

“The EU Strategy for the Danube Region – with specific emphasis on Land and Water Management and the Environment”

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**CHALLENGES AND OPPORTUNITIES THE
AGRICULTURAL INSURANCE INDUSTRY FACING
WITH IN RELATION TO CLIMATE CHANGE**

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Content

- Background
- Scope
- Methodology
- Outcome
- Conclusion and recommendations



CLIMATE CHANGE

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graph TD; A[CLIMATE CHANGE] --- B[MITIGATION]; A --- C[ADAPTATION]; B --> D[SYNERGY]; C --> D;
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The diagram is a flowchart with a white background and a blue decorative header at the top. The header features a blue gradient with white and green wavy lines. The main content is centered and consists of four text elements: 'CLIMATE CHANGE' at the top, 'MITIGATION' and 'ADAPTATION' in the middle, and 'SYNERGY' at the bottom. A blue horizontal line with a vertical stem connects 'CLIMATE CHANGE' to the two middle terms. Two blue arrows point from 'MITIGATION' and 'ADAPTATION' towards 'SYNERGY'.

MITIGATION

ADAPTATION

SYNERGY

Aim and Objectives

- Aim: to present a possible method to estimate the viability of climate change insurance schemes (agricultural flood insurance market in the UK) – focus is on the demand side
- Objectives:
 1. Estimate the risk levels at different land uses and flood frequencies
 2. Define farmers willingness to pay (WTP) for flood insurance
 3. Describe farmers' attitude related to floods and their risk tolerance

Methodology - overview

Objectives/research questions	Type of data required	Source of data	Methods of data collection
Types of costs associated with floods	Quantitative	Secondary sources: 1. Questionnaire about the summer 2007 floods (Morris and Posthumus, 2008) 2. Farm Management Pocketbook (Nix, 2008)	
Insurance practices elsewhere	Quantitative and Qualitative	Secondary sources: Literature review	
Description of farmers' risk attitude	Qualitative and quantitative	Primary sources: Farmers Secondary sources: Literature review	survey
Demand for agricultural (flood) insurances and its changes predicted in the future	Quantitative and Qualitative	Primary sources: 1. Farmers	survey

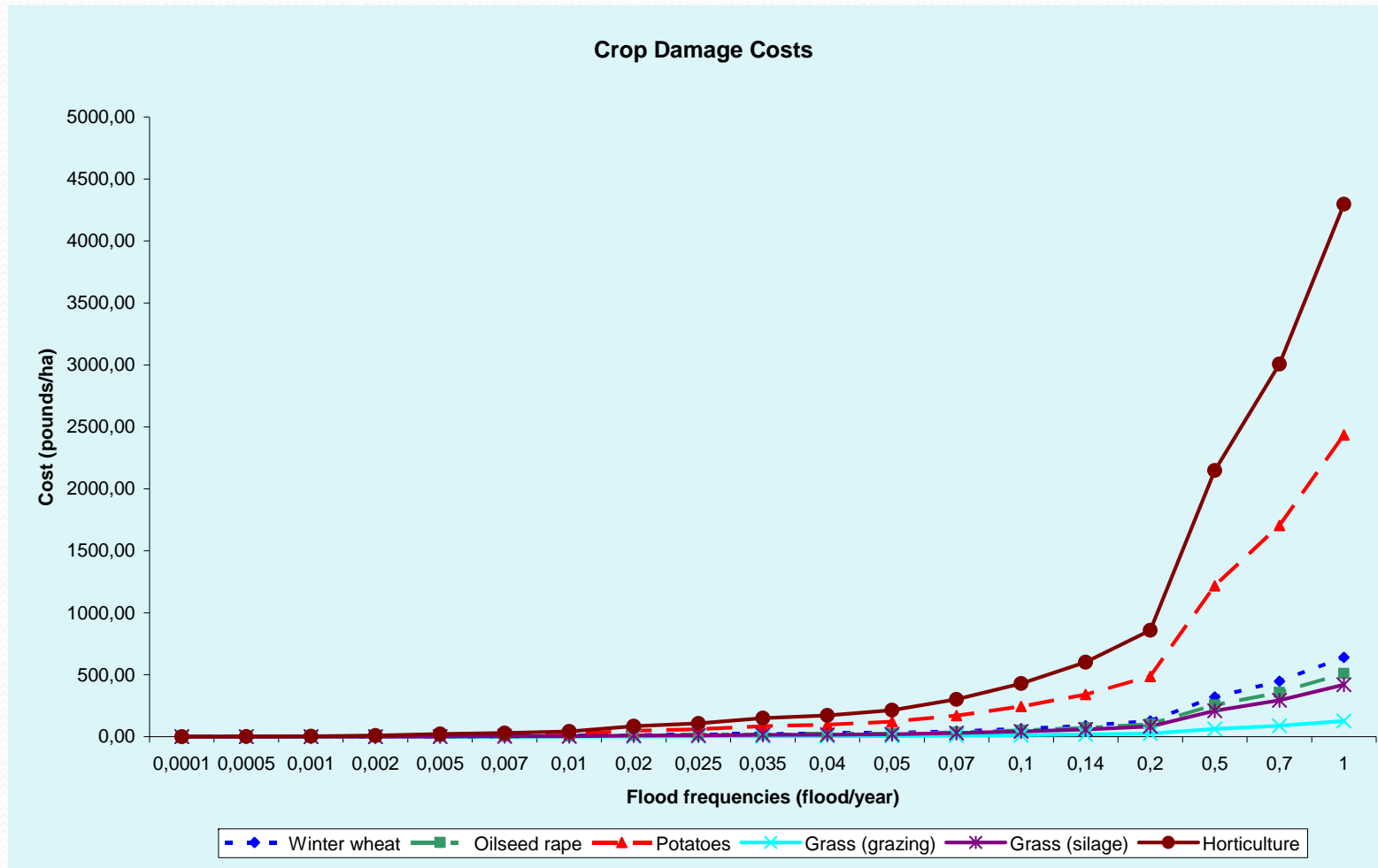
Methodology II.

Survey

1. General questions on farm management
2. Experiences about floods
3. Willingness to pay (contingent valuation – hypothetical market)

Results I.

Estimation of flood damage costs



implications

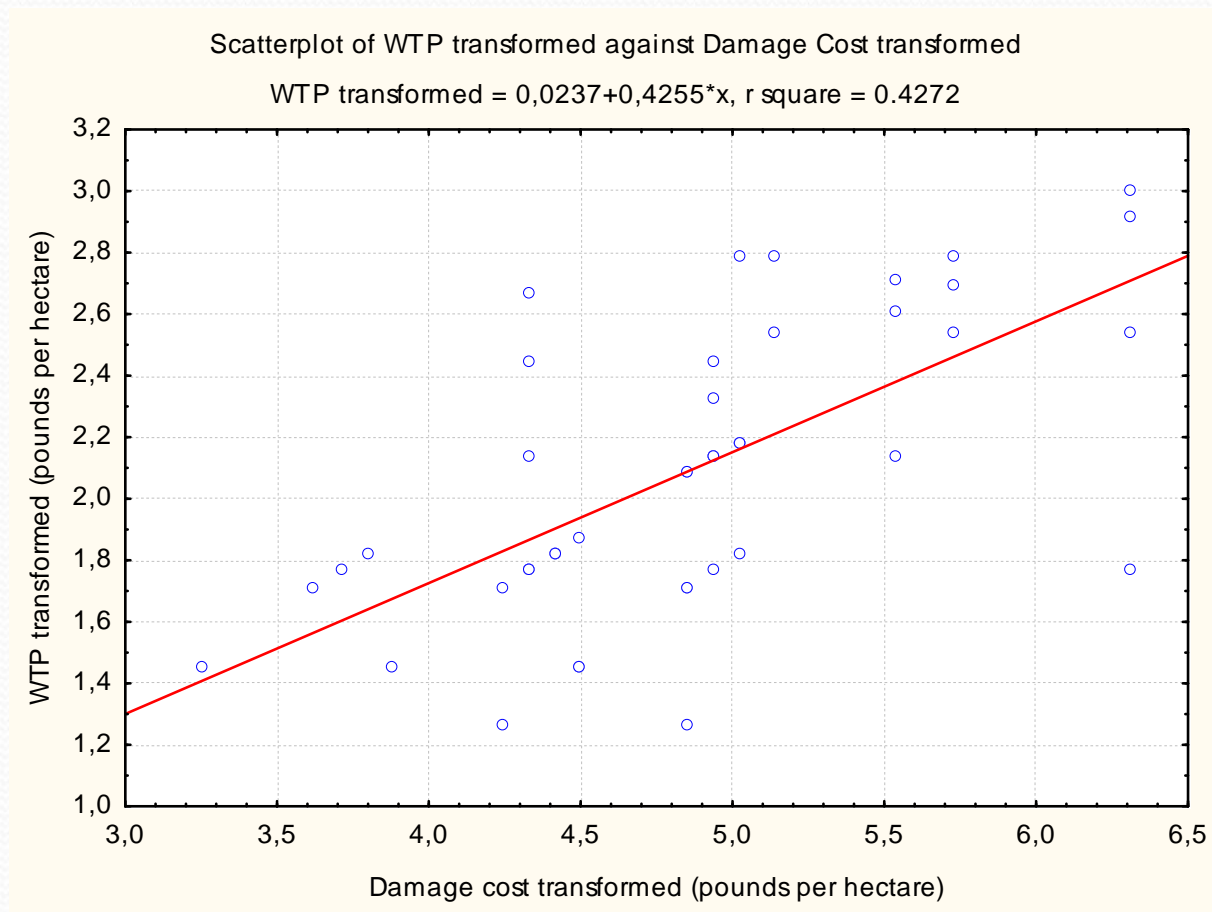
Results II.

Relationships between flood frequencies and land uses, and farmers' risk tolerance

- Converese relationship between crop values and flood frequencies (60% of grassland was flooded more than once per year)
- Farmers are taking actions to reduce their risk exposure
- Significant differences between summer and winter risk tolerance(1:1,8; 1:3)

Results III.

Estimation of farmers' WTP for insurance



Results III.

Estimation of farmers' WTP for insurance

- Statistically significant positive association between the variables (damage costs predicted and WTP)
- Risk averse attitude
- Low demand
 - Reasons:
 - Good farm management practices (lower risk)
 - Current flood frequencies < Tolerated flood frequencies

Conclusions and Recommendations

- Although weather-related risks might be increasing, the role of insurance is still not clear:
 - Low interest (risk level tolerated, other opportunities, low income)
- Damages cannot be managed on farm level:
 - EU: Health Check of the CAP
 - Governments:
 - Support
 - Sustainable risk management (cost-benefit analysis)
- Implications at the **Danube region**

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THANK YOU FOR YOUR
ATTENTION!

