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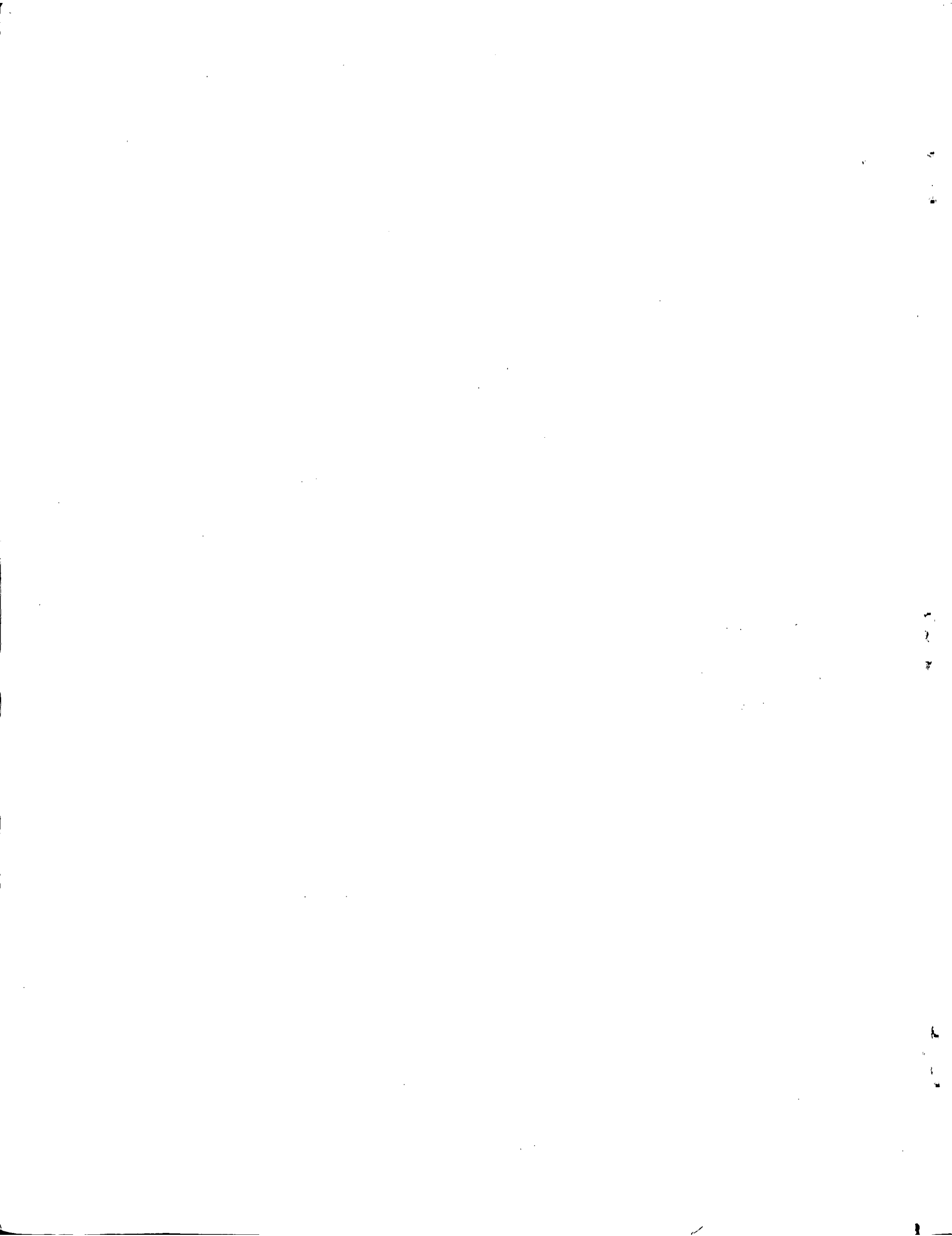


REPORT ON ACTIVITIES OF THE
CARIBBEAN COUNCIL FOR SCIENCE AND TECHNOLOGY



UNITED NATIONS

ECONOMIC COMMISSION FOR LATIN AMERICA Office for the Caribbean



REPORT ON ACTIVITIES OF THE CARIBBEAN
COUNCIL FOR SCIENCE AND TECHNOLOGY (CCST)

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REPORT ON ACTIVITIES OF THE CARIBBEAN
COUNCIL FOR SCIENCE AND TECHNOLOGY (CCST)

Introduction

This report covers the First Plenary Session of the Caribbean Council for Science and Technology (CCST) hosted by the Government of Barbados, and convened at the Government Conference Centre, Wildey, St. Michael, Barbados, 29 June - 2 July 1981, and the subsequent activities in implementation of the CCST decisions, etc..

Background

The Statutes for the CCST were approved on 17 April, 1980 at a Joint CDCC/UNESCO Meeting on the Caribbean Council of Science and Technology, held in Kingston, Jamaica from 14 - 17 April, 1980 on which occasion signatories to the Statutes were representatives of the Governments of:

Cuba	ad referendum
Dominica	full acceptance
Dominican Republic	ad referendum
Grenada	full acceptance
Guyana	full acceptance
Haiti	full acceptance
Jamaica	full acceptance
Suriname	ad referendum
Trinidad and Tobago	ad referendum
Belize	ad referendum
Netherlands Antilles	ad referendum

Subsequent to that meeting, additional approvals were indicated by the Governments of St. Lucia and St. Vincent, by correspondence to the ECLA sub-regional Headquarters for the Caribbean.

Instruments of Ratification were transmitted (in accordance with Article 31) by the Governments of Cuba, Dominica, Grenada, Guyana, Jamaica, St. Lucia, St. Vincent, Suriname and Trinidad and Tobago. In addition, the Governments of Belize, Dominican Republic, Haiti and the Netherlands Antilles have informed that their constitutional processes for ratification of the Statutes have been initiated.

In his capacity as current Chairman of the CDCC, the Honourable Hugh Shearer, Deputy Prime Minister and Minister of External Affairs of Jamaica, on 24 March, 1981 notified to all CDCC participating Governments, that considering Article 33 of the Statutes, and more than six countries having deposited Instruments of Ratification, that the Statutes were in Force. Accordingly, steps would be taken by the CDCC Secretariat to convene the First Plenary Session.

The session was convened at Barbados on 29 June - 2 July, 1981, and the ... report of that meeting is attached as an Appendix to this report.

Summary of Decisions of CCST

The following is a summary of the decisions taken by the CCST at its First Plenary Meeting:

1. Work Programme

Six projects were approved for the CCST Work Programme. The titles of these projects are given below and the listing is in order of priority approved by the Council:

- i. Assessment of National Science and Technology Capabilities;
- ii. Establishment of a Science and Technology Journal of the CCST;
- iii. Development of Agro-industries and Employment Opportunities particularly at Rural Level;
- iv. Preparation and Exchange of Audio-visual Material for Education in Science and Technology;
- v. Conservation and Exchange of Germplasm of Crop Plants; and
- vi. Study of the Consequences of the Development of Energy Crops on Food Supplies in the region.

2. Funding

It was agreed that the MDC's would be requested to contribute US\$8,000 per annum (US\$4,000 for 1981), and the LDC's US\$2,000 per annum (US\$1,000 for 1981) for the operational costs of the Council. Cuba, Guyana, Jamaica, Suriname and Trinidad and Tobago were categorized as MDC's and Dominica, Grenada and St. Lucia as LDC's.

3. Secretariat

It was decided because of the current lack of funds to establish a CCST Secretariat to request the CDCC Secretariat to continue providing Secretariat services until the next Plenary Session of CCST.

4. Meetings of the Council

It was decided to hold the next Regular Meeting during May 1982, and it was agreed that the Executive Committee should decide whether an Extra-ordinary Meeting should be held in 1981. The Executive Committee was also to decide on the venue for both meetings.

5. Election of Officers

The following officers were elected unanimously in accordance with Article 9 of the Statutes:

Chairman	Guyana designated member
Vice-Chairman	Suriname designated member
Honorary Treasurer	Jamaica designated member
Member	Grenada designated member

The countries named above would be requested by the Secretariat to indicate which of their two designated Council Members (where more than one Council Member is designated), would hold Office.

6. Attendance at Meetings of the Executive Committee

It was agreed that the Executive Committee could invite other members of the Council to attend its meetings.

7. Specialized Committees and Working Groups

It was agreed to establish the Committees or Working Groups listed on page 6 of the Appendix to advise the Council on its activities in the areas covered by the Groups.

8. Possible Observers at CCST Meetings

A list of organizations which the CCST could at its discretion, invite as observers to particular meetings was agreed and this is given in Annex XI to the Report.

Subsequent Actions

The Executive Committee met in Barbados on 13 August, 1981. Present were Dr. Dennis Irvine, Chairman (Guyana), Mr. Iwan Kortram, Vice-Chairman (Suriname), Ms. Merline Smith, Treasurer (Jamaica), and Dr. de Vere Pitt, Member (Grenada).

Summary of Decisions of Executive Committee:

1. It was agreed that Member Countries should be circularized with the names of members of the CCST and of the Executive Committee. This information, which is given below, was given to Member Countries under cover of a memorandum from the Director of the ECLA Office for the Caribbean dated 21 August, 1981.

Members of the CouncilMembers of Executive Committee:

Dr. Dennis Irvine	Chairman, (Vice-Chancellor of the University of Guyana) -(Guyana)
Mr. Iwan Kortram	Vice-Chairman, (Project Evaluation Division, Planning Bureau) - (Suriname)
Ms. Merline Smith	Treasurer, (Scientific Research Council) - (Jamaica)
Dr. James de Vere Pitt	Member, (National Science and Technology Council) - (Grenada)

Other Council Members:

Dr. Andrew Ucbabor	Chairman, (Dominica Council of Science and Technology)- (Dominica)
Dr. Ulric Trotz	Director, (Institute of Applied Science and Technology) - (Guyana)
Mr. Charles Stephen	Mathematics and Science Co-ordinator, (Ministry of Education) - (St. Lucia)
Ms. Eugenie Eersel	(United Nations Desk, Ministry of Justice and Foreign Affairs)- (Suriname)
Dr. Lenny Saith	Deputy Chairman, (National Council for Technology in Development)- (Trinidad and Tobago)
Mr. Thomas Harewood	Director, (Research and Development, Ministry of Finance) - (Trinidad and Tobago)

Mr. Hayden Toney · Acting Director, Energy Planning,
(Ministry of Energy and State
Enterprises) - (Trinidad and Tobago) -
(Alternate)

Mr. Gerald Thompson Foreign Service Officer, (Ministry of
External Affairs) - (Trinidad and
Tobago) - (Alternate)

2. It was decided that the report to CDCC VI would include details of the proposed method of funding and this is given in Annex X of the Appendix.

It was further agreed that the proposed budget for the CCST Secretariat would be presented to CDCC VI and this is given below:

Proposed Budget: CCST

	Recurrent Expenditure (per annum)
	<u>US\$</u>
1. Staff: Director P-5	45,000
Senior Officer P-4	40,000
2 Research Assistants G-6; G-5	25,000
3 Secretaries G-4	30,000
2. Office Accommodation - 2,000 sq.ft.	25,000
3. Utilities	1,000
4. Communications	10,000
5. Supplies and Materials	5,000
6. Books, Periodicals	3,000
7. Travel on Official Business	20,000
8. General Temporary Assistance	5,000
9. Rental, Replacement, Maintenance of Equipment	5,000
10. Consultants' Fees	20,000.
11. Miscellaneous Services	3,000
	<u>237,000</u>
	<u>Capital</u>
Equipment, Furniture, Furnishings (initial)	50,000
<u>Capital: US\$50,000</u> <u>Recurrent: US\$237,000 per annum</u>	

3. It was agreed to add to the list of Committees or Working Groups, one on New Technologies to include coverage of Information Systems, micro-processors and Bio-technology (e.g. Genetic Engineering).
4. It was decided that the Extra-ordinary Plenary Session of CCST would be held in Guyana from 9 to 12 December, 1981.
5. With respect to the Work Programme, it was agreed that the first Workshop on Assessment of National Science and Technology Capabilities would be held in Suriname in October, 1981.

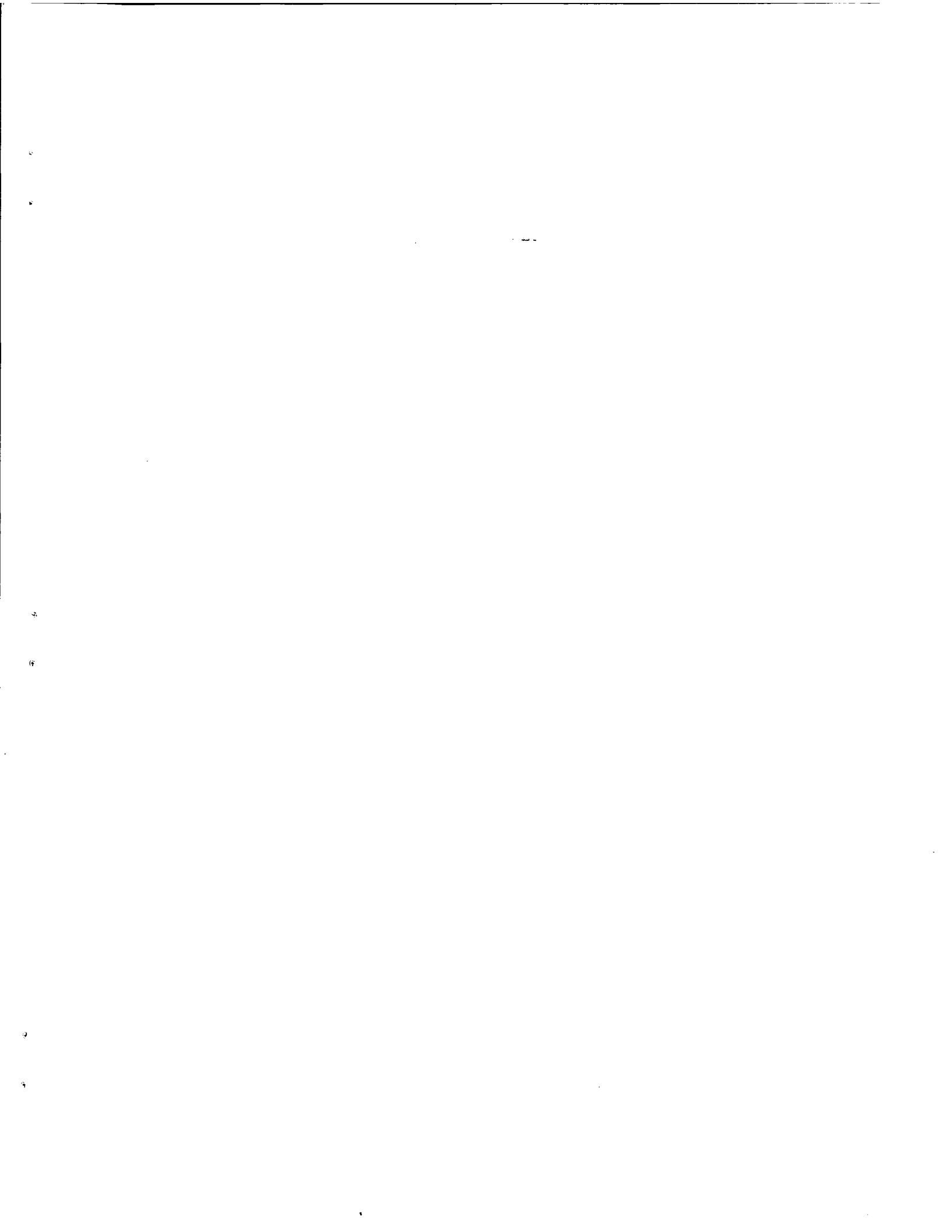
After the meeting of the Executive Committee, the members held useful discussions with representatives of the Caribbean Development Bank, Canadian International Development Agency, United States Agency for International Development and the European Development Fund.

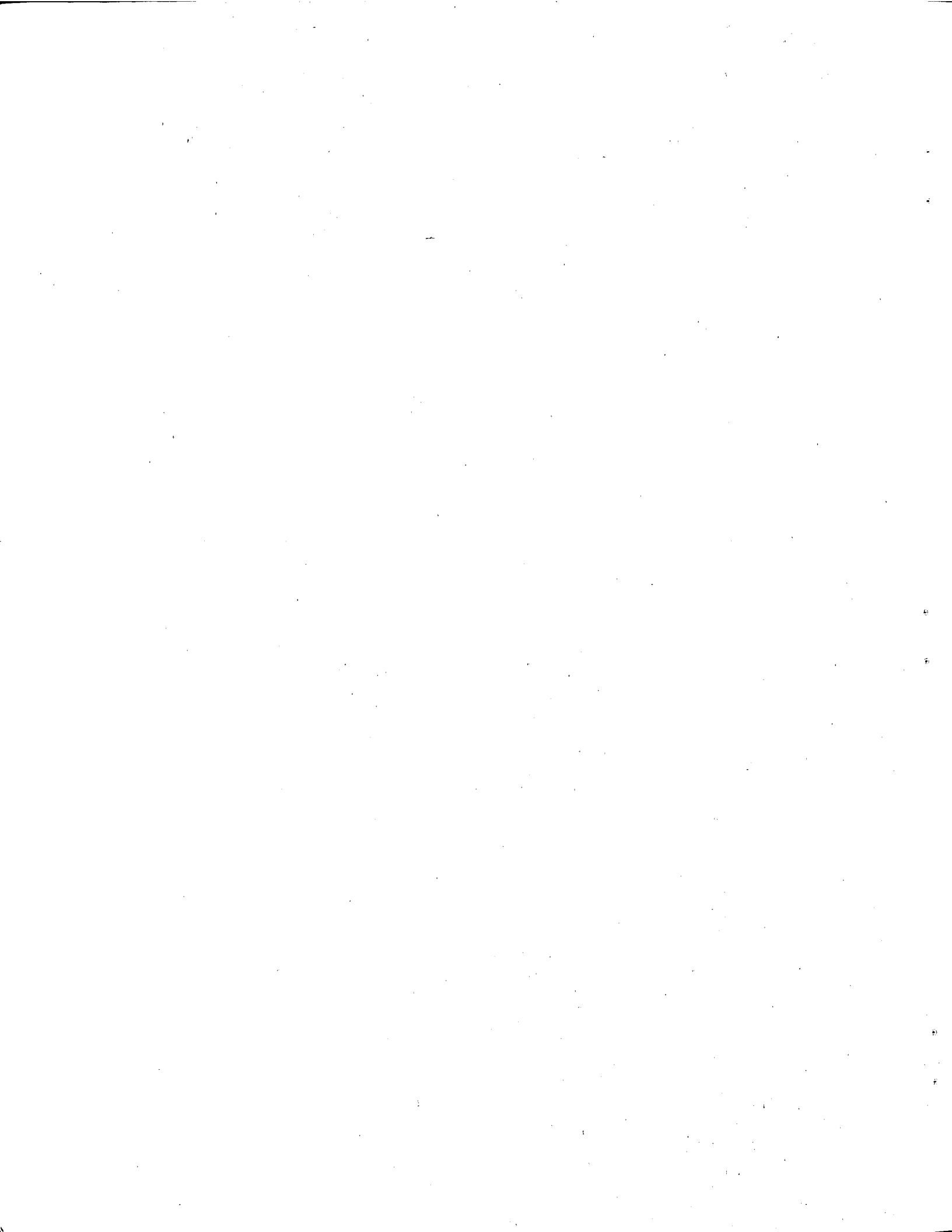
The CCST has been fortunate to have its first allocation of funds shortly after the Executive Committee meeting. The United Nations Interim Fund for Science and Technology for Development has provided US\$15,000 to meet the cost of the Workshop on Assessment of National Science and Technology Capabilities planned for 12-16 October, 1981, in Suriname.

This Workshop will launch the CCST Work Programme with the first priority project approved at the first meeting of the Council.

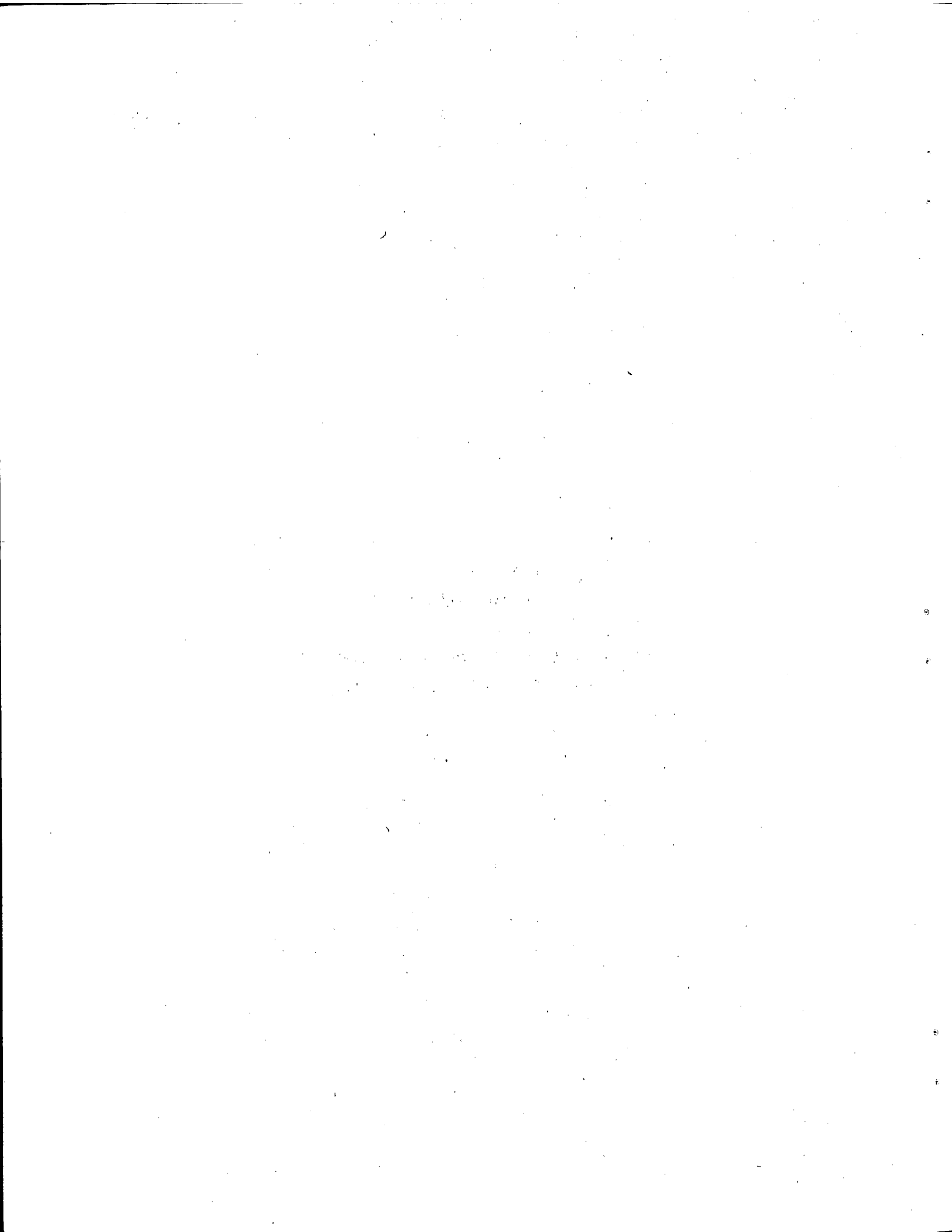
In response to the discussion taken at the First Meeting of CCST on contributions from Governments for funding the operations of the Council, the Government of Trinidad and Tobago has indicated its agreement to the proposal and has authorized the necessary payments. Further, at least one Government (Dominica) has given legal status to the CCST by an Act of Parliament.

The prospects for successful operation of the CCST thus seem very favourable.





REPORT ON
FIRST PLENARY SESSION
OF THE
CARIBBEAN COUNCIL FOR SCIENCE AND TECHNOLOGY
(Barbados, 29 June - 2 July 1981)



First Plenary Session of the Caribbean Council for
Science and Technology

I. ORGANIZATION OF THE MEETING

1. In keeping with the decision taken at the Joint Caribbean Development and Co-operation Committee/United Nations Educational Scientific and Cultural Organization (CDCC/UNESCO) Meeting held in Kingston, Jamaica, 14-17 April 1980, and endorsed by the Fifth Session of the CDCC that the First Plenary Session of the Caribbean Council for Science and Technology (CCST) be convened, a meeting was held in Wildey, Barbados from 29 June to 2 July 1981. The meeting was hosted by the Government of Barbados.

Opening Ceremony

2. The keynote address was made by the Honourable Senator Clyde Griffith, Parliamentary Secretary in the Ministry of Finance and Planning, Barbados, with special responsibility for Energy and Natural Resources. Addresses were also made by representatives of the United Nations Economic Commission for Latin America (ECLA), Office for the Caribbean and of the UNESCO Headquarters.

Attendance ^{1/}

3. Representatives of the following member countries of the Caribbean Council for Science and Technology (CCST) attended the session; Dominica, Grenada, Guyana, Jamaica, St. Lucia, Suriname and Trinidad and Tobago. Representatives of the following CDCC member governments also attended in observer capacity: Barbados and the Netherlands Antilles.

4. The Caribbean sub-regional inter-governmental organizations present were Caribbean Development Bank (CDB) and the Secretariat of the Caribbean Community (CARICOM).

^{1/} The List of Participants is given in Annex I.

5. The following United Nations organizations and bodies were represented: United Nations Economic Commission for Latin America (ECLA), United Nations Educational Scientific and Cultural Organization (UNESCO), United Nations Development Programme (UNDP), United Nations Industrial Development Organization (UNIDO), United Nations Interim Fund for Science and Technology for Development (UNIFSTD).

6. Apologies for absence were received from CCST member country Cuba and also from Belize, the Dominican Republic, Haiti and St. Vincent who had been invited in the capacity of observers.

Election of Officers for the Meeting

7. The following officers for the meeting were elected unanimously:

Chairman: James de Vere Pitt (Grenada)
Vice-Chairman: Iwan Kortram (Suriname)
Rapporteur: Merline Smith (Jamaica)

8. The functions of the Secretariat were performed by the United Nations ECLA Office for the Caribbean, which serves also as the Secretariat to the CDCC.

II. SUBSTANTIVE DISCUSSIONS Rules of Procedure of the CCST

9. The meeting considered the Secretariat document "Draft Rules of Procedure for Caribbean Council for Science and Technology".

10. The Rules of Procedure as amended and adopted are shown in the document titled "Rules of Procedure for Regular and/or Extraordinary Plenary Sessions of the Caribbean Council for Science and Technology as Adopted at the First Plenary Session" which is given as Annex II.

UNESCO Consultant's Report

11. The considerable discussion generated, indicated participants' general concurrence with the findings of the Report. With respect to recommendations, cognizance was taken of the several initiatives underway, including the CARICOM project on the preparation of an action plan for Science and Technology funded by the United Nations Interim Fund for Science and Technology for Development. It was pointed out that the draft Work Programme of the CCST was prepared with due regard for the contents of the recommendations of the Report.

12. It was felt that there was (i) common ground in perception of national needs; (ii) considerable overlap and duplication among regional initiatives and donor projects and (iii) the need for co-ordination at the regional level.

13. It was further pointed out that the CCST was intended to be a major co-ordinating agency in the field of Science and Technology in the Caribbean.

Work Programme

14. The following documents for this Item were prepared by the CDCC Secretariat: "Guidelines for the Work Programme", and "The Work Programme", the latter being supplemented by Conference Room Papers on the individual projects.

15. With respect to the projects included in the Work Programme, the agreed priority ranking with new titles where changes were made was:

1. Assessment of National Science and Technology Capabilities.
2. Establishment of a Science and Technology Journal of the CCST.
3. Development of Agro-industries and Employment Opportunities particularly at Rural Level.
4. Preparation and Exchange of Audio-visual Material for Education in Science and Technology.
5. Conservation and Exchange of Germplasm of Crop Plants.
6. Study of the Consequences of the Development Energy Crops on Food Supplies in the region.

These projects which are attached as Annexes IV to IX of the Report were endorsed.

16. Bearing in mind the work already underway in organizations such as CARICOM and the CDB, several participants referred to the need for co-operation and co-ordination of activities by the different agencies and the CCST.

17. Country participants were pleased with the indications from UNIFSTD and UNESCO that these organizations were going to look into the possibilities of funding and that there were reasonable prospects that some of the projects could be financed. The senior UNDP representative also pointed out that if CCST member countries requested funding for particular projects from their country programme allocations this could be considered.

Funding (member countries, external agencies special fund) and Establishment of the Secretariat of CCST

18. The meeting had before it the Secretariat paper "Funding of the Activities of the CCST".

19. There was detailed discussion of possible funding mechanisms and allocation of assessments among member countries.

20. It was decided that this Item should be discussed in conjunction with Item 13 "Establishment of the Secretariat of the CCST". The CDCC Secretariat pointed out its earlier contribution to CCST and its willingness to continue to serve as the Secretariat ad interim.

21. A drafting committee comprising Guyana, Trinidad and Tobago and the Chairman submitted proposals for consideration of the meeting. After further discussion agreement was reached on the Proposal for Funding the CCST which is attached to this Report as Annex X.

22. In so far as establishment of the Secretariat was concerned, it was decided, because of the current lack of funds to establish a CCST Secretariat, to ask the CDCC Secretariat to continue providing Secretariat services until the next plenary session.

Science and Technology Policies
in Medium Term 1984-1989

23. The UNESCO representative drew attention to the document, "Thoughts on a Preparation of UNESCO's Second Medium-term Plan in the Field of Science and Technology", explained the background to its preparation and urged member countries to send their comments to UNESCO. It was suggested that this Item could be discussed further at the Extraordinary Plenary Session of the Council which had been proposed for later in 1981.

Consideration of Agenda for the
Second Plenary Session

24. The meeting had before it the document "Draft Agenda for Second Plenary Session of the CCST".
25. It was suggested that there should be at least one Extraordinary Plenary Session of the Council each year between the Regular Plenary Session for the first two years and that one should be held during the next few months.
26. The Council instructed that the Executive Committee should decide whether the first extraordinary meeting should be held toward the end of 1981.
27. It was decided to hold the next Regular Meeting during May 1982.
28. It was further decided to leave the choice of venue to the Executive Committee.

Election of Officers of the Council

29. The following officers were elected unanimously in accordance with Article 9 of the Statutes:

Chairman	Guyana
Vice-Chairman	Suriname
Honorary Treasurer	Jamaica
Other Member	Grenada

The member countries named above would be requested by the Secretariat to indicate which of their two designated Council members (where more than one Council member is designated) would hold office. It was also agreed that the Executive Committee could invite other members of the Council to attend their meetings.

Collaboration with Other Agencies

30. The meeting approved a list of organizations and agencies with whom collaboration could develop and who could be invited as observers to CCST meetings. The list is given as Annex XI.

Specialized Committees and Working Groups

31. The meeting agreed to establish the following Committees or Working Groups:

1. Energy
2. Transfer of Technology and Patents
3. Information Systems
4. Agricultural Research
5. Marine Affairs (including Fisheries)
6. Health
7. Universities, Industrial Sector and other Private and Public Sector Institutions

32. Much of the discussions centred on the proposed committee on Transfer of Technology and Patents. The need to establish a mechanism for the exchange of such information within Caribbean countries was stressed. Sharing of experiences was vital in improving the negotiating capabilities of the individual countries. Mention was also made of the need to tap the services of the World Intellectual Property Organization (WIPO) and the United Nations Industrial Development Organization (UNIDO) in this venture. The meeting was informed of a seminar to be held in Jamaica by WIPO on Licensing. Some participants expressed an interest in attending this seminar. Delegates were in agreement with co-ordination in this area.

Plans for the Sixth Session of the
Standing Conference of Science and Technology
Policy-making Bodies in Latin America
and the Caribbean

33. The representative of UNESCO summarized the contents of a paper titled "Guidelines for the Preparation of National Reports on the Present State and Trends in National Science and Technology Policies". He indicated that the paper would be useful in providing guidelines for assessing national capabilities in Science and Technology in the Caribbean. He also urged members to attend the La Paz Conference.

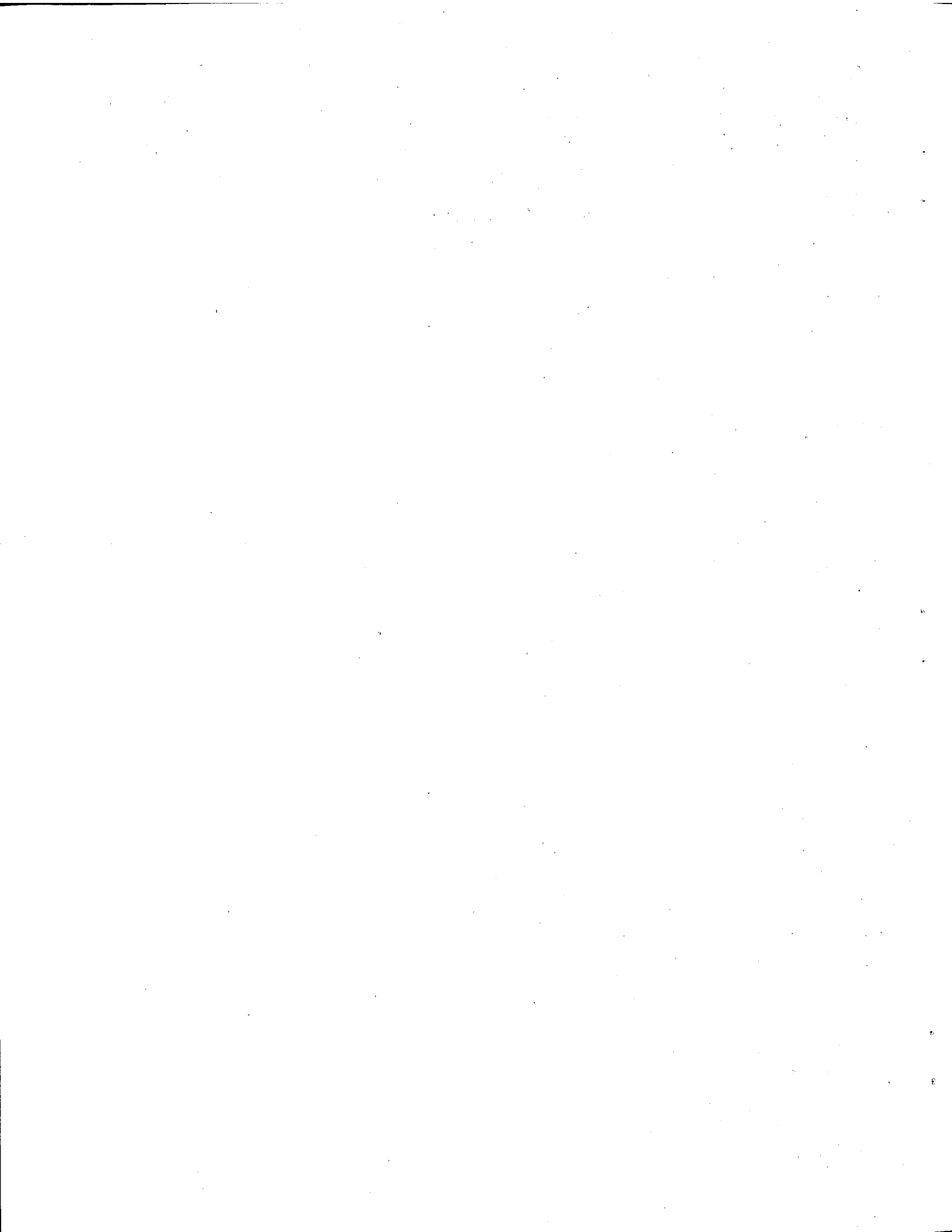
Closing Remarks

34. Members expressed their appreciation to the Chairman for his efficient handling of the meeting and pledged their support for the work of the Council.

35. The unavoidable absence of Cuba was regretted as it was felt that the Cuban experience would be vital to the regional thrust.

36. Appreciation was also expressed to the observers for their presence at the meeting and their contributions to the discussions.

37. The Chairman expressed gratitude to the Government of Barbados for hosting the meeting, to UNESCO for funding the meeting, to the ECLA/CDCC Secretariat for servicing the meeting and to the rapporteur for her hard work in recording the proceeding and to others who had assisted in making the meeting a successful one.



LIST OF PARTICIPANTS AT
FIRST PLENARY SESSION OF CCST

1. CCST Member Countries

DOMINICA	Andrew Ucbebor Chairman Council of Science and Technology 2nd Floor Government Headquarters Roseau Tel: 2401
GRENADA	James de Vere Pitt Director Grenada National Science and Technology Council Tanteen St. George's Tel: 2544
GUYANA	Ulric Trotz Director Institute of Applied Science and Technology P.O. Box 791 University Campus Turkeyen Greater Georgetown Tel: 53922
JAMAICA	Merline Smith Technical Information Officer Scientific Research Council P.O. Box 350 Kingston 6 Tel: 92-744471-4
ST. LUCIA	Charles Stephen Mathematics and Science Co-ordinator Ministry of Education Castries Tel: 3896/2611/ 2174
SURINAME	Eugenie Eersel Head, United Nations Desk Ministry of Justice and Foreign Affairs Gravenstraat 1 Paramaribo Tel: 77944/72497

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2. Observers

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St. Michael

NETHERLANDS ANTILLES

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3. Inter-governmental Organizations

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4. United Nations System

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United Nations Economic Commission for
Latin America/CDCC Secretariat (ECLA/CDCC)

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Conference and Documents Assistant

RULES OF PROCEDURE FOR REGULAR AND
EXTRAORDINARY PLENARY SESSION OF THE
CARIBBEAN COUNCIL FOR SCIENCE AND TECHNOLOGY

(As adopted at its First Plenary Session)

I. PARTICIPATION

Rule 1 - Representatives

Governments who have ratified in accordance with procedures set out in Statutes will be eligible to take part in the meetings of the Council with the right to vote.

Rule 2 - Observers

2.1 The Council may decide to invite observers from non-member governments and from such other organizations as it considers may assist it in meeting its objectives as listed for collaboration in Article 17 of the Statutes.

2.2 Such observers will not have voting rights.

II. ORGANIZATION OF WORK

Rule 3 - Elections

The Council shall elect annually a Chairman, Vice-Chairman and Honorary Treasurer in accordance with Article 9 of the Statutes; one other Council member will also be elected annually who, together with the above mentioned officers, will form the Executive Committee of the Council, such elections to take place at the end of the Regular Plenary Meeting.

Rule 4 - Specialized Committees and Working Groups

The Council may set up Specialized Committees and Working Groups and appoint the Chairman of each such group. Such Specialized Committees or Working Groups shall set their own Rules of Procedure.

Rule 5 - Executive Committee

Unless otherwise noted in these Rules of Procedure, the meetings of the Executive Committee will be governed by these Rules for the Council.

III. CONDUCT OF BUSINESS

Rule 6 - Duties of the Chairman

6.1. In addition to exercising the other powers which are conferred on him by these Rules, the Chairman shall open and close each Plenary Meeting. He shall direct the discussions, ensure observance of these Rules, accord the right to speak, put questions to the vote and announce decisions. He shall rule on points of order and, subject to these Rules, shall control the proceedings.

6.2 If the Chairman is absent during a Meeting, or part thereof, his place shall be taken by the Vice-Chairman. A Vice-Chairman, acting as Chairman shall have the same powers and duties as the Chairman.

6.3 The Chairman of a specialized committee or ad hoc working group or in his absence a participant designated by the committee or working group in accordance with Article 24 of the Statutes of the CCST, shall have the same duties and powers, with regard to the subsidiary body over which he is called upon to preside, as the Chairman of the Council.

Rule 7 - Quorum

As stated in Article 27 of the Statutes of the Council, a quorum shall be constituted by a half plus one of the member countries.

Rule 8 - Observers

Observers referred to in Rule 2 may submit communications or speak with the consent of the Chairman.

Rule 9 - Points of Order

9.1 During the discussion, any representative may raise a point of order, which shall immediately be decided upon by the Chairman.

9.2 An appeal may be made against the decision of the Chairman. Such appeal shall be put to the vote immediately and the Chairman's ruling shall stand unless overruled by a majority of representatives present and voting.

Rule 10 - Procedural Motions

10.1 During a discussion any representative may move the adjournment or closure of the debate or the suspension or adjournment of the session.

10.2 Such a motion, if it has been seconded shall be put to the vote immediately. Such motions shall have precedence in the following order over all other proposals or motions before the Council:

- a) suspension of the Session;
- b) adjournment of the Session;
- c) Adjournment of the debate on the question under discussion; and
- d) closure of the debate on the question under discussion.

Rule 11 - Conclusions and Recommendations

11.1 Draft conclusions and draft recommendations and draft amendments to them, may be proposed by the representative and shall be transmitted in writing to the Secretariat of the Council which shall circulate copies to all representatives.

11.2 As a general rule, no draft conclusion, recommendation or amendment shall be examined, and put to the vote unless it has been circulated in advance to all representatives in the working languages of the Council, or unless there is unanimous agreement of the countries referred to in Rule 1 and represented at the Meeting to waive this Rule (11.2), except as provided for in Rule 12.3.

Rule 12 - Working Languages

12.1 The working languages of the Council shall be Spanish, French and English.

12.2 Statements made at meetings of the Council shall be in one of the working languages. If no simultaneous interpretation and/or translation facilities can be provided because of financial constraints then the working language for the particular meeting shall be in English.

12.3 Speakers may, however, make statements in any language provided they make their own arrangements for the interpretation of their statements into one of the working languages as appropriate in accordance with Rules 12.1 and 12.3.

Rule 13 - Voting

13.1 As stated in Article 27 of the Statutes of the Council, each member country shall have a single vote and all decisions of Meetings shall be taken by a simple majority vote of member countries present and voting.

13.2 The expression "present and voting" shall mean member countries casting an affirmative vote, a negative vote or abstaining.

13.3 Voting shall normally be by a show of hands.

13.4 When the result of a vote by a show of hands is in doubt, the Chairman may take a second vote by roll-call. A vote by roll-call may be also taken if it is requested by not less than two members present before the voting takes place.

13.5 When the amendment to a proposal is moved, the amendment shall be voted on first. When two or more amendments to a proposal are moved the Council shall first vote on the amendment deemed by the Chairman to be furthest removed in substance from the original proposal, and then on the amendment deemed by him to be next furthest removed therefrom and so on until all amendments have been put to the vote.

13.7 If one or more of the amendments is adopted, the amended proposal shall then be voted upon as a whole.

13.8 A motion will be considered to be an amendment to a proposal if it merely adds to, deletes from or revises part of that proposal.

Rule 14 - Records

14.1 A record of the meeting shall be kept and shall be designated the minutes of that meeting.

14.2 The minutes of each meeting of the Council shall be confirmed at the next Regular Plenary Meeting of the Council.

IV. SECRETARIAT OF THE COUNCIL

Rule 15 - Secretariat

15.1 The Executive Secretary appointed in accordance with Article 15 of the Statutes of the Council shall participate in the work of the Council as Secretary without the right to vote. The Chairman may also allow participation of any other member of the Secretariat, also without the right to vote.

15.2 In accordance with Article 34 of the Statutes of the Council, until such time as an Executive Secretariat of the Council is established, the CDCC Secretariat shall assist in provision of Secretariat services. For that purpose, the Chairman may also allow members of the CDCC Secretariat to participate in meetings of the Council without the right to vote.

15.3 The Secretariat shall receive, translate and distribute all official documents of the Council and ensure the interpretation of the discussions in accordance with these Rules of Procedure.

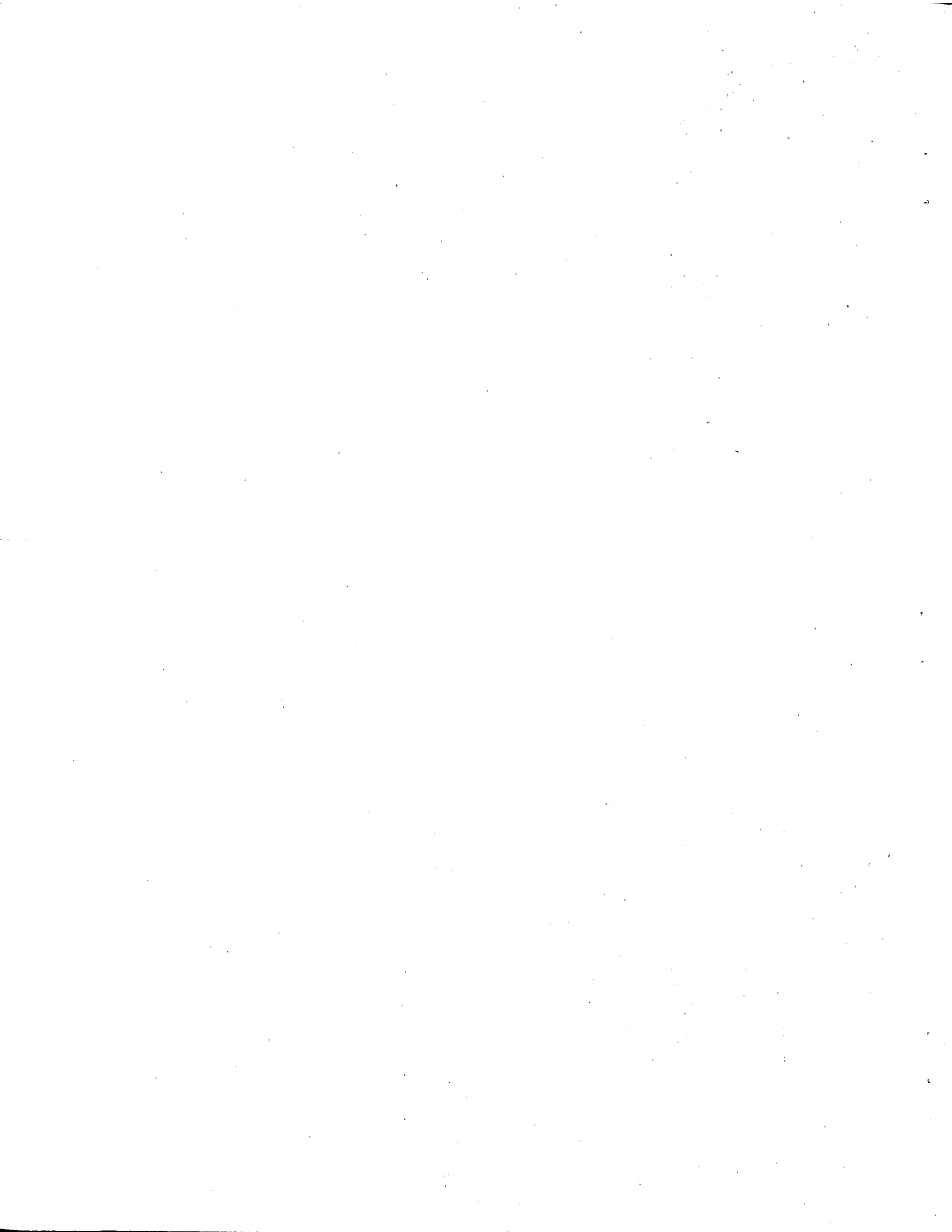
V. ADOPTION AND AMENDMENT
OF THE RULES OF PROCEDURE

Rule 16 - Adoption

The Council shall adopt these Rules of Procedure by a decision taken in Regular Plenary Session.

Rule 17 - Amendment

The Council may amend these Rules of Procedure by decisions taken in Regular Plenary Session by a two-thirds majority of member countries present and voting.



GUIDELINES FOR WORK PROGRAMME - (1981-1983)

Introduction

It is proposed that the initial activities of the Caribbean Council for Science and Technology (CCST) be planned for a 2-year period which may be considered as the establishment phase of the Council. These guidelines therefore are intended for that period, as is the proposed work programme. While there will be a review during this period, a thorough assessment can be made in 1983.

Funding

Projects may be financially structured so as to be:

1. Funded in the main by CCST member countries; in this case supplementary funding may be needed for co-ordinating activities such as workshops, publication of overall results (including translation where necessary). In the main these will be projects which individual countries would have been undertaking in any case and the CCST role would be to enhance collaboration so that the total effort would be more than the sum of the individual efforts, and duplications may be avoided.
2. Funded by International or Regional Agencies with complementary funds (in cash or in kind) being supplied at National Level. For these projects the CCST would solicit funding from relevant agencies for mounting of the projects.
3. Funded from a combination of sources, International, Regional and National with the CCST as with (2) above taking the major initiative.

With respect to the projects themselves, it may be convenient to classify them as follows:

1. Policy
2. Research
3. Development
4. Services
5. Institution building
6. Training
7. Information

It should be noted, however, that projects may combine more than one of the above aspects.

Guidelines

Important to all projects, should be a major thrust for collaboration between CCST member countries. Projects should:

1. Be capable of giving tangible results within the time-frame of the proposed Work Programme.
2. Be important and useful in themselves while bringing CCST to the attention of as wide an audience as possible.
3. Be likely to attract financial and technical assistance support from International as well as National Agencies;
4. Not compete directly with other regional efforts in Science and Technology but rather should complement and where appropriate, co-ordinate such efforts.
5. Wherever possible use the device of bringing together groups of persons interested in the particular project to encourage a free flow of ideas in Science and Technology.
6. Bridge the gap between the University academician, the technologist, and the users of technology so that indigenous scientific capability may be encouraged to be oriented for development.
7. Wherever possible, include elements for improving the capability of CCST member countries in science and technology.
8. Be integral to the planning and developmental process and be oriented to development even if the objective is long-term.
9. Include suggestions for avoiding or minimising possible adverse environmental or social effects.
10. Include mechanisms for side dissemination of results with and between member countries.

If these guidelines are agreed upon, then the projects proposed for the Work Programme (1981-1983) may be assessed in relation to how they may meet the provisions of the guidelines.

PROJECT 1

ASSESSMENT OF NATIONAL SCIENCE AND TECHNOLOGY
CAPABILITIES

Observation

The consensus was that the common aim of this project was to facilitate an assessment of the present Science and Technology policies and capabilities situation of the member countries and the drawing up of recommendations to governments.

It was further concluded that this assessment would only achieve its purpose if it were carried out preferably by Caribbean nationals. At the same time a common methodology would need to be adopted and participants familiarised with its use so as to permit coherent, in-depth, national assessments and their analyses at the regional level.

The technique proposed therefore consists of:

1. A planning workshop to define the methodology and familiarise participants with its use.
2. The carrying out of the national assessment.
3. A workshop to examine the national assessments with the co-operation of representatives of relevant organizations.

The Project

The CCST will have to work in the main through national organizations and so the effectiveness of its operations will be affected by the strengths or weaknesses of national Science and Technology bodies, focal points or other appropriate institutions. 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. The designation, at the request of the CCST Secretariat, by each CCST member country and other CDCC countries wishing to participate of an organization, institution or government department to be responsible for the activities needed for the carrying out of the national assessments, and the designation of one officer to act as National Co-ordinator;
- ii. The conclusion of grants, by means of contracts between the CCST and the participating national institutions for the carrying out of the national assessments (see below under Budget);
- iii. The organization by the CCST Secretariat of a Workshop mandated to discuss and familiarise participants with the methodology for the national assessments and to be attended by the National Co-ordinator. It is recommended that actual case studies from member countries may be used to illustrate difficulties encountered in carrying out national assessments.

The Workshop would use as a tentative outline of the points to be covered by the national assessments, the following:

Aspect 1 - General Features

- 1.1 Geopolitical setting
- 1.2 Socio-cultural and economic setting
- 1.3 Development scene

Aspect 2 - Science and Technology Policy Framework

- 2.1 Development policy framework
- 2.2 International and bi-lateral co-operation framework
- 2.3 Development policy and co-operation policy in its relations with science and technology policies

- 2.4 Policy-making machinery and procedures for science and technology, both explicit and implicit, with an indication of the degree of autonomy

Aspect 3 - Assessment of the Scientific and Technological Potential

- 3.1 Institutional network and physical facilities (building and equipment) including an evaluation of capabilities for future expansion and an identification of on-going and planned R and D programmes and projects and scientific and technological services
- 3.2 Human resources for scientific and technological endeavours
- 3.3 Financial resources for scientific and technological activities and budgetary practices in government and higher education
- 3.4 Scientific and Technological information and documentation resources
- 3.5 Facilities for surveying and monitoring the S + T potential on a continuing basis

Aspect 4 - National Policy Issues in Scientific and Technological Development

- 4.1 Legislation and regulation base
- 4.2 Policy instruments, concentrating on schemes and measures for the dissemination of R + D results and for the commercial utilization
- 4.3 Definition of short, medium and long-term objectives
- 4.4 Identification of short-term priorities for scientific and technological development

Aspect 5 - National Outlook on International Scientific and Technological Co-operation

- 5.1 Survey of on-going co-operation programmes and projects
- 5.2 Identification of needs and wishes for increased co-operation:

- i. within the Caribbean;

- ii. with countries outside the Caribbean;
- iii. with international entities; and
- iv. with bi-lateral agencies.

The tentative date of the Workshop was set for late September 1981.

- iv. The carrying out by the countries concerned of their national assessments, in accordance with methodology established at the Planning Workshop and with the benefit of the grants mentioned in the Budget for the project; and
- v. Analysis Workshop to consider the national assessments and to make recommendations to governments.

This Workshop, to be organized by the CCST Secretariat, would take place with the full participation of representatives of Caribbean institutions such as CARICOM, CDB, etc., as well as international agencies (such as UNESCO, UNIDO, UNIFSTD, UNDP) who are able to contribute to its success.

BUDGET

	<u>US Dollars</u>
1. Planning Workshop:	
5 days	
Travel and per diem of participants	
Interpretation/Translation	
Printing of documents	15,000
2. Grants to national entities participating in the project	50,000
3. Analysis Workshop:	
5 days as above	15,000
	<hr/>
TOTAL:	<u><u>80,000</u></u>

PROJECT 2

ESTABLISHMENT OF A SCIENCE AND TECHNOLOGY JOURNAL
OF THE CARIBBEAN COUNCIL FOR SCIENCE AND TECHNOLOGY

Objectives

Such a Journal would have the effect of bringing the existence of the CCST to the attention of scientists and technologists as well as policy-makers and planners in the region.

To share knowledge of new and significant information in the areas of:

- i. technical processes appropriate to countries in the region;
- ii. projects in progress; and
- iii. research results relevant to the development to the Science and Technology capability of the region.

Background

Information dissemination may be made at a number of official levels and to different target groups. The CARICOM Secretariat, with the assistance of funding from the Interim Fund for Science and Technology is co-ordinating a study on an Information System for Science and Technology and ECLA Port of Spain will collaborate with this study.

At a different level it is suggested that the Caribbean Council for Science and Technology (CCST) should publish a Journal using as a model R and D Mexico, which is published by the Council for Science and Technology in Mexico (CONACYT).

Indeed, consideration could be given to an approach from the CCST to CONACYT for assistance at least in the initial stages of publication of this Journal. R + D Mexico is published in English and already has a circulation in the Caribbean. The possibility of a Caribbean edition published jointly with the CCST might also be explored.

Alternatively, the CCST could publish its Journal on the basis of sequential issues, but at irregular intervals since the indigenous

material and the resources may be limited at the beginning. The CDCC Secretariat could provide the basic editorial services but consulting editors would also have to be appointed.

The Journal could highlight:

- i. technical processes appropriate to developing countries in the region;
- ii. research and development projects in progress and research results; and
- iii. science and technology services available in the region.

Collaboration should be sought with the Caribbean Development Bank, Technology Unit's newsletter and with the CDCC information systems as well as the University of the West Indies.

Costs are difficult to estimate since the number of issues per year, level of advertisement (if any) would affect the costs. There would be need for translation into the CCST languages. The Budget suggested, therefore, would be subject to revision in the light of CCST decisions on these points.

BUDGET

US\$50,000

PROJECT 3

PREPARATION AND EXCHANGE OF
AUDIO-VISUAL MATERIAL FOR
EDUCATION IN SCIENCE AND TECHNOLOGY

Objectives

To sensitize students, teachers and the general public and create an awareness of the role of Science and Technology in the society by making available information in a format that can be understood by all levels of users.

Background/Justification

Science and Technology tradition is greatly lacking in the Caribbean. Very little has been done by way of making known indigenous research, development activities and services in the area of Science and Technology. Since activities in this field affect everyone's daily lives, it is imperative that measures be taken to ensure that knowledge in this area be made available.

A series of audio-visual materials therefore, starting with video tapes but including film strips prepared in the languages of the CCST member countries, will be prepared to educate on the benefits and dangers of developments in Science and Technology.

The CCST should then act as a catalyst for the preparation of materials at national level and where appropriate and subject to availability of funds, prepare its own audio-visual materials.

Initially, materials which have already been prepared can be used. Whereas there may not be a great deal of material in any one country by pooling the material for all of the member countries, a useful series could be mounted.

It would be necessary to translate the texts and by dubbing provide the appropriate language.

Many of the materials prepared in this project could be used in schools and new literates and it is suggested that UNESCO might be interested in collaborating in such a project. This project could also

be of interest to the private sector which is a major user of technology; as well as to government medical and agricultural agencies, particularly for their extension programmes. The collaboration of the Universities and Research Service Institutes should also be sought.

An initial budget is suggested for the translation and dubbing into the different languages.

BUDGET

US\$50,000

PROJECT 4

STUDY OF THE CONSEQUENCES OF THE DEVELOPMENT OF
ENERGY CROPS ON FOOD SUPPLIES IN THE REGION

Many agencies, national, regional and international, and including the United Nations system have substantial activities in the general area of Energy, and more particularly, in alternative Energy Sources in the Caribbean region. It is not proposed that the Caribbean Council for Science and Technology (CCST) should in any way compete or duplicate these activities but rather that it should complement the other agencies.

The developments, spearheaded by Brazil, on the use of crops such as sugarcane and cassava for conversion for gasohol (Energy Crops) is likely to lead to medium-term competition for land (and also for human and capital resources) between Energy Crops and Food Crops.

The cultivation of Energy Crops may be seriously contemplated only in the countries with larger land masses such as Guyana, Suriname and Cuba. However, in Guyana and Suriname, with relatively small populations, the question of manpower resources may nevertheless be critical even though there is no shortage of land.

Equally important, however, are possible developments in food-exporting countries such as the United States, Australia and New Zealand which are contemplating the conversion of crops to gasahol.

Lester Brown ^{1/} has presented data to suggest that it is now commercially possible in the United States to use surplus grain for production of gasohol. Such a development could have tremendous effect on world food supplies and on world food prices.

^{1/} Lester Brown: Food or Fuel: New Competition for the World's Cropland; Interciencia, Vol. 5 No. 6, pp. 365-372, 1980.

The Caribbean countries, already burdened with foreign exchange problems with respect to imports for energy, and with also a large food import bill, will find the issue of the production of crops for food and for fuel a very critical one. This project, therefore, is aimed at providing information on this question so as to assist Governments in the decision-making process.

It would be basically an economic study but clearly land-use considerations would have to be taken into account. Thus there is little doubt that the sugarcane plant will produce in some land and climatic conditions which would be unfavourable for cereals, legumes and root crops.

In the long-term, the problem may be solved by technological development in the production of gasohol from cellulosic materials such as wood and agricultural wastes; but in the short-term the availability of technology for production of gasohol from starch or sugar-rich crops will make this the more likely immediate development.

Caribbean Governments will need assistance in deciding:

1. Whether to cultivate Energy Crops.
2. How urgent will be the need to increase indigenous food supplies in the light of possible world shortages.
3. What the magnitude of increases in world food prices is likely to be, and therefore the likely size of their foreign exchange food bill as opposed to their energy bill.

<u>BUDGET</u>	<u>US Dollars</u>
Consultancy	10,000
Travel	5,000

PROJECT 5
CONSERVATION AND EXCHANGE OF
GERMPLASM OF CROP PLANTS

Objectives:

The main objectives of the project are the identification, exchange and conservation of plant genetic material of indigenous and introduced crop plants. To this end, research at a basic level will need to be conducted to devise the most appropriate methods for storing and shipping plant material of the various crop species; research centres in the region will need to be identified where this research can be conducted. Further, when methods of preservation and storage have been identified, centres will need to be developed where the different crop species and varieties can be conserved.

Justification

An important aspect of increased production in agriculture, particularly with small farmers who cannot afford expensive inputs of fertilizer and crop protection chemicals, is the use of improved crop varieties. Plant breeding programmes are expensive and long-term and often such programmes are aborted and after a few years terminated through lack of funds. Sometimes, the basic lines and even the improved materials are lost and if funds subsequently become available, the programme has to start from the beginning again.

The difficulties and cost of maintaining germplasm are relevant with respect to those species that do not produce sexual seed; or in which the line can only be maintained in constant form by use of asexual reproduction. Many of the tropical root crops (Manihot - Cassava, Dioscorea - Yams, Colocasia - Dasheen, Xanthosoma - Tannia) and also many fruit trees - citrus, mango, guava, can only be maintained by expensive field plantings. In the case of the root crops, this usually means annual replanting.

Recent research has led to the development of techniques of tissue or meristem culture whereby crop varieties can be maintained in test tubes in the laboratory. This has been done at the International Centre for Tropical Agriculture (CIAT) in Colombia for Cassava where the entire germplasm collection is maintained in a laboratory in test tubes.

Research work will need to be conducted on other root crops and on the fruit trees in order for systems of meristem culture to be developed for these species.

Further, when such systems have been developed, they also provide a safer method of exchanging plant material between countries since most virus diseases are eliminated by meristem culture and other diseases would show up readily in the test tube culture. All Cassava material being sent from CIAT is now sent in test tubes.

This project indicates the importance of basic research to achieving practical needs; it also indicates the importance of basic research being objective-oriented. In this connection attention is drawn to the Demas Report on CARICOM in the 1980's ^{1/} which comments on research in Science and Technology in the following terms:

"Technological innovation does not begin with technology; it begins with science and scientific research."

"Scientific research, itself, may be concerned with 'pure science' or with applications, so that one might see a continuous moving from pure scientific research through applied science to technological applications. If we concentrate only on the applications taking pure and applied research for granted, or if we do not integrate our activities in pure and applied research with our activities in the purely technological field, we will certainly be limiting the number of alternatives which could be subject to technological exploitation."

^{1/} The Caribbean Community in the 1980's - Report by a group of Caribbean Experts appointed by the Caribbean Common Market Council of Ministers (Chairman - W.G. Demas), 1981.

At the Tropical Agriculture Research and Training Centre in Turrialba, Costa Rica (CATIE), there is an International Crop Genetic Resources project funded by the German Agency for Technical Co-operation (GTZ) in which particular attention is being given to Central America. This project is based on a recommendation from a Conference of Experts in Genetic Resources which met at Beltsville, U.S.A. in 1972. This conference recommended the establishment of a gene bank for Central America and the Caribbean Region but the project has so far covered only Central America.

There are already centres in the Caribbean maintaining collections largely by field planting e.g. Cocoa in Trinidad and Tobago, Sugarcane in Barbados, Bananas in Jamaica. It will be noted that these are traditional export crops.

Further work in meristem culture has started at the University of the West Indies at St. Augustine, Trinidad, on a range of crop species including both root crops and tree crops.

The benefits which can accrue from exchanging crop varieties may be obvious, yet surprisingly little exchange occurs between countries in the region, and more than one instance can be sited of independent plant breeding programmes on the same crop species.

The project proposes a first study to assess the potential for research on methods of conservation; to designate possible centres of conservation and to advise on exchange of germplasm. Collaboration is envisaged with CIAT; CATIE and the Board for Plant Genetic Resources at the United Nations Food and Agricultural Organization in Rome.

It is proposed to contract a consultant (plant breeder) to report on the various issues pertaining to the conservation and exchange of germplasm.

<u>BUDGET</u>	<u>US dollars</u>
Consultant	15,000
Travel	5,000
TOTAL:	<u>20,000</u> =====

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the information is both reliable and up-to-date.

The third part of the document focuses on the results of the analysis. It shows a clear upward trend in the data over the period covered. This indicates that the current strategy is effective and should be continued.

Finally, the document concludes with a series of recommendations for future actions. These include increasing the frequency of data collection and exploring new markets. The author believes that these steps will lead to even greater success in the future.

The following table provides a summary of the key findings from the analysis. It shows the total revenue, expenses, and profit for each quarter. The data clearly shows that revenue has increased significantly while expenses have remained relatively stable.

Quarter	Revenue	Expenses	Profit
Q1	120,000	80,000	40,000
Q2	150,000	90,000	60,000
Q3	180,000	100,000	80,000
Q4	210,000	110,000	100,000

Based on these results, it is recommended that the company continue to invest in its current operations while also exploring new opportunities for growth. This will help to ensure long-term success and profitability.

PROJECT 6

DEVELOPMENT OF AGRO-INDUSTRIES AND EMPLOYMENT
OPPORTUNITIES PARTICULARLY AT RURAL LEVEL

Background

The urgent need to increase food production in Caribbean Countries need not be re-stated here. Equally pressing is the need to increase incomes to rural poor, but technological innovation frequently increases the disparity in incomes between rural and urban peoples in the developing countries.

Further, a major constraint to food production is the fear of gluts with consequent fall in prices and loss by deterioration of surplus food. Processing of such surpluses therefore increases the marketability by prolonging shelf life and facilitating transports to markets. In addition, there is greater value added and if this is done in the rural areas, it should increase rural incomes and increase employment, thereby reducing the rural-urban drift.

The first step in the development of such rural agro-industries is the assessment of the opportunities as they exist in particular countries and the identification of appropriate technologies. The technologies may vary from domestic processing by the farm wife to industrial-type processing by farmer co-operatives.

Many of the smaller countries of the Caribbean have established produce laboratories which work on processing of local fruit into jams, jellies or preserves; there is some duplication of effort and the total volume that can be produced by any one country may be too small for successful external marketing. The possibilities of co-operative export marketing between countries therefore also needs to be explored.

In addition to the raw materials already available new materials should be considered such as the cashew which can grow in a variety of soil and climatic conditions which would be unfavourable for other crops.

This project is basically a developmental project, using existing technology for the development of viable rural enterprises.

Objectives

The main objective of the project is the identification of small-scale processing of Agricultural produce particularly in the rural areas, in order to reduce spoilage and increase income by the sale of processed and semi-processed products.

The processing may be undertaken at the small-scale community or individual entrepreneurial type enterprises as well as cottage scale.

Justification: At present much locally grown food products go to waste because of a lack of knowledge of the technique required for converting these into stable acceptable foodstuffs, while at the same time scarce foreign currency resources are spent on imported products of the same or lower nutritional value.

An example of the possibilities is given by work at the University of the West Indies on the various uses of green banana, breadfruit, and root crops which are major crops in the Eastern Caribbean. One product which seems to have commercial potential is the preparation of an enriched breakfast food. Other products of similar type may be made from breadfruit, sweet-potato and yam.

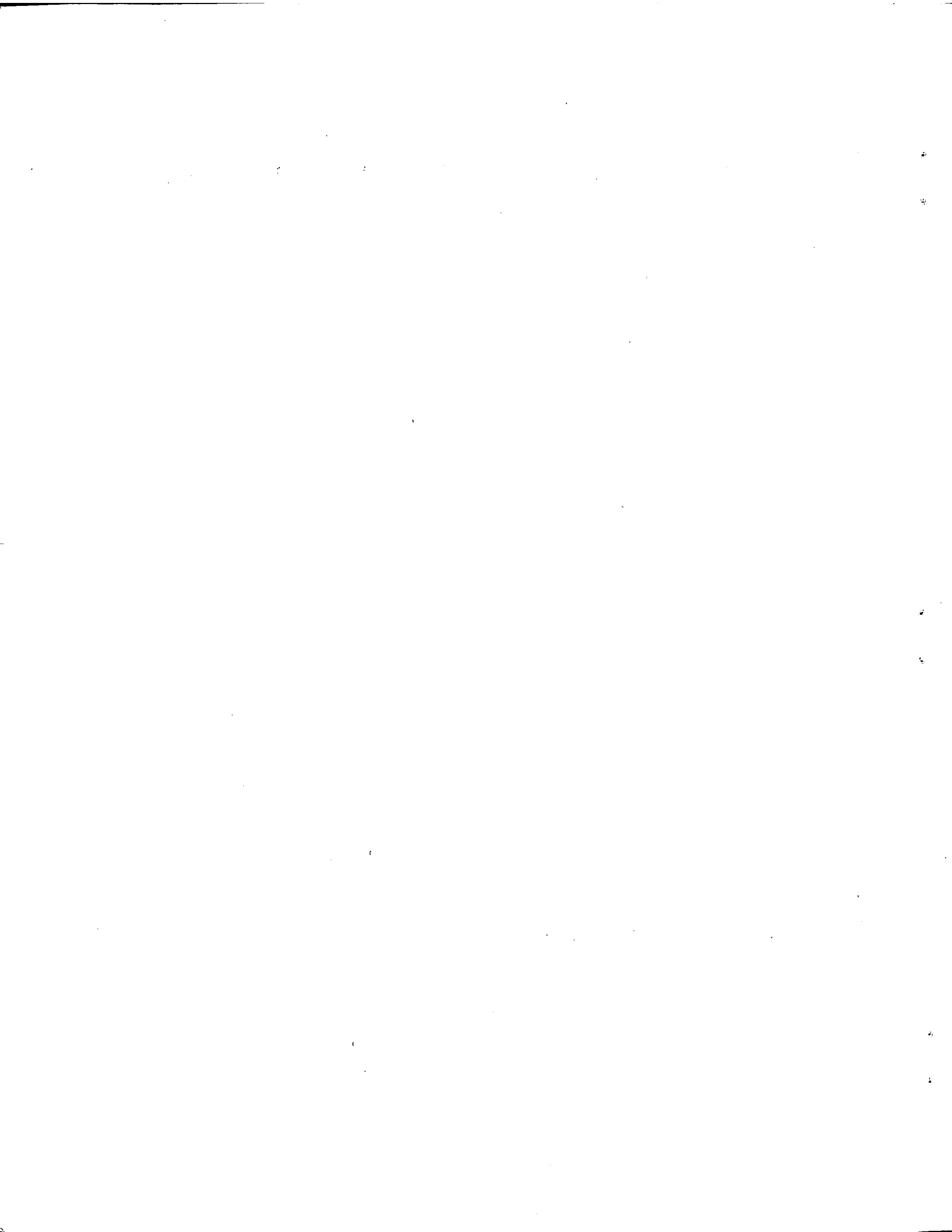
The research findings at U.W.I. need to be translated into active implementation within the rural communities and this project will provide the information on needs and possibilities for development.

The benefit will be in increased use of locally produced raw material, increase rural incomes and improve nutritional status for the local population.

The project proposes a first study to determine the potential that exists both in raw material and human resources. Collaboration is envisaged with the University of the West Indies, the Caribbean Industrial Research Institute (Trinidad) and the Food Technology Institute of the Jamaican Industrial Development Corporation.

The first phase would be a study and report by a food technologist with expertise in small-scale food processing technology.

<u>BUDGET</u>	<u>US dollars</u>
Consultancy	25,000
Travel	<u>5,000</u>
TOTAL:	<u><u>30,000</u></u>



ANNEX X

PROPOSAL FOR FUNDING CCST

Operating Budget of CCST to 31 December 1982

It is assumed that;

- i. CDCC could continue to supply technical and Secretarial services to the CCST for the initial period; and
- ii. Extra-regional funding could be obtained for priority projects defined in the 1981/1982 Work Programme.

On that premise, the Council recommends to CCST member states that they contribute in cash to the CCST budget, in accordance with the following schedule, to 31 December 1982:

	US dollars	
	Second half of 1981	1982
LDCs ^{1/}	1,000	2,000
MDCs ^{1/}	4,000	8,000

The Council requests the CDCC Secretariat to open a Special Account which it will manage until such time as the CCST establishes its Executive Secretariat as provided for in Article 15 of the CCST Statutes.

Governments are requested to make their cash contributions to the CCST Special Account at the CDCC Secretariat.

CDCC shall comply with the provisions in Article 19 and 20, concerning the keeping of proper books of account and Annual Balance Sheet, properly audited.

^{1/} LDCs include Dominica, Grenada and St. Lucia.
MDCs include Cuba, Guyana, Jamaica, Suriname and Trinidad and Tobago.

Budget of CCST from 1 January 1983

It is proposed that the following long-term financing formula be considered at the Second Plenary Session of the CCST:

- a) the contribution of member countries should be divided into two parts, one fixed and the other variable;
- b) that the fixed portion should be 50% of total members' contribution and should be allocated among all member countries; and
- c) that the variable portion, the remaining 50% should be allocated among the MDCs of the CCST in accordance with the UN scale of contributions.

Authority to Seek Funds

The Executive Committee of the CCST should be authorized to identify and seek additional sources of funding for the activities of the organization for each fiscal period. This authority may be delegated to the Executive Secretariat.

PROPOSED OBSERVERS AT CCST MEETINGS

United Nations System

Caribbean Development and Co-operation Committee (CDCC)
Economic Commission for Latin America (ECLA)
Food and Agriculture Organization (FAO)
United Nations Centre for Science and Technology (UNCST)
United Nations Development Programme (UNDP)
United Nations Educational Scientific and Cultural
Organization (UNESCO)
United Nations Industrial Development Organization (UNIDO)
United Nations Interim Fund for Science and Technology for
Development (UNIFSTD)

Inter-Governmental Agencies

Commonwealth Science Council (CSC)
Organization of American States (OAS)

National Councils for Science and Technology particularly
from the Third World

Aid Agencies

Ford Foundation
International Foundation for Science (IFS - Sweden)
International Development Research Centre (IDRC)
National Foundation for Science (NFS - USA)
Rockefeller Foundation
SAREC - Sweden

Regional Agencies

Caribbean Community Secretariat (CARICOM)
Caribbean Development Bank (CDB)
Inter-American Institute for Co-operation in
Agriculture (IICA)
University of the West Indies (UWI)

