



CDCC/CCST/81/6
11 May 1981

ECONOMIC COMMISSION FOR LATIN AMERICA
Office for the Caribbean

CARIBBEAN DEVELOPMENT AND CO-OPERATION COMMITTEE

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND
CULTURAL ORGANIZATION (UNESCO)
Division for Science and Technology Policies

First Plenary Session of the Caribbean
Council for Science and Technology



WORK PROGRAMME (1981-1983)



UNITED NATIONS

ECONOMIC COMMISSION FOR LATIN AMERICA Office for the Caribbean

WORK PROGRAMME (1981-1983)

In formulating these projects consideration has been given to the proposed guidelines and also to the limited resources which may be available both in terms of human and financial resources. The main strategy is to ensure the proper and effective establishment of the CCST.

Project 1: Organization of Science and Technology at National Level

The CCST will have to work in the main through national organizations and so the effectiveness of its operations will be affected by the strength or weakness of the National organization. Further the objectives of the CCST state (in part):

"Article 3(ii) to identify institutions that could participate in the projects, and establish the mechanisms for co-operation" and "Article 3(v) generally, to promote the establishment and the strengthening of appropriate national and Caribbean organs and mechanisms for Science and Technology development and application".

To meet these objectives it is necessary to assess in some detail the systems in each member country and to propose and implement plans for their improvement.

This project will therefore entail:

- I. An examination of the systems for Science and Technology (S+T) including:
 - (i) installed capacity
 - (ii) legislation and policies
 - (iii) national priorities
 - (iv) possibility for technical cooperation
 - (a) needs of individual countries
 - (b) ability to help others
 - (v) medium-term Research and Development (R+D) activities.
- II. Workshop to discuss draft proposals; and
- III. Formulation of recommendations to member countries for improvement in the S+T organization.

It is proposed that two consultants, one in S+T policy and one with R+D assessment and planning capability be engaged. These consultants would need to travel to each member country.

(Approximate Cost - US\$100,000).

Project 2: Establishment of a Science and Technology Journal of the CCST

The journal should reach a wide audience of scientists, technologists and development planners in the public and private sectors and would be a major means of: (a) exchanging information on new developments; (b) informing on the existence and activities of the CCST.

For initial establishment:

- (i) the CDCC secretariat could act as Editor and would solicit contributions from National Institutions as well as from like journals in developing countries;
- (ii) the journal would be sequential but not at regular intervals until it was fully established;
- (iii) a useful model could be the R+D journal published by the Council for Science and Technology in Mexico.

The journal could thus highlight:

- (a) technical processes appropriate to developing countries in the region;
- (b) projects in progress;
- (c) research results.

This project should also collaborate with systems already in existence or planned for exchange of information such as the Caribbean Development Bank (CDB) newsletter and the CDCC information system.

Costs are difficult to estimate since the number of issues per year need not be fixed in advance. However, an initial sum is proposed.

(Approximate Cost - US\$50,000).

Project 3: Preparation and Exchange of audio-visual material for public information system

In order to reach a wider audience it is suggested that major use be made of the television media and of audio-visual cassettes. This would involve a major thrust to inform the public on the benefits (and dangers) of developments in S+T. More particularly it would highlight indigenous S+T and R+D activities. Often there is not sufficient material in any one country for a sustained publicity effort, but by pooling the resources of CCST member countries, and by encouraging the preparation of new materials a significant impact may be made.

This project would therefore:

- (1) depend very much on work at National level;
and
- (2) would necessitate translation.

To meet these needs, some funding will be required and an initial sum is suggested below.

(Approximate Cost - US\$50,000)

Project 4: Inventory of Science and Technology Institutions, Manpower Resources, and R+D Projects

This project would in some sense be a follow-up of Project 1 and would provide detailed information for the implementation of recommendations for Technical Cooperation between CCST member countries particularly in R+D work and in S+T services.

It is proposed that this study be undertaken largely at National level but with the aid of a consultant visiting member countries over a 3-month period, with coordination being undertaken by the CDCC Secretariat.

The listing of R+D projects would form the basis of a register which with periodic updating could assist in development of collaboration between workers in the same fields and help to avoid costly duplication.

The funding proposed therefore is to provide for the consultant.

(Approximate cost - US\$15,000)

Project 5: Study of the Consequences of the Development of Energy Crops on Food Supplies in the region

Major projects are underway in the region on alternative energy sources and no doubt energy crops will be considered as one of the many possibilities. On a global basis there is now grave concern in many quarters that the production of gasohol will lead to direct competition for land between energy crops and crops for production of food for human consumption. Further the economics of oil may lead to those countries which currently export surplus grain in the near future using such surpluses for production of gasohol. This could produce a crisis situation for the Caribbean region which is a major importer of food.

It is proposed therefore that an economist be employed to prepare a report in the current situation with a view to formulating action plans in the near future.

(Approximate cost - US\$15,000)

While the above projects may in general terms be categorised under the broad heading of Policy but include elements of Information and Institution Building, they do not cover any R+D work directly. The two additional projects proposed below may be categorised as R+D projects. They involve work at both the basic scientific level and also at the applied research and developmental levels.

Project 6: Conservation and Exchange of Germplasm of Crop Plants

Mechanisms either do not exist or are weak in the region for conservation of valuable germplasm. Thus improved material can be lost and costly breeding and selection work often has to be repeated.

In large measure this is due to the fact that many of the tropical crops cannot be stored as true seed and therefore must be maintained in expensive field plantings which require competent supervision. In some cases techniques of tissue or meristem culture have been developed which allow for "laboratory" storage of material. Thus the whole of the cassava germplasm collection at the International Agricultural Research Institute (CIAT) in Colombia is stored by meristem culture in test tubes. Basic research work is needed in other

tropical species to allow use of this technique on a wider scale. While some such activities are developing, they need to be encouraged so that centres of excellence may be created in developing countries (most of the tissue and meristem culture work is now done in the developed countries).

The second part of this project involves exchange of germplasm so as to avoid the duplication of expensive plant breeding programmes. Such duplication does now in fact occur with little or no collaboration between the agencies involved.

This project would involve a study of existing needs and capabilities as well as of the opportunities for development and exchange of germplasm.

There should be liaison with the Board for Plant Genetic Resources (a UN (FAO) agency) and with CATIE in Costa Rica which functions in Central America. There will also be Plant Quarantine considerations that must be taken into account.

The first phase of this project will be the study and report by a suitable consultant, and cost of this phase only is budgeted.

(Approximate Cost (Phase I) - US\$20,000)

Project 7: Development of Agro-Industries particularly at Rural Level

In many of the Less Developed member countries of CCST possibilities for industrialization may be limited, particularly in rural areas. But much can be done for food processing by appropriate techniques thus adding value to the farm product and giving to the rural communities income which they are normally deprived of by selling only the harvested items in the "raw" state.

This project will involve largely application of techniques already available and must commence with a study of the needs and opportunities at a technical level. Subsequently market studies may be required as well as funding of particularly development projects. The funding here suggested is for the initial study and report. A Food Technologist should be engaged to conduct this initial study.

(Approximate Cost - US\$30,000).

Clearly the needs of the region are such that the number of projects could be greatly extended. Further, individual member countries will have particular priorities which do not appear in this list of projects. However, major considerations in making these proposals have been to keep within the limits of what is possible and to create credibility for the CCST in its establishment phase. Also some effort has been made to complement existing programmes (such as in Project 5) and to recognize the major basis in agriculture which applies to most member countries (hence the R+D Projects 6 and 7). Also in the case of the two latter projects the range of interests of CCST is demonstrated, from scientific capacity to application of results; and thus the possibility (even though in a limited way) for the academic to be objective-oriented in research activities is brought out.