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**WATER-RELATED ISSUES IN THE ESCWA REGION, THE CURRENT
SITUATION AND THE CHALLENGES**

**GENERAL OVERVIEW OF WATER-RELATED ISSUES
IN THE ESCWA REGION**

Summary

In view of the critical status of the world's water resources, the international community has, since the last quarter of the twentieth century, been concerned about and held many meetings on various aspects of the issue. The first of those meetings was the United Nations Water Conference, Mar del Plata, Argentina, in 1977, and the most recent the Third World Water Forum, Kyoto, Japan, in 2003. Such meetings were attended by a wide range of experts, specialists, civil society representatives, ministers and high-level Government officials from all over the world, and produced a global consensus as to the need for the adoption of a new vision for water resource management in the early twenty-first century. It is expected that such a vision will have a direct impact on the way in which the Arab region deals with and manages water-related issues.

This document aims to identify the effects that the adoption of such new ideas will have on the management of water resources in the ESCWA region. It also covers the ESCWA vision for and the role entrusted to it in regard of support for the development by the countries of the region of mechanisms for the management of their water resources that are both consistent with the related global vision and take into account the interests and economic, social and cultural particularities of the region.

I. WHAT IS THE VISION OF THE INTERNATIONAL COMMUNITY WITH RESPECT TO THE MANAGEMENT OF WATER RESOURCES TO THE YEAR 2025?

1. The Ministerial Declaration of The Hague on Water Security in the 21st Century identified the following main challenges:

- Meeting basic needs: it should be recognized that access to safe and sufficient water and sanitation is a basic human need that is essential to health and well-being, and to empower people, especially women, through a participatory process of water management;
- Securing the food supply: every person has the right to the basic minimum of food. If that right is to be realized, attention must be given to increasing the productivity of water, rather than focusing on increasing the productivity of land. The green revolution, which increases the amount of land under cultivation, at the expense of water resources, must therefore become a blue revolution, whereby every drop of water is properly valued. Economic mechanisms must, consequently, be so activated as to become tools to encourage the saving of water through the adoption of water-dripping irrigation systems; the establishment of institutions and unions to empower farmers; and the dissemination of techniques for gathering water and the use of supplementary irrigation for crops grown using rainwater;
- Protecting ecosystems: the integrity of ecosystems and, in particular, of wetlands, deltas and lakes, must be ensured for future generations. To that end, water resources must be the subject of integrated management as part of the complementary management of river basins, regardless of the political boundaries of the rivers involved;
- Sharing water resources: in order to promote peaceful cooperation and develop synergies between different uses of water at all levels, trans-boundary water resources must be managed through an international system. It has become clear that intransigence is often counter-productive and unsatisfactory and that international cooperation is the only way to avoid disputes and increase the benefits of the water resources of international water basins;
- Managing risks: in order to provide security from floods, droughts, pollution and other water-related hazards;
- Valuing water: related actions include the use of mechanisms for pricing water services, with a view to achieving equity and increasing efficiency and sustainability. Water has a social value that includes all its uses at various levels. The value of one unit of water for any use reflects its true economic value to that activity. There is no doubt that if, at the very least, a proper price is paid for water supply, waste will be prevented, and that the proper pricing of water services will help to redistribute shares to the sectors with the highest economic yield. Water must therefore be considered an economic commodity. However, its pricing must not have a negative impact on the poor: when financial policies and legislation are formulated, the social dimension must be taken into consideration;
- Governing water wisely: all water users have an interest in its management. Central Governments must therefore be involved and encourage the establishment of local institutions to empower communities and various types of residential agglomerations and, in particular, women, youth and farmers, to manage their available water resources in the way that will best serve their interests and provide them with a direct benefit.

II. WATER RESOURCE MANAGEMENT IN THE ESCWA REGION

A. THE PROBLEMS AND CHALLENGES

2. The ESCWA region currently suffers a variety of pressures and deficiencies that jeopardize the sustainability of its scanty water resources. The natural scarcity of water and the concomitant hot and arid

climate lead to increased levels of consumption and of evaporation in the agricultural sector. The region also suffers from social and housing pressures that have greatly increased demand for water for human consumption and for agricultural and industrial development purposes. As a consequence, the amount of wastewater has also greatly increased, is not being appropriately treated and is polluting already scarce resources. Most ESCWA member countries further suffer from deficiencies in the institutional infrastructure and the water-related legislative and planning systems. At the institutional level, there is intervention in the concerns of the relevant bodies, and an urgent need for coordination between the water sectors and sectors involved in development, economic and social planning: development policies that are dependent on intensified water use, in the agricultural sector in particular, are inconsistent with the critical situation with respect to water of the countries of the region. As for legislation, the region does not suffer from a lack of legislation so much as a lack of mechanisms for implementation and widespread non-compliance. With regard to planning, there is a noticeable lack of integrated and comprehensive planning at the level of trans-boundary water basins. A further deficiency is the limited part played by local communities and stakeholders in the management and rehabilitation of the sector.

3. The region also suffers from such technical problems as the insufficiency of the data necessary to manage demand for water and a lack of such agricultural technology as dripping genetic modification to increase resistance to disease and salinization. The predominance of agricultural activity over all other economic activities and the inability to implement water pricing policies have also been major causes of the depletion of water resources in the region. Certain political circumstances make it difficult for some ESCWA member countries to cooperate in managing the waters of shared rivers and groundwater basins and discovering and developing new resources or preparing and adhering to agreements governing the division of waters between the riparian countries.

B. THE PROBABILITY OF WATER DISPUTES IN THE ESCWA REGION

4. Analyses performed by a large number of military, political and strategic experts are unanimous in indicating that, as the century progresses, the scarcity and deterioration in the quality of water in the region will inevitably lead to unprecedented tension and strife. The question is the extent to which the people of the ESCWA region will be able to deal individually, bilaterally or even regionally with the prospective disputes without resorting to force. Any response to that question must point out that the continuing lack of stability in the security and political spheres in the region has placed obstacles and delays in the path of regional cooperation with respect to the development of water resources and created an atmosphere that is not conducive to such cooperation with upstream States or States beyond the ESCWA region.

5. Notwithstanding the foregoing, ESCWA sees ample grounds for optimism should stability and a just and lasting peace be established in the region. The justifications for such optimism may be summarized as below:

(a) There are, throughout the world, more than 200 water basins that are shared by two or more countries and more than 280 agreements that have been successfully negotiated in that regard and in order to avoid and peacefully resolve water-related disputes. In resolving water-related crises, the countries of the region can draw upon the expertise, positive aspects and successful practices demonstrated in various relevant international experiences;

(b) ESCWA considers that water is and will remain a principal cause of regional disputes in a world in which water resources are dwindling. Nevertheless, there have always been significant traditional mechanisms that ensure cooperation between the peoples that share the same water resources, even in the course of the most violent strife;

(c) On the whole, experts, strategists, military men, politicians and scholars concur in estimating the cost of a war fought over water as comparable to the economic return that could be realized if a peaceful solution were found. Experts estimate the average cost of a war as equivalent to the capital cost of building several water desalination plants.¹ Similarly, the cost of defending, guaranteeing the quantity and quality of

¹ Aaron Wolf, *Hydropolitics along the Jordan River*, United Nations University Press, 1992.

the water resources in the occupied territories and ensuring control thereover could cover both the current cost of desalinating water and the associated environmental expenses;

(d) ESCWA considers that the rapid technological developments in various parts of the world make it possible to develop new water resources without any cost in human life or exposure to international pressure or censure;

(e) ESCWA further considers that the greatest stumbling block in resolving the distribution problems of shared international waters is to find ways of dividing access, and in any case, the scarcity of water in the region remains an unresolved problem. If there is no cooperation, each State in the region will make its own investment aimed at reducing demand and increasing supply, which will lead to the duplication of efforts, waste of time, lost opportunities and reduced benefits.

III. WATER RESOURCE MANAGEMENT AS PART OF THE HYDRO-POLITICAL CONCEPT IN THE ESCWA REGION

6. One of the main aims of ESCWA is to assist the countries of the region in formulating integrated and cooperative ways of best managing their limited water resources and avoiding disputes over those resources. In order to form a picture of the role of ESCWA in helping the countries of the region to avoid such disputes, the traditional means used must be reviewed, together with those for the peaceful management of water that appeared in the World Water Vision that was adopted at the Third World Water Forum in 2003. Set forth below are the ways and means that are considered essential in order to alleviate the water crisis in the ESCWA region.

A. THE APPLICATION OF MODERN HYDROTECHNOLOGY

7. It has been established that modern technologies are a highly effective tool for increasing water resources and reducing demand, provided such considerations are taken into account as fluctuation in supply and demand; global climate change; demographic changes; and the accuracy of available information. Results may be achieved using one or more of the following means:

(a) Increasing water resources by developing new natural sources, such as collecting winter storm water wherever it falls or storing that water underground in artificial reservoirs in order to minimize loss through evaporation and seeking new sources of fossil groundwater;

(b) Increasing water resources by rendering usable impure or salt water, employing technology such as evaporation, distillation, reverse osmosis; recycling wastewater; or transferring water between basins;

(c) Reducing demand by controlling population increase, restricting migration to the Arab region, and minimizing the amount of water allocated to agricultural irrigation by using such modern technology as dripping, small sprinklers that reduce evaporation and the cautious application of genetic engineering to devise modified organic crops that can be grown using less fresh water, impure water or even sea water;

(d) Encouraging cooperation and the exchange of data between the countries of the region in respect of the research into and development of applicable water-conservation techniques.

B. THE DEVELOPMENT OF WATER MANAGEMENT POLICIES IN THE ESCWA REGION

8. The role played by policies in the integrated management of water resources in the ESCWA region must be studied in the context of the interests, power and influence of the various groups of water users and their economic and social clout in the country and the region. Set forth below are the most important of those who consume water and apply the related policies:

(a) Agriculture: between 75 and 85 per cent of the available water in the ESCWA region is used by the agricultural sector. This predominance and the concomitant political and social impact on farmers can be ascribed to one or more of the following causes:

- (i) The interest that farmers have in using food security standards to measure agriculture, reinforcing that aspect and linking it to national security;
- (ii) The use of agricultural activity as a tool for determining disputed borders between certain countries of the region or between the countries of the region and those beyond it;
- (iii) The use of agriculture as an economic activity that can justify the distribution of shares of oil wealth to certain peoples of the region;
- (iv) The political undertakings by certain regional Governments to make the desert bloom despite the lack of water, the cost and the consequent environmental degradation.

(b) Industry and the domestic sector: between 10 and 20 per cent of water in the ESCWA region is used by industry. Individual water consumption is one of the lowest of all the arid regions in the world. In the light of that situation, it is difficult for water policy makers to take radical steps to reduce water consumption in the domestic sector. It should be noted that intensified efforts to reduce the demand for water for agricultural purposes will have a greater impact than efforts to minimize domestic water consumption;

(c) The technical executors of policy: high-level decision-makers depend on this group of water experts, hydrologists, chemists, geologists, economists and environmentalists to apply national policy and determine negotiating positions for their country at the regional and international levels;

(d) Policy and decision makers: these comprise a group of politicians who come under pressure from the aforementioned sectors to draw up policies in accordance with the political, economic and social situation that prevails at the time that decisions are made.

9. Policies and measures for water resource management have been applied in the region and are likely to soon increase supplies. However, massive investment is required in order to establish, operate and maintain the basic infrastructure. Furthermore, those policies have recently fundamentally changed, with the emphasis on demand management and, in particular, controlling ever-increasing demand, wastage of water resources, deterioration of quality and the inefficient use of water resulting from increased competition between the water-consuming sectors and the lack of integrated planning in respect of resources. Notwithstanding the fact that many aspects of the hydrological situation and water-related challenges are common to the countries of the region, there are significant differences in respect of economic, social and cultural conditions and legal and administrative systems which lead to great differences in the demands of each State and, in consequence, in their water-related policies and in the type and orientation of reforms applied in the water sector. Overall, the countries of the region can be divided into two groups, namely, one comprising countries that have adopted water-related policies and plans or frameworks for water-related policies, and the other comprising countries that have not adopted such policies but have taken water resource management issues into consideration in their development plans. The first group have prioritized the planning of water policies, adopting periodically-reviewed national policies that aim to implement water resource management strategies that are in harmony with the national plans. In the second group, water resource management policies and strategies have been formulated, but as part of five-year development plans. While the countries of the region have made no little progress in water resource management, integrated management generally remains in its very early stages.

10. ESCWA is undertaking awareness campaigns to strengthen the concept of integrated water resource management and is arranging training sessions, expert group meetings and workshops in order to identify and clarify the advantages of and opportunities offered by instituting integrated water resource management at the national and local levels in supporting decision-makers in the region.

C. ACTIVATING ECONOMIC MECHANISMS FOR WATER RESOURCE MANAGEMENT IN THE ESCWA REGION

11. Economic theories provide very useful concepts for the resolution of certain water crises, because they provide sound approaches to policy choices that aim to improve the efficiency of water use and distribution.

In the ESCWA region, as in the majority of other parts of the world, the cost of water is heavily subsidized, in the agricultural sector in particular. The true cost of water should reflect all the investment in the development of resources; pumping; storage; establishment of irrigation networks; building and maintenance of conduits; and the building of distribution and sanitation systems. Simply determining the cost of providing water services for irrigation, and ensuring that it covers the true expense involved in developing those services will provide incentives for the free market and lead to greater efficiency and economy in agricultural water use. It will also bring about a voluntary change of direction from the agricultural sector towards those, such as industry and tourism, that make a greater contribution to the national product.

12. There are many ways in which a proper tariff for water services may be established, the most extreme of which ensures that the tariff covers not only the cost of operations, maintenance and supplying the consumer with water, but also includes the cost of resource consumption and the related environmental degradation. Here, consideration must be given to the social aspects of recovering the cost of water services, and the right of poor persons to an equitable share of that resource must not be ignored, even if they are unable to fulfil their monetary obligations.

13. Politicians have been swayed by powerful non-economic considerations based on the assumption of a plentiful water supply, including national pride in the distribution of national wealth; feelings of social injustice; the desire to make the desert bloom and to achieve food security in order to ensure national security; traditional conventions regarding land; and aesthetic environmental values. However, such non-economic considerations cannot be sustained indefinitely, given the growing scarcity of water in the ESCWA region.

14. In the light of the foregoing, it will be useful for ESCWA to focus its work in the field of water resources on the following:

(a) The strengthening of the capacities of member countries in respect of the integrated management of water resources, taking into consideration the relationship between water and natural, social and political particularities and the hydrological cycle of the country concerned; focussing on the concepts of integration, participation, consensus and equality; and respecting gender issues;

(b) The strengthening of the capacities of member countries in respect of the management of their shared water resources, by building trust, developing negotiating skills, providing and exchanging relevant data and developing and supporting appropriate systems for the management of shared groundwater reservoirs;

(c) The strengthening of the capacities of member countries in respect of water services and sanitation, through the formulation of policies that will help to realize the seventh Millennium Development Goal, namely, Ensure environmental sustainability.

15. This issue is submitted to the Committee on Water Resources for its information and in order to permit it to adopt the activities it considers appropriate in support of the aforementioned orientations and in the light of the status of water resources in the region, and the necessary tools for the integrated management of those resources.