

SOME ASPECTS OF EARTHQUAKE PREDICTION IN JAPAN

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Introduction

Currently, the major focus of disaster studies in Japan is on examining the social impact of earthquake prediction, as is demonstrated by the fact that the Japanese Diet has recently passed legislation (Large Scale Earthquake Countermeasures Act of 1978) with a view to authorizing arrangements for minimizing earthquake damage. In this respect, the Japanese Meteorological Agency already plans to establish a comprehensive national information network on seismic activity throughout the country for the purpose of producing "earthquake reports" to facilitate the early forecasting of major quakes. The importance of research on the socio-psychological impact of prediction may become even greater in the future. In fact, with the Tokai area in central Japan as the initial target for the country-wide warning network, several research groups have been undertaking surveys on the social impact of earthquake prediction in this area since 1978.

The Large Scale Earthquake Countermeasures Act of 1978 provides that the area in danger of a damaging earthquake shall be identified, and that an emergency plan against conceivable disaster shall be drawn up for this area. Article IX of the Act requires that the Prime Minister shall issue an earthquake warning and shall order preparations against disaster in response to a report by the Director-General of the Meteorological Agency on the danger signal of a major earthquake, thus providing the legal basis for the earthquake warning system.

It is well known that Japan, as compared to other countries, is highly organized and prepared against disaster and has well-prepared advance planning. The presence of counter-disaster plans on various levels in Japan is well established. The research report of the Disaster Research Center of the Ohio State University notes well-organized responses in the emergency period following the Niigata earthquake of 1964 [Dynes, Haas, and Quarantelli, 1964].

This does not, however, mean that the problem has been solved. To my knowledge, seismologists as well as government agencies can not specify accurately the time, place, magnitude and probability of occurrence of an earthquake. In addition, there has been no empirical research on the impact of earthquake prediction. Japan has only recently begun to emphasize the importance of planning based on earthquake prediction, and the Act of 1978 was the first step in this direction.