88 Effective Implementation Of Integrated Disaster Risk Management (IDRM): Toward An Implementation Science

BACKGROUND

Integrated disaster risk management (IDRM) is gaining rapid recognition as the technique of choice for action in the disaster prevention field by virtue of its many tried and tested attributes for bringing science, technology, and policy into a powerful confluence. By IDRM, we mean regional, socio-cultural, context-based synergistic risk management or adaptive risk management based on open channel communication and free-flow of information, ideas, and insights. The integration is voluntary as opposed to an authoritarian or dictatorial regimentation of ideas. The essence of this approach is participatory democracy that allows all stakeholders involved in the disaster process full and free access to every phase of decision-making in the formulation and implementation of disaster management techniques and policies. A careful review of facts and data pertaining to disaster management in different parts of the world, however, provides many examples of repeated failures in implementation of the theory and principles embodied in IDRM. This clearly points to the need for significant additional work in disaster management education focusing on effective implementation.

OBJECTIVES

The purpose of this note is to provide a brief overview of some of the issues that we think are central to effective implementation. We tentatively call this focused effort "implementation science". We define the term "implementation science", in this context, as a collective enterprise to develop a systematic body of knowledge (facts, empirical evidence, intuitions, insights, experiences) on the causes and consequences of natural and human disasters, to analyze them systematically, and to successfully implement the resulting strategies in the prevention or mitigation of losses due to disasters. With this in view, we have identified and discussed below some key elements of implementation science in the context of disaster management, both natural and man-made.

ACTIVITIES

We identify five central elements for the successful implementation of integrated disaster risk management "collaborative action"; "process sustainability"; "disseminability"; "vitality", and "viability". By collaborative action, we mean that the proposals for implementation have to be acceptable to the various parties involved through working together Process sustainability refers to dynamic sustainability with the clear potential to allow for continuing improvements in the state of knowledge Disseminability, a term we have coined, refers to the ability to successfully disseminate implementation strategies Vitality refers to a dynamic surge of embedded human energy that can be readily translated into implementation. Viability, another central characteristic, is incorporated in the notion of vitality and makes possible quick and innovative management, as dictated by the changing configuration of events, thereby significantly increasing the effectiveness of implementation.

We briefly discuss here the salient points germane to each of the five elements noted above The essence of collaborative action is to develop a successful strategy to narrow the divide by working together. This will involve a variety of roles such as catalysts, facilitators, mutual acceptance, synergistic interactions, and partnerships and coalitions, among others Process sustainability refers to the modalities of keeping the operation, over time, intact. To achieve this, we need a sound mechanism of operations, maintenance and repair, life cycle assessment and management, affordable technologies, and more. Disseminability requires methods and techniques to spread the success to others This would involve sharing of ideas, knowledge formulation, participatory frameworks, local information sharing and partnerships, cyber communication, etc. Vitality refers to the life-activating and sustaining potential of a positive human force in augmenting implementation The power of positive thinking, faith healing, community-based action, local lore, and oral traditions are all channels through which we can tap into this powerful life force. Viability, as noted above, is the attribute that makes successful

implementation possible. The key factors that add to viability include adaptability, flexibility, nonlinearity, and innovativeness.

FUTURE

We propose an international conference of all those interested in effective implementation of IDRM strategies, in order to help define future directions and also to develop a common communication platform to pursue the mission articulated here.

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89 An Educational Component Of The UNESCO Cross-Cutting Theme Initiative

BACKGROUND

UNESCO's Cross-Cutting Theme (CCT) Initiative: Reduction of Natural Disasters in Asia, Latin America, and the Caribbean is an international, multi-disciplinary project that aims to preserve sustainable development and reduce poverty through the reduction of the impact of natural disasters, and it aims to do so by incorporating risk management as an integral part of public policy as well as city development plans. The pilot project was implemented in close collaboration with local authorities and institutions in Tijuana in Mexico, Antofagasta in Chile, Kathmandu in Nepal, and Dehradun in India

In addition to analyzing and improving development plans in the participant cities to keep the risk associated with fast urban growth under control, the UNESCO CCT Initiative implemented demonstration projects with schools in three of these four cities. Two types of demonstration projects utilizing two different educational tools were implemented. The first utilized the **Riskland** educational board game developed by UNICEF-ISDR and was implemented at the primary school level. The second utilized the **Building for the Big One** curriculum developed by the San Jose Tech Museum of Innovation and was implemented with students at the junior high and high school level.

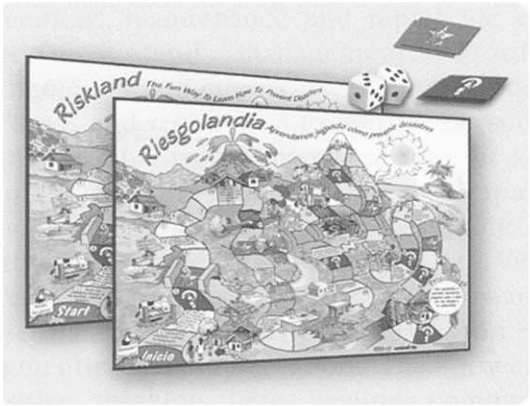
OBJECTIVES

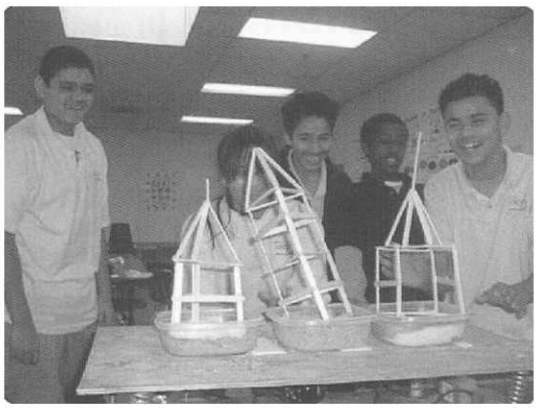
The aim of these demonstration projects was two-fold. In the short-term, the objective was to promote the introduction of risk reduction in the educational system of the participating cities, and, in this way, contribute to the long-term objective of creating of a culture of prevention. Both objectives were set with the necessary consequential goal of ensuring the sustainability of risk reduction programs

ACTIVITIES

Riskland is an educational board game developed by UNICEF-ISDR that was used in The Schools Project to teach elementary school-aged children how to prepare for and react during and after a disaster. The **Building for The Big One** exercise is part of the Design Challenge Curriculum of The San Jose Tech Museum of Innovation and was used to encourage junior high and high school students to build and test model structures in order to learn about the importance of proper construction, the need to consider characteristics of soils being constructed on, and the value of prevention and preparedness in reducing human and material losses caused by earthquakes

The project was carried out with the assistance of the local city representatives and school officials, under the guidance of the project coordinators. Besides working in their own schools, students from each of the participating cities communicated and interacted with each other and students of Downtown College Prep of San Jose, California through an internet discussion group that was created exclusively for the project Through this interaction, students learned not only about the importance of disaster prevention, but also about the culture and way of life of their peers in other cities. Recent earthquakes in California and Iran also motivated discussion and facilitated the understanding of seismic disasters.





ACHIEVEMENTS

In association with the Secretariat of the United Nations International Strategy for Disaster Reduction and the Municipality of Tijuana, B.C., Mexico, UNESCO convened a final symposium to review the results of this initiative in Tijuana, Mexico and San Jose, California on January 19-22, 2004 The purpose of the meeting was to allow city representatives and school children to report on the results of the project and share experiences, and to provide a forum for project participants and the broader international community to draw lessons from the project, generate ideas for potential collaboration opportunities and prepare for a potential longer-term initiative to promote the creation of a culture of prevention.

The Final Symposium event produced specific recommendations on ways to incorporate risk reduction considerations into the city development plans and on necessary actions to establish a culture of prevention and long-term planning, especially in developing countries. Specifically, in order to achieve the vision of a true culture of prevention, the group recommended the implementation of several initiatives in order to build a concept of prevention Their aim would be to do so in a manner such that, in 20 years, tangible results could begin to be seen, and that, in 10 years, the public s mentality will have changed to a reflect a culture of prevention at all levels Specific recommendations included

- Creating programs of public awareness directed at public officials and the general public
- Incorporating themes of prevention as an integral part of the official education curriculum
- Designing formal and informal educational programs to teach the topic of prevention
- Training and teaching the media regarding topics of prevention

FUTURE

- In the project's participating cities, the demonstration projects are being extended to the entire educational system in each city. The goal is to have the disaster mitigation related educational programs as permanent components of the school curricula. International and local support should be given for these efforts to succeed
- The experience of this project should be applied to more cities. In collaboration with the Tech Museum of San Jose, UNESCO, and the ISDR, proposals are already being prepared to apply this methodology in several cities of Asia and Latin America International coordination is required to increase the impact and effectiveness of these efforts.

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