

URBAN SCALE VULNERABILITY:
SOME IMPLICATIONS FOR PLANNING

Myer R. Wolfe
Assisted by Susan G. Heikkala

Introduction: The Mandates and Imperatives of Earthquake Hazard
Mitigation

The notion of intervention in the environment to mitigate the consequences of disasters--in the specific instances earthquakes--implies the use of fundamental government powers to manipulate environmental change towards the goal of achieving public safety. The question in a comparative context is what are the mandates and/or imperatives that emerge relating to institutional, political, or even cultural determinants. Secondly, as it is premised on the ability to wield these powers, what is the function of planning in this milieu?

The powers which sovereign bodies can bring to bear on disaster mitigation might be characterized as coercive on the one hand and permissive on the other. Numerous precedents exist for the use of coercive measures, or those leading to regulation by public bodies, to influence environmental change which may be useful in a pre- or post-earthquake situation. Land use regulations, such as zoning and subdivision ordinances, are now extensively utilized. These mechanisms were first employed only as a means of preventing problems arising from the juxtaposition of noxious uses, but later as a means of promoting the development of amenities. As this exemplifies, applications of police powers are dynamic.

In fact, as the understanding of environmental complexity becomes more sophisticated, the network of regulations to deal with it has become correspondingly more detailed. As a case in point, the 1969 Environmental Policy Act of the United States requiring impact statements for federal actions which have a "direct and significant" impact on the environment, is neither regulation per se nor an incentive per se, but an instance of institutionalized evaluation. By examining a proposed action for its impact--including adverse effects, feasible alternatives, long and short term applications--the assessment is relying on a systematic and selective predictive process. The relevance for hazard mitigation is obvious. As Andrews noted, the "process of planning is shot through from start to finish with judgments, intuitive predictions and assumptions about the impacts of alternative actions" [Andrews, 1975]. Coastal management planning which in and of itself is a voluntary national