

Provincial policy for floodsafety in spatial planning in unembanked areas

Deltas in times of climate change 30 september 2010
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Flood safety in special planning in unembanked areas

Contents:

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Flood safety in spatial planning in unembanked areas

Context and causes

- General need for further spatial development
 - No current standards for flood risks in unembanked area's.
 - Climate change will increase current risks
 - Federal government: "inhabitants and companies at own risk"
- > Province: leading role in policy development (in cooperation with municipalities and water boards)

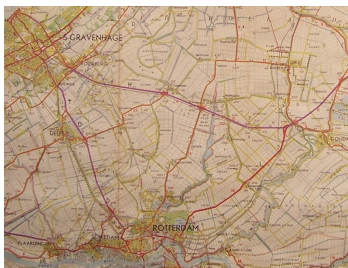
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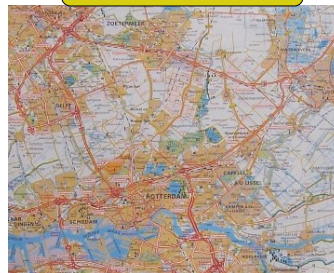
Why building in unembanked area's?

Rotterdam in 1948 and 2008

1948



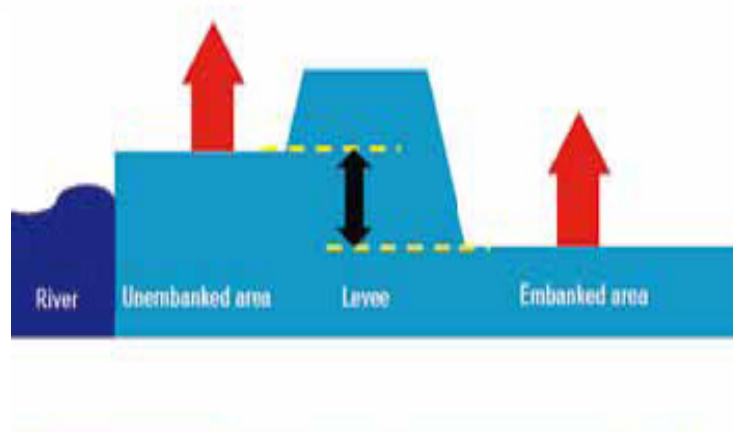
2008



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Unembanked area's



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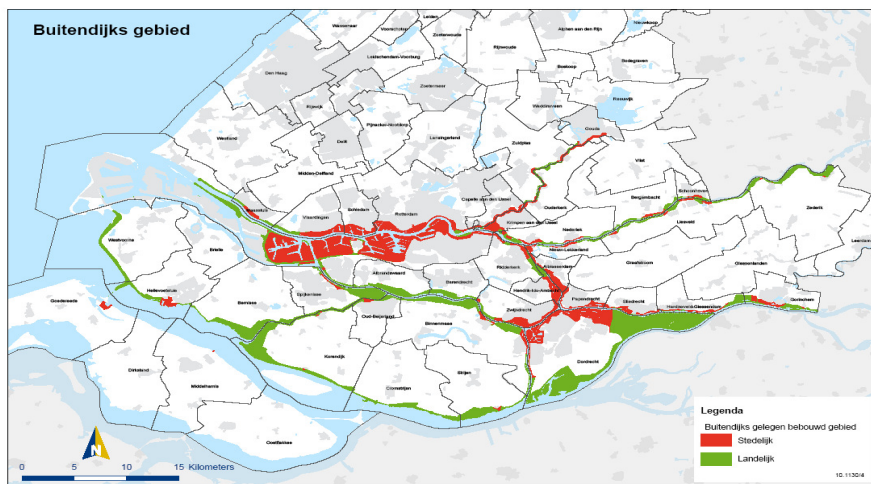
Policy characteristics

- Application: vulnerable functions which are newly developed e.g. hospitals, child care centers, houses, home for the elderly
- Decision framework takes a central place in provincial policy
- Flood risk impact is calculated on:
 - Casualties
 - Social disruption

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Urban and rural unembanked area's

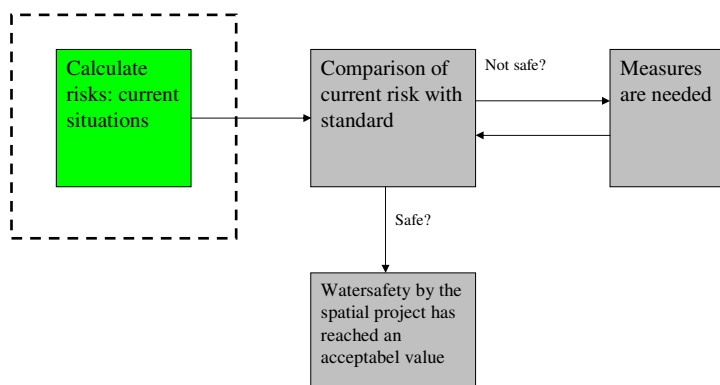


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Decision framework

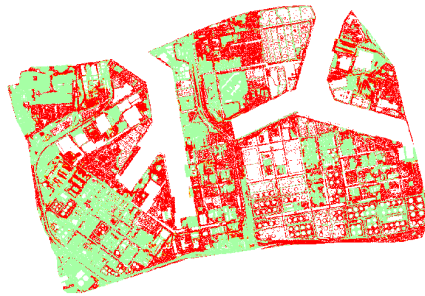


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Example of results decision framework



Situation 2100

Green risk < $1 \cdot 10^{-6}$ casualties in a year

Red risk > $1 \cdot 10^{-6}$ casualties in a year

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Current phase of project

- Decision framework has been tested in pilots
- Decision framework have to improve by the results of the pilots and a second opinion from Deltares:
 - Improvements in calculating casualties
 - Improvements in calculating social disruption

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Further implementation

- Municipalities have to use the decision framework
- The provincial policy is integrated in the provincial spatial plan
- Provincial control on use of the decision framework
- The coming years no provincial obligation on taken measures, consideration still being made by municipalities

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General innovations in decision framework

- Based on risk assessment
- Based on multilevel safety
- Effects of any measures can be calculated

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Innovations social disruption

- Social disruption is translated in a quantitative decision framework at first
- Disruption is a result of:
 - Change on flooding
 - Amount of people affected
 - The amount of time a function is disrupted
- Historical facts were used to support the chosen standard
- An attempt is being made to define a critical factor for disruption of functions (disruption of houses is more critical than disruption of a school)

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Dealing with uncertainties and climate change

- Climate-factor is introduced in the decision framework
- This means spatial planning will be tested on future (2050 or 2100) waterlevels.
- Climatescenario (optimistic? pessimistic?) will be chosen
- Measures deltaprogram in 2014 (open or closed system) gives more certainty in possible waterlevels.
- Then more experience is made by using the decision framework and uncertainties can be reduced.