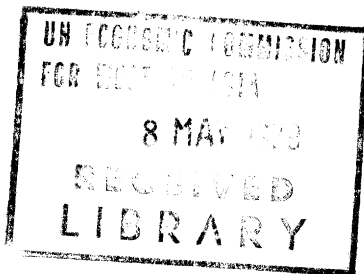




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ECONOMIC COMMISSION FOR WESTERN ASIA

Summary of the National Paper of  
the Arab Republic of Egypt

submitted to  
the United Nations Conference on  
Science and Technology for Development  
Vienna, August 1979

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### Item 1: Science and technology for development

The Egyptian Government considers that the elimination of obstacles, identified in this item, has the objectives of enhancing self-reliance and reducing technological dependency. This could be achieved by adopting the following measures:

#### On the national level

- (i) Formulation of a central national plan for scientific research and technological development parallel to and concordant with the national economic and social development plans;
- (ii) Establishment of a central national institution for the affairs of transfer of technology, as well as national institutions specialized in the development of capital goods and in the vertical transfer of technology;
- (iii) Participation of local research and development institutions in consultative and executive capacities in the various phases involved in the process of transfer of technology;
- (iv) Active involvement of the R & D community in extension services;
- (v) Orientation of a major proportion of the national scientific research resources towards applied objectives;
- (vi) Proliferation of the notion of commitment in the R & D community through contractual commitments;
- (vii) Evolution of the existing wages and incentive system to depart from traditional patterns;
- (viii) Realistic confrontation of the problems of brain and skill drain;
- (ix) Popularization of science and technology and propagation of practical hobbies. Development of science education programmes in pre-university schooling;

- (x) Working towards the goal of increasing national R & D manpower and expenditure to reach, within 10 years, 1000/million inhabitants and 3 per cent of the GNP, respectively;
- (xi) Deepening the role of social sciences and the humanities in the process of overall development, particularly for the prevention and treatment of the social ill-effects of new technologies;
- (xii) Use of the most advanced science and technology instruments in the solution of the fundamental problems of development.

On the international level

- (i) Implementation of the principles of the Code of Conduct on Transfer of Technology;
- (ii) Decisive increase of developed countries' investments allocated for R & D conducted in developing countries;
- (iii) Revision of the existing systems and programmes of education and training of citizens of developing countries in developed countries;
- (iv) Decisive increase of developed countries' efforts to help developing countries to solve their fundamental problems through implementation of effective projects for fastly increasing productivity and improving services;
- (v) Reduction of expenditure on armament in developed countries and orientation of a substantial proportion of this expenditure towards R & D for development purposes;
- (vi) Extension of help to developing countries in the area of acquisition and application of modern technologies;
- (vii) Co-operation with developing countries to enable them to produce capital goods, particularly those related to development and utilization of natural resources and effective in solving fundamental development problems and increasing their productive capabilities.

Item 2: Institutional arrangements and new forms of international co-operation in the application of science and technology

(a) The building up and expansion of institutional systems in developing countries for science and technology

On the national level

- (i) Reinforcement of existing central institutions of scientific research and technology with regard to their capabilities in making policies, and performing R & D activities and with regard to their much-needed organizational stability;
  - (ii) Provision of support to institutions of acquisition and dissemination of science and technology information to radically upgrade their structure and performance;
  - (iii) Expansion of institutional systems for training of skilled and specialized labour and protection of such institutions from changes which adversely affect their function and performance;
  - (iv) Establishment of institutions specialized in technological innovation and development and in the vertical transfer of technology;
  - (v) Expansion of existing industries and trades, and introduction of new ones through increased participation of the R & D community in instructive and demonstrative extension services;
- (b) R & D in the industrialized countries in regard to problems of importance to developing countries
- (i) Increase investments allocated for R & D activities conducted for the benefit of developing countries to 0.5 per cent of their GNP;
  - (ii) Intensify their R & D programmes directed at solving the problems of the developing countries, particularly those of industrialization, food, building materials and housing, public health, and conventional and non-conventional energy sources;

- (iii) Implement programmes for basic and field research oriented towards attaining solutions for the problem of explosive population increase through effective, safe and ethical approaches of contraception;
  - (iv) Engage individuals from the developing countries in the projects carried out in the developed countries for the benefit of development in the Third World;
  - (v) Establishment of institutional arrangements and implementation of programmes oriented towards the development of intermediate and appropriate technologies specifically designed to help the cause of development in developing countries;
- (c) Mechanisms for the exchange of scientific and technological information and experiences significant to development

On the national level

- (i) Development and upgrading the capabilities of the National Information and Documentation Centre to become a central establishment for the acquisition and dissemination of science and technology information;
- (ii) Development of the National Patent Office by upgrading its facilities and services to play its role as a central national institution;
- (iii) Dissemination of developed and advanced technological information to local production sectors and services;
- (iv) co-operation with regional and international schemes for establishment of a world network for the exchange of science and technology information;

- (d) The strengthening of international co-operation among all countries and the design of concrete new forms of international co-operation in the fields of science and technology for development;
- (e) The promotion of co-operation among developing countries and the role of developed countries in such cooperation.

On the regional level

- (i) Exchange of information with regard to the optimal utilization of natural resources, and implementation of co-operative projects for their exploration and utilization;
- (ii) Establishment of educational institutions for the training of specialized cadres in the areas of particular interest to the region. One possibility is the establishment of a regional university to be a centre of excellence for the benefit of the entire region;
- (iii) Encouragement of the mobility of experts, exchange of experiences, and regulation of the process of immigration of trained personnel and entrepreneurs within the Third World (or within the region) and to the developed countries;
- (iv) Establishment of regional science and technology information systems and centres for transfer of technology to serve in exchanging experiences and information within the region and also to lend support to the negotiating capabilities of the individual countries;
- (v) Maximized utilization of existing institutions in the region and their development to serve at the regional level as an alternative to establishing a chain of new ones;
- (vi) Exchange of experience and information with regard to intermediate and appropriate technologies within the regional group and among the regional groups of developing countries.

On the international level

It is recommended that the developed countries take the following actions:

- (i) Provide material assistance and expertise to developing countries in the organization and management of highly functional national science and technology infrastructures and in the assessment of their performance;
- (ii) Participate actively and effectively in the developing countries' efforts to establish science and technology information systems of utmost utility and also in the international efforts to establish world-wide networks;
- (iii) Design large-scale developmental schemes - in which groups of developed countries participate - for the massive assault on vital problems of development common to particular regions.

Item 3: Utilization of the existing United Nations system and other international organizations

- (i) Provision of practical assistance to developing countries in matters related to transfer of technology through establishment of a world centre, with affiliated technological information-expertise banks, which would participate in the negotiation process in the subsequent follow-up and evaluation of projects;
- (ii) Establishment of an effective world technological information network to enhance the productive capabilities of the developing countries, including a revision of the existing practices and legislations of industrial property and licensing;
- (iii) Exerting an international effort for approaching a state of unified standards and measures;
- (iv) Adoption of world integrated programmes for dealing with the fundamental problems of the Third World - which in particular, include shortage of food and energy, inadequacy of building materials and patterns, public health, and deterioration of environment;



- (v) Adoption of world integrated programmes for the development of appropriate and intermediate technologies to improve the quality of life in developing societies (particularly in rural areas) and their productive capabilities;
- (vi) Establishment of a world system for rewarding and honouring the scientists whose contributions provide practical solutions to the major problems of humanity;
- (vii) Organization of intensive training programmes and establishment of regional training centres which are concerned with the fundamental development issues;
- (viii) Revision of existing procedures for the implementation and follow-up of the recommendations of international conferences and appraisal of their effectiveness;
- (ix) Overall assessment of the output of the United Nations developmental projects which have so far been implemented in developing countries in order to benefit from the results in scheming new projects;
- (x) Overall assessment of the criteria used in the selection of international experts with regard to their capabilities, suitability for their commissions and remuneration;
- (xi) Active cultural endeavour to acquaint developed societies with the civilization and heritage of developing societies and the potentials of their contribution to humanity;
- (xii) Developing a world mechanism for monitoring advanced science achievements with the purpose of preventing their use in threatening world peace, humanity and civilization anywhere in the world.
- (xiii) Harmonization of the United Nations system science and technology policies and activities and their co-ordination with those of other international organizations to realize the aforementioned objective, as an alternative to establishing new institutions;

(xiv) Establishing of an arrangement for the continued dialogue and consultation between developed and developing countries in regard to the above issues in general and questions of transfer, adaptation and development of technology in particular, in accordance with the recommendations of the Lima Declaration.

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