



How cities adapt through use of green infrastructure

Dr. Bregje K. van Wesenbeeck

Bregje.vanWesenbeeck@deltares.nl

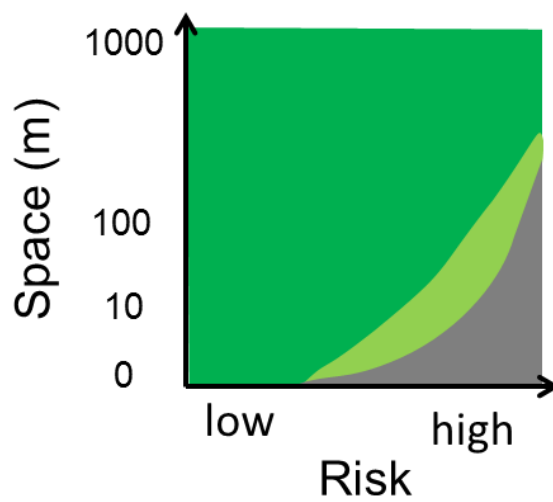
Is there a place for GI in the city-scape?



Can we achieve sufficient safety with GI?

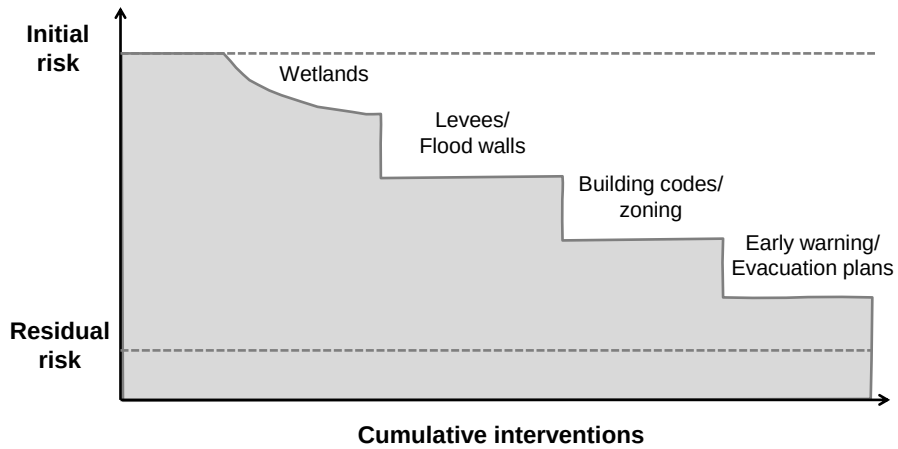
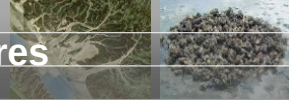


What, when and where?



Van Wesenbeeck et al. In prep

Cascade of risk reduction measures



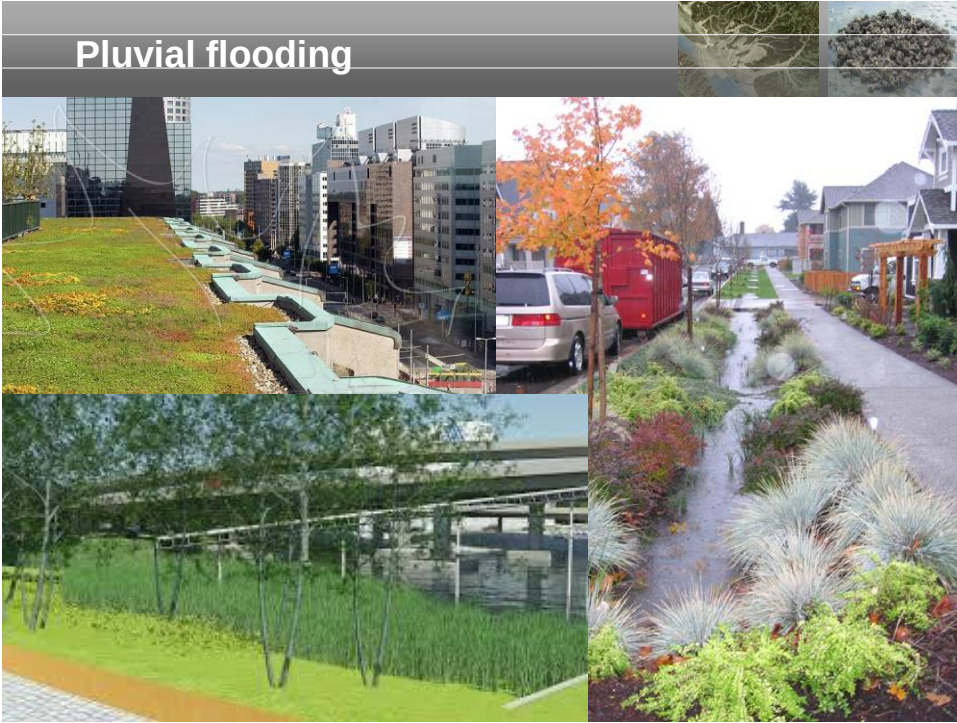
Spalding et al. 2014

Deltares

Pluvial flooding



Pluvial flooding



Pluvial flooding



Fluvial flooding



Fluvial flooding



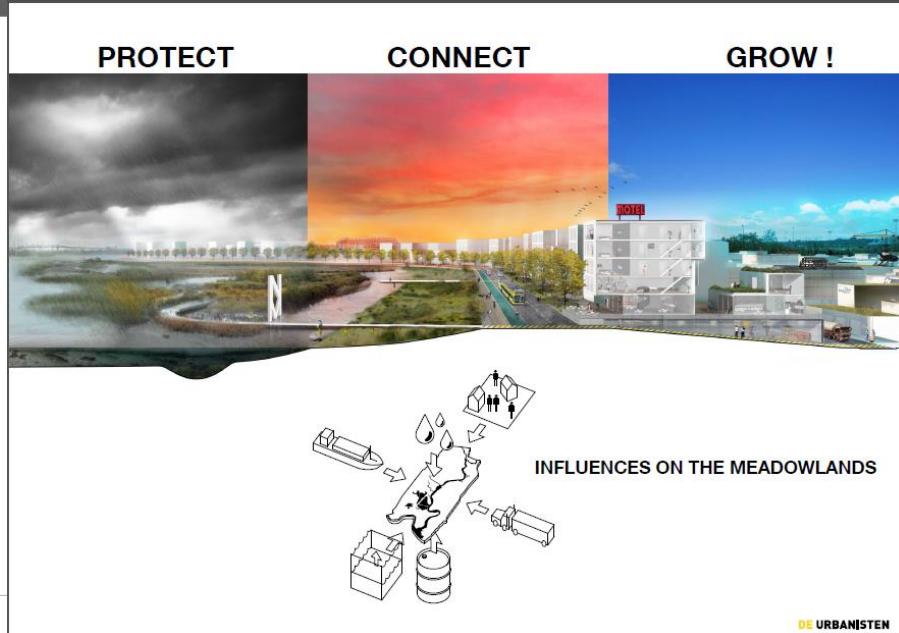
Coastal flooding



Coastal flooding



Coastal flooding



Blue green dream

Adaptive Solutions The Blue Green Dream project BlueGreenDream viewer

v-web001.deltares.nl/bgd/bgd/site/index.php/map/show

Blue Green Dream

Setup **Measures**

Flat area on low ground

Soil type

- ☒ Sand
- ☐ Peat
- ☐ Clay
- ☐ Bed rock

Existing type of space

- ☐ Red space (buildings)
- ☒ Grey space (paved surfaces)
- ☐ Green space - private
- ☒ Green space - no recreational use
- ☒ Green space - recreational use and urban farming
- ☐ Grey/green space - sports/playground
- ☐ Blue space (water)

Surface characteristics

- ☒ Roofs less than 35 deg
- ☐ Flat roofs
- ☐ No flat roof(s) and/or roofs with slope less than 35 deg present?

How much subsurface depth without constraints is present on landscape?

- ☒ less than 0,5m
- ☐ 0,5-1m
- ☐ 1m-1,5m
- ☐ more than 1,5m

Required system capacities: Threshold capacity (prevention) and Coping capacity (coping)

- ☐ Heat stress prevention
- ☐ Heat stress coping

Contribution

Climate

- Storage capacity: 0 m³
- Heat reduction: 0 °C
- Peak flow reduction: 0
- Drought reduction: 0

Water quality

Bio Diversity

Health

Economy

Active measures

<http://v-web001.deltares.nl/bgd/bgd/site/index.php/map/show>

Google

EN 17:01 24 Sep 14