



KOBE REPORT draft

Session 3.7, Thematic Cluster 3

Cost-benefit analysis for disaster risk management

1. Summary of the session's presentations and discussions

After the introduction of the panelists by the chairman Mr. Schaef (GTZ), Mrs. Koehler from the German Ministry of Foreign Affairs welcomed the participants highlighting the importance of cost-benefit analysis (CBA) as crucial for disaster risk reduction. She explained the objectives of the session which are to raise awareness for the economic rationality of disaster risk management, to reach a better understanding of the potential of applying cost-benefit-analysis and to lay the basis for partnerships to improve the methodology and its application.

The first presentation was given by Charlotte Benson, ProVention Consortium, presenting the results of a project on Methodologies for Assessing Natural Hazard Risks and the Net Benefits of Mitigation. The project was initiated due to the fact that despite a rapid escalation in disaster losses many governments still do not invest in disaster mitigation.

The main recommendations of the first phase of the study are:

- 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.

Furthermore, the following critical issues have been addressed:

- The need for supporting data;
- The challenge to increase political will;
- Augmented institutional and individual motivation; and
- Assured accountability.

A second speaker (Mr. Mechler, IIASA) presented the methodological background for cost-benefit analysis for natural disaster management. The presentation was based on a study carried out for GTZ in order to develop guidelines for the application of cost-benefit analysis in developing countries with data scarcity. The methodology has been applied in two pilot projects in Peru and Indonesia and led to the following conclusions:

- CBA demonstrated benefit of and need for undertaking disaster risk management measures. It can be a tool for systematic and coherent decision-making.
- It is a monetary framework for systematic decision-making, the problem is how to include non-monetary values.
- The tool gives values to costs and benefits. Nevertheless, it has to provide clear results in order to convince politicians to set priorities for disaster reduction.
- Guidelines exist but are often not applied due to the complexity of the methodology.

A first round of questions and comments centered on the following issues:

- Adaptability of the methodologies to local communities and its use by non-experts. The methodology can be applied, although some technical knowledge is needed. Experiences with CBA do exist in several countries at the local level (UNDP-Vietnam, Tearfund study).
- Difficulties to convince political decision-makers: It has been stressed that economic aspects are only one dimension, human aspects (e.g. loss of life) have to be considered as well.

After the first part of the discussion, two examples from different countries (Peru, Indonesia) were presented:

Mr. Von Hesse from Peru described the current process in his country to include risk assessment in public investment planning. This process was triggered by the increase of registered emergencies. This enhanced political awareness for the need of sustainability of public investments in development.

The main characteristics of this process are:

- Risk assessment is in a first step applied to minor investments and selected sectors.
- It has not yet been applied in most large investments projects.
- Speed remains the challenge in order to apply CBA after emergencies with the urge for rapid reconstruction.
- Motivation: increase state's capacity to reduce risks, increase efficiency of public investments and reduce poverty levels.

Mr. Triutomo presented some reflections on experiences in Indonesia.

- Disaster management is responsibility of the district governments; in most cases the district decision makers do not have the capacities to undertake pro-active disaster risk management and prefer more tangible investments (e.g. schools, roads).
- CBA could be a good tool to strengthen the paradigm shift from reaction to prevention on the local level.
- Short planning horizons („quick yields“) in public planning make it difficult to adopt risk management projects where benefits arise in the future.

Mr. Kessler from ADPC demanded first of all the application of existing methodologies and instruments for cost-benefit-analysis. He argues that we already know that CBA shows efficiency rates of 5-7 %. The major challenge is how to finance disaster reduction. Examples from India show that the capital market is available to provide the necessary resources for reconstruction/retrofitting. ADPC is supporting the use of “capital investments”, helping the poor to get access to money for disaster-resistant reconstruction of their houses.

During the final discussion the following aspects were addressed:

- It is important to focus on low-cost houses with appropriate indigenous knowledge.
- Asian Regional Consultative Committee (RCC) can be used as a platform to discuss such aspects and engage political decision-makers.
- The GTZ method for CBA is meant to support such efforts to foster political will, on the regional and national level, but also on the local level.
- In Vietnam CBA has been applied by UNDP/ADB, exchange would be helpful and was agreed to be one priority.
- There are yet no experiences to apply CBA for disaster preparedness. It was recommended to look at it more closely.
- The Disaster Management Institute (DMI) uses CBA for prevention measures (floods, fires etc.), including using indigenous knowledge.
- ADPC together with ECLAC develops methodology for damage assessment which provides good estimates for costs but is still weak on estimating benefits of risk reduction measures.

2. Primary issues

- Broad application of CBA methodologies is required. Exchange of lessons learnt is needed.
- Calculation of benefits provides incentives for investments in disaster reduction. This effect is enhanced by considering both human and economic losses.
- However, application of CBA demands political will and technical skills.
- Methodologies have to be adapted to be locally applicable and quick in order to be carried out in rehabilitation and reconstruction processes (use windows of opportunity).

3. Partnerships

Proposed project: GTZ-ADPC-RCC for the integration of disaster risk analysis in sectoral policies (e.g. infrastructure).

4. Name, affiliation and contacts of presenters and titles of presentations

Mr. Thomas Schaeff, GTZ/DKKV, thomas.schaeff@gtz.de, Chairman;

Mrs. Traudel Koehler, BMZ, Introduction;

Mrs. Charlotte Benson, ProVention Consortium, "Measuring Mitigation: Methodologies for Assessing Natural Hazard Risks and the Net Benefits of Mitigation";

Mr. Reinhard Mechler, IIASA/GTZ, "Cost-benefit analysis for natural disaster management: methodological background";

Mr. Sugeng Triutomo, BAKORNAS PBP (Indonesia), "Case of Indonesia";

Mr. Milton von Hesse, Ministry of Finance (Peru), "SNIP and risk handling";

Mr. Earl Kessler, ADPC, "Potential of the domestic capital market as a source of funds for disaster risk management".

5. Name, affiliation and contact of person filling in the form

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