



World Conference on Disaster Reduction
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Integrating Disaster Risk Management
into Development Financing:
The Role
of International Financial Institutions

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Vulnerability Reduction at Core of CDB's Development Agenda

Disasters retard development gains, increasing poverty levels

- Of 17 borrowing member countries, 15 are SIDs
- Annual occurrence of multihazards
- A single hazard may affect several countries simultaneously
- Majority of countries are dependent on single source of foreign exchange, viz. tourism, agriculture
- Disproportionate disaster impact – greater losses per capita



Disaster Risk Management Portfolio

1972 – 2004

- Total Loan Portfolio: US \$2.3 bn
- Total Grant Portfolio: US \$193 mn
- Disaster management:
 - Loans: US \$146.8 mn
 - Emergency Relief Grants: US \$2.68 mn

Since 2000

- Increasing number of disaster mitigation capital projects and disaster mitigation technical assistance grants



Mainstreaming Disaster Risk Management into Development Planning: Milestones

- 1998** Natural Disaster Management Strategy and Operational Guidelines
- 2000** Disaster Mitigation Facility for the Caribbean
- 2003** Corporate Priority on Vulnerability Reduction
- 2005 – 2009** Strategic Plan: Environmental Sustainability included as a cross cutting theme



Disaster Mitigation Facility for the Caribbean: Expected Outcomes

Disaster Risk Reduction (DRR) Integrated into CDB's projects and procedures

- Revised DR Management Strategy
- Revision of relevant Bank policies
- Staff training
- **Incorporate DRR into project design**

National Capacity to mainstreaming DRR into the development process improved

- Hazard mitigation policies and plans
- Institutional strengthening – disaster management agencies, tertiary education
- **DRR tools and practices**
- Increased stakeholder awareness and participation

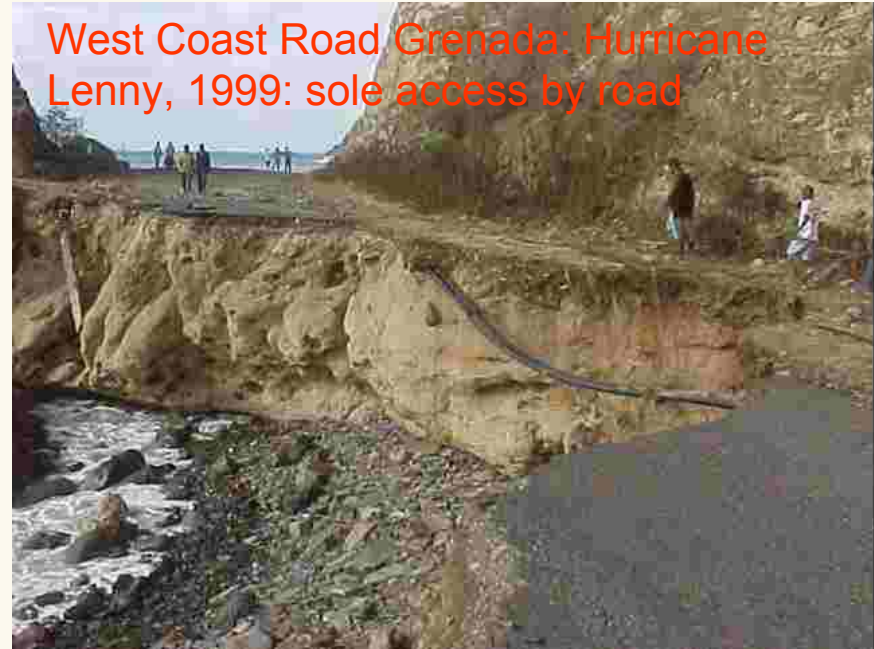


Vulnerability to Development Projects

Princess Margaret Hospital,
Jamaica; Hurricane Gilbert, 1998



West Coast Road Grenada: Hurricane
Lenny, 1999: sole access by road



- e.g. Nevis, Hurricane Lenny, 1999; Four Seasons Hotel – loss of use for several months led to 40% unemployment
- e.g. Grenada; Hurricane Ivan 2004; economy devastated; major infrastructural damage



Integrating Disaster Risk Reduction into the Project Cycle

Environmental impact assessments (EIA) with enhanced natural hazard risk components provide a useful mechanism to enable the development review process to better encourage and promote development design that limits or reduces vulnerability to natural hazards.

- EIA assesses:
 - impact of the project on the environment (stronger focus traditionally)
 - impact of the environment on the project
- Current structure of EIA does not:
 - explicitly include natural hazards
 - address natural hazard vulnerability and risk

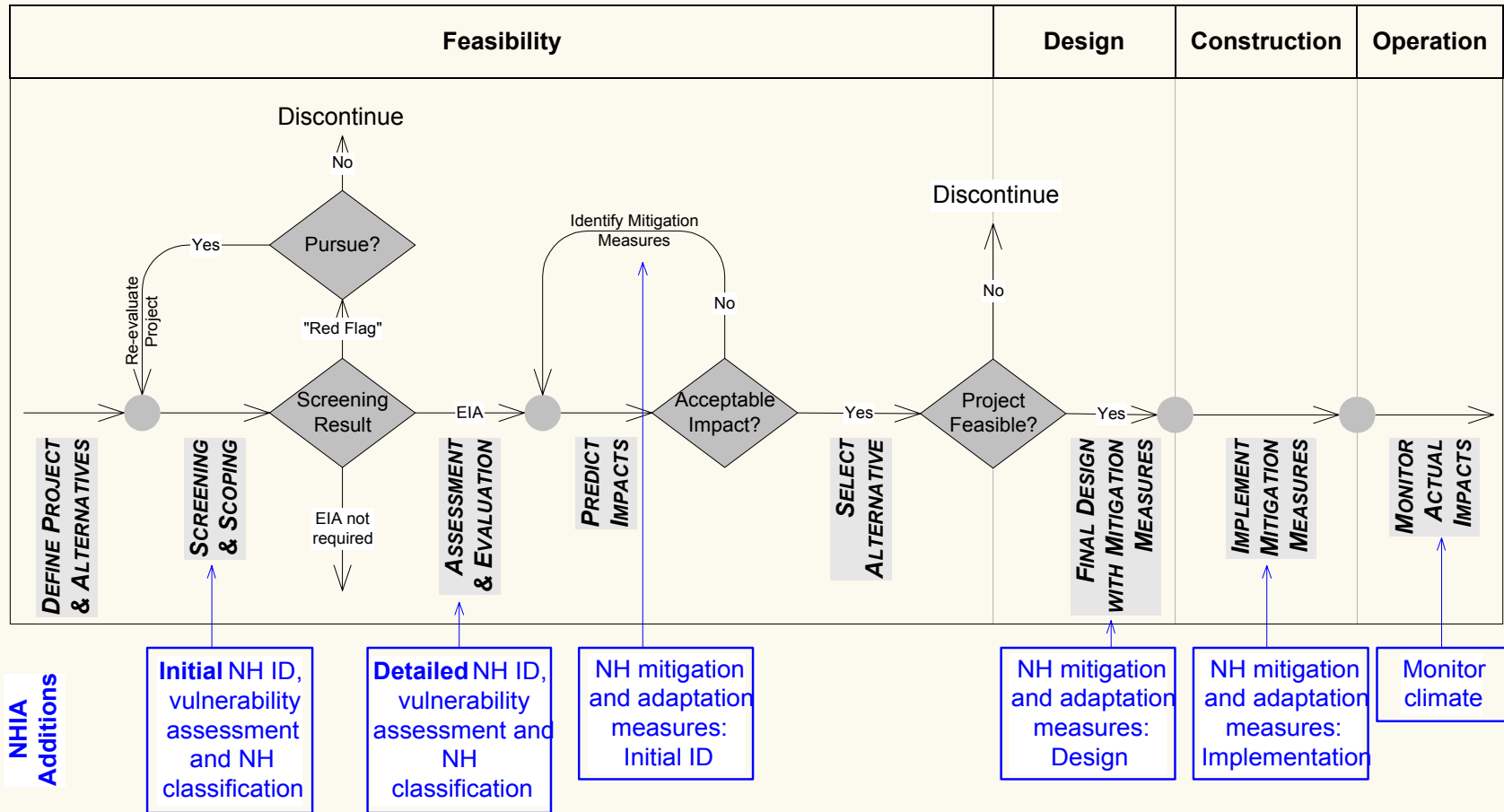


Natural Hazard Impact Assessment (NHIA)

- Study undertaken to identify, predict and evaluate natural hazard impacts, including those associated with climate change, within EIA
- Assesses:
 - Impact of the project on the environment (existing/potential natural hazards); and
 - Impact of the natural hazard environment on the project (project vulnerability to natural hazards)
- Integral component of environmental review process and EIA
- Allows for routine and explicit consideration and mitigation of natural hazard risk
- Provides a mechanism for incorporating natural hazard risk considerations into the project cycle



Natural Hazards in the EIA Process: Generic NHIA-EIA Flowchart



NHIA Additions

Initial NH ID, vulnerability assessment and NH classification

Detailed NH ID, vulnerability assessment and NH classification

NH mitigation and adaptation measures: Initial ID

NH mitigation and adaptation measures: Design

NH mitigation and adaptation measures: Implementation

Monitor climate

Step 1

2,3,4

5

6-10

11

(modified from EIA flowchart (OECS/NRMU 1998))

NHIA-EIA Sourcebook



**Sourcebook on the
Integration of
Natural Hazards
into
Environmental
Impact Assessment**

**NHIA-EIA
SOURCEBOOK**



- **Rationale and Overview**
- **Generic EIA and Natural Hazard Interventions**
 - Step 1: Define Project and Alternatives
 - Step 2: Preliminary Hazard and Vulnerability Assessment
 - Step 3: Screening
 - Step 4: Scoping
 - Step 5: Assessment and Evaln – Detailed Hazard/Vuln. Ass
 - Step 6: Develop Env. Management Plan
 - Step 7: Cost Benefit Analysis
 - Step 8: Monitoring Programme
 - Step 9: Prepare Final Report
 - Step 10: Project Appraisal
 - Step 11: Implementation and Monitoring
- **Cumulative Impacts**
- **EIA at the National Level**
- **Annexes - Checklists, References, Examples**



Natural Hazards in the EIA Process: Feasibility Stage (Steps 1 and 2)

Step 1: Define Project and Alternatives

In the initial project definition and description include information on the following, at a minimum: design criteria of project (e.g. building code used), soils, geology, slopes and drainage, location relative to coasts and rivers, hazards or damage history.

Step 2: Preliminary Hazard and Vulnerability Assessment

Undertake a preliminary identification of significant hazard and hazard impacts to inform EIA screening and scoping, including an estimation of frequency or probability of hazard events (initial hazard identification) and severity of impacts on project components and zone of influence (initial assessment of vulnerability).



Natural Hazards in the EIA Process: Feasibility Stage (Screening)

Step 3: Screening: based on the information from Step 2, assign:

- *Category A* (Full EIA report): anticipated short-term to mid-term impacts from natural hazards are *highly likely* to result in significant adverse social, economic, structural or environmental impacts.
- *Category B* (Focus EIA report): anticipated short-term to mid-term impacts from natural hazards are likely to result in social, economic, structural or environmental impacts, but ones that are less adverse than those of Category A projects.
- *Category C* if it is likely to have minimal or no adverse environmental impacts, or minimal anticipated short, medium or long-term impacts from natural hazards.

NB: Typically, some types of projects are automatically assigned to Category A, due to project importance and location in inherently hazardous areas, e.g. coastal infrastructure, lifelines, ports, airports, tourism plants.



Natural Hazards in the EIA Process:



Step 5: Assessment and Evaluation: Fully assess and characterize significant natural hazards, their potential impact on the project and potential effects on those hazards introduced by the project. Includes a detailed hazard and vulnerability assessment for significant hazards identified during screening and scoping. Natural hazard risk reduction measures are selected and the preferred project alternative identified.

Step 7: Cost Benefit Analysis: identify and incorporate into the feasibility analysis the costs (design, implementation) of additional protection for natural hazards and benefits of damage and loss avoided. Benefits of the project without natural hazard protections must be reduced to account for potential loss.

Step 10: Project Appraisal: in determining the viability and acceptability of the project against established criteria, confirm that:

- all potentially significant hazards have been analyzed using appropriate methodologies
- appropriate and sufficient management, mitigation and/or adaptation measures have been identified and incorporated into project design
- it is technically, financially and administratively feasible to implement the necessary natural hazard risk management measures in the proposed project.

NHIA-EIA Sourcebook

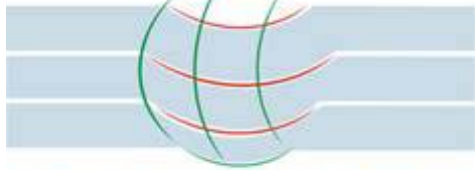
- Living Document
- Available in CD, January 2005; see www.caribank.org
- Complementary document: *Guide to Climate Change Adaptation into the EIA Process*, uses same methodology and focuses on climate change



Challenges

- Increasing awareness and application of methodology as tool for routine incorporation of DRR in the project cycle:
 - Targets:
 - International financial Institutions
 - Bilateral agencies
 - Subregional and national development banking community, commercial banks
 - National Governments
- Capacity building in NHIA-EIA
- Provision of technical assistance to support increase in demand for hazard maps and vulnerability assessments





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