NOTES ON PROCEDURE FOR CONVEYING EARTHQUAKE FORECASTS WITH SPECIAL REFERENCE TO THE PERU PREDICTION FOR 1980-81

J. L. Roberts
Department of Public Administration
Victoria University of Wellington,
New Zealand

1. INTRODUCTION

This paper deals with certain forecasts made by Dr. B. T. Brady of the U.S. Bureau of Mines and Dr. W. Spence of the U.S. Geological Survey concerning possible events in the subduction zone of the Nazca and Americas plates off the coast of Central Peru. The writer is not a physical scientist and offers no judgement on the validity of the theories developed or observations made by Drs. Brady and Spence. As a student of politics and administration he is concerned only to study the consequences for those public authorities who came to learn of the arguments put forward by the two scientists and from an examination of the response to consider the case for some consistent procedure when scientists who are not resident within a particular country decide that they are in a position to forecast an earthquake at some place in that country within a period sufficiently specified to suggest that some counter-measures should be taken by the community. It is relevant to mention that the author has been actively engaged in the study of political and administrative consequences of earthquake prediction for some ten years. (Cf. Roberts 1973, 1977, 1979, 1979, 1981, 1981.). The author was also present at the audience with the President of Peru when Drs. Brady and Spence officially conveyed their forecast that a series of strong earthquakes would occur near Lima in the second half of 1981. He has had the advantage of several discussions with the American and Peruvian scientists and administrators involved.

2. THE NEED FOR DEFINITIONS

The most cursory acquaintance with earthquake prediction will reveal that there are a number of stages in the process involving an increasing number of actors. The first stage involves the continuing work of the earth science community in gathering information on the phenomena of earthquake causation and frequency. We could call this the hazard evaluation stage. From this data, it is customary to find a response in the technical and politico-administrative community which attempts to assess the exposure of structures and land use to