

Post-disaster settlement reconstruction and the regulative mechanism: a comparative inquiry

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Abstract:

The tsunami of Aceh in 2004 creates widespread destruction of settlements and buildings. One of the obvious reasons of the destruction is because regulations and codes were not generally adopted. Improving the application and enforcement of regulations and codes in developing countries are necessary key measures that can improve government action to reduce the impacts of natural disaster. After conducting settlement transformation research in post-tsunami Aceh (Housing and Settlement Research Group 2006), it is necessary to conduct further comparative documentation on natural disaster mitigation based on experience in other countries. The essential comparative documentation including: what types of regulations are successful and should be more widely adopted, and what does not work to prevent extensive destruction caused by natural disaster. Three types of settlement and built environmental regulative mechanism are considered in this paper: regulations for constructing new settlement, buildings and code enforcement; regulations for intervening in/upgrading the existing settlements and buildings; and regulation of the insurance industry. When applied, improved regulative mechanism can substantially reduce the impacts of natural disaster. For the strengthening of existing substandard buildings, some regulations exist and some successful programs of evaluation and strengthening are clearly identifiable. However, lessons from other regulations indicate that legislation is needed to back such programs, and further incentives for action are needed. Several national insurance schemes for natural disaster losses have potential to stimulate mitigation activity. For all of regulative mechanism types, complexities are shown to compromise implementation and enforcement. Ultimately, enforcement by government is only part of the answer. The success of any government action depends equally on the development in society of a 'safety culture' in which citizens both understand the risks they face and are prepared to participate in the management of them.

Keywords: settlement, building, disaster planning, governance, regulation, risk mitigation

Introduction

Badan Koordinasi Nasional Penanganan Bencana recorded 164 disaster were occurring in Indonesia during 2002-2005 (<http://www.bakornasbpb.go.id/new/>). Another disaster data base developed by Asian Disaster Reduction Center (ADRC) in the website <http://www.adrc.or.jp> has recorded 31 natural disaster are taking place in Indonesia since January 2004. The media and databases indicate that the risks from natural disaster are rapidly increasing, not only in Indonesia but also globally. Indonesia's Disaster Management Law was enacted in 26 April 2007. It is registered as State Document 2007 number 66 which consist of 13 chapters and 85 articles.

The literature research has shown that among the richer countries, there has been significant progress in reducing loss of life in earthquakes and modest progress in reducing flood- and storm-related casualties. For the less-developed countries, there has also been progress in lessening the impact of earthquakes, but losses of life from wind and storm have actually increased very much in line with the rise in population levels. Globally, there seems to be no progress at all. WHO notes down, in 2006, more than 160 countries were affected by 354 natural disasters, disrupting the lives of more than 100 million people (<http://www.who.int/hac/en/>). However, wherever in the world one lives, the continuing high level of losses from natural disaster affects us all – either directly as victims or indirectly as contributors to the cost to reinstate what has been lost. And it particularly affects the settlement within which nearly all of this loss is concentrated. Why, when scientific understanding of the causes of these events is increasing rapidly and engineering skill to design against them is so highly developed, do these large death cause continue and the financial losses continue to intensify? And what should nations, cities, employees, families, for example, be doing about it?