

Chapter 14:

Governing Water Wisely

In principle, the institutional framework for water management should comprise the bodies that establish the rules or legislation on the development and use of water resources and the legislative bodies and agencies with regulatory or political functions and responsibilities. The institutional framework should therefore aim at reconciling different interests of water users at all times and facilitating the correct implementation of water resource policies and programmes. In general, the framework should include the following elements (Andah, 1996):

1. Specific rules and laws governing the assessment, development and use of water resources;
2. The decision-making bodies on programmes for the tapping and utilization of water resources; and
3. The various levels of communication and information links between decision-making agencies, groups directly affected by water management programmes and the general public.

The type of prevalent institutional structure for water management in any country has been shaped not only by political and administrative organizations but also by the historical role of water in national development and the perceived desires and needs embodied in the value of water. The diversity of the degree of institutional integration in water management is as natural as the degree of problems inherent in the management of irrigation, drainage control or pollution control. The diversity also reflects the differing historical, political, economic, social, administrative, geographical, physiographical, and climatological conditions of a given territory.

The increasing demands on water due to the present population growth and general awareness of the diminishing water availability in time and space due to either natural humid deficiency or human's negative impact on water bodies through pollution, calls for regulatory action, which, in its totality, is considered as the basis for water management. Such actions could include (Gonzalez Villarreal F.J., 1980):

- Regulation of the water system, referring to measures that make it possible for increases in the available supplies;
- Regulation of the boundaries between the water system and user system, covering the phases of planning, construction and operation of hydraulic infrastructures necessary to ensure that the natural supply is adequate to meet the demand programmes of the whole user system, which should now include the impacts of water consumption on the water system such as groundwater use, erosion and pollution controls;

- Regulation at the boundaries of inter-related users, especially useful in water stress regions; inter-related users can be subjected to a prioritization scheme in the form of differential pricing and allocation for different uses, as well as conflict resolution. Such a regulation is normally better effected if the physical water basin is taken as the basis for water management; and
- Regulation of international costs and boundaries referring to all activities that ensure the adequate quantity and quality supply for various transboundary water uses through international agreements on water allocation and pollution control.

The most recommended forms of regulation are utilization concessions, waste discharge permits and tariffs which must be established prior to use of the resource. Tariff systems must not only take into account the recovery of capital and operating costs but also promote the efficient and beneficial use of water. The principle that the polluter must meet the cost of depollution should be the economic basis for pollution control.

Institutional capabilities for Integrated Water Resources Management (IWRM)

Generally, from an administrative point of view, a comprehensive institutional framework (legislative, organizational and decision-making) must cover the following functions as much as possible (Andah, 2002a):

- Preparing an inventory, both quantitative and qualitative, of water supplies (surface and groundwater);
- Policy-making on water;
- Administration of water rights;
- Planning for water use;
- Launching projects for the improvement, utilization and conservation of water;
- Operation, maintenance and supervision of waterworks;
- Settling conflictual situations and disputes;
- Coordination of water resources activities; and
- Water resources research and technology transfer.

National and institutional capacities are needed for adequate and appropriate approaches to Integrated Water Resources Management in a holistic manner, which should include the general capacity for creating knowledge and information bases through research and development in order to guarantee adequate and timely skills and competence necessary for:

- Continuous data collection activities on the components of the hydrological cycle and environment dynamics, and modern database management systems for archiving, control and retrieval of data;

- Water resources assessment for the design and management of water resources projects in a sustainable way with natural ecosystems;
- Monitoring of freshwater availability, desertification processes, environmental change and degradation, and hydrological disasters such as floods and droughts, taking into consideration the ongoing predictions on climate change;
- Development and diffusion of knowledge bases commensurate with the growing demands on water and the advances in science and technology;
- Development and adaptation of new technologies into local conditions; and
- Creation of modern information communication systems, capable of interacting at all levels of decision-making and enhancing the growing role of the public in water management.

The correct assessment of water resources in time and space of a region, nation or of a basin is therefore of crucial importance to rational and sustainable development of the global water resources. The possibilities for the utilization and control of water resources are based on the correct assessment of a country's water resources, which determines the sources, extent, dependability and quality of the water. The capacity to make sound decisions on how best to develop and manage water resources is, to a large extent, dependent on the capabilities to collect reliable and adequate data and information on the status and trends of the water resource, including both quantity and quality.

The water resources assessment framework is therefore perceived to incorporate the following:

- **Resource supply assessment** directed at the physical availability of surface and groundwater as regards both the quantity and quality;
- **Demand assessment** dedicated to the water requirements of different water uses and development alternatives, often in conflict between them and the natural ecosystems;
- **Environmental impact assessment** evaluates the impact of water resources development projects on natural and physical ecosystems;
- **Social impact assessment** examines how social and institutional structures affect water use and management; and
- **Risk or vulnerability assessment** of floods and droughts provide information on the frequency and magnitude of their occurrence, ways of mitigating them and subsequent incorporation into the general water resources management system.

The enabling institutional environment

The role of the institutional framework within which water resources could be effectively and rationally developed and managed has been growing in the last decades due to the in-depth perception being attained for the complex interaction of the controlling variables of both the

physical and socio-economic aspects of this vital resource. It is a fact that any attempt at achieving a good level of water resources planning and management must begin with a proper quantification of the resource both in time and space, specifically, the hydrological and water cycles. From the hydrological point of view, water resources institutions can generally be grouped into two - those engaged in the physical quantification of the components of the hydrological cycle such as meteorological and hydrological services and those managing the user systems, for example, irrigation, water supply, hydropower development agencies, and so on.

The types of water resources institutions prevalent in any country are a reflection of many factors, including climate and water resource development level. It can be observed that countries with arid and semi-arid climatic fluxes, such as Egypt and Sudan, have generally developed their water resources along central irrigation bodies either in the form of ministries or authorities. In the tropical humid regions, where oil resources are lacking, the central mover is an authority on hydropower development. From the institutional point of view, there is not only one authority or agency responsible for water management in any particular country. There exist multiple sources as regards legislation or the institutional framework. This situation naturally creates conflicts of jurisdiction, inter-institutional rivalries which can hinder the rational development and management of water resources. A water authority can be considered at different levels (national, regional, or local) and according to different functions (political, executive, technical, legal). It therefore becomes indispensable that modern legislative processes are directed at a precise definition of the relationship between the different authorities responsible for water, either horizontally or vertically, according to the functions they perform.

Legal bases for preparing water legislation

Any water use, if not properly planned and managed by water law and administration might cause detrimental side effects on the water body itself, to other natural resources and to the general environment. The increasing complexity of problems associated with the use and development of water resources and the potential for social conflict inherent in a growing imbalance between fixed or diminishing water supply and an ever-increasing water demand on one hand and the impact of water-utilizing technologies on the resource itself, on the other hand, calls for an adequate response from law makers. In such a situation, the developed countries are more concerned with legislative modernization while the developing countries are mainly at the stage of creating the necessary legal framework for proper administration of water resources. The legal administration of water resources must reflect two salient directions. First, the quantitative and qualitative requirements of a better distribution and use of water resources must be reconciled with acquired rights and long established practices. Second, the legal arrangements must take into account the existing and future water variations, both excesses and shortages, in order to avoid conflicts and disasters. The legal framework must include (Caponera D., 1988):

- Ownership or other legal authority for water resources, covering surface water, groundwater and all other water resources;
- A distinction that can be made between private and public ownerships. The latter can also be subdivided into national, regional or local as and when applicable;
- Rights on the use of water can be in the form of authorizations, permits, licences, or concessions subject to some regulations that vary from country to country;
- Modern water rights flexible enough to introduce functional criteria for the use of water by giving the competent water authority sufficiently wide discretionary powers;
- Ordering of water use on priority basis must be included in the legal framework for municipal, agricultural, industrial, hydropower, aquaculture, navigational and recreational uses, especially in water stress areas;
- The legal ordering must be flexible enough to allow for alterations and modifications according to the changing requirements of the national economic, social, and environmental exigencies.
- Beneficial uses of water must be grouped under a unified code as against the present practice of specifying them under their respective water use;
- Adverse effects of both natural and human-induced water, such as flood damage, submergence of riverbanks, soil erosion and siltation, salinization and others, have now become an integral part of the general water management and must therefore be included in a basic water code or in a coordinated form with relevant provisions;
- Water quality and pollution control legal provisions can be formulated under a central water code to cater for water wastage and its wrongful use, water recycling and re-use, sanitation, protection against pollution and the environment in general;
- Groundwater resources must be considered as an indivisible component of the water cycle under special provisions of all appropriate water legislation, covering drilling of boreholes and aquifer risk to depreciation and pollution;
- Protection of waterworks and hydraulic installations must be considered in the legislation with regard to operation and maintenance as well as general protective measures for the water system;
- Declaration of protected regions or zones such as drainage basin boundaries and smaller zones such as land development units, flood protection or drought emergency zones, national parks and reserves and also areas of pollution sources, should be covered under special provisions of the legislation;
- Financial aspects of developing water resources should be dealt with by legislation to cater for direct and indirect state funding, loans, subsidies and subventions as well as policies on capital recovery and operational costs; and
- Enforcement procedures must be provided for under any modern water legislation for the protection of water rights, including sanctions and other legal measures against infringement of the water code.

Organizational structure

The type of prevalent institutional structure for water management in any country has been shaped not only by the political and administrative organizations, but also by the historical role of water in the national development and the perceived desires and needs embodied in the value of water. The structures are therefore a reflection of many factors, including climate, level of water resources development, historical and cultural link with water (as in semi-arid and arid regions) and the political structure. The political administration also exerts a lot of influence on the evolution of the water institutions. A more decentralized organizational structure can be expected in a federal state or a regionally conscious state rather than in a unitary state with differing levels of coordination. The type of political and administrative set-ups and the prevailing water policy go a long way to determine the degree of administrative integration in the management of water resources.

Prevalently, decentralized institutional structures for water management might be based on water-basin finance agencies and coordinated at the national and regional levels through administrative participation of technical and research bodies, both public and private and by representatives of water-related economic interests, as can be found in the Volta River Authority of Ghana. Institutional structures can also be based on territorial divisions defined by the main water basins with some form of integrated water resources administration.

The centralized institutional structures are normally found with separate competences within state ministries, such as the Ministry of Public Works (Ghana), the Ministry of Irrigation (Egypt, Sudan). Other countries place their administrative structure for water management according to the degree of importance attached to water problems in Ministries such as Interior, Health, Environment and Agriculture. In some countries, a centralized administrative function is exercised through a national water resources authority or commission, composed of representatives of all sector interests. Such a practice has been experienced in Ethiopia and is presently being practiced in Ghana and Niger. Another form of a centralized water administration is through the formation of an actual Ministry for Water Resources, as was done in Kenya, Ethiopia, and Nigeria. Some prevailing types of water resources institutions are shown in Table 15.1.

Table 14.1: Prevailing Types of Water Resources Institutions in Some African Countries

TYPE	CHARACTERISTICS	COUNTRIES
Loose or Uncoordinated Institutions	Policies fragmented in various Ministries with water interests	Ghana Sierra Leone Niger Cameroon
Water Commission / Board	Overall policy-making and coordination with agencies, public corporations and departments of ministries being subordinated	Ghana ¹ Niger
Ministry with mixed competence (Ministry of Water Resources, Forestry and Fisheries) Ministry of Mines, Water and Energy	Partial or overall policy-making or coordinating body for water	Gambia Uganda Zambia Malawi Cameroon Burkina Faso
Ministry for Water Resources	Solely responsible for planning and coordination of water resources activities	Ethiopia Kenya Nigeria
River Basin Authorities	Responsible for coordinating development projects within basins	Nigeria Ghana

In practice, the institutional structures for water resources management are generally found to be a mix of centralization and decentralization. The distribution of authority either from the centre or amongst the sub-national structures varies from country to country according to differing inter-related factors. It must be noted that structures of centralized water resources management and planning that do not have to reckon with multiple levels of governmental authority can lead to a more expeditious re-allocation of existing resources among uses and/or users as conditions change and a superior ability to proceed with water development projects without being constrained by state, regional or local claims of authority over the resources. Alternatively, plans prepared at the central level without proper consultation with and participation of the regions and users could fail to sufficiently take into account their particular needs and aspirations.

There is no country where some sort of central authority does not exist either on a permanent or on *ad-hoc* basis for coordinating water resources activities implicitly or explicitly. The functions of such institutional frameworks vary in different environments and could be in the form of:

- Playing a critical role in identifying the socio-economic determinants of water development policy and its objectives;
- Acting as a body limited in its tasks to synthesis and coordination in an advisory capacity; and
- Performing an executive role with high administrative standing, including following up the execution of water plans.

It is evident that increasing state intervention in water management becomes the more irreversible as the need for proper coordination of planning, development and control of water administration

grows. The effectiveness of such an intervention will be enhanced if users and beneficiaries of water are involved in the water administration with the general tendency of such beneficiaries bearing the costs of water development. The diversity of the degree of institutional integration in water management is as natural as the degree of problems inherent in the management of irrigation, drainage control or pollution control. The diversity also reflects the differing historical, political, economic, social, administrative, geographical, physiographical and climatological conditions of a given territory. At the same time it must be kept in mind that all issues related to water form part of an integral whole based on the intrinsic unity of the water resources of each water basin.

Decision-making structure

Due to the multifaceted nature of water resources use, it is almost impracticable to have a single body that makes decisions on water management. Decisions on water supply and development affect various interests, covering sectoral, organizational and regional issues. The sectoral interests involve water supply for domestic use, irrigation, hydropower generation, transport and recreation while the organizational interests are concerned with the bureaucratic bodies dealing with water use and development. Such interests can even be parallel among themselves. Regional interests are normally located in identifiable physical entities or a political division. When decisions are made with predominance to any of the specific interests, imbalances and conflicts can occur. It should be desirable that decisions on water management should be the result of an interaction of a number of bodies with a trade-off between benefits and adverse effects being drawn collectively between the various interest groups. It is well known from experience that the establishment of a national or regional authority does not necessarily guarantee the full integration and unification of the process since it is difficult to establish one body that covers all facets of water management. Such a decision-making process becomes easier if water development is envisaged under multi-purpose planning. It therefore becomes clear that coordination should be a basic element in water resources planning and management.

Generally, institutional structures will vary from country to country and sometimes even regionally within the same country. In designing an appropriate institutional structure for water planning and administration, it can be recommended to consider the following criteria:

- The institutional structure must be able to consider a broad range of alternatives to the problems under investigation;
- The structure must guarantee a combination of efficiency and fairness in water administration, consistent with the national policy;
- The institutional framework must permit and encourage continuity through adaptation of plans to changing local, regional and national priorities;
- The structure must permit and encourage representation of all stakeholders affected by specific development and management plans; and

- The institutions must possess the capacity to generate a continuing process of learning based on project and post-project analysis in order to improve their effectiveness.

A sufficient authority must exist within the institutional structure to oversee concordance with construction and operational plans and to forge a closer link between planning and resource allocation. The institutional structure must guarantee that the implementation stage includes provisions necessary for an adequate water supply both in quantity and in quality and the services needed by other structures to ensure continuing functioning as regards operation, repairs and maintenance. The institutional structure itself must be dynamic in essence, capable of evolving in accordance with changing national and regional conditions.

It can be seen from the above described components of water management institutions that a unique authority does not exist anywhere that can cope with all the decisions necessary to carry out comprehensive water resources activities, be it a centralized or decentralized institutional framework. The most expedient alternative is to establish a coordinating mechanism that could bring various parts into proper relation, establish consistency in decisions, ensure unity of action, and adopt an integrated or balanced approach to problems and activities in order to achieve the desired objectives of the national water policy.

Towards an effective institutional framework for water management

The complex and multi-disciplinary nature of water resources management and planning coupled with the present problems of pollution and environmental degradation seems to indicate a centralized institutional structure for the effective management of water and land resources in its integrated whole. The intriguing question regarding centralization is not necessarily tied to the choice of centralization but rather to the type of functions it must exercise, be it coordinated or executive.

The planning of water resources within the general framework of economic activity with a decidedly integrated approach, to the planning of water resources regarded as a particular aspect of the national planning process are all practiced in one way or another in various countries. Presently, national water management institutions are accepted as a necessary component in the national administrative framework, the responsibilities of which must at least cover the following:

- Provision of a unifying perception of national water concerns and interests which permit modification of the legal and institutional framework;
- Creation of a national framework of water management, including evaluation and control, within which regional and national programmes can be fitted in relation to national socio-economic and environmental objectives;

- Evolution of rules and procedures within which water management activities can be programmed;
- Provision of available and projected total estimates on water supply and demand and possible future critical areas and problems;
- Creation of the necessary basis for the efficient and effective water resources management at the lowest levels of operation;
- Provision of the administrative and coordinating mechanisms to deal with inter-regional and international water management problems;
- Coordination and promotion of national programmes of information, research, and training and programmes for information and technology transfer at the international level; and
- Intervention, when necessary, in the execution of regional and/or river basin projects or programmes.

Decentralized institutional frameworks are diffused in every country based on either the sectoral use or on regional entity, which more often than not, coincides with identifiable water basin(s). Recent experience has tended to show that water management may be most efficient if regional agencies operate within limits of water basins, and are responsible for regional water planning and related measures and for administering both the water resources and the water services. The administrative agencies in water basins can however be grouped into three broad categories according to their competence and functions, as follows:

- Those with only planning and coordination authority;
- Those with responsibilities in coordination and finance; and
- Those with powers to draw up development plans and execute them and also to operate the systems within the basin.

The river basin management experience in Africa seems to indicate sectoral biases, as in the case of the Volta River Authority in Ghana, dominated by hydropower generation, and the Awash Basin Authority in Ethiopia, with predominance of irrigation (Andah, 2002c). It is important to emphasize that in Africa, purely regional water agencies do not exist as the final product is under national control and use. Due to the diverse functions of regional institutions, the following recommendations can be considered:

- The national water institution should have the necessary authority to guide, integrate and coordinate all water resources activities at the regional and basin levels efficiently, bringing together all sectoral interests in water management.
- The institutional relationship between regional or water basin agencies and the national authority must be well defined. In order to facilitate gradual integration of water management into the management of the environment, a close link must be established between water resources management and general regional planning.

The characteristics and jurisdiction of the water basin agencies and their responsibilities to the water users must be set up in a legal and administrative framework which might cover the formulation of up-to-date databases of the supply and use of water in the region, the operation and maintenance of hydrometeorological network, planning, design, construction and operation of water installations and also the establishment of systems of charges and tariffs necessary to recover capital investment, operational and maintenance costs.

Box 14.1: Advantages and Disadvantages of Centralized Institutional Framework

The degree of flexibility and incorporation of water resources activities can produce positive and negative features in a centralized water administration. The advantages of centralization include (Andah, 2002c):

- Unites sectoral interests and multi-level decision-making in a legal and institutional framework consistent with national aims and objectives.
- Enhances a better allocation of human and financial resources for the evaluation and control of water programmes and policies.
- Provides a national framework for the estimation of supply and demand and programmes for overcoming future imbalances.
- Facilitates the adoption of standards and procedures for water activities, including types, installation and maintenance of equipment and common bases for comparison of different project feasibility studies.
- Harmonizes inter-regional and international problems with national interests.
- Evolves models common to different regions towards better use of technical capacity and expertise.
- Establishes a hierarchical order of projects in accordance with national priorities.
- Develops training and research programmes within a national policy of capacity building and enhancement, taking into consideration the scientific and technological requirements.
- Avoids duplication of work of regional and sectoral agencies through the establishment of information systems and analytical tools for common use.
- Provides a central framework for minimizing local pressures in resource allocation and hence guarantees a more equitable and efficient use of the resources.

Excessive centralization without regional and sectoral feedback can, on the other hand, produce the following disadvantages:

- Standard policies that are too restrictive and hence inappropriate for tackling particular regional and local problems.
- Limited participation of users in project formulation, in decision-making and in the financing of measures.
- Loose contact with users and local exigencies leading to decisions based on incomplete information and to ineffective execution and operation of projects.
- Establishment of a large, central bureaucracy which can result in slow decision-making and inefficiency in programme execution.
- Formulation and execution of multisectoral regional plans which can be hampered by central authority obstacles.
- Restriction of regional negotiating capacity in the absence of proper reconciliation of national interests with prospects of regional development.

Box 14.2: Statement of the African Ministerial Council on Water (AMCOW)

Water – A Key to Sustainable Development in Africa - 12 May 2003

Towards achieving the targets set at the Millennium Summit and the World Summit on Sustainable Development (WSSD)

Introduction

We, the Members of the Steering Committee of the African Ministerial Council on Water (AMCOW), having met in Dakar, Senegal, from 20-24 May 2003, adopt the “NEPAD Statement on International Solidarity with Africa for the achievement of the water-related targets in the Millennium Development Goals and the outcomes of the World Summit on Sustainable Development”. Our Meeting is part of our quest for implementation actions in line with the expectations of the Johannesburg Summit.

For over 30 years, numerous conferences and international agreements have built the framework for today's water resource policies and decisions. The international community, in both the Millennium Goals and the outcomes of the World Summit on Sustainable Development, underlined that the global water crisis is a threat to economic development, poverty reduction and the environment, and hence to peace.

I. Time for Action: Towards a new regional and global compact for achieving the targets on water in Africa

We note that the supply and quality of freshwater in Africa remains one of the most critical issues of the twenty-first century.

In Africa close to 40% of the population are without access to safe water supply and even more lack adequate sanitation. A number of partnership initiatives as well as a new water policy framework were announced at the WSSD, including the recent reform of EU water policy and the new Water Framework Directive of the EU. The need to integrate sustainable water management in national and regional development strategies is now widely recognized as a pre-requisite for achieving the MDGs on water in Africa.

We welcome the international community's recognition that, in Africa, over 40% of our people have no access to water. We call on the international community, in conformity with the NEPAD goals, to work with Africa in addressing the myriad of challenges inherent in long-term water management. They should support regional efforts to develop coherent water management strategies, set up appropriate bodies at national, regional and local level, and attract the necessary public and private investment.

In this regard, we applaud the solidarity of the EU with Africa in the water sector, as manifested in the launch, on the occasion of the World Summit on Sustainable Development in Johannesburg, of a major initiative to help achieve, in our region, the targets set at the Millennium Summit and in Johannesburg to reduce by half the number of people without access to drinking water and sanitation by the year 2015.

We recognize that the achievement of those targets calls for measures and initiatives of a very special character on the part of all concerned, including our countries and civil societies as well as bilateral and multilateral agencies, the private sector and other stakeholders, if we are to mobilize the resources needed. We also fully realize the urgent need for innovative mechanisms to enable us to mobilize significant sources of financing from public, private and international resources.

As part of our commitment to the achievement of the targets on water in the Millennium Development Goals and the Johannesburg Plan of Action, the African Governments along with representatives of the international community will convene the Pan-African Implementation and Partnership Conference on Water, in Addis Ababa, 8-13 December 2003.

At the Conference, we shall agree on a roadmap to expedite the translation of commitments into action, through a series of concrete measures and initiatives in the water sector. In this regard, the Conference will address the implications of the WSSD on regional water initiatives, and the continent's role in the implementation of the Summit's outcomes. The Conference will provide a unique opportunity to determine how to collectively meet the WSSD targets on water and to achieve the Millennium Development Goals. Our objective is to focus attention on the implementation requirements as well as the means of implementing, in Africa, the many regional and international targets in the water sector. The Pan-African Conference will seek to secure inter/intra African commitments to the implementation of targets, and build international solidarity in the form of meaningful partnerships.

Under the aegis of NEPAD/AMCOW, we shall, at the Pan-African Conference launch:

- The African Water Development Report;
- A regional initiative for Integrated Water Resources Management in each country;
- A master plan for trans-boundary basins management;
- An innovative programme for strengthening national and sub regional water policies, laws, institutions and other instruments;
- Specific modalities for the effective implementation, at the national, sub regional and regional levels, of the EU-Africa strategic partnership on water;
- Modalities for the full implementation of the African Water Facility for mobilization of public and private as well as international financing essential to the achievement of the targets in the water supply and sanitation sector at the national and sub regional levels; and
- A regional initiative for financing groundwater assessment and management.

II. Support to Africa by the Group of Eight Industrialized Countries (G 8)

At its Summit in Kananaskis, Canada in 2002, the G8 Group of Industrialized Countries noted that the importance of water spans over a wide range of critical uses – from drinking water, to sanitation, to food security and agriculture, to economic activity, to protecting the natural environment. The G8 Leaders also noted that water management is sometimes at the centre of threats to regional peace and security. The African Ministerial Council on Water notes the measures taken by the Kananaskis Summit to encourage efforts to improve water resources development and management in Africa. That Summit laid a firm basis for supporting Africa's water-related initiatives.

Nine months ago, at the World Summit on Sustainable Development, the international community committed itself to specific goals, targets and time bound measures aimed at accelerating the transition to sustainable development. While some of these targets constitute a reaffirmation of the Millennium Development Goals, most represent new commitments.

As the G8 Leaders met in Evian-les-Bains, France, at their first Summit since Johannesburg, a key question demanding urgent attention was the partnership needed to help Africa achieve specific time-bound measures, particularly within the context of the following water and sanitation targets agreed to at the WSSD:

- Establishment of a world solidarity fund to eradicate poverty and promote social and human development, making community level water and sanitation projects eligible for funding;
- Elements for a programme of action on sanitation;
- A mandate to launch a programme of action, with financial and technical assistance to achieve the MDG on safe drinking water and the additional target on sanitation;
- Development of Integrated Water Resources Management and water efficiency plans by 2005 with support to developing countries;
- Support to activities for the International Year of Freshwater in 2003 and beyond; and
- A call for effective coordination among the various international and intergovernmental bodies and processes working on water-related issues.

The international community has underlined that the global water crisis is a threat to economic development, poverty reduction and the environment and hence to peace.

We invite the leaders of the G8 Countries to build a new compact with our region in the field of water - a key to sustainable development in Africa. We call on the leaders of the G8 group of Countries to endorse, at its 2003

References

Andah K.: Institutionalization of Water Resources Management in Developing Countries - Keynote Address. In Andah K., & Sannoh S. (Editors): Water Resources Management in Drought-Prone Areas. Proceedings of an International Workshop, Addis Ababa, March 18-22, Grifo publishers, Perugia, 1996.

Andah K.: Technology Transfer and Information Dissemination in Developing Countries, Article level contribution to the UNESCO Encyclopaedia on Life Support Systems. EOLSS on-line: <http://greenplanet.eolss.net/EolssLogn/LoginForm.aspx>, UNESCO, 2002c.

Andah K.: Water Resources Technology Transfer and Capacity Building, Topic level contribution to the UNESCO Encyclopaedia on Life Support Systems. EOLSS on-line: access to login <http://greenplanet.eolss.net/EolssLogn/LoginForm.aspx>, UNESCO, 2002a

Caponera D. (1988): Water Law and Administration. Lecture Notes, International Advanced Course on Water Resources Management, WARREDOC, Perugia.

ECA (1994): Policies and Strategies for the Development and Utilization of Natural Resources and Energy in Africa, ECA, Addis Ababa. [Report of the Ad-Hoc Expert Group.

ECA (1999): Integrated Water Resources: Issues and Options in Selected African Countries, publication FSSDD/ENV/044/98/rev, United Nations Economic Commission for Africa, Addis Ababa.

Gonzalez Villarreal F.J. (1980): Central Planning in Water Resources Development. In Water Resources Planning Experiences in a National and Regional Context, Publishers. TCD/SEM.80/1, 298 pp, United Nations, New York. Report of a UN Workshop convened in Co-operation with the Government of Italy - Castelgandolfo and Stresa, 1979.

ECA/WMO (1995): International Conference on Water Resources: Policy and Assessment, Report, Addis Ababa.