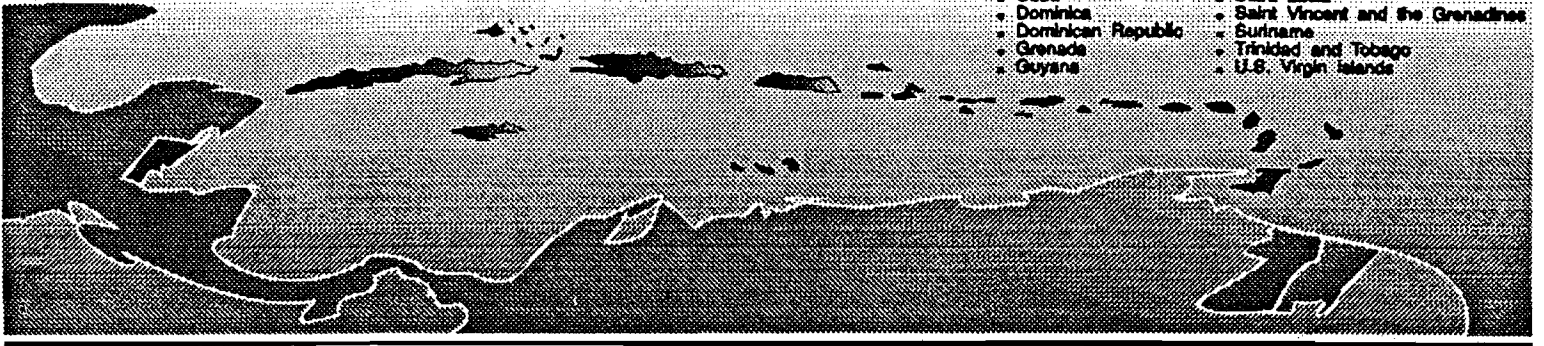




- Antigua and Barbuda
- Aruba
- Bahamas
- Barbados
- Belize
- Br. Virgin Islands
- Cuba
- Dominica
- Dominican Republic
- Grenada
- Guyana
- Haiti
- Jamaica
- Montserrat
- Netherlands Antilles
- Puerto Rico
- Saint Kitts and Nevis
- Saint Lucia
- Saint Vincent and the Grenadines
- Suriname
- Trinidad and Tobago
- U.S. Virgin Islands



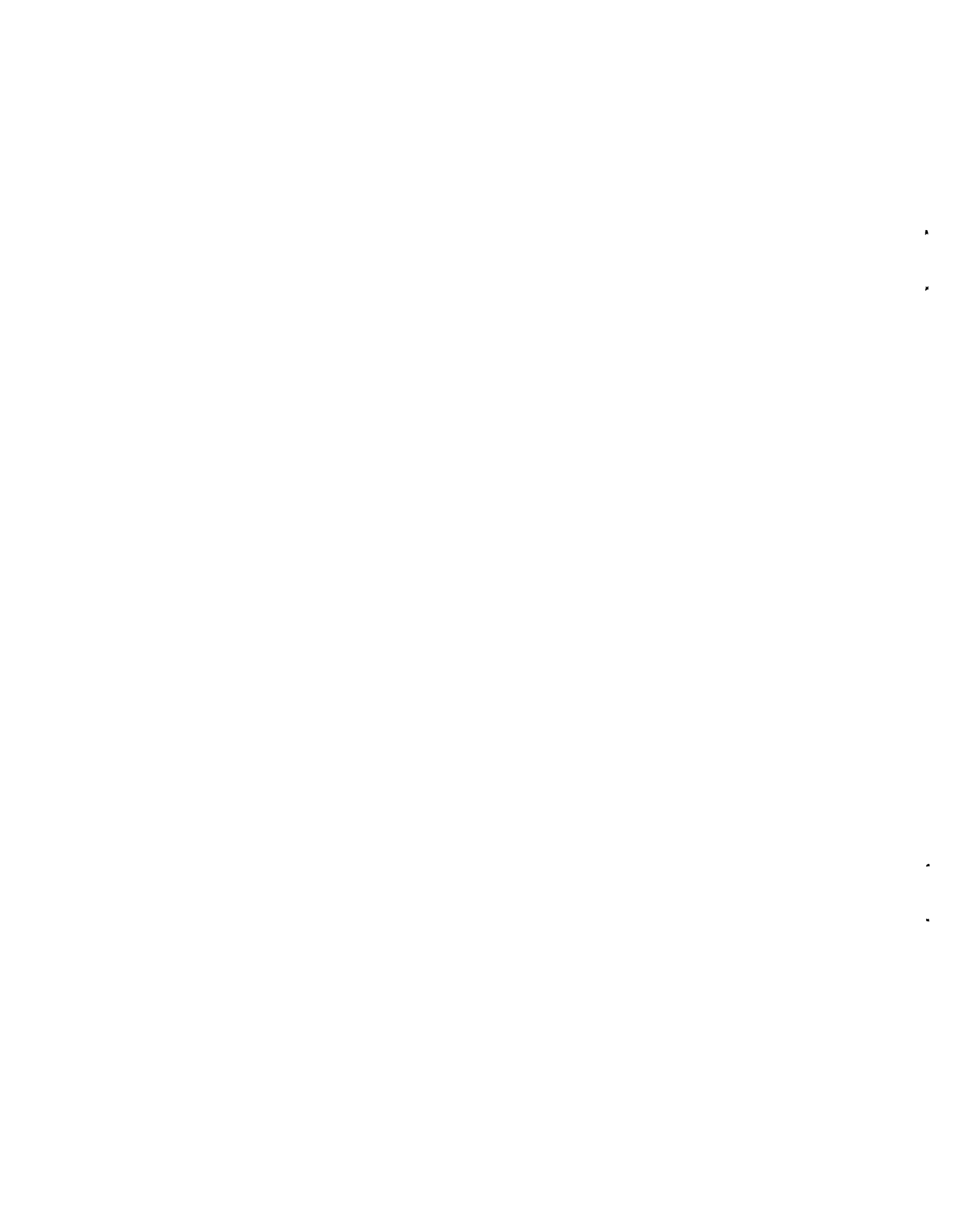
Fifteenth Plenary Session of the CCST  
 Port-of-Spain, Trinidad & Tobago  
 19-20 December 1997

GENERAL  
 LC/CAR/G.521  
 CCST/97/9  
 31 December 1997  
 ORIGINAL: ENGLISH

**REPORT OF THE FIFTEENTH PLENARY SESSION OF THE  
 CARIBBEAN COUNCIL FOR SCIENCE AND TECHNOLOGY (CCST)**

*Normandie Hotel, Port-of-Spain, Trinidad and Tobago  
 19-20 December 1997*





## I. ORGANIZATION OF THE MEETING AND OPENING SESSION

The fifteenth Plenary Session of the Caribbean Council for Science and Technology (CCST) was convened in Trinidad and Tobago from 19-20 December 1997.

Representatives from the following CCST member countries were present: Antigua and Barbuda, Barbados, Cuba, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago and the United States Virgin Islands. Absent were the representatives for Belize, Dominica, Haiti and Suriname.

Also present were representatives from the Dominican Republic, the Association of Caribbean States (ACS), the Caribbean Community (CARICOM) secretariat, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the University of the West Indies (UWI). The list of participants is given at Annex II.

### Opening session

In welcoming participants to the meeting, **Mr. Donatus St. Aimee**, Secretary of the CCST, noted that the Council was beginning to function with renewed vigour. Some of the earlier projects of the Council were beginning to bear fruit and this, he believed, was the reason for the responsiveness of member States. He expressed his hope that the new-found momentum could be sustained and that countries would make a special effort to meet their financial obligations, which would enable the Council to continue its programme of meaningful intervention in the development process of the subregion.

He took the opportunity to thank focal points for their assistance and support over the past years.

**Ms. Len Ishmael**, Director of the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean, expressed her pleasure at attending a meeting of the CCST for the first time. Since her assumption of office, she had assured the CCST Secretary of ECLAC's continued support for the work of the Council which, she felt, was vital to its functioning. She had been heartened to note the Council's emphasis on issues critical to development - environmental protection, science popularization, human resources development and industrial development. While technology was responsible for some of the problems confronting the region, it also held the key to solutions, as well as to resource generation. She stated that because of the small size of the subregion's countries, strategies to employ technology to solve problems which sometimes did not respect physical or legal boundaries needed to be based on cooperation.

She attributed the Council's relevance and unique place in the subregion to its networking and regional approach to problem-solving and its ability to highlight issues without clearly identified constituencies. Its mandate to foster regional cooperation and develop international linkages, she said, was operationalized by its ability to mobilize human resources and information. Based on this, ECLAC's support and collaboration with the CCST would continue as it had over the previous 17

years to ensure best resource use, efficient problem-solving and the promotion of science and technology for implementing development strategies. To this end, she guaranteed her fullest support. Initiating a plan to determine the best possible framework for the CCST, she had engaged in discussion with the CCST Chairman. She looked forward to the deliberations on this issue, which she wished to continue at a technical level meeting of the Caribbean Development and Cooperation Committee (CDCC) in March 1998, and at ECLAC's twenty-seventh session in Aruba during May 1998. She requested the support of those present in ensuring the highest levels of representation at a one-day CDCC Ministerial Meeting during the Aruba session.

Concluding her address, she noted the dedication and hard work of the secretariat, congratulated the Council for its good work, expressed her hope for continued success and reaffirmed her commitment to working with the Council for the benefit of Caribbean people.

Speaking on behalf of the CCST Chairman and Focal Point for Guyana, **Mr. Roshan Habibulah** noted the commitment of the current Chairman to the work of the CCST. He extended the apologies of Mr. Chandarpal to the meeting for his absence due to the political situation in Guyana. Noting the mandate of the CCST to include science and technology activity in the development process, he emphasized that the support of member governments was needed to ensure the success of the work undertaken by the Council. In conclusion, he expressed his hope that the meeting would work towards a coordinated approach to science and technology in the Caribbean.

**Dr. Rupert Griffith, Minister in the Office of the Prime Minister, Trinidad and Tobago**, addressed the meeting on behalf of the host Government. He welcomed members of the head table and the President of the National Institute for Higher Education (Research, Science and Technology) (NIHERST), Trinidad and Tobago. He congratulated representatives from Jamaica and Guyana on the recent successful holding of general elections in their respective countries.

He stated that as the new millennium dawned, Caribbean countries were faced with the choice of either developing gilt-edged capability in science and technology, or of continuing to lag behind. He expressed confidence that the former would prevail as a tool for improving human welfare. He stressed that constraints to regional economies in terms of market sizes and availability of financial resources would continue to exist unless regional cooperation was given its deserved priority. He noted that the driving forces of the development process would remain unknown unless there was understanding of the evolution of international systems. According to the Minister, it was necessary to understand that economic transformation was no longer based on abundance of natural resources. In addition, unless attention was paid to the development of successful emerging economies, current production characteristics would continue to exist.

Emphasizing that state-of-the-art capability in science and technology was critical to growth and development, the Minister highlighted the emergence of competitive advantage based on technological advantage. This approach, he stated, should be understood, and implemented without reservation.

He urged country representatives to dispel notions that Third World policy makers were unaware of the importance of technology to economic development by the collaborative implementation of visionary ideas. He noted initiatives by the CCST which signaled the unfolding of such a process. While these initiatives were commendable, challenges to the development process remained, which should be addressed by the CCST's expertise in taking action to apply advanced technology to banana industry diversification, the use of environmentally friendly technologies in production, technology transfer and cooperation and sharing of research results.

In conclusion, Dr. Griffith invited delegates to experience the hospitality of his country.

## II. SUBSTANTIVE DISCUSSIONS

### Agenda item 1:

#### The role of research in regional development:

#### The critical contribution of Caribbean higher education institutions

Dr. Roger Prichard of UWI looked at enrolment in the higher education system as it related to funding of research in the Caribbean. He then identified several areas requiring research and outlined a proposed funding programme for UWI.

Comparing the percentages of the eligible age group entering post graduate studies in the Caribbean and in North America, he noted the former was 10 times less than the latter. Of these persons in the Caribbean, fewer numbers were in science and technology, most were in taught Masters Programmes, rather than research degree programmes and most were part time. This situation was a reflection of the fact that there was no sustained means of funding research. He added that privately-funded research was often confidential and, therefore, lost to the system. Also development grants from donor agencies promoted development research which did not necessarily add to developing a research culture in the region.

Looking to the future, he noted that economic growth was presently driven by technological and knowledge-based inputs, people-focused and "female friendly". Giving example of the tourism industry, he proposed that research should be relevant to this industry, seek to integrate sun, sea and sand with culture, incorporate historical aspects, and address agricultural diversification to feed the tourists as well as the general population. Other areas in which research was needed, he said, were in introducing new products and services, opening new markets and mitigation of natural disaster.

On the question of approaches to developing a research culture, he proposed a funding programme for UWI which would include matching private sector support, government programmes of support to strategic research, a programme of enquiry driven research and programmes for careers in research. He highlighted the high percentages of returns of money invested in research in countries where research and development was established.

This proposal had been strongly supported by the University body and would go to the CARICOM Heads of Government at their next meeting. Dr. Prichard offered to share the proposal with participants with a view to increasing support at the national level.

In the ensuing discussion, issues raised regarding his presentation included the importance of ocean and coastal sciences, the need for a permanent mechanism for cooperation with the private sector, especially in technology transfer and confidentiality of research. Seen as particularly important was the commercialization of research findings. Referring to prevailing skepticism regarding the relevance of research in the Caribbean, one participant emphasized the need to identify approaches to translating research findings to policy and mechanisms for information dissemination. Dr. Prichard stated that research should fit into a strategic development programme. In addition, the quality of research should be assessed.

#### Agenda item 2:

#### Consideration of the reports of the fourteenth Plenary Session and twentieth Executive Committee Meeting and matters arising

The Secretary presented the reports of the fourteenth Plenary Session and the twentieth Executive Committee Meeting to the meeting.

He drew attention to the report of the consultant on science councils in the Caribbean entitled, "A review of science and technology councils in the Caribbean". He informed that the Government of Jamaica had expressed its view that the consultant's report did not accurately reflect the work of the Scientific Research Council and, based on this, had requested circulation of an independent study. The document, "Scientific Research Council - Jamaica... Strengthening Jamaica's Economic and Social Structure" reviewed the operations of the SRC between 1960 and 1997.

It was circulated at the meeting to national focal points, who were requested to consider it alongside the consultant's report.

Informing the meeting on follow-up to the World Solar Summit, the Secretary reported on his participation in a UNESCO meeting in Guadeloupe at which he had identified some funding opportunities for Caribbean energy projects. The meeting had indicated that the Caribbean projects forwarded by the secretariat to the World Solar Summit needed to be prioritized and resubmitted for consideration. Given the status of the Latin American Energy Organization (OLADE) as a major player in the World Solar Summit Process, he expressed the hope that the CCST/OLADE Memorandum of Understanding would allow for action in this area. He noted, however, a resolution at that meeting nominating the ACS as implementing agency in the Caribbean for energy matters.

The representative of UNESCO, Dr. Winthrop Wiltshire, emphasized that it was up to the countries to mobilize support and funding for the projects. He noted that renewable energy had been elevated to higher priority in the UNESCO work programme at the recent twenty-ninth session of the General Conference of UNESCO.

In discussing the matter of collaborative membership in some regional institutions, membership in the Inter-American Institute for Global Change Research (IAIGCR) was identified as one that could possibly be pursued through the CARICOM Caribbean Programme for Adaptation to Climate Change (CPACC).

Regarding a project proposal on the establishment of a regional network for cooperation in science and technology in areas of common interest (CARICYT), submitted by Cuba to the ACS Special Committee on Science and Technology, Education, Health and Culture, Cuba clarified that this network would only serve as an information dissemination mechanism and, so, did not conflict with the role of the CCST. However, possible linkage between that project and the CCST project for the determination of priorities in science and technology was brought to the attention of the meeting. It was added that it was possible that the Organization of Eastern Caribbean States (OECS) countries might not be well served by the approach proposed. The project would be approved by the ACS, pending comments by member countries. The meeting concluded that more coordination was required between the ACS and CCST Secretariats.

The Director of ECLAC/CDCC informed the meeting on the participation, issues addressed and outcome of the Ministerial Meeting to review the SIDS Programme of Action, held in Barbados during November 1997. Based on the poor status of implementation of the Programme and submissions from various regional organizations, that meeting had identified concrete actions of high priority to be taken at the subregional level and possible organizations responsible for implementing them. ECLAC/CDCC, together with CARICOM would detail the operations of a Regional Coordinating Unit for implementation of the Programme. In addition, country profiles were being published for distribution. The representative of CARICOM noted that the meeting had enabled the Caribbean to present a united front at a recent global meeting on climate change in Kyoto, Japan.

Regarding the activities of the CCST on science popularization, the representative of Saint Lucia stated his country's willingness to put matching funds to have the interactive science exhibition developed by NIHERST, Yappollo, visit Saint Lucia. The representative of Grenada indicated that his country had hosted a successful exhibition through NIHERST and that it was currently organizing a science forum and preparing to host Yappollo.

The representative of the United States Virgin Islands noted that the Non-independent Caribbean Countries (NICCs) had been excluded from the Summit of the Americas process and that he hoped that ECLAC would assist in ensuring the participation of those countries.

#### Agenda item 3:

#### Consideration of proposal for arrangements for the CCST secretariat

In the context of longstanding discussions on arrangements for the CCST secretariat, the Secretary referred to discussions at the previous Plenary Session and the CDCC resolution regarding the relationship between ECLAC and the CCST. The document prepared by ECLAC, he said,

represented an opportunity to hear ECLAC's perspective, and so initiate constructive dialogue. The objective, he emphasized, should be to ensure the effectiveness of the secretariat in fulfilling the mandates of the Council.

Before commencing her presentation of the ECLAC document, "Interim report on administrative support arrangements for the Caribbean Council for Science and Technology" (CCST/97/7), the Director noted the difficulties encountered in the day-to-day administration of the work of the secretariat. These, she said, resulted from the fact that arrangements, which had been intended to be temporary, had become entrenched and were outdated. As a result of her decision to resolve this situation, she had met with the CCST Chairman and a document outlining alternatives in existing arrangements had been prepared for presentation at the current meeting. It was hoped that countries would comment on the document, in order to inform deliberations of the CDCC technical level meeting in March 1998 for input into the ECLAC session at which there would be a CDCC meeting at the ministerial level in Aruba in May 1998.

The document presented three options for the CCST secretariat - an independent secretariat, fully self-sufficient in all aspects; a secretariat located outside of the ECLAC offices, but supported by that office in specific administrative areas deemed necessary by the CCST; and continuation of the current arrangements with some modifications. It also outlined current aspects of support provided by the ECLAC system. In addition to the information provided by the document, she noted the high levels of support which had been provided to the secretariat from 1992-1996. This was based on the percentages of the cost of CCST activities which had been met by ECLAC. She then reviewed in detail the options and possible constraints of each.

Issues raised by participants in response included the nature of the relationship between the CDCC and the CCST and the treatment of project funds. The Director informed that the rules of the United Nations regarding projects had to be adhered to, with the result that all extrabudgetary funds were subject to the application of a 10-13 per cent overhead charge. This would not apply, she said, in cases where a discrete activity requiring limited organization support, such as a meeting, was undertaken nor was it applied to government contributions.

The representative of CARICOM noted the presence of several institutions operating independently under the aegis of CARICOM, suggesting that those relationships could assist with resolution of the present issue. He added that the arrangements of the secretariat should be put in the context of an evolving role for the CCST, and could take into account mechanisms envisaged for implementation of the SIDS Programme of Action, given the fundamental role of science and technology in development. The representative of FAO suggested that there was need to start from the determination of the structures needed to promote science and technology in the Caribbean and then to tailor the structure of the secretariat to meet this.

Discussions having been deferred to the second day of the meeting to give participants time to study the document in detail, it was agreed that a subcommittee be set up to undertake all possible arrangements for the secretariat. This subcommittee would be comprised of representatives of



Barbados, Cuba, Saint Lucia, Trinidad and Tobago, the CCST Chairman and the CARICOM Secretariat and two persons knowledgeable about the beginnings of the CCST as well as the United Nations system, Dr. Dennis Irvine and Mr. Beasley Maycock. The report of this subcommittee would then be circulated to the Council for comment and then submitted to the CDCC.

During the ensuing discussions, comments were made regarding the contribution of ECLAC to the cost of CCST activities, it was questioned whether this contribution could be continued to be provided to an autonomous secretariat. In response examples of institutions, such as the Latin American Demographic Centre (CELADE) and the Latin American and Caribbean Institute for Social and Economic Planning (ILPES), were given by the Secretary.

It was agreed that the member countries needed to take the initiative in deciding what would be the future of the secretariat. This would benefit from approaches to relevant political groupings within the United Nations, such as GRULAC.

The CCST secretariat was requested to prepare a document in response to the options presented to assist the subcommittee's deliberations.

#### Agenda item 4:

#### Caribbean Programme for Adaptation to Climate Change (CPACC)

Mr. Neville Trotz, Regional Coordinator of the CPACC, informed the meeting on its background, objectives, regional components, pilot components, management structure and levels and sources of funding.

The basis for action of the project was the Programme of Action for the Development of Small Island Developing States (SIDS). Its objective, he said, was to support a regional approach to prepare for the effects of climatic change and sea-level rise. Its regional components were a monitoring network, databases and information systems, an inventory of coastal resources and use and policy formulation. Its pilot components were coral reef monitoring, coastal vulnerability and risk assessment, economic valuation of coastal and marine resources and regulatory proposals formulation. It was to be funded in the initial stages by the World Bank via the Global Environment Facility (GEF).

It was hoped that successful management of the project could serve as a model for other regional projects. It was also seen as an opportunity to boost the science and technology infrastructure in the Caribbean, and it was suggested that the CCST could play a role in this respect. The extreme importance of the application of GIS technology for environmental management was emphasized and Geographic Information System (GIS) training initiatives in the Dominican Republic highlighted in this context.

Agenda item 5:  
Consideration of the fourteenth annual report of the secretariat

Thanking the focal points for their support over the past year, the Secretary presented the fourteenth annual report on CCST activities (CCST/97/5), focusing on the status of implementation of the work programme and negotiations with donor agencies, and giving some additional background information.

Regarding activity to facilitate the professional development of science and technology personnel, the secretariat informed on discussions held with the Director of Colciencias, which indicated the possibility of some collaborative activity on short-term attachments for Caribbean scientists at Latin American organizations under the MERCOCYT programme.

The meeting was informed that the OAS-funded projects on agroprocessing and science teaching had been proposed to the OAS via the Governments of Saint Lucia and Trinidad and Tobago, respectively, to meet that organization's requirements for funding. Member countries expressed concern regarding the methods of disbursement of funds by the OAS under the project. Under other OAS-funded projects, lengthy delays had been experienced with the purchase of goods from particular sources, due to the policy of the OAS which did not permit pre-payment of vendors. It was agreed that approaches to avoiding this problem needed to be identified from the outset of the projects.

The representative of UNESCO informed the meeting of a UNESCO-UNDP project on advanced technology in basic education for adults. This was seen as being complementary to the CCST project in science teaching.

Regarding the funding for the Entrepreneurial Development Centre project, the Secretary informed that regional STABEX funds would be used for those countries which did not receive STABEX funding. In order to meet anticipated requirements for an implementation plan and financial plan by the STABEX committee, a consultant would be hired and would visit participating countries in early 1998.

Agenda item 6:  
Development of a policy for sustainable development

Ms. Frances Martin, Director of Policy in the Government of Nova Scotia, Canada, informed the meeting on her ongoing work in Saint Lucia. She had been working with the Sustainable Development Unit in the Ministry of Finance and Planning to develop a National Sustainable Development Policy. This policy, it was hoped, would establish linkages between numerous sectoral policies. The two key principles being applied in the development of the policy were extensive public participation at the community level, and the development of sustainable development indicators. These would involve increased logistical support to communities and strengthening of mandates of community groups, as well as monitoring. Supporting legislation was proposed which would require

reporting of indicators on a regular basis. Once the policy was developed, it would be used for development of legislation, guiding resource investment, promoting intergovernmental coordination, improving stakeholder participation and decision-making, supporting information exchange and priority setting. The indicators would address environmental priorities, social priorities and economic priorities.

The outline policy was being developed for Cabinet approval, and then funding for implementation would be sought. This was anticipated to be completed in 15 months.

Agenda item 7:  
Proposed work programme for 1998

The Secretary presented the document outlining the proposed work programme for 1998 "Proposed activities of the CCST secretariat for 1998" (CCST/97/6), stating that it represented an attempt by the secretariat to complete activities under the five-year work programme, 1994-1998.

The proposed activities related to renewable energy; the programme for the improvement of teaching of science and mathematics in the Caribbean; the revision of the regional policy for science and technology; the project on the determination of priorities for science and technology; the project on food processing and fresh preservation of foods; a meeting of ministries on integrated planning and new technologies for sustainable development; a training workshop on project preparation and management; follow-up to the integrated water resources meeting; the establishment of entrepreneurial development centers for the OECS; diversification of the banana industry and a meeting of ministers responsible for science and technology. In addition, activities under the ECLAC work programme were presented. Costs of the activities, funding already identified and a summary of the financial resources and requirements were provided in the document.

The Secretary requested the agreement of the meeting on the suggested activities. He highlighted those activities which still required funding, indicating possible sources of funding in each case. He added that activity regarding the project on the history of science and technology in the Caribbean had been omitted from the document, but suggested that it could be reintroduced if the Council considered it necessary.

Other activities suggested for inclusion related to research in the materials sector, especially non-metal minerals, integrated natural resources and environmental management, quality certification of products, especially in the sea foods sector. A suggested regional meeting on non-metal minerals to determine priorities for the region was placed in the context of activities related to integrated

planning and new technologies, which, one participant suggested, should be reflected by all activities undertaken by the Council. The representative of Guyana suggested that, based on the substantial amount of work undertaken by his country, Guyana could play an important role in promoting activities in this area, starting with an assessment of the status of the sector.

It was noted that the role of the CCST was to support research, rather than undertake research itself, and to coordinate dissemination of the results of that research. The representative of Cuba noted the possibility of that country's working with the CCST secretariat in implementing almost all of the activities indicated.

It was suggested that activities relating to revision of the regional policy, determination of priorities, integrated planning, project preparation and management and the Meeting of Ministers Responsible for Science and Technology could all be linked to the regional science and technology policy to be revised in 1998.

#### Agenda item 8:

#### Preliminary consideration of the five-year work programme (1999-2003)

The Secretary stated that at the end of 1998, a draft work programme for the next five-year period would be presented by the secretariat. Wishing to be guided by the membership of the Council in the preparation of this document, he proposed several activities, in addition to those activities left over from the current period. Activities proposed related to promotion of renewable energy, environment, natural products, marine biotechnology, biological pest control, technology transfer and promotion of the development of science councils. It was suggested that work in the area of environment should address waste management.

The issue of participation of other institutions in the implementation of the work programme was raised. While collaborative work undertaken in the past was brought to the attention of the meeting, closer links were recommended in particular with the University of the West Indies and the Caribbean Academy of Science. The long-standing mandate to formalize a cooperation agreement with CARICOM was hoped to be fulfilled in the near future, facilitated by recent changes in staffing at the CARICOM Secretariat.

It was recommended that working groups, to include UWI, could address specific issues and assist the Council to implement its work collaboratively. The representative of Trinidad and Tobago drew attention to the fact that such groups were provided for by the CCST's statutes, but had never been operationalized. She added that this could also bring depth to the work of the Council.

Agenda item 9:  
Other matters

The following issues were raised:

***World Conference on Science***

The representative of UNESCO informed the meeting on the World Conference on Science, to be held in 1999. In preparation for this, a regional seminar intended to foster the exchange of ideas and information related to the elaboration of national policies on science and technology, would take place in September 1998, in the Dominican Republic. He suggested that the CCST should play a major role in representing the Caribbean's interests at this forum.

***Visit of Nobel Laureates to the Caribbean***

The representative of UWI drew attention to two symposia to be held in Trinidad, which would mark the tenth anniversary of the (CAS). One would feature two Nobel laureates. He suggested that other countries might benefit from visits of these persons, if this could be arranged through the secretariat.

***Group membership in Centre for Science and Technology***

The question of membership in the Centre for Science and Technology of the Non-Aligned and other developing countries was raised by the representative of Trinidad and Tobago. Based in New Delhi, India, the Centre had been established in 1989. It was agreed that group membership for the CCST membership countries would be explored.

***Funding for science popularization***

The Trinidad and Tobago representative also informed the meeting that there was the possibility that a project on science popularization would be funded through CARIFORUM. In order to avoid duplication, it was necessary to ensure that a coordinated approach to such organizations was taken. Given the lack of information on that organization, which the CARICOM Secretariat also served, the CARICOM representative agreed to assist in encouraging the funding of the popularization project by reflecting the views of the those present to the Secretariat.

***Post of UNESCO Adviser in Science and Technology***

The meeting noted the need to ensure that the post of UNESCO Adviser in Science and Technology was not lost, and that a Caribbean national would fill it when the need arose. It was agreed that the Chairman would prepare a letter reflecting these concerns to UNESCO, as well as to member countries through their focal points. Focal points would then bring the issue to the attention of the relevant Ministers (or Secretaries for the National Commissions for UNESCO), for action at the political level.

***Date and Venue of sixteenth plenary session of the CCST***

The representative of Saint Kitts and Nevis indicated that country's willingness to host the next plenary session at the end of November 1998.

***Membership of Dominican Republic in the CCST***

The Secretary welcomed the presence of the representative of the Dominican Republic. This, he said, was in the context of the long-expressed intentions of that country to join the CCST. He pointed out that there was much ongoing work in the Dominican Republic which could be shared with the CCST membership.

The representative of the Dominican Republic stated that the objectives of his participation were to request membership and to obtain a positive response, and to inform the meeting of the seminar to be held in November 1998, in preparation for the World Conference on Science. The meeting agreed to the membership of the Dominican Republic in the CCST pending a formal request from that country.

***Follow-up to workshop on science and technology indicators***

The representative of Trinidad and Tobago urged the membership to start planning activities to follow-up on discussions at the workshop on science and technology indicators in the Caribbean, which was held on 17-18 December in the context of the Latin American Network on Science and Technology Indicators (RICYT). Since RICYT had recently received funding from the OAS, it was necessary to send in proposals early enough for consideration for funding.

Agenda item 10:  
Meeting closure

The Secretary indicated his appreciation for the input of the Director of the ECLAC Subregional Headquarters for the Caribbean to the meeting as well as those of other participants, in particular the representative of CARICOM. He thanked his staff for their support and expressed his hope for increased collaboration between the member countries. He also expressed his thanks for the support of the previous Director, Mr. Daniel Blanchard, who had been reassigned to Santiago.

Annex I

**Speech delivered by Dr. Rupert Griffith,  
Minister in the Office of the Prime Minister, Trinidad and Tobago**

Mr Chairman, it is indeed a pleasure for me to address this August gathering of delegates of the fifteenth Plenary Session of the Caribbean Council for Science and Technology. I join the Chairman in conveying my sentiments of welcome to all the delegates.

As the new millennium dawns, the reality facing Caribbean nations is becoming much clearer. In simple terms, we are confronted with the choice of developing gilt-edged capability in science and technology or continuing to lag afar in terms of the application of science and technology, in our development matrix. I sincerely hope that we would choose the former option. As a matter of fact, I am confident that as a region, we shall subscribe to the virtues of science and technology as a tool for improving human welfare in years to come.

Mr Chairman, that we have gathered here today as a region to discuss, among other things, how science and technology can contribute to the security of our sovereign existence is indicative of well-placed confidence.

It is of signaled importance that there is the awareness throughout the region that our economies are challenged both in terms of market size and availability of financial resources. These are likely to continue to be acute constraints unless we indulge in exponential increase in our efforts at regional cooperation. This task has never been easy, and regardless of our knowledge of the dire consequence of failure. We are yet to give regional cooperation the priority it delivers? (or requires)

Distinguished delegates, the new socio-economic paradigm instructs that unless we understand the characteristics of the evolution of international systems, identification of the causes of the process of growth and development would elude us.

Unless we understand that economic transformation is no longer based on abundance of natural resources, the facts that underpin economic growth would be obscure to us. More importantly, Mr Chairman, unless we pay keen attention to the course development that successful emerging economies have adopted, our status as comparatively inefficient producers and large scale importers of capital goods would remain secured.

We need to step back and observe that one of the critical vehicles of growth and development, is state-of-the-art capability in science and technology. At a recent international gathering of telecommunication experts I stated categorically in my address, that Caribbean nations need to be alert to new industrial configurations that are rapidly reforming the science of economics and overall human interactions. Key among these changes is the erosion of international competitive edge based on quantities and location of bankable physical resources, and the emergence of a regime of

competitive advantage predicated on technological edge. This must not only be understood, it has to be implemented without reservation.

Mr Chairman, these are not seminal ideas. Hoffman, using a sample of Caribbean countries to exhort Third-World policy makers to change their approach to development wrote: "whether we curse or bless technology, I am quite sure that the one thing we are not guilty of is ignoring the impact that technology continually has on our daily lives. Unfortunately, I am equally sure that many Third-World policy makers concerned with planning for industrial projects, are unaware of the importance of technology and the role of technical change as a driving force to economic development".

It is incumbent on you, delegates of this CCST meeting to reverse this statement, not with platitudes, but with visionary ideas to endure a modern Caribbean for future generations. These ideas should be pursued through collaborative networking among Member States of the Caribbean Council for Science and Technology.

What is most heart warming, Mr Chairman, is that some indications of the collaborative process is unfolding within the CCST. In the Report of the Fourteenth Plenary Session, I have noted the invitation of the CARICOM Secretariat to the CCST to join a Technical Working Group which has been established to assist industries throughout the Caribbean, particularly in the less developed countries. The suggestion of the said Plenary that an assessment of the science and technology infrastructure be undertaken as a means of engaging decision makers in dialogue on the effect of technology on society is a step in the right direction. Most importantly, the call of the CCST for a Regional Science and Technology Council to be established by linking focal points via the Internet, with a view to improving the capacity of Member States to respond to, and forecast international changes of significance to the region, is positive and forward looking. If this call is heeded to, it will leave an indelible imprint on future regional development.

While the CCST should take comfort from these initiatives, you must recognize that your work has only begun. Greater challenges await you in streamlining development processes as in the Caribbean. Though the terrain ahead remains difficult, I challenge you to commit all your expertise to overcome the difficulties. This includes intensification of efforts to and derive optimal formula, via the use of advanced technology, to diversify the banana industry in the Windward islands.

You should also explore systems that would encourage the productive use of environmentally friendly technologies, technology transfer and technology cooperation. Your remit must of necessity incorporate the deepening South-South cooperation in the use and adaptation of technology. This should treat with the problem of cross-border sharing of knowledge gained through research.

In closing, Mr Chairman, let me once again invite all the delegates to experience the warmth of our hospitality. While you make fundamental decisions to chart our future, please spare some time to enjoy the diverse cultural offerings of our lovely twin-island Republic.

Thank you and may God bless you all.



Annex II**LIST OF PARTICIPANTS****ANTIGUA AND BARBUDA**

Dr Anthony Richards  
 Chief Chemist, Chemistry and Food  
 Technology Division  
 Ministry of Agriculture, Fisheries,  
 Land and Housing, Dunbars  
*Tel: (268) 462-4502*  
*Fax (268) 462-4962/6104*  
*E-mail: PRICHARDS@CANDW.AG*

**BARBADOS**

Dr Eslie Alleyne  
 Director  
 National Council for Science  
 and Technology (NCST)  
 Reef Road, Fontabelle  
 Bridgetown, St. Michael  
*Tel: (246) 427-1820*  
*Fax: (246) 228-5765*  
*E-mail: ncstbar@caribsurf.com*

**CUBA**

Mr José Ramiro Más Camacho  
 Director  
 Coordination Programmes Division  
 Science and Technology Agency  
 Ministry of Science, Technology  
 and Environment,  
 Calle 18, el 41 y 47 Playa  
 Ciudad Habana  
*Tel: (537) 22-7009/7095*  
*Fax (537) 24-9460/9664*  
*E-mail: acyt@ceniai.inf.c*

**DOMINICAN REPUBLIC**

Mr Juan F. Evertsz, Asistente-Asesor en Ciencia  
 y Tecnología  
 Presidencia de la República  
 Secretariado Técnico  
 de la Presidencia  
 Palacio Nacional, Santo Domingo  
*Tel: (809) 221-8628/685-7701*  
*Fax (809) 221-8629*  
*E-mail: JEVERTSZ@AACR.NET*

**GRENADA**

Mr Carlton Frederick  
 (Chairman, National Science  
 and Technology Council)  
 Grenada Industrial Development Corporation  
 Frequente Industrial Park  
 Frequente, St. George's  
*Tel: (473) 444-1035-8*  
*Fax (473) 444-4828*

**GUYANA**

Mr Roshan Habibulah, Head  
 Institute of Applied Science and Technology (IAST)  
 Turkeyen Campus, East Coast, Demerara  
*Tel: (592) 22-4214*  
*Fax (592) 22-4229*  
*E-mail: roshanh@yahoo.com.*

**JAMAICA**

Ms Alicia A. Hayman, Research Officer  
 National Commission on Science  
 and Technology (NCST) Secretariat  
 Office of the Prime Minister  
 1 Devon Road, Kingston 10  
*Tel: (876) 960-8345*  
*Fax (876) 960-8407*  
*E-mail: ncst@uwimona.edu.jm*

**SAINT KITTS AND NEVIS**

Mr Clement Williams, Secondary Science Coordinator  
 Curriculum Development Unit  
 Ministry of Education  
 Lockhart Street, Basseterre  
*Tel: (869) 466-8610*

**SAINT LUCIA**

Mr Bishnunarine Tulsie  
 Head, Sustainable Development  
 Science and Technology Unit  
 Ministry of Finance and Planning  
 P.O. Box 709, Castries  
*Tel: (758) 451-8746*  
*Fax (758) 452-2506*  
*E-mail: estplanning@candw.lc*

**SAINT LUCIA (cont'd)**

Ms Frances Martin  
 Ministry of Finance and Planning  
 P.O. Box 709, Castries  
 Tel: (758) 451-8746  
 Fax (758) 452-2506  
 E-mail: [estplanning@candw.lc](mailto:estplanning@candw.lc)

**SAINT VINCENT AND THE GRENADINES**

Mr Alston Stoddard  
 Coordinator, Science and Technology  
 Ministry of Trade, Industry  
 and Consumer Affairs, Kingstown  
 Tel: (809) 456-1223  
 Fax (809) 457-2880

**TRINIDAD AND TOBAGO**

Mrs Maureen Manchouck, President  
 National Institute  
 of Higher Education Research, Science  
 and Technology (NIHERST)  
 20 Victoria Avenue, Port Of Spain  
 Tel: (868) 625-2110/4145  
 Fax: 625-4161  
 E-mail: [president@niherst.gov.tt](mailto:president@niherst.gov.tt)

Dr Thomas W.A. Carr  
 Science and Technology  
 Division, NIHERST

**UNITED STATES VIRGIN ISLANDS**

Dr Carlyle Corbin  
 Representative for External Affairs Government House,  
 St. Thomas 00802  
 Tel: (809) 774-0001, ext. 322  
 Fax (809) 774-6917  
 E-mail: [CGCORBINMON@WORLDNET.ATT.NET](mailto:CGCORBINMON@WORLDNET.ATT.NET)

**ORGANIZATIONS/INSTITUTIONS****ASSOCIATION OF CARIBBEAN STATES (ACS)**

Ms Fay Durrant, Director,  
 ACS,  
 11-13 Victoria Avenue  
 P.O. Box 660, Port of Spain  
 TRINIDAD AND TOBAGO  
 Tel: (868) 623-2783  
 Fax (868) 623-2679  
 E-mail: [acs-aec@trinidad.net](mailto:acs-aec@trinidad.net)  
 Web site: [acs-aec.org](http://acs-aec.org)

**CARIBBEAN COMMUNITY (CARICOM) SECRETARIAT**

Mr K. Mustafa Touré, Programme Manager  
 Sustainable Development Directorate of Regional Trade  
 and Economic Integration, CARICOM  
 Bank of Guyana Building  
 P.O. Box 10827, Georgetown, GUYANA  
 Tel: (5922) 58044 (direct)  
 (5922) 69280-9 (Pbx)  
 Fax: (5922) 57341/67816  
 E-mail: [CARISEC2CARICOM.ORG](mailto:CARISEC2CARICOM.ORG);  
[sustain@solutions2000.net](mailto:sustain@solutions2000.net);  
[sustain11@hotmail.com](mailto:sustain11@hotmail.com)

**ORGANIZATION OF AMERICAN STATES/ UNIVERSITY OF THE WEST INDIES (OAS/UWI)**

Dr Ulric O. D. Trotz  
 Project Manager  
 CPACC Project, CPACC Project Office  
 CERMES Building, Cave Hill Campus  
 UWI, BARBADOS  
 Tel: (246) 417-4581  
 Fax: (246) 424-4204  
 E-mail: [utrotz@caribsurf.com](mailto:utrotz@caribsurf.com)

**UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)**

Dr Winthrop W. Wiltshire  
 UNESCO Representative and Science  
 and Technology Adviser for the  
 Caribbean, 8 Elizabeth Street  
 Port of Spain,  
 TRINIDAD AND TOBAGO  
 Tel (809) 622-0536  
 Fax: 628-4827  
 E-mail: [winthrop@wow.net](mailto:winthrop@wow.net)

**UNIVERSITY OF THE WEST INDIES (UWI)**

Professor Roger Prichard  
 Pro Vice Chancellor (Research), UWI  
 Office of Research  
 Sir Frank Stockdale Building  
 St. Augustine Campus, St. Augustine TRINIDAD AND TOBAGO  
 Tel: (868) 662-5023  
 Fax (868) 663-7741  
 E-mail: [pritchard@trinidad.net](mailto:pritchard@trinidad.net)

**UNIVERSITY OF THE WEST INDIES (cont'd)**

Professor Baldwin S. Mootoo  
Deputy Principal, UWI  
*Tel: (868) 662-2002, ext. 2184*  
*Fax (868) 645-8415*

Professor Ramsey Saunders  
Head, Department of Physics, UWI  
*Tel: (868) 663 - 1334*  
*Fax (868) 645-3122*

**ECLAC System**

Ms Len Ishmael, Director, UN-ECLAC  
P.O. Box 1113, 3rd Floor  
CHIC Building, 63 Park Street  
Port of Spain, TRINIDAD AND TOBAGO  
*Tel (868) 623-5595/1969*  
*Fax (868) 623-8485*  
*E-mail: lishmael@eclacpos.org*

Mr Donatus St. Aimée, Secretary, Caribbean Council  
for Science and Technology (CCST)  
*E-mail: dstaimée@eclacpos.org*

Ms Hitome Rankine, Technical Cooperation Assistant  
*E-mail: ccst@eclacpos.org*

Mr Paul J. Peters, Secretary  
*E-mail: ccst@eclacpos.org*

