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**REPORT OF THE NATIONAL TRAINING WORKSHOP  
ON THE ECLAC METHODOLOGY TO ASSESS THE  
MACROECONOMIC AND SOCIAL IMPACTS OF NATURAL DISASTERS**  
*Port of Spain, Trinidad & Tobago  
17-19 March 2003*

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This training course was organized by the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean, in collaboration with the Ministry of Planning of Trinidad and Tobago, and held at the ECLAC conference room from 17-19 March 2003.

The main objective of the workshop was to expose a wide range of key personnel to training in the use of the ECLAC disaster assessment methodology. Related objectives were to strengthen the capability of Trinidad and Tobago to conduct their own assessment following a relatively minor disaster. In addition, the workshop sought to develop the capacity to create an effective counterpart team in cases of a serious disaster.

Training materials included power point presentations and a training manual, *ECLAC/CDCC Disaster Assessment Training Manual for Caribbean Small Island Developing States (SIDS) LC/CAR/G.730*. A copy of the table of contents of this training manual is appended.

The training was conducted by ECLAC staff and included (in alphabetical order): Erik Blommestein, Lancelot Busby, Len Ishmael (Director) and Esteban Pérez and two consultants, Ivor Jackson and David Smith.

In her opening presentation the Director of the ECLAC Subregional Headquarters for the Caribbean, Ms. Len Ishmael, acknowledged that Trinidad was somewhat south of the normal hurricane belt and was fortunate to have experienced its last hurricane, Flora, in 1963.

However, while a tremendous amount of the damages incurred in recent years in other countries have been coastal in nature, an increasing component has been the result of inland flooding as destabilised watersheds, mangrove destruction and increasing urbanisation decreased the natural ability of the land to reduce rates of runoff and to carry fresh water safely out to sea. The impact of Tropical Storm Debbie in Saint Lucia in the 1990s carried tremendous costs as a result of fresh water flooding triggered by destabilised watersheds and silted rivers. In the case of Jamaica, more people have died as a result of flooding than for any other reason during a hurricane or tropical storm; and in Trinidad and Tobago, severe flooding, occasioned during the last ITCZ event of 5 November 2002, created tremendous dislocation to peoples' lives as storm waters raged through the Santa Cruz and San Juan areas. More to the point, however, in Trinidad and Tobago, like Jamaica, is the fact that even normal ranges of rainfall accumulation during the raining season precipitate increasingly severe and repeated outcomes of flooding in central and other parts of the country. The timing of this Workshop, before the rains this year, was intended to enhance the ability of the country to prepare for the coming rainy season.

The training course then proceeded along the lines of the appended programme. Participants were drawn from a wide range of disciplines and had been involved to some extent in disaster management, response and damage assessment. The list of participants appears at Annex 2.

Regretfully no survey was undertaken after the workshop. However all trainers made an effort to make the sessions more interactive as a consequence of the results of the Saint Lucia survey.

Annex 1**Programme****Day 1 - Monday 17 March 2003**

- 8:30 - 8:45 a.m. Welcome Remarks - Len Ishmael, Director,  
ECLAC Subregional Headquarters for the Caribbean
- 8:45 - 9:00 a.m. Introduction of trainers and participants

**Session 1 - Vulnerability - Setting the stage**

- 9:00 - 9:15 a.m. i) The concept of vulnerability
- 9:15 - 9:30 a.m. ii) The Coastal Zone: Summary of hazards and vulnerabilities
- 9:30 - 10:15 a.m. iii) Land use planning and vulnerability assessment
- 10:15 - 10:30 a.m. *Coffee Break*

**Session II - The ECLAC Methodology**

- 10:30 - 11:00 a.m. i) An introduction to the ECLAC Methodology
- 11:00 - 11:30 a.m. ii) Key concepts and definitions
- 11:30 - 12:00 p.m. iii) Introduction of the Case Study and assignment of working groups

**Section III - Applying the Methodology**

- 12:00 - 12:45 p.m. i) Affected Population: gender differentiation, loss of life, displaced population, homelessness, migration, employment effects, etc.
- 12:45 - 2:00 p.m. *Working Lunch*
- 2:00 - 2:45 p.m. ii) Infrastructure (transportation, essential services, communication)
- 2:45 - 3:30 p.m. iii) Coastal areas and infrastructure
- 3:30 - 3:45 p.m. *Coffee Break*
- 3:45 - 5:00 p.m. iv) Environment (marine and terrestrial natural resources)

**Day 2 - Tuesday 18 March 2003****Section III - Applying the Methodology (Cont'd)**

## v) Economic Sectors:

- 8:45 - 9:30 a.m. - Tourism
- 9:30 - 10:30 a.m. - Agriculture and fisheries
- 10:30 - 10:45 a.m. *Coffee Break*
- 10:45 - 11:15 a.m. - Commercial and manufacturing sectors
- 11:15 - 12:30 p.m. v) Social sectors
- 12:30 - 2:00 p.m. *Working Lunch*

**Session IV - Pulling It All Together - Summary of Effects**

- 2:00 - 3:00 p.m. Overall effects of damages on the economy: Macro-socio-economic impacts
- 3:00 - 3:15 p.m. *Coffee Break*

**Session V - Vulnerability Reduction and Mitigation**

- 3:15 - 4:15 p.m. Planning for vulnerability reduction
- 4:15 - 5:00 p.m. Coastal engineering reconstruction, management and mitigation

**Day 3 - Wednesday 19 March 2003**

- 9:00 - 9:45 a.m. Social sector dynamics
- 9:45 - 10:15 a.m. Institutional options for disaster management
- 10:15 - 10:30 a.m. *Coffee Break*

**Session VI - Pulling It All Together - Operational Aspects**

- 10:30 - 11:15 a.m. Information management and operational logistics

**Section VII - Case Study**

- 11:15 - 1:00 p.m. Working groups (planning, natural resources, economic, infrastructure, social)
- 1:00 - 2:00 p.m. *Working Lunch*
- 2:00 - 3:45 p.m. Group presentations
- 3:45 - 4:00 p.m. *Coffee Break*
- 4:00 - 4:30 p.m. Wrap-up session
- 4:30 - 5:00 p.m. Presentation of Diplomas

Annex 2**List of Participants**

<b>Name</b>	<b>Ministry/Organization</b>
Ms. Wilma Bartholemew	Ministry of Sport and Youth Affairs
Mr. Patterson Beckles	Water and Sewerage Authority
Mr. Andirood Boodoosingh	National Gas Company
Ms. Yvonne Brumant-Baldwin	Ministry of Planning and Development
Ms. Marisa Clarke-Marshall	Institute of Marine Affairs
Ms. Glenda Cox	Ministry of Health
Ms. Daphne Davis	Ministry of Planning and Development
Mr. Derek Hinds	Ministry of Works and Transport
Mr. Dhanraj Jagai	Airports Authority of Trinidad and Tobago
Mr. Andrew Joseph	Public Transport Service Corporation
Ms. Lois Melville	Ministry of Social Development
Major Zephryne Millard	Trinidad and Tobago Regiment
Mr. Jameel Mohammed	Ministry of Local Government
Mr. Garfield Murray	Trinidad and Tobago Board of Architects
Mr. Ganesh Narine	Trinidad and Tobago Electricity Commission
Mr. David Neale	Trinidad and Tobago Society of Planners
Ms. Kay Patrick	Ministry of Works and Transport
Ms. Sherry Ann Persad	Central Statistical Office
Mr. Hilton Potts	Ministry of Housing
Ms. Paula Webber	Ministry of Works and Transport
Mr. Nayar Rampersad	Trinidad and Tobago Fire Service Headquarters
Mr. Malcolm Reid	Telecommunications Services of Trinidad and Tobago (TSTT)
Mr. Ezekiel Sampson	Trinidad and Tobago Meteorological Services
Mrs. Faith Pusam-Ramdath	Adventist and Development Relief Agency (ADRA)
Ms. Jenny Singh	Ministry of National Security
Mr. Madan Singh	Ministry of Health
Mr. Anil Sookdeo	Environmental Management Authority
Ms. Deborah Thomas	Trinidad and Tobago Society of Planners
Ms. Nicole Williams	National Emergency Management Authority (NEMA)

<b>Name</b>	<b>Ministry/Organization</b>
Dr. Myron Chin	Department of Civil Engineering - UWI
Mr. Ramon Gregorio	Ministry of Public Administration and Information
Ms. Mikalla Rogers	Ministry of Public Utilities and Environment
Ms. Lynette Atwell	Pointe-a-Pierre Wild Fowl Trust
Mr. Sataish Rampersad	Port Authority of Trinidad and Tobago
Ms. Carol Smart	Town and Country Planning Division
Ms. Coreen Joseph	Town and Country Planning Division
Mr. Leo Alleyne	Ministry of Health
Ms. Brigid Telfer	Ministry of Legal Affairs, Consumer Affairs Division
Lt. Col. Dave Williams	National Emergency Management Authority (NEMA)
Ms. Marlene Andrews	Ministry of Agriculture, Land and Marine Resources
Ms. Dian Holder	Ministry of Agriculture, Land and Marine Resources
Ms. Grace Les Fouris	Town and Country Planning

Annex 3**TABLE OF CONTENTS OF THE TRAINING MANUAL****Section A - Caribbean SIDS and their Vulnerability**

- A.1 Introducing vulnerability
- A.2 The coastal zone - risks, hazards and vulnerability
- A.3 Land use planning and vulnerability assessment

**Section B - The ECLAC Methodology**

- B.1 An introduction to the ECLAC methodology for SIDS
- B.2 Key concepts and definitions

**Section C - Applying the Methodology**

- C.1 The affected population
- C.2 Infrastructure (transportation, essential services, communication)
- C.3 Coastal areas and infrastructure
- C.4.a Terrestrial environments: Assessment of disaster impacts
- C.4.b Marine environments: Assessment of impacts
- C.5 Tourism
- C.6 Agriculture and fisheries
- C.7 The manufacturing and commercial sectors
- C.8 The social sector

**Section D - Pulling it all Together - Summary of Effects**

- D.1 Overall effects of damages on the economy of the affected country

**Section E - Building a Framework for Vulnerability Reduction**

- E.1 Planning for vulnerability reduction
- E.2 Coastal engineering: Reconstruction - Management and mitigation
- E.3 Social sector dynamics
- E.4 Project development for vulnerability reduction
- E.5 Actions at the community/national level to reduce vulnerability
- E.6 Building capacity for vulnerability reduction - Institutional options for disaster management agencies

**Section F - Managing the Process - Operational Aspects**

- F.1 Information management
- F.2 Operational logistics

**Section G - A Generic Outline for Reports****Glossary****Annex I** Case Study**Annex 2** Selected Exercises