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AN EXAMINATION OF DECISION MAKING IN ADJUSTMENT TO THE FLOOD
HAZARD WITH PARTICULAR REFERENCE TO THE LOWER MANAWATU REGION.

A THESIS PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS IN GEOGRAPHY AT MASSEY UNIVERSITY.

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ABSTRACT

The relationship between man and his environment is in a constant state of change. The study of this interrelationship has commanded the attention of many disciplines, yet no one discipline can adequately comment on all essential relationships involved. Geography with a traditional interest in the study of man and his environment is ideally suited to a role as a synthesiser of various interdisciplinary findings. This study is concerned with man-environment interactions in the floodplain and in particular with the varying 'levels' of mans adjustment to the flood hazard.

The primary aim of this research was the identification of the inter-relation of various elements in a decision making model for flood hazard adjustment. The study is based on the analysis of adjustment to the flood hazard in the lower Manawatu region, although it is intended that the research findings and methods be of more general applicability for the study of such adjustment decisions.

The data used in the study was obtained from local Catchment Board files and from floodplain occupants. The variation in attitudes towards flooding and flood protection between these two groups is emphasised and the effect of this on floodplain land use with and without flood protection is outlined.

Floodplain protection has a long history in the lower Manawatu region. The range of adjustment decisions, the reasons for these decisions, and aspects of the impact of these decisions are examined within the analytical framework of Kates model of

adjustment to natural hazards. An examination of the environmental processes and the human use processes are undertaken.

In the examination of the human use processes the role of the decision makers hazard perception, search of alternative adjustments, and evaluation of these adjustments are examined. The factors influencing the Catchment Boards hazard perception, adjustment search, and evaluation are discussed within the constraints of legal and financial limits, as well as the predisposition of this organisation towards conventional "engineered solutions" to flood protection. Variations between this body and the resource users, and the impact of this on post scheme land use is discussed.

The evaluative procedure used in this study then is demonstrated in an analysis of protection measures in the lower Manawatu region. The application of the decision making model is demonstrated and its effectiveness evaluated. It is suggested that floodplain protection should be viewed within a wider planning context and floodplain protection can be seen as a case of inappropriate land use unless viable 'economic' protection can be provided. This implies that post locational errors should not be compounded by automatically providing flood protection. The timescale of environmental processes and the sensitivity of the environmental system should be considered, and a system of land use planned to minimise the social costs of use.

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