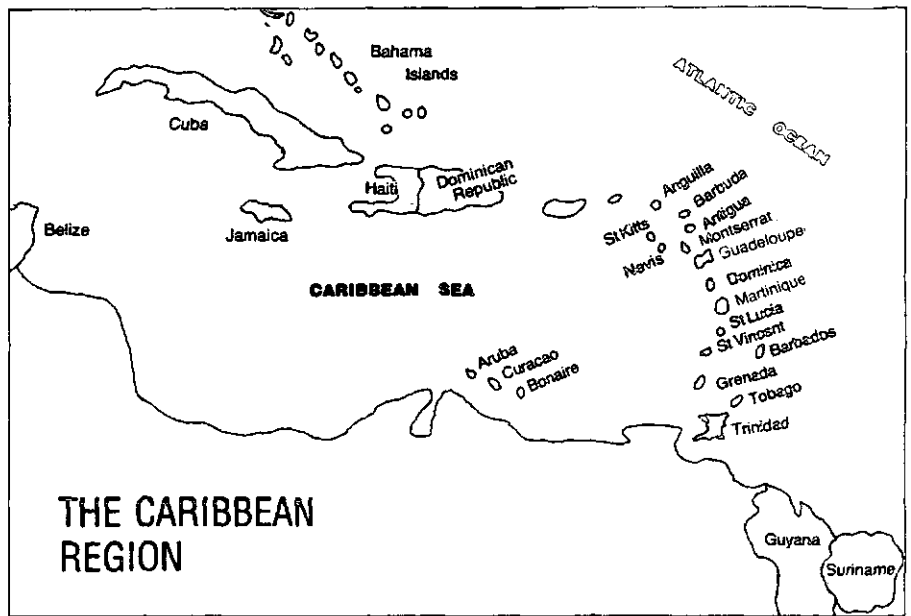


CARIBBEAN
DEVELOPMENT
 AND
CO-OPERATION
COMMITTEE



GENERAL
 CDCC/CCST/81/18
 18 November 1981
 ORIGINAL: ENGLISH

ECONOMIC COMMISSION FOR LATIN AMERICA
 Office for the Caribbean
 CARIBBEAN DEVELOPMENT AND CO-OPERATION COMMITTEE
 CARIBBEAN COUNCIL FOR SCIENCE AND TECHNOLOGY

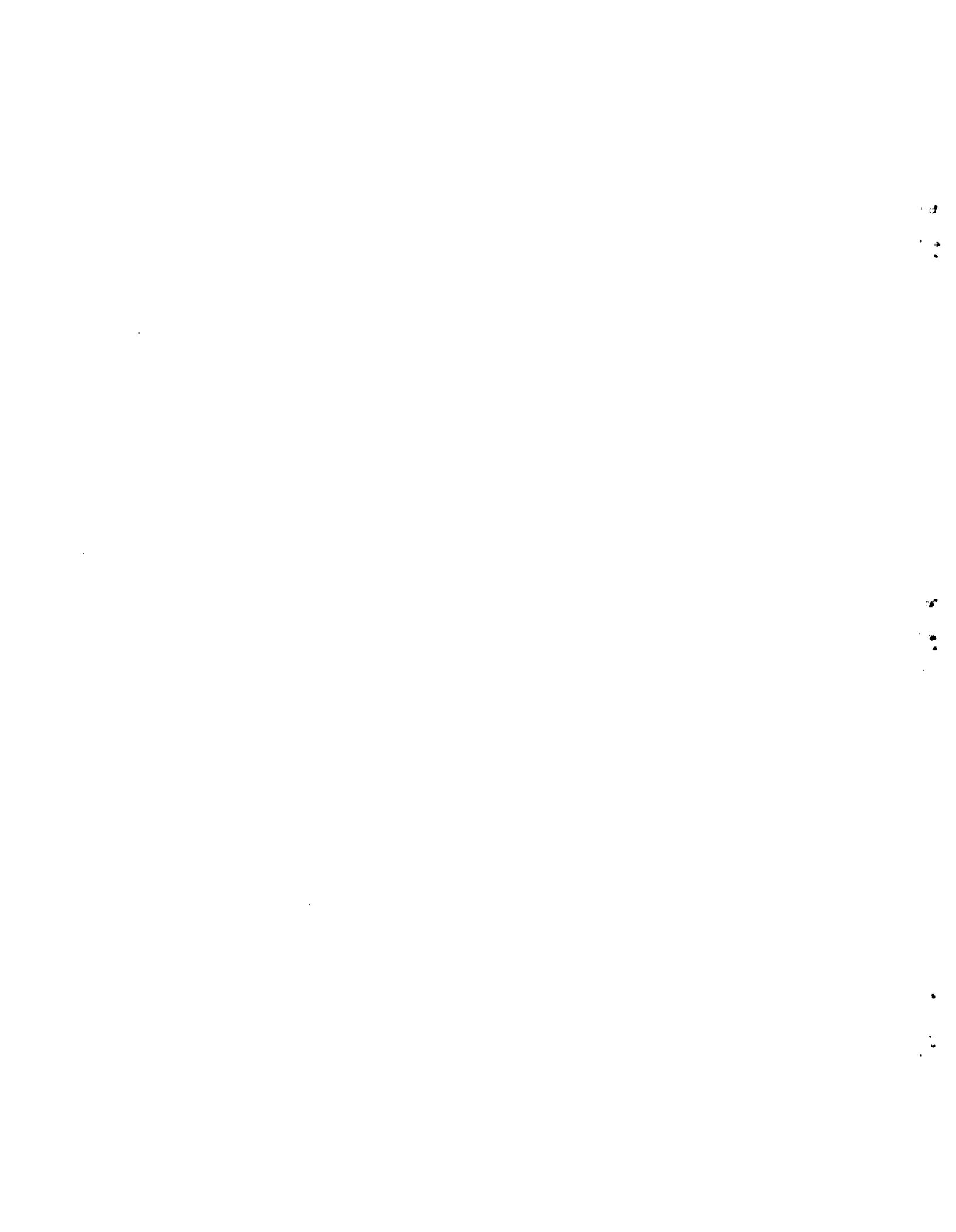


REPORT ON THE WORKSHOP ON
 METHODOLOGY FOR ASSESSMENT OF NATIONAL
 SCIENCE AND TECHNOLOGY CAPABILITIES
 12-15 October 1981
 Paramaribo, Suriname



UNITED NATIONS

ECONOMIC COMMISSION FOR LATIN AMERICA Office for the Caribbean



REPORT ON THE WORKSHOP ON
METHODOLOGY FOR ASSESSMENT OF
NATIONAL SCIENCE AND TECHNOLOGY CAPABILITIES

12-15 October 1981

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I. ORGANIZATION OF THE MEETING

1. This Workshop on the Methodology for Assessment of National Science and Technology Capabilities is the first activity of the priority project of the Work Programme 1981-1983 of the Caribbean Council for Science and Technology (CCST). The Workshop was hosted by the Government of The Republic of Suriname and was held in the Torarica Hotel in Paramaribo, Suriname from 12 October to 15 October 1981.

Opening Ceremony

2. The keynote address was made by the Honourable Mr. Harold Rusland, Minister of Education and Community Development, The Republic of Suriname. Addresses were also made by Professor J. Spence of the Economic Commission for Latin America/Caribbean Development and Co-operation Committee (ECLA/CDCC) Secretariat and Mr. A. Uchebor, member of the CCST.

Attendance^{1/}

3. Representatives of the following member countries of the CCST attended the Workshop: Dominica, Grenada, Guyana and Suriname. Representatives of the following CDCC member governments also attended: The Dominican Republic, the Netherlands Antilles and Montserrat. The Caribbean regional inter-governmental organization present was Caribbean Community Secretariat (CARICOM). Also present as observers were: Caribbean Industrial Research Institute (Trinidad and Tobago), National Institute of Higher Education (Research, Science and Technology) (Trinidad and Tobago), the United Nations Interim Fund for Science and

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

Technology for Development (UNIFSTD), the Organization of American States (OAS). The ECLA sub-regional headquarters for the Caribbean (the CDCC Secretariat) served as secretariat to the Workshop.

Adaption of the Programme

4. The provisional programme (Workshop Document CDCC/CCST/81/11/Rev.2), was considered and the amended programme as approved is attached as Annex II to this report.

II. SUBSTANTIVE DISCUSSIONS

Presentation by the Representative of Guyana

5. The Representative of Guyana had prepared a paper titled "Survey in Guyana" for the Workshop (CDCC/CCST/81/15), with which he gave the meeting an insight into the capabilities and problems of the Guyanese Government with regard to science and technology.

6. The survey was designed to cover the entire country and incorporated the following objectives:

- i) to be able to quantify the available technical capability in Guyana;
- ii) to assess the need for training programmes in specific areas;
- iii) to develop a profile of training needs in the light of developmental plans;
- iv) to facilitate the quick identification of the most suitable persons with required expertise to function as Consultants both within and outside Guyana; and
- v) to demonstrate the present development of Science and Technology expertise thereby establishing whether such expertise as is available is being utilized to the best advantage.

The representative of Guyana also stressed the need for a booklet, to be used to convince governments of the necessity of a centrally co-ordinated

network of research.

Presentation by University of West Indies/
University of Guyana

7. Due to the absence of a representative of the Caribbean Technology Policy Studies Project a representative of the ECLA Office in Port-of-Spain presented the paper on that project (CDCC/CCST/81/16). The Caribbean Technology Policy Studies Phase II (CTPS-II) is a research project and aims to tackle, inter alia, three fundamental technological problems:

- i) how to determine the most effective way to generate indigenous technological capabilities in small developing countries;
- ii) how to acquire know-how from abroad in the contemporary international climate and in the future; and
- iii) the need of proper technological planning.

Presentation by the Representative of
the CARICOM Secretariat

8. After having given some background information of the involvement of the CARICOM in science and technology matters in the region, he identified the two areas that have the full attention of the CARICOM.

- i) Institutional Strengthening and Development in the area of Science and Technology; and
- ii) the priority sectors for Research and Development.

It was also pointed out that the UNIFSTD had provided the resources for a study in a number of areas which the CARICOM countries have designated as priority areas.

9. During the presentation the following project ideas were mentioned inter alia:

- National Centres for Documentation and Information
- Regional Policy on Science and Technology
- Technical Consultants Service

The priority sectors identified for the development of Science and Technology are:

- agriculture
- energy

With respect to Energy a participant wondered whether it was correct to concentrate on the energy sector if United States Agency for International Development (USAID) is already paying full attention to that sector. The ECLA representative stressed the possible competition between plants grown as alternative energy sources and plants grown for food. Since no organization is studying this problem in the Caribbean the CCST had included it in its work programme.

Presentation by the OAS

10. The OAS representative stressed the desire of that organization to co-operate with CCST in general and with the Assessment of National Science and Technology Capabilities Project in particular. The representative further mentioned a basic fact in all the problems that Third World countries face in their policy on science and technology, namely: that the problem of Science and Technology is not only from the supply side, but it is also a problem of demand: there is a lack of demand for science and technology; there are distortions in the demand and in its direction: there is lack of linkage between the supply from the scientific sector and the demand coming from the productive sector.

UNESCO Survey

11. It was noted that a representative from the United Nations Educational Scientific and Cultural Organisation (UNESCO) had been unable to attend the Workshop due to the meeting in La Paz, Bolivia, of Latin American and Caribbean Science and Technology Policy-making bodies. Also papers which were sent for the Workshop had not arrived. It was therefore agreed that participants would, before the next day's session, study the survey format sent to countries by UNESCO for the La Paz meeting, copies of which were made available.

The Presentation of the Dominican Republic

12. The representative of the Dominican Republic stated that in that country the Department of Science and Technology reports to the Technical Secretariat which is subordinated to the President of the Republic.

13. To measure the capabilities of the Dominican Republic in Scientific and Technological matters, a survey is being conducted for the year 1980. The survey was originally sponsored by the OAS and then funded by UNIFSTD. One of the characteristic features of the survey is that it is being carried out with hardly any foreign experts.

14. The survey results will be used to sustain the national science and technology development plan, this being one of the most important goals of the study.

15. It should be mentioned that the private sector was not involved in the survey because a pre-study showed that this would be more appropriate at a later stage. The representative stressed that this should not be interpreted to mean that the private sector is not considered to have great importance in the Dominican Republic, and it will be included later on.

16. The methodology used to carry out the survey was as follows: there are four questionnaires and the fifth is being designed.

- in the definition of statistical units,
the institute is the primary statistical (research) unit,
- the institutes have been divided into units
and these are the secondary statistical units;
- projects arise from the secondary units, and
these are the third statistical units.

17. From the projects carried out from 1978-1980 the qualified personnel were identified, a member being the fourth statistical unit. The last questionnaire deals with the financing involved in the projects.

18. This sub-division of the survey has the advantage that an internal control mechanism of the statistical units is present.

19. The Government appointed sectoral committees which had to prepare sectoral studies for an integrated Science and Technology plan. In order to analyse the survey results, in each identified sector nuclei were formed. Only senior scientists could become members of the nuclei. The hope was expressed that the recommendations coming from the sectoral studies to the government would be used as guidelines by the private sector.

Contribution by the
Representative of UNIFSTD

20. The representative of the United Nations Interim Fund for Science and Technology for Development (UNIFSTD) made interventions complementing the presentations made by the delegates of the Dominican Republic and the representative of the CARICOM Secretariat, regarding projects financed and monitored by UNIFSTD, as well as to inform the meeting on the actual situation of and prospects for the funding of science and technology projects through the pertinent UN funding agencies.

21. He explained the reasons why UNIFSTD is supporting the project "Strengthening of the National Science and Technology Planning Capacity in the Dominican Republic" with a financial contribution of US\$530,050 highlighting the projects model character with regard to conception and implementation and pointing to the interest shown by several Governments and inter-governmental bodies in the approach taken and the methodology followed by the project.

22. With regard to the project "Refinement of a Plan of Action for Science and Technology Projects in the CARICOM Region", executed by the CARICOM Secretariat with the assistance of a regional Steering Committee and financed with an UNIFSTD input of US\$125,000, the representative of the Interim Fund stressed the preparatory assistance character of this activity which is expected to result in the identification and preparation of regionally co-ordinated priority projects, in the context of a regional science and technology action plan, for submission to funding agencies (including UNIFSTD and/or its successor).

23. Finally, the UNIFSTD representative informed the meeting on the resumed third session of the Inter-governmental Committee on Science and Technology for Development, the upcoming discussions of science and technology issues, especially the future of UNIFSTD, in the UN General Assembly and its Committees and on the International Goodwill Mission on Science and Technology for Development which culminated in the "Declaration of Caracas" supported by 19 development countries, including Key OPEC member countries.

Working Group

24. The meeting agreed that an open-ended working group had to be formed to prepare a survey format for the CCST based on the survey format of the Dominican Republic, the UNESCO country survey, and the guidelines in the aide-memoire of this CCST Workshop on Assessment of Science and Technology Capabilities, while taking into account the experiences in Guyana.

25. The Working Group had as a core, representatives of:

- Dominican Republic
- Guyana
- Suriname as a representative of the MDC's
- Grenada as a representative of the LDC's

26. It was also agreed that a survey format should be constructed in the main on the basis of aspect number three of the aide-memoire; that is assessment of national scientific and technological potential. However consideration should also be given to certain aspects of policy formulation and international co-operation.

27. The meeting considered recommendations of the Working Group for a survey format and approved the formats given in Annexes III and IV of this Report.

28. It was further agreed that this survey format would be circulated to all Workshop delegates as well as to CCST and CDCC member countries (where these latter have not yet become members of CCST) requesting any additional comments.

29. It was expected that the survey format would be finalised by the end of 1981 so that the survey activities could commence early in 1982.

Conclusions and Recommendations

30. It was agreed to make the following recommendations:-

- 1) To the CCST - that a booklet be prepared informing governments on the importance to national development plans of data, such as would be collected in the Survey on Science and Technology Capabilities.
- 2) To the various agencies of the UN System - that every effort be made to support the initiatives of the CCST and in particular the project on Assessment of National Science and Technology Capabilities.
- 3) To CCST/CDCC Secretariat - that a report on the Workshop be presented to CDCC VI requesting member governments to support the Survey to be carried out on Science and Technology Capabilities and urging that inputs be made into the higher Councils of the United Nations system to ensure adequate funding for Science and Technology, in which context the following resolution was passed:

The Workshop,

31. Taking note with satisfaction of the funding by the United Nations Interim Fund for Science and Technology for Development (UNIFSTD) of a number of important science and technology projects in the Caribbean region and of the preparatory assistance given by UNIFSTD for the identification and elaboration of a much greater number of priority projects to be financed as soon as additional resources become available;

Recognizing with appreciation the support given so far by UNIFSTD to the activities of the Caribbean Council for Science and Technology and expressing the hope that such support will continue with increasing financial resources;

Recalling United Nations General Assembly Resolution 34/218 of 19 December 1979 which established UNIFSTD as an organ of the General Assembly, pending the coming into operation of the United Nations Financing System for Science and Technology for Development;

Urges the member Governments to strive for the establishment of the

United Nations Financing System for Science and Technology for Development and, pending the coming into operation of such system, to take the necessary steps, through active participation in the on-going discussions in the competent UN bodies, in order to assure the continuation of the activities started by UNIFSTD.

Closing Remarks

32. Members expressed their appreciation to the chairmen for their efficient handling of the various sessions of the meeting and to the rapporteur for his hard work in recording the proceedings.

33. Appreciation was also expressed to the observers for their presence and contribution to the meeting and the ECLA/CDCC Secretariat for servicing the meetings.

34. Gratitude was expressed to the Government of Suriname for hosting the meeting, and to all others who had assisted in making the meeting a successful one.

List of Participants

DELEGATES

<u>CCST Member Country</u>	<u>Delegate(s)</u>
Dominica	Andrew Ucbebor
Grenada	Christine Emmons
Guyana	Patrick Munroe
Suriname	Iwan Kortram
	S.P.R. Nukoop
	A.A. Sandel
	Tony Nahar
	D.K. Mungra
	W.E. Henar
	E.A. Brunings
	A.H. Alberga
	A.R. Hindomi
	Jan Ruinard
	Van Ling
	Mitrasingh
	Smith
	Lieuw Chong
	Olf
<u>Other CDCC participating Country</u>	
Dominican Republic	Ada De Llinas
Montserrat	Joseph Daniel
Netherlands Antilles	Cedric Eisdén

OBSERVERS

<u>Agency</u>	<u>Representative(s)</u>
Caribbean Community Secretariat (CARICOM)	Trevor Hamilton
Caribbean Industrial Research Institute (Trinidad and Tobago)	Artie Whittingham
National Institute of Higher Education (Research Science and Technology) Trinidad and Tobago	Maureen Manchouck
Organization of American States	Manuel Mari

Agency

United Nations Interim Fund for Science
and Technology for Development

Representative(s)

Neils Brandt

SECRETARIAT

Economic Commission for Latin America
(ECLA/CEPAL)

John Spence

Christine David

WORKSHOP ON METHODOLOGY FOR ASSESSMENT OF
NATIONAL SCIENCE AND TECHNOLOGY CAPABILITIES

12-15 October 1981

Paramaribo, Suriname

PROGRAMME

MONDAY 12 OCTOBER 1981

20.30 - 21.00 Registration
21.00 - 21.30 Opening Ceremony (Chairman - Mr. I. Kortram)
21.30 - 23.00 Cocktail Party

TUESDAY 13 OCTOBER 1981

Chairman - Mr. I. Kortram

09.00 - 10.00 Survey in Guyana
10.00 - 10.30 Discussion
10.30 - 10.45 B R E A K
10.45 - 11.30 Information Paper on University of West Indies/
University of Guyana Technology Policy
Studies Project
11.30 - 12.00 Discussion
12.00 - 14.00 L U N C H
14.00 - 14.45 Information on CARICOM Secretariat/Interim Fund
for Science and Technology for Development
Project
15.15 - 15.30 B R E A K
15.30 - 16.00 Presentation by the Organization of American
States (OAS)

WEDNESDAY 14 OCTOBER 1981

Chairman - Mr. A. Uchebor

09.00 - 10.00 Dominican Republic - Methodology of Survey
10.00 - 10.30 Discussion
10.30 - 11.00 C O F F E E
11.00 - 12.00 Discussion

12.00 - 14.00

L U N C H

Chairman - Mr. T. Hamilton

14.00 - 14.45

Dominican Republic - Survey Format

14.45 - 15.30

Discussion

15.30 - 16.30

General Discussion

Chairman - Dr. Pat Munroe

18.30 - 20.30

WORKING GROUP

Survey Format

THURSDAY 15 OCTOBER 1981

Chairman - Dr. Pat Munroe

9.30 - 11.30

WORKING GROUP

Survey Format

14.30 - 18.00

Approval of Survey Format

18.00 - 18.30

Conclusions and Recommendations

---oOo---

SCIENTIFIC AND TECHNOLOGICAL ACTIVITIES SURVEY
IN THE COUNTRY DURING THE YEAR 1981

SECTION 1: INSTITUTION

1. IDENTIFICATION AND LOCATION

1.1 What is the official title of this institution at the end of 1981? (Specify: Institute, Department, Section, Division, Unit, Group, Commission, etc.)

1.2 What is the name of the institution to which this office was administratively subordinate at the end of 1981?

1.3 When did the institution begin its operations? _____ Month
_____ Year

1.4 What was the institution's complete address at the end of 1981?

Street

House Number

City, Town or Section

Province

Zone (Mark + for either case _____ Urban _____ Rural

2. OBJECTIVES AND FUNCTIONS

2.1 Are there any written objectives for this institution in 1981? If yes, state them.

2.2 Are there any unwritten objectives of this institution in 1981? If yes, list and describe these in order of decreasing importance.

2.3 What are the duties corresponding to this institution? Describe them in order of decreasing importance.

2.4 Which economic, social, etc. sectors will benefit from the activities carried out by this institution? Describe these in order of importance, beginning with the one which will receive the greatest benefits.

3. RESEARCH POLICIES

3.1 Does the institution possess written policies for establishing priority areas in which research should be carried out or sponsored? (Mark + accordingly).

Yes _____ No _____

3.2 Is it possible for the researcher to carry out research activities in this institution without obtaining prior approval or authorization from the management? (Mark + accordingly).

Yes, frequently _____ Yes, exceptionally _____ Never _____

3.3 What percentage of the institution's working hours were spent on each of the following activities during 1981?

1. Research and related activities

% Administrative tasks

% Training of personnel

% Receiving training

% Actual research

% Other tasks, (specify)

4. BASIC SERVICES

In the following table, mark + in the corresponding column for the services which are the property of the institution, and those to which the institution had access from the institution to which it is hierarchically subordinate. Mark - in the cases that services are neither owned nor available to the institution. Indicate by a + if this service is of importance.

Type of Service	Property	Access	Importance
1. Library			
2. Documentation and Information Centre			
3. Printing Office			
4. Computer Service			
5. Accounting Services			
6. Maintenance Service			

change of objectives
other (specify)

3. DATE, (MONTH AND YEAR)
4. DATE PROJECT WAS BEGUN
5. INITIALLY PROGRAMMED DATE OF COMPLETION
6. ESTIMATED DATE OF COMPLETION
7. ACTUAL DATE OF COMPLETION
8. DATE OF SUSPENSION
9. PRINCIPAL CAUSE SUSPENSION:
 - FINANCIAL
 - LACK OF PERSONNEL
 - CHANGE OF OBJECTIVE
 - OTHER (specify)
10. TYPE OF PROJECT^{1/}
11. ORIGIN OF THE PROJECT PROPOSAL^{2/}
12. NAME OF THE INSTITUTION WHICH SUBMITTED THE PROJECT PROPOSAL
13. DATE PROJECT WAS REQUESTED
14. LEVEL OF AUTHORITY WHO APPROVED PROJECT IMPLEMENTATION
15. PRINCIPAL AREAS OF SCIENCE AND TECHNOLOGY DEALT WITH IN EACH PROJECT

Notes: Utilize the following codes for columns 10 and 11

1/ 1-- Fundamental 2-- Basic 3-- Applied 4-- Experimental
5-- Supporting

2/ 1-- Proposed by the person in charge of the project
2-- Decision of the Unit, not the responsibility of the person
in charge of the project
3-- A decision of the higher authorities, in which the Unit did
not participate
4-- Part of an integral programme of the institution
5-- Request by another institution

8. COLLABORATION IN PROJECTS OF OTHER INSTITUTIONS

In the following table record the titles of all scientific and/or technological research projects of other institutions carried out on a collaborative basis in 1981. Record the type and cash value of this collaboration, as well as the name of the institution which was primarily responsible for implementation of each of the projects.

1. PROJECT TITLE
2. STAFF
3. MATERIALS
4. CASH
5. OTHER
6. NAME OF THE INSTITUTION PRIMARILY RESPONSIBLE FOR IMPLEMENTATION OF THE PROJECT

9. ACTIVITIES RELATED TO RESEARCH IN SCIENCE AND TECHNOLOGY

In the following table mark with a + the activities the institution is carrying out on a permanent basis, occasionally, and those carried out in 1981. If there were none, mark with a -. Also indicate the sector for which the institution carried out these activities.

TYPE OF ACTIVITY	PERMANENT	OCCASIONAL	DURING 1981
1. Documentation			
2. Technical aid and consultancies			
3. Other dissemination activities			
4. Collection of data			
5. Standardization			
6. Quality control			
7. Metrology			
8. Routine scientific and technological services			
9. University level (under-graduate teaching)			

7. Repair Service
8. Transportation Service
9. Laboratories:
 - 1) Clinical
 - 2) Soil
 - 3) Microbiological
 - 4) Chemical
 - 5) Other (specify)
10. Other services (including equipment) of importance to the research being carried out. (Specify).

5. INCOME DURING 1981

In the following table, record the amount of the income received by this institution during 1981, according to the source of income. When no income was received for any of the categories listed below, mark - in the space corresponding to the amount. Record the amounts in US\$.

Source of Income	Amount in US\$		
	Cash	Other	Total
1. Core Budget			
2. Loans obtained from: (record the name of each loan office and obtained from each, during 1981)			
3. From research contracts:			
4. From provision of professional and technical services			
5. Grants and Donations:			
5.1 Central Government			
5.2 International organizations and foreign Governments			
5.3 Others (specify)			

6. Other

7. Grand Total

Check that the sum total is equal to the sum of the amounts recorded in categories 1 through 6 of this table.

6. BRANCH OFFICES

In the following table, record the names of the institution's branch or subordinate offices (specify their types: institute, department, section, division, unit, group, etc.) which carry out scientific and/or technological research and/or activities on a continuous basis. Record the name of each office, its principal activity and location. Request and attach a copy of the institution's organizational diagram.

<u>Name of office</u>	<u>Principal Activity</u>	<u>Location</u>
-----------------------	---------------------------	-----------------

7. RESEARCH PROJECTS

In the following table, record the names of the research projects approved or implemented by the Institute during 1979, 1980 and 1981. Mark + for the stage in which the project was found at the end of 1981. Record the dates the projects were requested, the principal reasons for suspension and the date of suspension of those projects which were considered suspended by 31 December 1981, the type of project, the origin of the project proposal, name of the institution which submitted the project proposal, level of authority who approved project implementation, principal area of science and technology dealt with in each project.

1. PROJECT TITLE

2. STATUS ON 31 DECEMBER 1981:

- (i) COMPLETED
- (ii) IN PROGRESS
- (iii) SUSPENDED (temporary, indefinite)
- (iv) NEVER STARTED.

Give reasons: financial
 lack of personnel

- 10. Post-graduate teaching
- 11. Other scientific and technological tasks (specify)

10. DISSEMINATION OF THE RESULTS

10.1 Type of dissemination: in the following table, mark + for the type of publication used by the institution in 1981 to publicise the results of its research during 1981. Also mark + for publication produced by the agency even though not used for dissemination of research results.

- | | |
|---|----------------------|
| 1. TYPE OF PUBLICATION | PUBLICATION UTILISED |
| Yearbook/annual report | |
| Bulletin | |
| Book | |
| Monograph | |
| Journal | |
| Other (specify) | |
| 2. PUBLICATIONS PRODUCED BY THE INSTITUTION (REGULARLY) | |
| 3. PUBLICATIONS PRODUCED BY THE INSTITUTION IN 1981 | |
| 4. OTHER MEANS OF DISSEMINATION | MEANS UTILISED |
| Organization of national seminars | |
| Organization of international seminars held in the country | |
| Organization of seminars outside the country | |
| Participation in national seminars | |
| Participation in international seminars held in the country | |
| Participation in seminars held outside of the country | |
| Participation in radio programmes | |
| Participation in television programmes | |
| Others: (Specify) | |

11. PROFESSIONAL SCIENTIFIC STAFF

In the following table record the name of each of the persons who participated in a scientific and/or technological activity with the institution during 1980 and 1981, regardless of whether he was thus employed at the end of 1981. Specify his position within the institution and his present address.

1. NAME

2. POSITION HELD

3. 1980 _____

4. 1981 _____

Mark + for the year within the period 1980 - 1981 in which he participated in scientific activities.

5. PRESENT INSTITUTION ADDRESS

12. PROFESSIONAL SUPPORT STAFF

1. NAME

2. POSITION HELD

3. 1980 _____

4. 1981 _____

Mark + for the years within the period 1980 - 1981 in which he participated in scientific activities.

5. PRESENT INSTITUTION ADDRESS

13. NON-SCIENTIFIC PERSONNEL

List the number of persons employed in the institution in the following categories:

1. Technical

2. Administrative

3. Clerical

4. Others

14. IDENTIFICATION OF THE INTERVIEWEE

Name:

Position:

Telephone:

Extension:

Signature:

15. IDENTIFICATION OF THE INTERVIEWER

Name:

Date on which the interview began:

Date on which the questionnaire was completed:

Number of visits:

Number of attached sheets:

Signature:

16. OBSERVATIONS OF THE INTERVIEWER

SECTION 2: SCIENTIFIC AND TECHNICAL STAFF

1. IDENTIFICATION

1.1 Institute

1.2 Name of the Interviewee

1.3 Sex (Mark + accordingly): Male Female

1.4 Date of Birth Day Month Year

1.5 Nationality in 1981

1.6 Were you residing in the country during 1981 for the purpose of participating in Research?

Yes No

2. POSITION IN THE INSTITUTION

2.1 What was the last position you held while working in this institution during 1981?

2.2 What was your main duty during 1981?

2.3 In which scientific or technological fields of specialization did you work during 1981?

2.4 What type of contract or other employment agreement were you offered in the institution during 1981?

Mark + accordingly.

_____ Exclusive employment _____ Full time _____ Part time

2.5 State the dates corresponding to the periods in which you worked for the institution.

From _____ Day _____ Month _____ Year

To _____ Day _____ Month _____ Year

3. ACTIVITIES WITHIN THE INSTITUTION

3.1 How many hours per week in 1981 did you work for the institution, as stipulated in your official contract, designation or assignment?

_____ Hours/Week

3.2 On the average, how many hours per week in 1981 did you work on research and related activities?

_____ Hours/Week

3.3 What percentage of your working hours was spent on each of the following activities during 1981?

% Administrative tasks

% Training tasks

% Receiving training

% Research

% Service Activities

% Other tasks (Specify)

3.4 In which of the following research stages did you participate? (Mark + accordingly).

1. Identification of the problem, objectives, and hypotheses

2. Selection of the methodology

3. Collection of information

4. Analysis of findings

5. Dissemination of findings

6. Use of results

4. ACADEMIC LEVEL

In the following table mark + for each academic degree obtained, the area of science and specialization, the name of the academic institution where the degree and specialization were obtained, the country in which this institution was located, and the duration of these studies. In case that no specialization was obtained, mark -.

1. Degree: Technician, bachelor, engineering or architecture, master, doctorate, post-doctorate, others (specify), none.

2. Field of science and/or technology

3. Field(s) of specialization

4. Name of the Academic Institution(s)

5. Country in which the Academic Institution(s) is/are located

6. Duration of studies: From _____ month _____ year
To _____ month _____ year

7. Membership of Professional Societies and Associates

5. EXPERIENCE IN RESEARCH

In the following table, write down the titles of the scientific and/or technological research projects in which you have participated. Also record: main scientific or technological discipline involved in each project, the name of the head institution, name of the head sponsoring agency, the country in which the project was implemented, the highest position you held within this project, the year in which the project was completed, and the period in which you participated in this project.

1. Project title

2. Main scientific or technological discipline involved

3. Name of the head Institution^{3/}
4. Name of the head sponsoring agency^{4/}
5. Country in which the project was implemented
6. Position held
7. Year of completion
8. Participation period: From _____ Month _____ Year
To: _____ Month _____ Year

6. PUBLICATIONS

In the following table, record the names of the scientific and technological subjects on which you have published material, the field of specialization to which this subject corresponds, the type of publication, the title of the publication, country in which it was published, name of the publisher, and the year of publication.

1. Subject covered
2. Field(s) of specialization
3. Type of publication
4. Title of the publication
5. Country in which it was published
6. Publisher's name
7. Year of publication

7. ACADEMIC EXPERIENCE

In the following table write down the teaching programmes in which you have participated. Also record the main scientific and technological disciplines involved, the title of the courses taught, position held,

^{3/} If the project was implemented as a result of the researcher's own initiative, write his (her) name in this column.

^{4/} If only the researcher's name is recorded in column 3, and sponsorship was not requested, mark -. If sponsorship was requested, but was not obtained, mark +.

the name of the institution, the country in which the teaching was done and the length of the period in which you participated in the teaching programme.

1. Title of teaching programme
2. Main science and technology discipline involved
3. Title of Course
4. Name of the Institution
5. Country in which the course was taught
6. Position held
7. Length of period From _____ To _____

8. IDENTIFICATION OF THE INTERVIEWEE

Name :

Position :

Telephone : Extension

Signature :

9. IDENTIFICATION OF THE INTERVIEWER

Name :

Date on which the interview began:

Date on which the questionnaire was completed:

Number of visits: Number of attached sheets:

Signature :

10. OBSERVATIONS



SCIENCE AND TECHNOLOGY POLICY FRAMEWORK

Table 1 - Nomenclature and networking of Science and Technology organizations

I. First level - POLICY MAKING

ORGAN	FUNCTION	LINKAGES		
(e.g. Councils, boards, committees, commissions, agencies, government departments etc..)	(e.g. planning, programming, budgeting, decision-making, general policy advice, inter-ministerial co-ordination, etc.)	Upstream linkage	Down stream link-ages	Major colla-boration
...

II. Second level - PROMOTION AND FINANCING

ORGANIZATION	LINKAGES		
(e.g. Professional associations - private or public -, research or university grants committees, research councils, academies of science, funding agencies, foundations, etc..)	Upstream (authority to which it reports)	Downstream (executing organizations concerned)	Other linkages (if any)
...

III. Third level - EXECUTION OF SCIENCE AND TECHNOLOGY ACTIVITIES

ESTABLISHMENT	FUNCTION	LINKAGES	
e.g. research establishment institute	(e.g. major type of activity: R and D, PTST, STS)	Upstream linkage (authority to which it reports)	Other major linkages (e.g. advisory board, agency)
...

IV. Fourth level - INTERNATIONAL CO-OPERATION

NATIONAL AGENCIES	PROGRAMMES	INTERNATIONAL COLLABORATING AGENCIES
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