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

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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

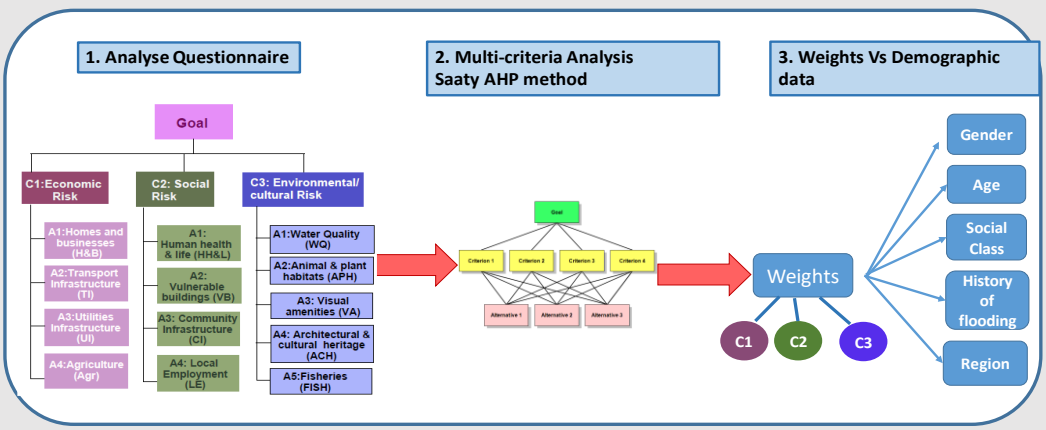
- Developed by UCD and OPW
- Over 1,000 structured door-to-door interviews with the public.
- Arranged by and undertaken by Behaviour and Attitudes Ltd. (www.banda.ie) on behalf of the OPW.
- Questionnaire included a pairwise comparison of the various flood risk management objectives together with a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

3. Study Objectives

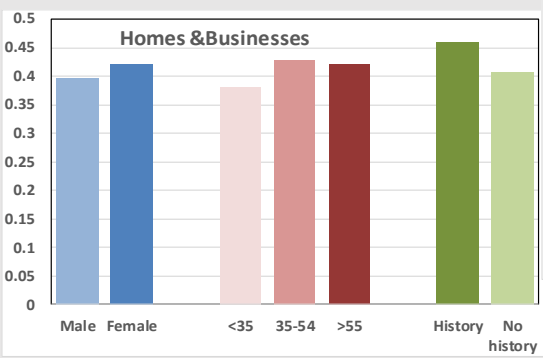
The objective of the study is to:

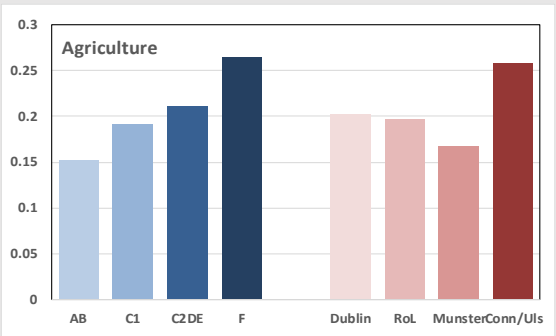
apply a multi-criteria analysis method to determine global weights that reflect the perceived relative importance of the criteria pertaining to the importance of economic, social and environmental / cultural aspects of flood management strategies.

Study the relationship between global weights and demographic characteristics (e.g. gender, age, social class) of the public.

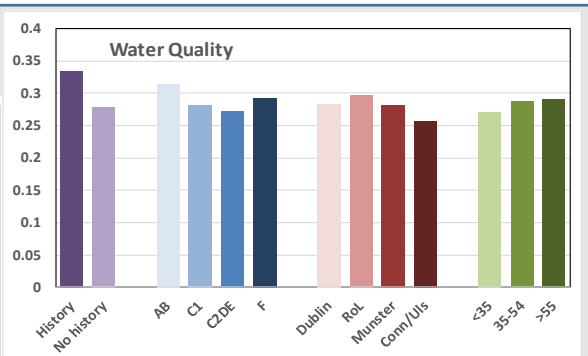


Results – Minimising Economic Risk – C1

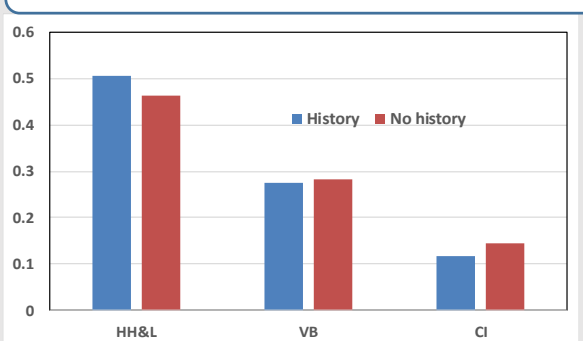




Results – Minimising Environmental/Cultural Risk – C3



Results – Minimising Social Risk – C2



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.