

'Climate resilient Cities: Best Management Practices and Innovations'

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Introduction:

Tauw
 UDeift
 Adaptation

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Now: Accept & Adapt (mitigation for long term)

Challenges urban climate (change) and BMPs

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Content

1. Introduction
2. Climate adaptation strategy
 - BMPs
 - LT-effectiveness after design
3. Tools (dissemination)
4. Take home messages
 - More info
 - Working together?

Analysis
 Analysis
 Action

(Dutch) Challenges urban climate

Challenges urban climate (change) The Netherlands

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Climate adaptation 2.0, Manila

Waiting involved eg ecosystem under adverse condition

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Future? New cities

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Challenges in urban climate change

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Effect on cities...

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Smart cities: we need a multifunctional strategy

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Some examples

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>1001 BMPs

Books ... for international knowledge exchange?

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Urban Climate

- Flooding
- Heatstress
- Drought
- Language (cost)
- Subsidence
- Pollution
- Waterquality
- (m)obility
- Opinion (social media)
- ... etc

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Multi-layer-models Groningen

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Books ... for international knowledge exchange?

What Is It?

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International knowledge exchange tools (trauma): experience: interactive, VR (augmented) reality, serious gaming, ...

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Floodmodel Amsterdam

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Example: Amsterdam

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National climate adaptation strategy

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National climate adaptation strategy

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Using social media for calibration of models

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The need for INXCES

Innovations for extreme Climate Events

INXCES partners:
 Technical University of Civil Engineering of Bucharest (UTCBS-COM)
 The Norwegian University of Science and Technology (NTNU)
 The Norwegian University of Science and Technology (NTNU)
 The Geological Survey of Norway (NGU)

Relevant workpackages:
 Technological innovations and tools
 Dissemination and Outreach

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Case studies INXCES climate specific challenges

Bergen, Norway
Groningen, The Netherlands

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INXCES Network & Dissemination

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Green: eg Parcs (Mark Denis Ong)

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Also 'small green' International example: Flooding?

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Climate city approach Multifunctional and space for water

- Buildings
 - Roofs
 - Green buildings
- Squares
 - Open areas
 - Playgrounds
- Roads
 - Road surface
 - Road storage
 - Near roads
- Green
 - parcs
 - Little green islands

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Buildings

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Budget: Quick wins

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Results of workshops

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(water) squares

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Roads

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Europe example Copenhagen

ClimateAdapt in Copenhagen July 2011

The economy of adopting

- Green buildings
- Green roofs
- Green walls
- Green facades
- Green courtyards
- Green balconies
- Green terraces
- Green parking
- Green courtyards
- Green balconies
- Green terraces
- Green parking

Reality check

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Place? Climate city approach Multifunctional and space for water

- Mapping flooding/hotspots
- Buildings
 - Roofs
 - Green buildings
- Squares
 - Open areas
 - Playgrounds
- Roads
 - Road surface
 - Road storage
 - Near roads
- Green
 - parcs
 - Little green

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Copenhagen

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Copenhagen

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>1001 SUDS

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Nice pictures...But (how) do they work??

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From Copenhagen to Malmö (Sweden) 16 min

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Ekostaden Augustenborg

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Factor time

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Do SuDS work? Factor Time

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National climate adaptation strategy

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National climate adaptation strategy

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Extreme climate events: factor drought

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Monitoring methods: Infiltrometer

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Method: provided tool for knowledge exchange on suDs: www.climatecan.nl

Learning by doing
Keep it simple

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Project example Bergen (Norway)

Description
Description
Project location
Project description
Project photos
Project videos
Project documents
Project links

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www.climatecan.nl in Holland

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Help your climate adaptation measures in 1 day

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www.climatecan.nl, can you infiltrate in Holland (Manila)?

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Target group: educational SuDS

• (Young) professionals... YOU

More than 90% of the target group has 10 years or less of experience with an important target group: young professionals

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high quality photos and videos, docs, links, ...

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Upload from desk: docs, links, pictures & movies

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Learning from SuDS: Full scale testing

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Learning from SuDS: Full scale testing

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Innovative SuDS & EU projects

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Top views on climatecan (info BMPs)

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Top views on climatecan (info BMPs)

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National climate adaptation strategy

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Vintage SuDS: social media

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Vintage SuDS

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International knowledge exchange tools (stream): experience: interactive, V-A (augmented) reality, serious gaming, ...

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Vintage SuDS

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Innovative SuDS & EU projects

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Cityscan:

the City Climate Scan methodology: to measure, map, scan and assess different parameters that provide insight into the vulnerability of urban areas and neighborhoods.

For the Rotterdam City Climate Scan (September 2017), the following challenges were selected: risk of flooding, heat stress, water quality (micro-pollutants and plastic waste) and air quality.

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Video impression

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Airquality

Method Results

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heatstress

Method Results

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www.climatecafe.nl

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Upcomming Events national

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Floodmodels: infiltration capacity

Method Results

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Waterquality

Method Results

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Northern Netherlands climate adaptation

<https://climate.nl/activiteit/nederland/nl/en/projects>

Groningen innovations (small scale) and international knowledge sharing

Circulair, simple

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Map BMPs

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www.Climatecafe.nl Network, raising awareness, capacity building, ...

Upcomming Events international

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International triple helix Cityscan:

Join us...

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Its a start.....Challenges in urban climate change

Help out with your knowledge

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Messages to take home

- Think positive
- We share challenges lets share solutions
- Climate adaptive strategy: A+3
- Cost effective multifunctional long term urban planning
 - Use guidelines and lessons learnt for SuDS (wastes, pp, squares, etc)
- Use international knowledge exchange tools
- Join. More info?

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THANK YOU...

see more?
www.climatecafe.nl
twitter.com/Climate_Scan
www.climatecafe.nl
www.GCA.org

ANY QUESTIONS?

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Thank you

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