

PROVENTION
CONSORTIUM

‘Measuring Mitigation’: Methodologies for Assessing Natural Hazard Risks and the Net Benefits of Mitigation

Presentation by Dr Charlotte Benson

Thematic Session on Cost-Benefit Analysis
World Conference on Disaster Reduction

18-22 January, 2005, Kobe, Japan

Objectives of project

The problem :

Despite a rapid escalation in disaster losses in recent decades, many development organisations remain reluctant to pursue risk reduction as a key objective, or even to protect their own projects against potential hazards, without proof that mitigation 'pays'.



Photos: IFRC

Objectives of project

Project goal :

To develop tools for use by development organisations in adapting their existing project identification, appraisal and evaluation methodologies to take risks emanating from natural hazards into account and assess related risk reduction opportunities.



Photos: IFRC

Structure of project

Phase 1:

- Detailed review of existing standard tools used by development organisations in designing and evaluating projects.

Phase 2:

- Development of guidance notes for use by development organisations in adapting existing project appraisal and evaluation tools, and related guidelines for developing broader country and sectoral strategies, to take risks emanating from natural hazards into account and analyse related risk reduction opportunities.

Key findings of Phase 1

- Many of the standard tools currently used by development organisations in designing projects could be used to assess risks emanating from natural hazards and potential returns to mitigation.
- There is nothing intrinsically difficult about either appraising natural hazard related risks or monitoring and evaluating risk reduction activities.
- In reality, natural hazards and related vulnerability are rarely considered in designing and appraising development projects, often even in high risk areas.

Recommendations

Broad recommendations

- Existing appraisal and evaluation guidelines should be revised to provide more explicit guidance on analysis of hazard-related risks and options for reducing vulnerability.
- Natural hazards and related vulnerability should be considered as part of all forms of project appraisal. Vulnerability is complex and multi-faceted, requiring analysis from human, social, environmental, economic and poverty perspectives.
- In high-risk areas, natural hazards and related vulnerability should be automatically assessed as part of the appraisal process.

Recommendations

Economic analysis

Revised guidelines should

- Encourage explicit consideration of natural hazard related factors, including in sensitivity analysis of economic viability.
- Encourage consideration of natural hazards and related vulnerability in assessing the sustainability of projects.
- Encourage examination of the economic consequences of any change in vulnerability brought about as a consequence of a project.

Recommendations

Environmental analysis

Revised guidelines should

- Encourage systematic analysis of natural hazards and related risks as a central component of the environmental appraisal process.
- Recommend collation of data on natural hazard related risks in the project area as a fundamental first step in project scoping.
- Stipulate that full EIAs are required for all projects in high risk areas.

Recommendations

Social analysis

Revised guidelines should

- Re-think weighting of different elements in social analysis to better reflect the relative importance of vulnerability to natural hazards and linkages between this and other forms of vulnerability.
- Encourage emphasis on local and household participatory appraisal in seeking to assess sensitivity to hazard risks.

Recommendations

Risk assessment

Revised guidelines should

- Encourage explicit consideration of natural hazard related risks.
- Encourage consideration of qualitative as well as quantitative measures of risk.
- Recommend safety risk assessments of physical structures, integrating safety concerns in the design, construction and operation of projects in areas at risk from high impact events.

Recommendations

Logframe analysis

Revised guidelines should

- Encourage use of logframe analysis to systematically and logically examine the consequences of any potential natural hazard events.

Recommendations

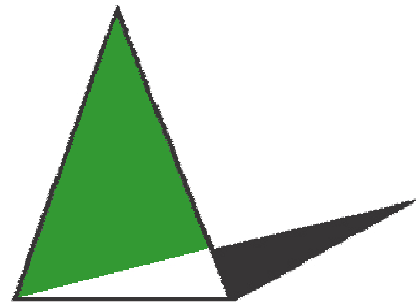
Monitoring and evaluation

- There should be much more emphasis on M&E in disaster reduction, particularly evaluation of longer-term impact.
- Projects must ensure that adequate baseline data are collected, using vulnerability analysis or other appropriate methods.
- Selection of indicators – especially of impact – and analysis of causal linkages are major methodological challenges that should be taken up seriously by development organisations.

Post-script

Further critical issues that need to be addressed:

- Supporting data
- Political will
- Institutional and individual motivation
- Accountability



PROVENTION
CONSORTIUM

www.proventionconsortium.org