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Summary

of

the National Paper of the Yemen Arab Republic

Submitted to the

United Nations Conference on Science and Technology for Development

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#### INTRODUCTION

The Yemen Arab Republic attaches great importance to the United Nations Conference on Science and Technology (UNCSTD). Like other developing countries, Yemen is keenly aware of the role played by Science and Technology in the advancement of social and economic development.

The Government has decided that the scientific planning approach must be adopted if the basic objectives of development are to be achieved. These objectives include the establishment of a modern centralized state replete with political, administrative, social and economic foundations.

Since the application of science and technology for development must take account of the special circumstances of each country and its social and economic environment, it is necessary to touch upon those characteristics and the major features of the Yemeni economy which help set the parameters for the application of science and technology in the country. The most important of these features is the geographic heterogeneity of the country and the communications difficulties imposed by the uneven nature of the land. Moreover, before the Revolution of 1962 the country lived in total isolation and now suffers from a critical weakness in its administrative machinery and its communications, road and service infrastructure.

1. Contents of the national gaper

The national paper of Yemen included a comprehensive discussion and analysis of the different topics covered by UNCSTD. It described the status of science and technology in Yemen and proposed a number of recommendations at the national, regional and international level based upon an objective study of the following areas:

- (a) Food and agriculture;
- (b) Natural resources;
- (c) Health, housing and the environment;
- (d) Transport and communications;
- (e) Industrialization, including the production of capital goods.

This summary will only describe a number of the obstacles that confront the application of technology and the solutions recommended on the national and the international levels in the fields of agriculture and natural resources.

#### 2. Food and agriculture

The agricultural sector contributes around 50 per cent of GDP in Yemen. Despite the crucial importance of this sector, it suffers from the absence of many of the basic structures and services needed for promoting the development process. This is particularly true of the institutions needed for absorbing modern technology. For example, the factors for improving and increasing production, such as chemical fertilizers, improved seeds and farm machinery are at present in very limited use.

Since the transfer and development of technology in the agricultural sector is not a highly complicated operation when compared with the industrial sector, technology transfers can be increased if the following are made available:

- (a) Organizations trained in agricultural counselling and agricultural supply system;
  - (b) Credit facilities for agricultural producers;
  - (c) Receptivity of producers to modern technology;
  - (d) Strengthening and expansion of agricultural research stations.

The Yemen Arab Republic firmly believes that on the regional and the international levels co-operation between the developing countries and the industrialized countries has an important role to play in the transfer of technology in the agricultural sector. Yemen has concluded a number of bilateral and international agreements in this regard, such as the agreement with the Government of the United Kingdom, whose purpose was to assist Yemen in finding the optimum methods for mechanizing agriculture in view of the unevenness of the land in Yemen.

#### 3. Natural resources

Foreign groups and organizations prospecting for oil, minerals and groundwater represent the only instance of the application of science and technology in the development of natural resources in Yemen.

The solar energy has been utilized since ancient times, particularly in the construction of dwellings which were built so as to absorb the maximum amount of solar radiation for heating, especially in the mountainous and the colder regions. The Government presently has a number of programmes and projects in which solar radiation is used as a source of energy for a variety of production and service purposes. The Government also aims to use the country's solar energy resources for construction and development.

The following are among the major obstacles to progress in the development of natural resources:

- (a) The absence of technological awareness in the country;
- (b) The shortage of trained manpower;
- (c) Difficulties in selecting technologies that are suitable to conditions in Yemen;
  - (d) Lack of the necessary finances;
  - (e) The nature of the country's topography, which increases investment costs.

#### 4. Action proposals

- (a) Development of the national organizations that deal with foreign companies and enhancement of their negotiating capabilities;
- (b) Policy co-ordination with the other Arab States through all available channels and organizations, and particularly through an Arab Centre for the Transfer and Development of Technology;
- (c) Urging foreign companies to contribute effectively to the development of scientific and technical potentials and to train specialized manpower in the requisite numbers.

### 5. General Proposals and recommendations

Yemen views UNCSTD as a major opportunity for all countries to work out and co-ordinate their policies in favour of the establishment of a New International Economic Order based on justice and equal opportunity. Yemen is conscious of the significance of this Conference for the transfer, application and development of technology in the different countries and the impact of these

operations on the acceleration of economic development in the developing countries. On this basis, and in the hope of contributing to the Conference's success, Yemen makes the following proposals:

- (a) Co-operation among the developing countries in the field of science and technology should be deepened and enhanced at all levels. The exchange of information and expertise among these countries should play a big role in facilitating the transfer, adaptation and development of technology;
- (b) Specific recommendations and resolutions for the purpose of strengthening the national institutions and organizations concerned with the transfer of technology in the developing countries should be adopted. For without the participation of these in the technology transfer operation, the resolutions of the Conference will have no true impact on the promotion of the application of science and technology in the less industrialized countries;
- (c) The industrialized technology-exporting countries have a responsibility for facilitating the adaptation and development of technology in the recipient countries. For in many instances, the industrialized countries and their multi-national corporations have made their investments without introducing the appropriate adaptations to the technology imported;
- (d) Universities and scientific institutes in the developed countries should be urged to assume responsibility for orienting the research and higher studies of their foreign students from the developing countries towards scientific problems and applications relevant to their respective developing countries. This vital measure can be expected to contribute to the reduction of the brain-drain;
- (e) The United Nations through its organizations should help the developing countries to set up specialized regional institutions devoted to the selection, transfer and development of technology suitable to the circumstances and needs of the developing countries.

