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SECTION 1: THE QUESTION OF SCIENCE AND TECHNOLOGY  
IN DEVELOPMENT

Submitted by the Trinidad and Tobago Delegation  
to the Second Session of the CDCC, Santo Domingo,  
16 - 22 March, 1977

SECTION 2: NOTE BY CDCC SECRETARIAT ON THE PROPOSAL



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## SECTION 1

### THE QUESTION OF SCIENCE AND TECHNOLOGY IN DEVELOPMENT

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The Constituent Declaration of the CDCC speaks "inter alia" of the need of the CDCC to reconcile global policies and programmes with sub-regional priorities. This in fact implies that the members of the CDCC should pari passu monitor and assess international trends and movements and seek to reconcile their own priorities with these trends or extract from these trends that which is of relevance and benefit to their established priorities. The relevance of this to the economic and social development of the Caribbean area can hardly be over-emphasized - an area whose economy is largely based on products which are sensitive to international markets.

On the international scene today, there is an increasing awareness of the integrated role that science and technology can play in developmental activities. This awareness has been paralleled by many initiatives within the United Nations system and the O.A.S.

Perhaps the most significant overall initiative in this regard is the decision by the General Assembly at its 31st Session to convene a United Nations Conference on Science and Technology for Development. This conference is scheduled to take place during 1979 and will have as its main objectives the following:

- (a) To adopt concrete decisions on ways and means of applying science and technology in establishing a new international economic order, as a strategy aimed at economic and social development within a time frame;
- (b) To strengthen the technological capacity of developing countries so as to enable them to apply science and technology to their own development;

- (c) To adopt effective means for the utilization of scientific and technological potentials in the solution of problems of development of national, regional and global significance, especially for the benefit of developing countries;
- (d) To provide instruments of co-operation to developing countries in the utilization of science and technology for solving socio-economic problems that cannot be solved, by individual action, in accordance with national priorities.

The preparatory work for the Conference is extensive and each country and region is expected to prepare adequate documentation to allow a full and meaningful participation. To quote the UN document: "The preparatory period for the Conference should be an integrated and fundamental component of the Conference itself, through preliminary national and regional analysis of relevant socio-economic problems which may be solved with the help of science and technology."

There are also other initiatives in this regard in the form of programmes and projects. The series of consultations taking place in UNIDO on specific industries - i.e., fertilizers, iron/steel, and aluminium - to name a few. There is the multinational Programme in Science and Technology, Education and Culture within the O.A.S. system and there is also the establishment of the UNCTAD's advisory service on the Transfer of Technology to assist developing countries at their request. There is also the proposed Conference on Technical Co-operation among developing countries. The value of technical co-operation among developing countries is already recognized and included in the priorities of the CDCC. This question, however, cannot be divorced from the larger question of Technology in development. Indeed it is essentially a component of development.

Mr. Chairman, given the existence of these initiatives, the stated intention of our Constituent Declaration, and the importance of Science and Technology in development in relation to our own developmental aspirations, perhaps it is necessary to consider more closely how the role that member governments have determined for the CDCC can assist in providing the means through which these initiatives can be channelled to meet our priorities and assist in our developmental efforts.

Mr. Chairman, the CDCC is intended to be a co-ordinating mechanism for member countries and a consultative organ of ECLA. On one level, it can play the role of identifying common areas of interests, and devising strategies to promote these in a co-operative, co-ordinated way. On another level, it can and should advise the ECLA on the directions that certain programmes established for the region, should in its view take. We submit that these could be useful functions, perhaps the most useful functions of the CDCC.

In accordance with the above considerations, we may then ask ourselves, how can member countries (collectively where common interests prevail) reconcile their priorities with the global policies that are being considered today on the international scene. We believe that CDCC can be the mechanism in the formulating of strategies to benefit from these policies.

In order to do this, the CDCC could perhaps begin by looking at the question of Science and Technology, as a focal point in the formulating of developmental strategies. The CDCC could also seek through the co-operation of its members to co-ordinate common approaches to the application of Science and Technology in development. The CDCC could also seek to identify projects, activities and industries in which technology application and transfer could increase productivity and accelerate development, e.g. - There exists a wide variety of Agro-based industries to which this would be directly relevant. There are energy-based industries, cottage industries, fisheries, water, etc.

Against this background, we would wish to outline certain thoughts for the consideration of this Committee:

- (i) That we should seek more actively to utilize existing programmes in Science and Technology (UNIDO, UNCTAD, etc.) in the pursuit of the establishment of sub-regional indigenous technologies;

- (ii) That the CDCC should seek to fully utilize all provision for Transfer of technologies to the extent that the technologies themselves are applicable to the region;
- (iii) That projects involving the application of Science and Technology in development should be more readily identified by CDCC and pursued as priority activities in the Region - on the basis of established priorities;
- (iv) That there should be a relevant component of the application and transfer of technology in all programmes proposed by United Nations agencies for the Region, i.e. that there should be a greater integration of proposed projects;
- (v) That perhaps in accordance with this perspective CDCC member countries might wish to consider in consultation, the desirability of a common set of approaches and priorities as a sub-regional input for the United Nations Conference on Science and Technology in development.

Perhaps Mr. Chairman, I might now advance possible mechanisms for translating these thoughts, suggestions and proposals into concrete action. It would seem to my delegation that the CDCC Secretariat should itself become more involved in activities related to the application of Science and Technology relevant to the needs and interests of developing countries under mandate from its Committee. This could even be done on the level of a unit of the CDCC Secretariat. This involvement may be undertaken in conjunction with the proposed Caribbean Council of Science and Technology. The parameters of its involvement might conceivably be inter alia one or all of the following:

- (i) To co-ordinate and evolve activities relating to technology for development;
- (ii) To act as a clearing house - in conjunction with the Caribbean Documentation Centre - for all information and documentation on science and technology;

- (iii) To seek out areas for the development of technology and liaise with the most suitable national institutions for the further development and/or adaptation of technology;
- (iv) To convene specialized study groups to examine new developments in technology with a view to their utilization by member countries;
- (v) To assist Specialized Agencies in formulating new projects relating to the application of Science and technology;
- (vi) To perform the Secretariat functions in order to arrive at a common set of approaches and priorities as a sub-regional input for the United Nations Conference on Science and Technology.





SECTION 2

NOTE BY CDCC SECRETARIAT

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At the Second Session, the Caribbean Development and Co-operation Committee (CDCC) agreed to the creation of a Council for Science & Technology. The Secretariat hopes that the proposed Council will undertake most of the functions advocated in the proposal.

The primary objective of the proposed Council is to promote efforts to co-operate in the mutual transfer of technology and of technological and scientific knowledge in order to facilitate the adaptation of imported technology and the development of domestic technologies and increase the bargaining power of the sub-region's countries in operations between the latter and countries outside the area on these matters.

This suggests that the immediate objectives of the Council, acting under CDCC mandates, should be:

- i) to help member countries in the development of their own science and technology capability, and at the same time
- ii) to make the application of this capability more effective through joint action.

Hence the Council is seen as offering a forum for discussion on these questions and an agency for promoting appropriate action on the part of existing institutions, and providing advice to CDCC and its member governments. The proposed Council will co-ordinate and evolve all activities relating to technology for development, will

seek out areas for the development of technology and liaise with the most suitable national institutions for the further development and/or adaptation of technology. It will endeavour to utilise existing programmes in science and technology (UNESCO, UNIDO, UNCTAD etc.) in the pursuit of the establishment of sub-regional indigenous technologies.

#### Work Programme

The Work Programme for the CDCC as a whole presented in the Report of its First, Constituent Meeting, and which was endorsed at the CDCC-II, draws attention to a number of fields with substantial implications in terms of science and technology, including:

- i) increased food production and improved food technology, including problems of transport, storage and processing;
- ii) hence research pertaining to tropical agriculture, soils and fertilizers, livestock production, marine resources, and the wider dissemination of results;
- iii) development of agro-industries and forest-based industries, with local technologies more appropriate to the Caribbean;
- iv) planning and design of industrial plants, techno-economic studies, exchange of technology, training of technical personnel;
- v) development of present and potential energy sources, including solar, wind and nuclear sources;
- vi) better knowledge of indigenous raw materials, with a view to their industrial utilization;
- vii) higher level of processing of major natural resources such as bauxite, nickel and petroleum-based fertilizers;
- viii) increased attention to public health problems, including nutrition, and communicable diseases;
- ix) exchange of technology on low-cost housing;
- x) reduced impact of natural disasters, in association with improved meteorological and telecommunications systems, and broad ecological studies.

During CDCC-II a number of new proposals were made for consultation with Member States as to their interest and feasibility, including:

- i) a project for the establishment of a personnel training centre for the development of coastal resources;
- ii) the establishment of a regional centre of improved genetic material for agricultural products;
- iii) the creation of an institute for research into the use of sugar-cane and its by-products for the production of food, meat and milk, fuel and fertilizer in the Caribbean region;
- iv) a proposal for the creation of a Caribbean institute for mineral and hydrocarbon resources;
- v) possibilities of sub-regional co-operation in applied research and technical assistance for the industrial sector;
- vi) dwarf strains in sugar-cane.

A first task would be to ascertain the work of the national councils with a view to identifying possible actions at the regional level, such as:

- i) determination of priority fields to which scientific and technological efforts should be directed;
- ii) within the selected fields, the design of appropriate programmes of action;
- iii) implementation of programmes through specific research and development projects, to be undertaken within existing institutions, with, if necessary, support from institutions outside the region; hence the
- iv) identification of existing R and D units and scientific and technical service units within the region which might participate in R and D projects, within the constituted R and D projects, for each of the priority areas - in other words, a regional survey of science and

technology potential in terms of human, financial, institutional and informational resources.

The Council would also concentrate on:

- i) promoting the strengthening of existing institutions, and if necessary the creation of new institutions;
- ii) encouraging advanced education and training of scientific and technological personnel within the region;
- iii) promoting the status of scientific and technological workers and the return to the region of Caribbean scientists and engineers domiciled elsewhere;
- iv) advising on the monitoring and control, where appropriate, of the transfer of science and technology;
- v) encouraging the development of indigenous technology and the local design and adaptation of technology so as to lessen outside dependence.

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Under the joint sponsorship of the Jamaica Government, the United Nations Conference on Science and Technology for Development and the CDCC, a meeting is scheduled to be held in Jamaica on 14-18 February, 1978, to consider inter alia national and sub-regional preparations for the United Nations Conference on Science and Technology and the Statutes for the Caribbean Council for Science and Technology.

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