Weighting the Perceived Importance of Minimising Economic, Social and Environmental/Cultural Risks in Flood Risk Management

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1. Introduction

In 2006, the Office of Public Works (OPW) began the National Catchment-based Flood Risk Assessment and Management (CFRAM) Programme through a series of pilot studies. A Multi-Criteria Analysis (MCA) Framework was developed through the CFRAM pilot studies that integrated a range of objectives related to human health and society, the environment and cultural heritage and the economy into the core process of selecting suitable flood risk management measures for a given area or location, and then for prioritising national investments for different schemes and projects. In support of this MCA framework, UCD, was commissioned to undertake a collaborative study with the OPW to determine global weights that reflect the perceived relative importance of a range of criteria pertaining to the importance of economic, social and environmental / cultural aspects of flood management strategies.

2. National Survey

- Developed by UCD and OPW
- Over 1,000 structured door-to-door interviews with the public.
- Arranged by and undertaken by Behaviour and Attitudes Ltd. (www.banda.ie) on behalf of the OPW.
- Questionnaire included a pairwise comparison of the various flood risk management objectives together with a collection of standard demographic criteria relating to the respondent.

3. Study Objectives

The objective of the study is to:

1. Analyse Questionnaire
2. Multi-criteria Analysis
   - Saaty AHP method
3. Weights Vs Demographic data

Results – Minimising Economic Risk – C1

Results – Minimising Environmental/Cultural Risk – C3

Conclusions

**Economic Risk – C1**
- Higher weight H&B by females than males
- More weight given to H&B by those with history of flooding
- Higher weight given to Agr by under 35s

**Social Risk – C2**
More weight given to HH&L than those with history of flooding.
Higher weight given to community infrastructure by those who have no history of flooding.

**Environmental/Cultural Risk – C3**
- More weight given to WQ by those with history of flooding, social class AB, and over 55s.