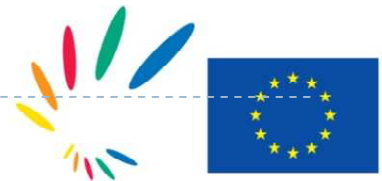




Financing and legal framework in The Netherlands

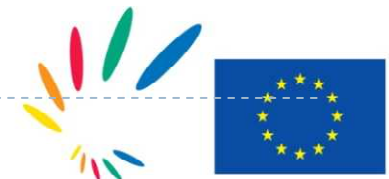
Tallinn seminar November 2011





1. What national legislation is there on risk mitigation?

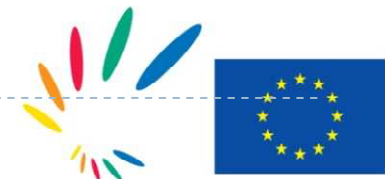
- Safety Regions Act
- Environmental Management Act:
 - External Safety Decree
 - Hazards of Major Accidents Decree of 1999
- Spatial Planning Act
- Building and Construction Act (+ regulation)
- Nuclear Energy Act
- Water Act





2. Which public institutions have what responsibilities and what mandates? (in mitigation)

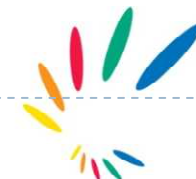
Public institution	Responsibilities/mandates
State	<ul style="list-style-type: none">▪ National structure vision▪ National spatial plan▪ Making legislation on safety and health▪ Responsible for water safety coast and more important waterways▪ Responsible for different kinds of transport safety▪ Permits for establishing nuclear activities▪ Enforcement
Province	<ul style="list-style-type: none">▪ Provincial structure vision▪ Provincial spatial plan▪ Water safety▪ Environmental permits and enforcement <i>b.e. giving permits for establishing post-Seveso industries</i>
Municipality	<ul style="list-style-type: none">▪ Municipal structure vision▪ Municipal spatial plan▪ Environmental permits and enforcement <i>b.e. giving permits for establishing post-Seveso industries</i>
Waterboard	<ul style="list-style-type: none">▪ Responsible for water safety and water quantity





2. Which public institutions have what responsibilities and what mandates? (in mitigation)

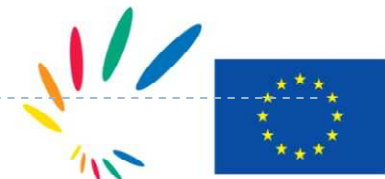
Public institution	Responsibilities/mandates
Safety Region	<ul style="list-style-type: none">▪ Risk assessment▪ Advice on external safety▪ Advice on all hazard mitigation▪ Enforcement
Environmental Protection Agency ZHZ	<ul style="list-style-type: none">▪ Handles request for (environmental) permits, surveys abidance of the permit and laws, and has the power to enforce abidance.▪ In near future: also Building & Construction safety
District Attorney and Police	<ul style="list-style-type: none">▪ Law enforcement





3. What are the legal responsibilities of private companies and civil society?

Private entity	Responsibilities
Industries/transport hazmat	Risk assessment Prevention policy (technical)
Tennet, energy network	Management of a safe energy network
Drinking water companies	Management of a safe water facilities
Project developers	Compliance to regulation on spatial planning building and construction

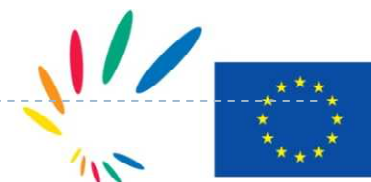




4/5. Different budgets related to mitigation and their estimated amount

Water safety

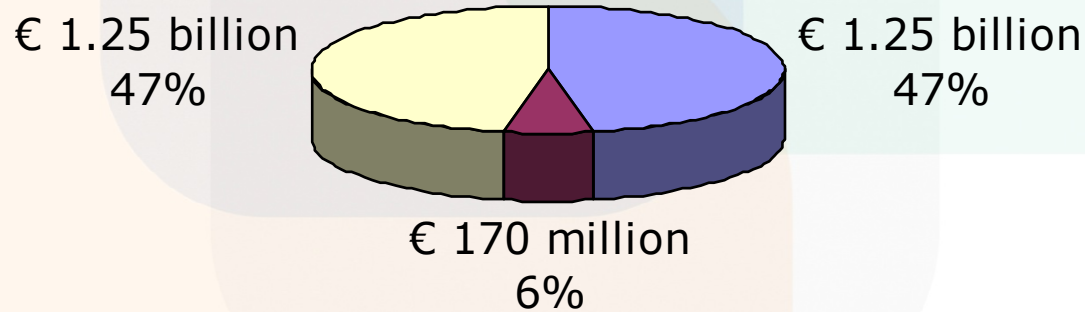
Budget	Risk	Amount
State, ministry of Infrastructure	Water safety	1.25 billion
Waterboards	Water safety	1.25 billion
Provinces	Water safety	170 million
Municipalities	Water safety / Sewage	1.3 billion



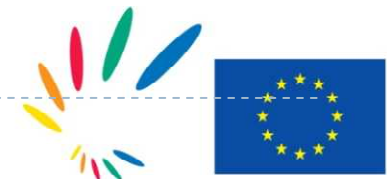


Expenditure in 2010 for flood protection and water management

- rijk
- provincie
- waterschap



2010 expenditure by municipalities for sewage: 1.3 billion





4/5. Different budgets related to mitigation and their estimated amount

National example:
Ministry of Infrastructure and Environment

Safety budgets 2012	Risk	Amount
Water safety	Flooding	1.25 billion
Traffic safety	Traffic safety	26 million
External safety	Hazmat	31 million

Budgets with indirect relation to safety	Related risk	Amount
Spatial development	All hazard	300 million
Development of infrastructure	Transport safety*	2.5 billion
<i>Long term</i> reservations for maintenance of infrastructure	Transport safety*	24 billion

▶ 8 * Potentially also for flood safety: evacuation routes

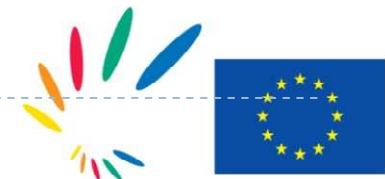




4/5. Different mitigation budgets and their estimated amount

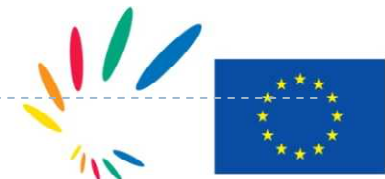
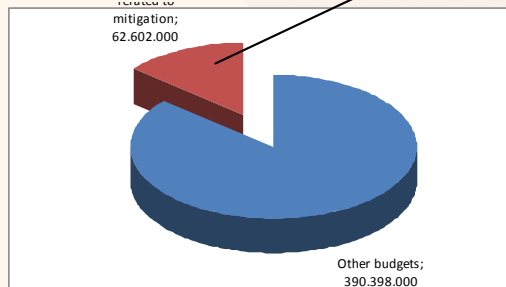
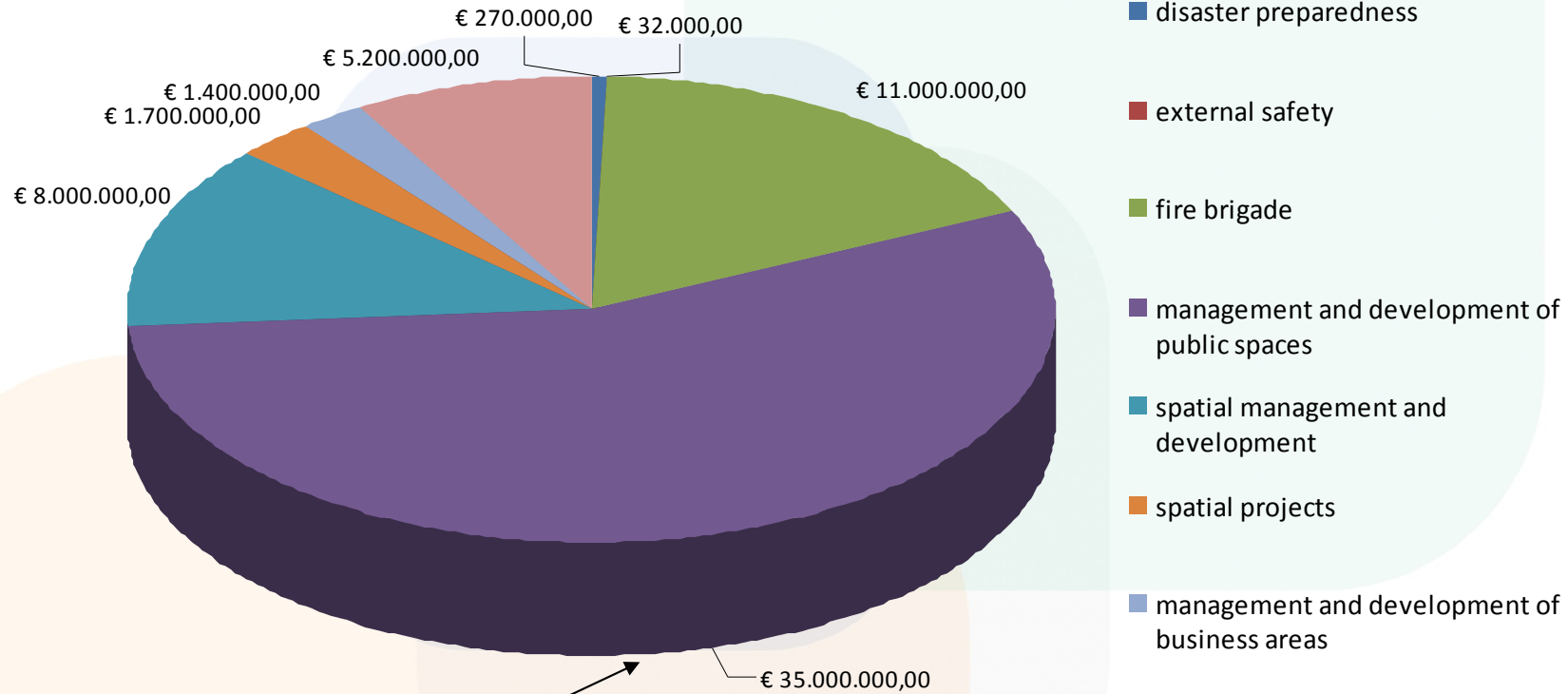
Specific for South-Holland South

Budget	Risk	Amount
Safety Region ZHZ	All hazard	1 mln
Province ZH	Industrial risks and transport (ext. safety)	9 mln
Environmental Protection Agency ZHZ	Industrial risks and transport fires	20 mln
Municipalities	All risk	<i>See example Dordrecht</i>





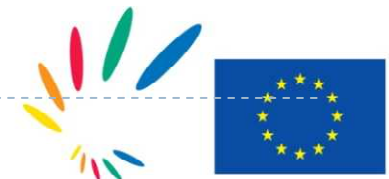
Budgets for safety and spatial planning activities Dordrecht





6. Who decides on these budgets?

- Municipalities: municipal council
- Provinces: provincial council
- National government: parliament
- Safety Region: board (Mayors)





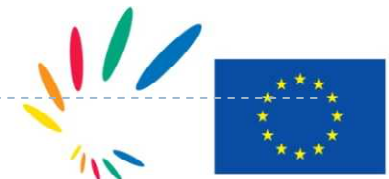
7/8.

Best practice on finding financing from other institutions (including public private partnership)

MAR 

MARE project:

- Partners: city of Dordrecht, Water board, Safety Region, Ministry of Infrastructure and Environment
- Objective: climate proofing the Wielwijk district
- Approach: restructuring of a housing area to mitigate flooding risks, using spatial development budgets
- Example: rain water management





Climate proof Wielwijk

Focus on impact of heavy rain on the sewage system

Don't wait till measures cannot be postponed anymore, but consider measures in case of spatial restructuring



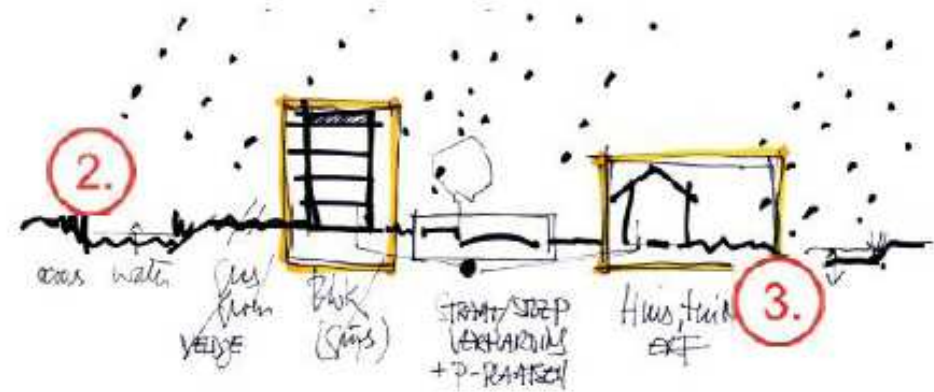
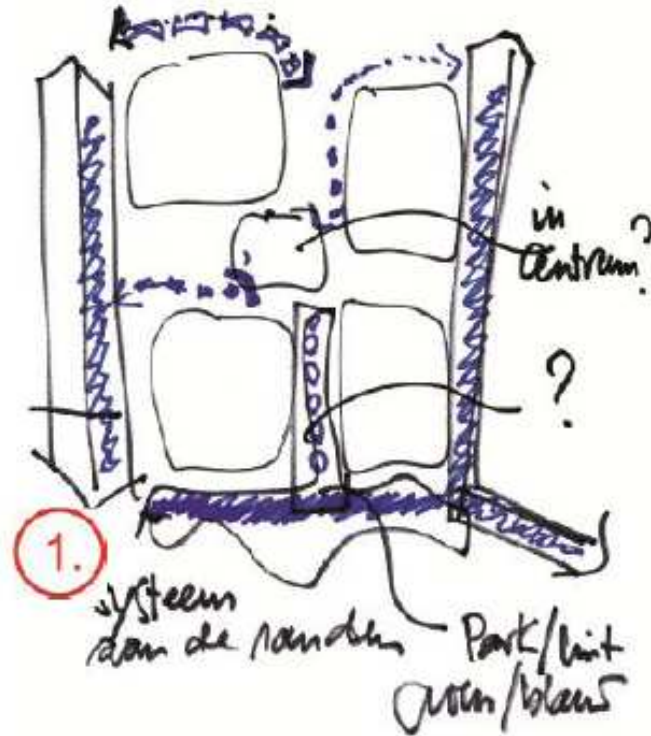


Outcome of preliminary research

- Extreme weather likely to increase due to climate change. For The Netherlands especially heavy rains will occur more often.
- Underground sewage system in 'Wielwijk' in bad condition, in need of replacement.
- Separation of rain drainage from the sewage system could prevent future overflows due to heavy rains.
- Waterstorage and drainage measures above ground could also make the district more appealing



Drainage measures taken into account in spatial restructuring plan



1. District
2. Public space
3. Buildings and private ground



Rain drainage on private property instead of public sewage system

Situatie nu:
Aansluiting op riool



Los knippen van riool



Situatie straks:
Water op eigen perceel oplossen



opvangtank aan app. gebouwen



opslagzakken



combinatie veranda en regenton



water veranda

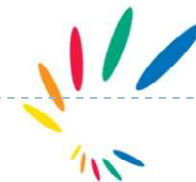


mooie tonnen





Natural water filtering buffer to keep open waters clean from polluted rain





New open water in the district

Exces rain storage

Beautification

Recreation

Result:

- **Heavy rain proof**
- **Increased value**
- **Mitigation without extra costs**

Een nieuwe waterlaag voor Wielwijk

