



# Flood protection around the North Sea

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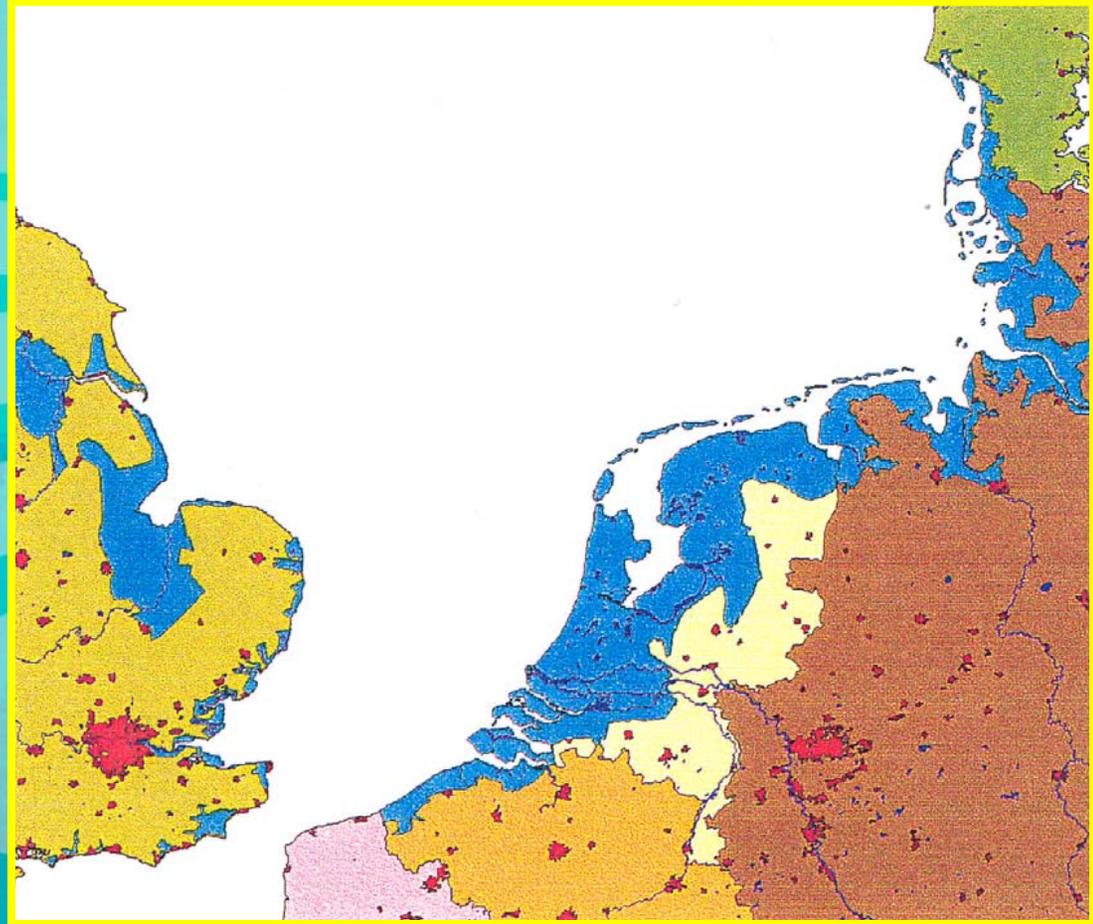
# Introduction

## Different situations:

- Flooding vulnerability

## But also

- Socio-economic conditions
- History
- Legislative traditions
- Politics



# Flooding vulnerability

Country	Flood prone area [km <sup>2</sup> ; %]	Capital at risk [billion €]
England&Wales	2,200 (5%)	250
Denmark	<1%	No data
Belgium	3%	No data
Germany <sup>1)</sup>	11,000 (18%)	No data
Netherlands	25,000 (70%)	2,000

1) Niedersachsen, Bremen, Hamburg, Schleswig-Holstein

# Decision criteria and safety standards

Country	Criteria	Standards
England&Wales	Cost-benefit ratio	Indicative
Denmark	Population at risk	1/50-1/1,000
Belgium	None	1/1,000
Germany	None	<1/100
Netherlands	Legal obligation	1/2,000-1/10,000

# Organization and legislation

Country	Organization	Legislation
England&Wales	Mixed	Permissive
Denmark	Centralised	Permissive
Belgium	Centralised <sup>1)</sup>	Permissive
Germany	Centralised <sup>1)</sup>	Permissive
Netherlands	Mixed	Prescriptive

1) At the level of the states

# Organization and legislation

## Permissive legislation:

- is a disadvantage if flood protection is in competition with other expenditure needs
- is an advantage as flood protection decision can be made on economic benefits

## Prescriptive legislation in the Netherlands:

- set clear and uniform goals for waterboards and Rijkswaterstaat
- reflects the feeling of 'never again'

# Differences in engineering too

