and Water Resources Programme.
- WMO/UNESCO Water Resources Handbook for the Review of National Capabilities.
- IAEA regional projects on water resources.
- Assessment using isotope techniques in combination with hydrological studies.
- UNEP/UNDP/World Bank International Waters Assessment project.

- FAO Regional Programme on Freshwater and Irrigated Agriculture.
- World Bank related activities.

RESULTS

- Continued collaboration between IGWA and river/lake basin organisations in Africa.
- GEF International Waters activities and projects for Africa.
- Regional components of the Global International Waters projects.
- Water policy reviews and analyses.
- Increased inter-governmental dialogue on water resources.

- Special focus and increased attention to the growing water demand and supply challenges in the urban centres of Africa.
- Increased funding for water and sanitation programmes.
- Greater collaboration between key agencies in this area such as WHO, UNICEF, UNDP, World Bank.

- Strategy and action plans for water resources assessment of African countries.
- Projects on international waters assessment in Africa including those envisaged under the Global International Waters Assessment Project of the GEF implemented by UNEP.
- Guidelines and tools in water assessments.
- Support to collaborative African programmes on water assessment.
- Updated information and data on water assessment.

- Water control and management systems.
- Improvement in existing surface irrigation through increased efficiency.
- Water conservation programmes.
- Capacity building programmes in water control and management.