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JAMAICA:
MACRO-SOCIO-ECONOMIC ASSESSMENT OF THE DAMAGE
DONE BY FLOOD RAINS AND LANDSLIDES
MAY 2002



ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN
Subregional Headquarters for the Caribbean
CARIBBEAN DEVELOPMENT AND COOPERATION COMMITTEE

PREFACE

This assessment was prepared for the Government of Jamaica following the significant damages to social and economic infrastructure and productive sectors as a result of a period of sustained and unusual rainfall associated with the convergence of a tropical wave over Jamaica and an area of high pressure to the north of the island resulting in periods of heavy and sustained rainfall over the period May 22 – June 2, 2002.

A request for technical assistance was directed to the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean, on May 31, by the Planning Institute of Jamaica. In view of the recent training provided by the ECLAC Caribbean team in the use of the ECLAC methodology to a multi-disciplinary group of 58 persons spanning several sectors, it was felt that this event, while most unfortunate, nonetheless provided an opportune moment for the Jamaican “trainees” to utilize the skills transferred and to apply the methodology which had been taught. Consequently, ECLAC fielded a team of five persons a few days after the request had been made, to give the Jamaican counterpart team the opportunity to collect data of the type and using an approach well suited to the preparation of assessments such as this.

This study was prepared by five members of the ECLAC Natural Disaster Damage Assessment Team. The mission was undertaken over a period of four days from June 16 2002 – June 21 with the singular objective of undertaking the actual assessment through analysis of available data, and pulling this report together.

The report undertakes a sectoral analysis leading to an overall assessment of the damages incurred. It appraises the macro-economic social, and infrastructural effects, identifies weaknesses in physical planning and other tools which would allow for mitigation, and provides guidelines for actions related not only to the recovery process, but most importantly including those essential to reducing vulnerability, both in the short term during the process of recovery and reconstruction, as well as over the longer term. The latter is considered of vital importance to the national interest, given the recurring phenomena of widespread damage to property and loss of life associated with flooding in this country, which could be alleviated through the judicious application of tools such as land use and physical planning and hazard assessment which would serve to ultimately reduce the vulnerability of the country to such events and preclude to some extent, the continuous diversion of financing available for development. This point is reinforced by the fact that the country is still in the process of recovering from the floods of November 2001 which impacted over a smaller area.

The direct and indirect damages have been assessed in accordance with the methodology developed by ECLAC. The study incorporates data and information supplied to the team and evidence collected through site visits and interviews. It is unfortunate however that some critical data input were not available at the time of undertaking this assessment, and some problems remain with respect to the aggregation of data from field sources. It is estimated that the damages and losses sustained exceed the capacity of the government to engage in recovery efforts without dislocation to its development trajectory.

The team is grateful to the Planning Institute of Jamaica (PIOJ) for its invaluable counterpart support and for responding graciously to its various requests for information. The team is

appreciative for the support provided by the Office of Disaster Preparedness and Emergency Management (ODPEM) and for the assistance provided by other agencies including the Ministry of Water Resources and Housing (MoWH), Water Resources Authority (WRA), National Works Agency (NWA), National Water Commission (NWC), National Environmental and Planning Authority (NEPA), Statistical Institute of Jamaica (STATIN), Ministry of Labour and Social Security (MLSS), Central Bank of Jamaica and the Rural Agricultural Development Agency (RADA).

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EXECUTIVE SUMMARY

This study was prepared for the Government of Jamaica following the damage and economic losses resulting from the flood rains affecting Jamaica over the period May 22 –June 2, 2002. The flood was associated with the convergence of a tropical wave over the country and an area of high pressure to the north of the island. As a consequence of the damages a request for technical assistance was directed to the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean of the on May 31 by the Planning Institute of Jamaica.

The Natural Disaster Damage Assessment Team undertook a mission to Jamaica over a period of four days from June 16 to June 21, 2002 to prepare a report on the evaluation and assessment of the damages. A first version of the report was completed and handed in to the Minister of Finance on June 21 (LC/CAR/R.63, 18 June 2002). This report represents an updated and expanded version of the document previously submitted.

This report undertakes a sector by sector analysis of the floods leading up to an overall assessment of the damages. The sectors analysed are grouped into four categories, social, productive, infrastructure and environment. The first includes the housing, education and health sectors. The second comprises agriculture, tourism, manufacture and distribution. The third includes transport, energy, water and sanitation, and telecommunications. The environmental assessment considers among others the analysis of changes to natural watercourses, damage to well fields and aquifers, sediment deposition, ecosystem and habitat damage. In the analyses of each of the sectors the document follows closely the ECLAC methodology by distinguishing between direct and indirect damage. Direct damage refers to losses to assets and stocks. Indirect damage is defined with respect to losses in flows (income and production flows).

The estimates for direct and indirect damage for the economy as a whole are then presented in a summarised format. Their magnitude is evaluated in relation to GDP and other macroeconomic variables. The overall assessment of the damage also includes a detailed macroeconomic assessment of the situation prior to the disaster, the expected situation without the disaster and the estimated performance of the economy taking into account the effects of the floods.

The document ends with a presentation of guidelines for a rehabilitation and reconstruction program. This includes an analysis of issues pertaining to planning policy and mitigation and a tentative list of selected project proposals.

Total damage was estimated at J\$2 471 million or US\$51 million. This represents 0.7 per cent of GDP and 4 per cent of merchandise exports. The bulk of the damage was bestowed upon assets and stocks. That is, it was direct damage representing 86 per cent of the total. The damage was concentrated in infrastructure and agriculture. The estimations undertaken by the mission show that agricultural and infrastructure management represented 3 per cent of their respective GDP.

The effects of the damage on macroeconomic performance are channelled mainly through the fiscal and balance of payments side. The damage will imply greater expenditures and lower incomes and at the same time a higher external indebtedness. It has also affected the traditional export base of the country based on agricultural products. Overall the disaster will have a minor impact on growth performance. The estimated rate of growth of GDP for 2002 without the disaster was estimated by the ECLAC mission at 2.2 per cent and at 1.9 per cent taking into account the effects of the disaster. The interpretation of the estimates and economic performance for 2002 should take into account that, the effects of the May floods are superimposed to those caused by the flood rains in October 2001 and which became visible in the first quarter of the present year.¹ In addition, some sectors have also been affected by unfavourable economic conditions. These considerations should provide a basis to assess the extent to which donors commitments following the October 2001 floods should be reviewed in the light of present circumstances.

The assessment presented in this report should enable the government and the international community to set national and regional priorities in the reconstruction and rehabilitation phases. It should be seen as a basis for enhancing preparedness to reduce vulnerability in the face of external shocks. Jamaica has been exposed to different natural disasters in recent times, particularly hurricanes, floods and landslides (including flooding and landslides associated with hurricane Michelle in 2001).

The country remains highly vulnerable and weaknesses exist in planning, land use policies and building practices. Although disaster planning and response capacity have evolved appreciably in recent years there is still a need to build resilience to flood and other disasters. This points to the need for changes in land use and building practices. In particular, the recent flood rains, coming so rapidly on the heels of those of November 2001, serve to highlight problems at the planning and design stage. It is most likely that the inadequacies in these systems have contributed to the extensive damages that were suffered.

¹ Jamaica, An Assessment of the Economic and Other Damages Caused by Hurricane Michelle, LC/CAR/G.672, December 2001

I. BACKGROUND

1.0 The mission

The Government of Jamaica through its planning agency, the Planning Institute of Jamaica (PIOJ), requested technical assistance to undertake a rapid assessment of damages in the aftermath of the severe flooding and rains which persisted during the latter part of May and the beginning of June. ECLAC responded by fielding a small team of experts to carry out the evaluation.

The mission visited Jamaica from 16 – 20 June 2002. The team's arrival was preceded by the collection of data on the extent of the damages caused by the natural disaster. The PIOJ and its newly established Sustainable Development Department coordinated this task.

The ECLAC team included three ECLAC officials and two external consultants:

Ms. Len Ishmael, Director, ECLAC Subregional Headquarters for the Caribbean
Mr. Esteban Perez, ECLAC, Subregional Headquarters for the Caribbean (Economics Unit)
Ms. Asha Kambon, ECLAC, Subregional Headquarters for the Caribbean (Social Unit)
Dr. David Smith, consultant, infrastructure assessment
Mr. Ivor Jackson, consultant, environmental assessment

This document contains an independent and objective assessment of the disaster, which sets forth the overall magnitude of direct and indirect damages and their effects on the behaviour of the economy as a whole. It is intended to assist in drawing up proposals for reconstruction priorities and needs.

2.0 Description of the phenomenon and its effects

2.1 *The meteorological phenomenon*

Beginning on Wednesday 22 May 2002 and continuing for a period of almost 10 days, heavy rains resulted in extensive flooding across the island of Jamaica. Damages were experienced in almost all of the parishes of the island, however, five parishes, in particular were declared disaster areas. These were: St. Elizabeth, Manchester, Clarendon, St. Catherine and St. Thomas.

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