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اللجنة الاقتصادية والاجتماعية لغربي آسيا (الإسكوا)

المؤتمر الإقليمي حول قضايا تدهور الأراضي
في المنطقة العربية

القاهرة، ٣٠ تشرين الأول/أكتوبر - ١ تشرين الثاني/نوفمبر ٢٠٠٧



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Executive Summary

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Executive Summary

1-Introduction:

The nature of soil, vegetative cover and relief in the Arab World differs according to the differences between the regions and areas that extend from deserts to coastal and inland plains plateaux and mountain areas. Most of these regions suffer from the scarcity of water. The soils are newly formed and poorly developed. The area of the arable land is estimated at about 197 million hectares i.e. about 14% of the total area. The area of cultivated are estimated at 79.5 million hectares. The area of rangelands is estimated at about 400 million hectares and the majority of these rangelands are largely degraded. The area of the forests is about 61.3 million hectares.

2-The Current State of Land Resources:

The area of the Arab World amounts to about 41.1 million km² representing about 10.2% of the total area of the world. Most of the area of the Arab World (90%) lies in the hyper-arid and arid regions. According to the 2005 statistics the number of population in the Arab World amounts to about 309 million. The Arab countries are distributed into four natural regions forming the Arab World and these are the Arab Mashreq, the Arabian Peninsula, the Central Region and the Arab Maghreb.

2-1 Water Resources:

2-1-1 Rainfall

About 90% of the total area of the Arab Region is considered among the hyper-arid and arid lands which receive varied amounts of yearly rainfall with variations in rainfall distribution within the rainy season. About 62% of the total area receives less than 100 mm/year while 28% receives between 100-300 mm/year and only 10% receives more than 300 mm/year.

2-1-1 Surface Water Resources:

A-Rivers: The great rivers such as the Nile, the Euphrates and the Tigris get important parts of their waters from outside the borders of the Arab World. The other continuously flowing rivers slope generally from the mountain series and get their waters from rainfall and from melting of snow accumulating on the peaks of the mountains.

B- Seasonal Wadis: Many wadies, of seasonal water flow, are scattered throughout the Arab world such as the desert wadies in Egypt and in the Great Sahara and the Arabian Peninsula.

C-Natural Lakes: There is a number of natural lakes in the Arab World which are linked with the sea as in Egypt or those which are separated from the sea such as the lakes of Qaroun in Egypt and Altharthar in Iraq . The lakes of the Arab Maghreb are very small, and originating mainly from shallow groundwater.

2-1-2 Groundwater Resources:

The number of the groundwater basins in the Arab world amounts to about 27 which differ greatly in its water storage capacities, the most important of which are the Nubian Sand Stone Basin, Al-Arqa Al-Kabeer basin, the East Mediterranean Basin, the East Arabian Peninsula Basin, the Basin of Jabal Horan and Jabal Al-Arab and finally the Upper Island Basin.

2-3 Soil Resources:

Soil classifications differ in the Arab World and they include different types of soils the most important of which are:

- Aridisols which include the calcic, gypsic and saline soils.

- Entisols which include the sedentary, sandy and shallow soils.
- Vertisols.
- Inceptisols.
- Alfisols.
- Molisols.

2-4 The Vegetative Cover:

2-4-1 Forests: The distribution of the forest lands in the Arab World varies greatly and the most important forests are the coniferous forests which include pine, cedar and fir and the broadleaf forests which include oak, terebinth and acacia. There are other types of forests but most of these forests are generally degraded in terms of quantity and quality.

2-4-2 Rangelands: most of the natural rangelands lie under the arid or semiarid climates. The vegetative cover of these rangelands is weak and therefore these rangelands are characterized generally as poor with low productivity. The productivity of these rangelands fluctuates from one year to another according to rainfall, intensity of exploitation and management system.

2-5 Land Uses:

2-5-1 Agricultural Uses:

A- Irrigated Agriculture: the area of the irrigated lands amounts to about 20% of the total cultivated area. The percentages of the irrigated crops differ in their distribution in the Arab World and these crops include cereals, forages, vegetables and cotton. Date palm trees, citrus and other types of trees are also grown in the irrigated areas.

B - Rainfed Agriculture: The area of rainfed agriculture amounts to about 68% of the total cultivated area. Wheat and barley are the main crops grown under this type of agriculture which is characterized by low productivity and instability of production and profits. Additional 12% of the total cultivated area is occupied with permanent trees.

2-5-2 Urban uses:

This type of land uses includes the housing and industrial areas and the areas used for trade, services, communications and telecommunications. It expanded at the expense of the agricultural lands and there are clear indications of the progressive increase of this type of land uses despite the fact that relevant statistics about this subject are not accurate.

3- Efforts and Achievements:

3-1 Directing Land Uses: The Arab countries have exerted significant efforts to encourage the optimum uses of the lands so as to achieve the best yield while conserving the land resources via adopting policies aiming to achieve the sustainable management of the agricultural lands.

3-2 Alleviating Natural Risks: The Arab countries have become aware of the natural risks affecting the agricultural lands and therefore they have taken proper measures to limit these risks and alleviate their negative effects.

3-3 Establishment of the Soil and Terrain Database (SOTER): Some Arab countries have established this database with the aim to improve the methods of exploiting the information and enhance the methods of map preparation and change monitoring.

3-4 Establishment of the Natural Resources Databases: Methodologies have been adopted to establish the natural resources databases. These databases are linked with the nature of the programs and projects implemented at the national or regional levels such as the Water Resources Database and the Arab Database for Arid Plants (ADAP).

3-5: The Integrated Management of Land Resources: The Arab countries are working towards the implementation of integrated concept of land resources management with the aim to achieve the rural sustainable development and ensure stability for the local population.

3-6 Improvement action of relevant activities to UNCCD: The most important activities implemented under this framework is the Sub-Regional Action Program for combating desertification in the countries of West Asia (SRAP) through two thematic networks: the Sustainable Management of Water Resources (TN1) and the Sustainable Management of Vegetation Cover (TN2).

3-7 Developing Monitoring and Assessment Systems: The Arab countries have developed their performance in the field of monitoring and assessing the changes in land resources in cooperation with regional and international organizations via adopting the systems pertaining to monitoring and assessment and land mapping such as LADA and LCCS.

3-8 Development of the Use of Nontraditional Water: The Arab region has witnessed a great development in the field of sea water desalinization, treatment of sewage water and the use of medium saline water and reuse of agricultural drainage water for irrigation.

3-9 Development of the Research that Suit the Local Environment: the Arab countries have intensified their reliance on this type of research and for this reason they established research stations for desert plants and centers for the study of the dry lands. They also established gene banks and carried out studies and research on water harvesting and range plant seedlings to rehabilitate the degraded lands.

3-10 Development of the Means and Methods of Training and Technology Transfer: The electronic and scientific revolution has affected positively the Arab countries as new techniques were used for training and technology transfer such as the remote sensing techniques and the geographic information systems. The Arab countries are implementing nowadays many projects pertaining to technology transfer and creating to create qualified national cadres to use the new technology.

3-11 Development of the Use of Proper Techniques: New methods have been developed in the use of the proper techniques to support the decision-making process. This is assisted by the establishment of specialized centers in the Arab countries such as the remote sensing centers, the information technology units and the decision support centers.

3-12 Adoption of New Farming Systems: The exchange of experiences and information between the Arab countries helped in the adoption of new farming systems that suit the environmental conditions and help conserve the land resources. This leads to the reduction of the production costs, improvement of the farmers' income and alleviation of the degradation of the land resources

4-Challenges and Constraints:

4-1 Population Growth: The most important aspects here are the increase of the population rates. The population distribution among the countryside, urban areas and the sedentary and nomadic life has its impact on sustainable development. Moreover, agriculture is considered as the main profession for the people in the Arab World and this leads to increased pressures on land resources as a result of the growing demand for agricultural products and the increase of the exploitation of the natural resources.

4-2 Land Degradation:

The data indicate that most of the area of Arab Region is exposed to land. The pressure caused by the increase in the number of the people and animals on the limited resources of the agricultural land and rangelands is considered as one of the main causes of degradation. Other causes include urban and industrial encroachment resulting pollution. Land degradation and depletion of the natural resources have profound effects on the agricultural activity and land productivity. They also limit the economic growth rates, weaken the capability of achieving food security and the policies aiming to alleviate poverty.

4-3 Degradation of Water Quality: The misuse of the water resources, the throwing of wastes into rivers and the intrusion of saltwater with fresh water lead to the degradation of water both qualitatively and quantitatively. Considerable amounts of water become unusable and this exacerbates the water shortage in different parts of the Arab world.

4-4 Challenges Facing the Achievement of Sustainable Development: There are real obstacles in the way of achieving the sustainable development and these obstacles should be properly addressed in order to find appropriate solutions. The most important obstacles are instability in the region, the problem of poverty, the irrational use of resources, the rapid population increase, some the harsh climatic conditions, the weakness of capabilities and the lack of water resources.

5- Recommendations:

5-1 Conservation of Land Resources: In this field the partnership between the different sectors should be activated and supported, attention should be given to the surveys and in-depth studies, legislations should be issued and immigration policies should be rationalized, development funds should be established, research efforts should be intensified pertinent to population issues and finally the management of the natural resources should be improved.

5-2 Solving the Water Crisis: This can be done through drawing up a general framework for the Arab integration plan in the field of the water resources, increasing awareness about the rational use of water and using the Arab investments in techniques pertaining to this subject taking urgent measures to conserve groundwater resources, getting rid of the habits which lead to wasting of scarce water resources and finally increasing the reuse of nontraditional water resources to decrease the burden on the uses of traditional water resources.

5-3 Developing the Arid lands: This can be realized through increasing the knowledge of the natural resources in these areas, carrying on basic studies, preparing maps, monitoring degradation and achieving the integration of the production systems, strengthening the extension systems, implementing the relevant decisions and legislations, supporting the scientific research institutes, providing databases and finally drawing up integration plans for improvement and development.

5-4 Sustainable Development: This can be achieved through limiting the environmental degradation, developing the development and environmental institutions, achieving balance between the population growth rates and the available resources, eradicating illiteracy, developing the production sectors, applying policies to limit poverty, enacting legislations and strengthening the role of the regional and international organizations and increasing their cooperation with the national institutions.

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