# Early participatory intervention for catastrophe to reduce island vulnerability (EPIC)

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## Abbreviations

DEPICT: Deployable EPIC Team.
EPIC: Early Participatory Intervention for Catastrophe to Reduce Island Vulnerability.

## Introduction

Disasters in small communities and isolated locations, such as islands, can have devastating impact. The small size and isolation of these communities creates a situation where a relatively small hazard event can threaten an entire nation or culture, as seen from the impact of volcanic eruptions and hurricanes in Montserrat and Tristan da Cunha. In many instances, for example volcanism on Montserrat and Ascension Island, generations of inhabitants might have had little or no experience of certain hazards before they cause major disruption while the local authorities might have a low level of preparedness. Building resilience against and reducing vulnerability to extreme events which have never been experienced is especially challenging.

During a rapid-onset catastrophe, specialists from overseas are often drafted in to the disaster location and hastily initiate a top-down approach to the risk awareness campaign, with little cross-discipline collaboration. These campaigns tend to be of limited success due to conflict between (a) the outsiders' strategies and interests and (b) the local community's perspectives and decision makers. Little consideration is given to the distinct worldviews of the population at risk, potentially resulting in a negative cycle of distrust and disbelief along with the development of misconceptions. Once initiated, such a situation is difficult to redress.

This proposal hypothesises that the combination of 'early intervention' with a 'participatory approach' would best reduce island vulnerability to both catastrophic and chronic disasters. The combination could be termed EPIC: Early Participatory Intervention for Catastrophe. EPIC should ideally occur long before a hazard threatens, but would also be essential when a crisis manifests and in the immediate and long-term aftermaths of extreme events.

## Definitions

### Catastrophic disasters

Generally sudden-onset, high-impact events which manifest over a relatively short time scale (although exceptions exist). Examples are aeroplane crashes, blizzards, chemical explosions, earthquakes, hurricanes, terrorist bombs, tornadoes, and volcanic eruptions.

### Chronic disasters

Generally slow-onset, high-impact events which manifest and perpetuate over a relatively long time scale


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***Ilan Kelman*** is the Deputy Directory of the Cambridge University Centre for Risk in the Built Environment and founded the Island Vulnerability website http://www.islandvulnerability.org to explore the challenges which isolated geographies face when dealing with risk and disasters by examining the processes which create, maintain, and could be used to reduce their vulnerability.

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A research associate with Benfield Hazard Research Centre and member of University College London's Department of Geography, ***Tom Mitchell*** conducted his undergraduate studies at Cambridge University before moving to Rutgers, The State University of New Jersey for his Master's research on the Montserrat volcano crisis. His PhD work at UCL has focused on integrating disaster risk reduction into development practice using analytic-deliberative process methods. Tom has carried out extensive research in the Eastern Caribbean, concentrating on St. Kitts & Nevis and Montserrat and has developed a series of indicators for mainstreaming disaster risk reduction, available on the BHRC website. In October 2005, Tom took up a new position as a Research Fellow at the Institute for Development Studies, University of Sussex, examining the link between climate change and disasters.

Roadside food seller (Tongatapu, Tonga): Needed in a DEPICT? (© Ilan Kelman 2004)

(although exceptions exist). Most such problems are associated with underdevelopment, violate basic human rights, and preclude sustainability and long-term health for that society. Examples are domestic violence, inequality, poor education or poor access to education, inappropriate waste management, poor water quality and access, and poverty.

## Early intervention

Proactive engagement by an interdisciplinary team of researchers and practitioners with vulnerable communities before a crisis event occurs. The purposes are to sensitise the researchers to the cultural values of the population, to increase risk awareness, and to set the stage for appropriate vulnerability reduction measures.

## Participatory approach

Researchers and practitioners working co-operatively with community members to understand and resolve community problems, to empower community members, and to democratise research and application. The ultimate aim should be a balance of local knowledge with the wider perspective of the outside team. The process should be an exchange, rather than one side dominating.

## Needs (outcomes needed from work on EPIC)

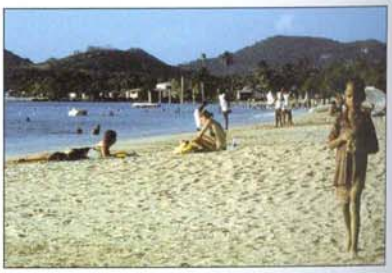
1. A detailed description of EPIC, its background, and its uses.
2. A method for implementing EPIC, especially more details about operationalising the method.
3. Field guidelines for using EPIC, including a description of the advantages and disadvantages, but focused on specific implementation guidance. Particular attention should be given to how social and physical scientists can most productively collaborate around interdisciplinary problems. In this case, the challenge is creating and maintaining sustainable communities on vulnerable islands.
4. A set of operational tools, i.e. a toolkit, to be used for EPIC (e.g. assessment, monitoring, participation, and evaluation techniques).
5. Possibly an operational framework or operational manual for EPIC, but that might not be needed. At this stage, these outcomes appear to be better integrated into the above outcomes.

## Operational issues

1. Resources, particularly time and patience, are needed to implement EPIC. Such resources might be scarce. Prior to a disaster, political will is rare for providing support for events which might never arise. During or after a disaster, other actions are generally considered priorities, particularly with the current response culture which favours direct, external intervention. A possible way to overcome this challenge is to use EPIC as a sustainability and development tool, which further reinforces the essential need to place disaster management in those contexts.

2. EPIC must meld physical and social sciences. Researchers and practitioners in those areas are often reluctant to assist with activities which are not their core focus or interests. Appropriate selection and training of operational field workers could help to overcome such barriers, but the power of mono-disciplinarism should not be underestimated.

3. A challenge exists in developing and maintaining a Deployable EPIC Team (DEPICT) which could properly depict the situation. Members should include people with backgrounds in anthropology, communications, development (e.g. urban or international development), emergency planning, engineering, law, physical science (e.g. geology, hydrology, or meteorology), planning, psychology, social work, and sociology. Properly encompassing all needed fields and maintaining coherent interdisciplinarism might make the team size untenable. Overall, having the relevant outlook and experience along with a willingness to listen, share, and learn is more important than having a specific background or training. A small group of individuals who have split academic or practitioner personalities would be more suitable than a large but diverse team.



Rodney Bay, St. Lucia: Could EPIC reduce vulnerability to both volcanoes/earthquakes and encroaching development/tourism? (© Ilan Kelman 1998)

4. EPIC entails both top-down and bottom-up activities working simultaneously – a difficult reconciliation. From the top-down perspective, strong leadership is needed to guide the process by engaging and connecting with the community, local elites, politicians, and key institutions while fully involving outsiders in the process, rather than through token gestures. Simultaneously, the bottom-up perspective implies that initiatives must emerge from the community to direct the leadership and the EPIC process.

5. Care must be taken to make EPIC a continual exchange rather than specific individuals or sectors dominating the process or unilaterally directing others with the expectation of obedience.

Interviewing (a Chat) on Montserrat: DEPICT members must exchange rather than direct. (© Kat Haynes 2003)

## Case studies

Past island case studies which used the EPIC approach or aspects thereof need to be researched.

Some possibilities for success or part-success stories:

- The 1994 volcanic eruptions around Rabaul, Papua New Guinea.
- The 1991 volcanic eruption of Mount Pinatubo, the Philippines.
- Earthquake preparedness in Japan.
- Shane Cronin's work in Ambae, Vanuatu and Savo, Solomon Islands.
- "Bayanihan: Building Multi-Sectoral Partnerships for Sustainable Disaster Prevention, Mitigation and Preparedness", a project run between 1994 and 2002 by the Corporate Network for Disaster Response in the Philippines.

A contrast would be needed with island examples where significant elements of EPIC were absent producing serious consequences. Some examples:

- The ongoing volcanic activity on Montserrat.
- The ongoing volcanic activity on Réunion.
- The evacuation of British Indian Ocean Territory.
- The evacuation of Guadeloupe in 1976/1977.

Other incidents are more challenging to categorise. For example:

- The 2001 hurricane on Tristan da Cunha.

Some case studies displayed self-help (or self-sustainability) which would be useful to contrast with EPIC:

- Cyclone Zoe (2002) striking the islands of Tikopia and Anuta in the Solomon Islands.
- Hurricanes Michelle (2001) and Lili (2002) hitting Cuba.

Once EPIC has been more comprehensively developed, test cases would be needed because empirical evidence would illustrate the aspects of EPIC to emphasise for ensuring success and sustainability. Sensitivity would be needed in field testing because mistakes could cause severe problems for the community and the outside world. At all stages, the community's needs and long-term sustainability and development processes would need to be factored in to EPIC activities; however, these activities should be part of EPIC's core anyway.

For EPIC field testing, case studies with relatively high vulnerabilities and relatively little prior investigation are:

- Ascension Island.
- Chatham Islands, New Zealand.
- Easter Island.
- Falkland Islands.
- Ulawun Volcano, New Britain, Papua New Guinea.

## Conclusions

The summary of issues to overcome to make EPIC work is:

- Collaboration amongst diverse fields through DEPICT.
- Getting DEPICT to identify community perspectives and to integrate them into the vulnerability reduction strategies.
- Getting the local population to accept outside information alongside their traditional knowledge.
- Evaluating progress and actions while maintaining the positive EPIC results after DEPICT's departure.

Isolation and small size breed vulnerabilities but also provide rewards for those communities. The key challenge is to reap the rewards without letting the vulnerabilities be detrimental. Early intervention and participatory approaches can assist, not only for catastrophe prevention and response, but also for the longer-term development activities necessary for creating and maintaining sustainable communities.