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Distributional consequences of coastal risk management policies under sea-level risk: a survey of OECD country approaches

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### **Context: Why focus on coastal adaptation?**

Sea level rise will bring more frequent and severe flooding to coastal areas



**Hypothesis**: Current institutional arrangements are not well equipped to deal with rising coastal risks – with distributional consequences



#### **Research overview**

Research questions		Method
Understanding the problem:	<ul> <li>What is the extent of the problem?</li> </ul>	Modelling
	<ul> <li>Why risks not internalized into decisions?</li> </ul>	Literature review
Current approaches:	<ul> <li>What policy tools are OECD countries using to reduce coastal risks?</li> </ul>	Scan of adaptation plans & other grey literature
What works:	<ul> <li>What aspects of the national context support, or hinder, adaptation at the local level?</li> </ul>	Case studies (NZ, Canada, U.K., Germany)
	<ul> <li>What are the elements of an effective response?</li> </ul>	Case studies, expert interviews



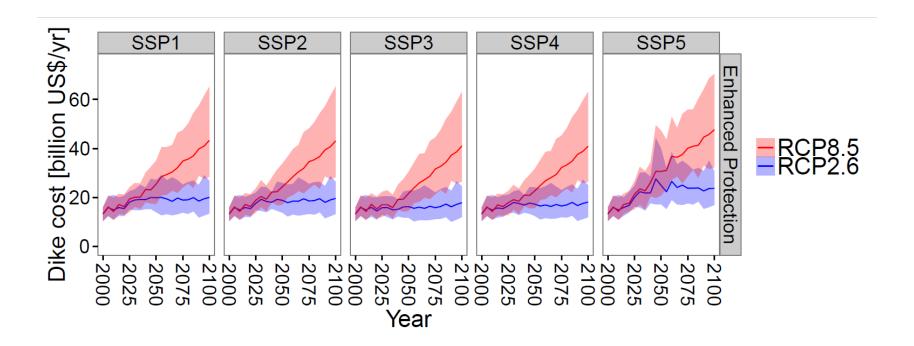
### The economic costs of sea-level rise (1)





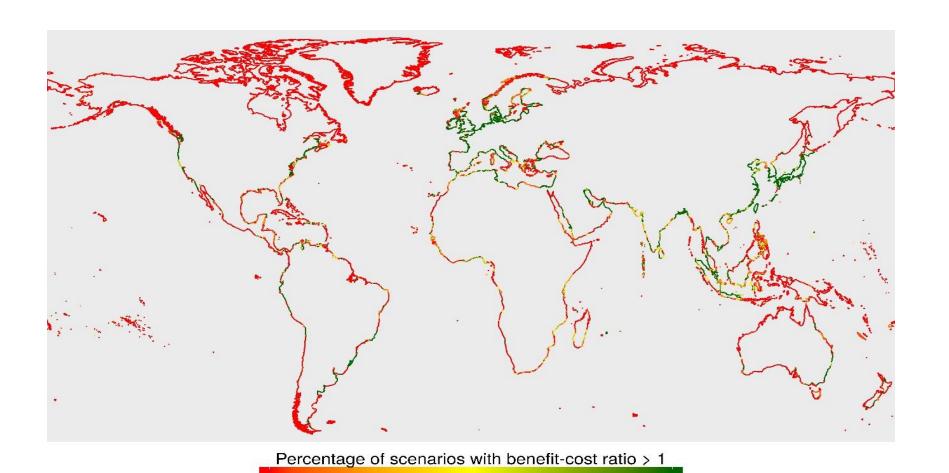
### The economic costs of sea-level rise (2)

 Investment needs are substantial: up to 70 billion USD by 2100





## Robust adaptation to 21st century sea-level rise





# **Evidence of a problem**





### **Understanding the problem**

- Individuals/ property owners
- Developers
- Local governments
- National governments

Gaps in risk awareness

Misaligned incentives for risk reduction

Political economy obstacles



## The role of national governments



# Information provision



Regulatory/ economic instruments



Dedicated national funding



#### NUMBER OF OECD COUNTRIES



25

Information provision



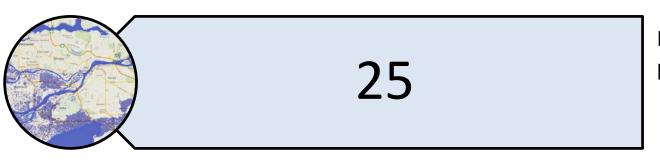
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Regulatory/ economic instruments



Dedicated national funding





Information provision





Regulatory/ economic instruments





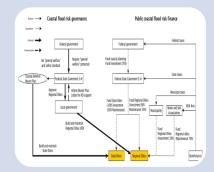
Dedicated national funding



#### Implementation at the local level







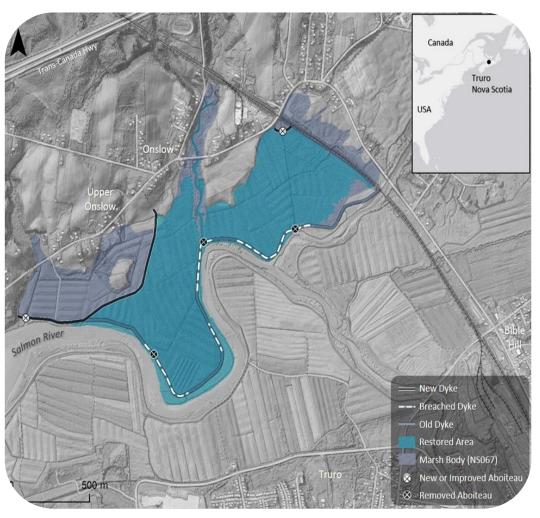


North Norfolk, United Kingdom

Truro, Canada Schleswig-Holstein, Germany Hawkes Bay, New Zealand



### Truro illustrates common challenges



#### Information and engagement

 Citizen preferences for government intervention with hard options to maintain the status quo

#### Alignment

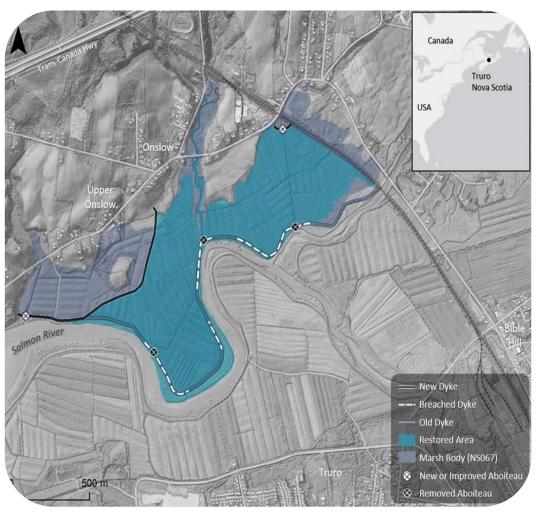
 Responsibilities spread across different ministries and levels of government

#### **Funding**

Unavailable or unclear sources



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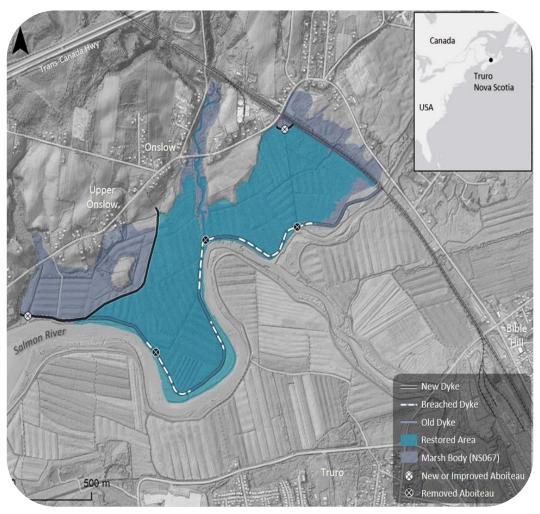
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## Truro illustrates common challenges



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## **Key takeaways for national governments**

- Impacts will get worse political and economic challenges expected to intensify
- Incentives set by national government can constrain local action
- Current focus on information, but there is a need to establish frameworks and set clear expectations



Thank you!

