

*Community-Based Disaster Risk Reduction*

***PARTICIPATORY RISK ANALYSIS & MAPPING***



***Disaster Risk Reduction:***

*The process of minimising the risk of disaster for a given society/group through taking action to minimise their vulnerability to, and maximising their capacity to cope with, a man-made or natural hazard.*

**Background**

Given that action taken to lessen the impact a disaster is a more efficient response to any crisis, and recognising also that there is a very steady increase in the frequency and intensity of disasters associated with natural phenomena worldwide, there is consensus around the need to re-focus humanitarian efforts towards disaster prevention, mitigation and preparedness activities. It is against this background that Trócaire, with funding from Irish Aid, has undertaken a research and learning project on community-based disaster risk reduction (DRR).

DRR has become a strategic priority for Trócaire in the Central America region. At present, DRR programming is underway in 379 communities in the region with over 40 partners. While activities are being implemented at all levels, from local and community to national and regional, the core focus has been on the preparedness of poor communities to build resilience and respond effectively to crisis events such as hurricanes, floods, landslides and earthquakes.

The research and learning project aimed to harness some of the DRR-related programme expertise acquired by Trócaire and its partners in Central America in their post-Mitch programmes and to share this learning with the wider organisation. The project involved developing and disseminating a simple participatory methodology for community risk mapping. Community risk mapping is a key starting point for many DRR programmes in the region.

**Participatory Risk Analysis (PRA) & Mapping Methodology**

Central to an effective DRR programme is the development of a contingency plan which is based on an assessment of existing risks and expected impacts (a risk scenario). The capacity of communities to understand, analyse and map risk is a crucial first step towards reducing vulnerability and responding effectively in emergency situations. It is in this context that the PRA & Mapping research project was conceived of, with the specific objective of developing a simple participatory planning tool to strengthen local DRR capacities.

The resulting methodology uses participatory techniques, GPS technology (Global Positioning System) and GIS software (Geographic Information System - ArcView) to create geo-referenced risk maps for the identification and accurate location of the most vulnerable families in a community relative to a particular natural hazard. The methodology has four main stages, as follows:

1. *Information Collection:* A census database is created and geo-referenced maps are produced identifying residential and agricultural areas and determining hazard levels in the selected community.
2. *Community Workshop:* Through the use of participatory techniques, a series of group activities are undertaken. Amongst other things the workshops define and identify capacity and vulnerabilities, analyse past experiences and future possibilities related to hazard, rank the vulnerability of and map community resources such as organisations and institutions.
3. *Data processing & map design:* Data gathered in the workshop is processed, a report is produced and geo-referenced maps showing hazard, vulnerability and risk are created.
4. *Presentation & Analysis of Results:* Outputs from Stage 3, above, are presented to the community and analysed with the objective of facilitating DRR contingency and development planning.

## **Rollout of the Methodology and Lessons Learnt**

Once completed and tested in Central America, a series of activities were organised to disseminate the methodology and learning across the wider organisation. In particular, the methodology was presented to Trócaire humanitarian staff at a workshop in Honduras, following which it was piloted in both the East Africa and South East Asia regions. This pilot process created the opportunity to test the suitability of the methodology for other hazards in different environments. Rollout of the methodology, raised interesting issues for consideration and highlighted the need for flexible adaptation when applied in new contexts.

For instance, the scattered nature of community dwellings in East Africa made gathering co-ordinates a more time consuming and tiring process than had been the case in Central America. Language difficulties occurred, as the key concepts of hazard, vulnerability and risk were difficult to translate into local languages, thus impeding clear understanding of their meaning by participants.

In a broader sense, the process posed questions about sharing institutional learning and how best to carry out learning activities. An ambitious project, its implementation created a very high workload and Trócaire was lucky to secure the participation of good consultants, without whom the project may not have been possible.

## **Conclusion**

The overall aim of this project was to improve community capacity to prepare for and respond to emergencies, and to manage risk in development processes. It was derived from a desire to help communities to analyse and reduce their own risk levels, seeking a holistic approach to risk analysis that harnessed the experience and perceptions of communities. Trócaire has not sought to replace other risk analysis methodologies, but rather has sought to complement these by creating a simple, flexible and inclusive tool that can be applied at low cost. The practical methodology adopted, while requiring some adaptation when applied to new environments, has been received positively overall. Participation was strong from communities.

In addition to their primary value as preparedness tools, feedback indicated that the workshops were also seen as an important platform for networking and discussion. Moreover, by working together, the participatory tools helped build confidence and trust within communities and were deemed to have potential positive knock-on effects on other livelihood and humanitarian programmes.

*This project is now in the final stages of completion and the methodology will shortly be published in both Spanish and English for dissemination. Please contact Trócaire's Emergency Unit for further information.*

*It is worth re-iterating that community risk mapping is just one step in the process of DRR. Given the high levels of community participation, and hence expectations raised, agencies should be fully prepared to respond to the 'next steps' that arise from the risk mapping process.*