

## Water quality: international knowledge exchange Philippines and The Netherlands

**Butuanon River Scan 2018, Philippines**

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### Introduction:

**Climate resilient Cities in Holland**  
talent.move the world.

### Challenges in urban climate

Philippine temperature hits danger levels

**Floodings**      **waterquality**      **Heatstress**

**Drought**      **Airquality**      **subsidence**

### Content presentation Waterquality

**Analysis**

- Analyzing your area

**Ambition**

- Formulating your ambition

**Action**

- Policy and implementation

### First: We share challenges

Amsterdam 1970

Amsterdam 2016  
**Dutch princess swims Amsterdam canals for charity**

### Lessons learnt The Netherlands

not solved in a week...  
how did we achieve this Waterquality?

**Analysis**

- Determine situation
- Monitoring
- Regulations
- stakeholders

**Ambition**

- Evaluate situation & ambitions
- Cost benefit approach

**Action**

- Education: public awareness**
- Cleaning up emissions
  - Improving the sewer system
- (Small) waterquality improvement
- Evaluation & governance
- ...
- Apply to Philippines?
  - lessons learnt

share you

## Lesson learnt from publications and Books ...? for international knowledge exchange?

Global Water Safety Conference 2016  
15-18 APRIL 2016 • ROTTERDAM (THE NETHERLANDS)

**Effective International Knowledge Exchange to Rehabilitate Rivers in Urban Delta's with RDM approach**

*Floortje Bogardus<sup>1</sup>, Eric de Boer<sup>2</sup>, Rick Heikamp<sup>3</sup>, and Marisa Palena<sup>4</sup>*

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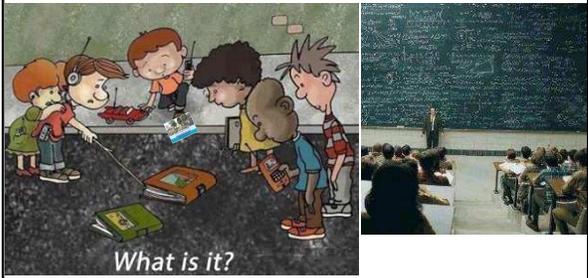
**Abstract:** Rotterdam is a delta city with an urban population of 650,000. The city is situated in a delta region with a high density of urban areas and a high density of water bodies. The city is facing a high risk of flooding due to sea level rise and the increasing urbanization of the delta region. The city is facing a high risk of flooding due to sea level rise and the increasing urbanization of the delta region. The city is facing a high risk of flooding due to sea level rise and the increasing urbanization of the delta region.

**ROTTERDAM CLIMATE PROOF**

**TRANSIT-ORIENTED DEVELOPMENT SMART MICRO-CITY**

**share your talent.move the world.**

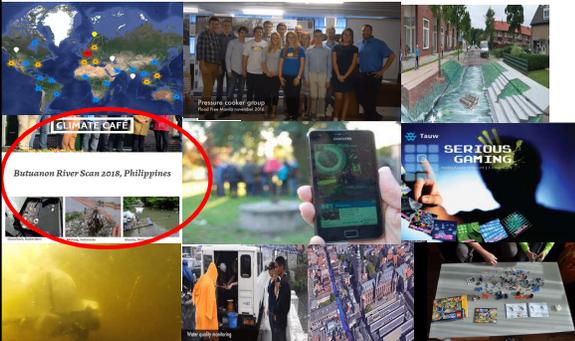
## Books ... for international knowledge exchange?



**What is it?**

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## international knowledge exchange tools: experience: interactive, V+A (augmented) reality, serious gaming, ...



**GLIMITE CAFE**

**Butuanon River Scan 2018, Philippines**

**Pressure cooker group**

**TAUW SERIOUS GAMING**

**Water quality monitoring**

## Learning with climatecafe

**Analysis**

- Analyzing your area

**Ambition**

- Formulating your ambition

**Action**

- Policy and implementation

**Butuanon River Scan 2018, Philippines**

**Monitoring from source/spring**

## Analysis

Analysis not only waterquality measurements

- Source of pollution
- Quality analysing?
- Stakeholders?
- Awareness level
- BMPs?
- Straight to Ambition and Action
  - Raising awareness
  - Capacity building
    - (young professionals)
  - Dissemination
  - upscaling

**GLIMITE CAFE**

**Butuanon River Scan 2018, Philippines**

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WELCOME TO CITY CLIMATESCAN CAFE

HOW WE WORK | WHO ARE WE? | NEWS | PARTNERS | CONTACT

**GLIMITE CAFE**

**City ClimateScan Mainz 10-14 June 2009**

**EU research ClimateCity Ganges**

**Early International Climate Scan 2004-2006 in Taiwan and Philippines**

**Peer ClimateScan Team member: Rick Heikamp**

**Climate Cafe**

**Review Rotterdam City ClimateScan 2010**

**International City ClimateScan application guideline**

**ClimateScan was born in Pinar del Rio, Thailand**

**City ClimateScan Manila**

**City ClimateScan Penang (Philippines) and Ganges (India) problems caused by urbanization and climate change, such as flood and drought, flooding, and more.**

**Erasmus+ grant with Groningen...**

**Share your talent.move the world.**

**DAGBLAD NOORDEN** Profiloosnummer 1

## Studenten onderzoeken waterkwaliteit in Groningen

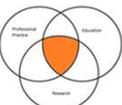
5 september 2016 • 5 september 2016 • Groningen




### Studenten Hanzehogeschool onderzoeken waterkwaliteit Groningse vijvers

Studenten van de Hanzehogeschool Groningen starten morgen, dinsdag, met een bijzondere onderzoek naar de waterkwaliteit van alle vijftien vijvers in de stad.

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## Analyse: How it works



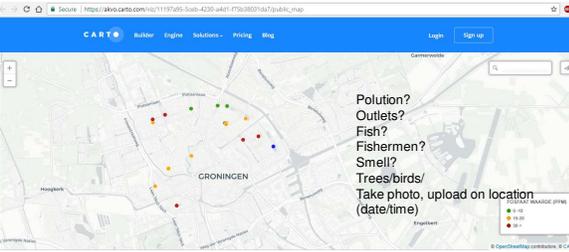
- Step 1** Open application, answer survey questions and follow on screen instructions
- Step 2** Dip test strip into the water
- Step 3** Position the test strip on the color calibration card and follow on screen instructions
- Step 4** Observe and save test results
- Step 5** Repeat strip test for other desired parameters
- Step 6** Place electrical conductivity (EC) sensor in water to measure total dissolved solids (TDS) or salinity and water temperature






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## Analyse: result



Source | [https://akvo.carto.com/viz/11197a95-5ceb-4230-a4d1-f75b38031da7/public\\_map](https://akvo.carto.com/viz/11197a95-5ceb-4230-a4d1-f75b38031da7/public_map)

13-11-2016 Kenniscentrum NoorderRuimte bureau NoorderRuimte

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## Raising awareness Dissimination

### Hanzestudenten willen drijvende woningen van afval bouwen

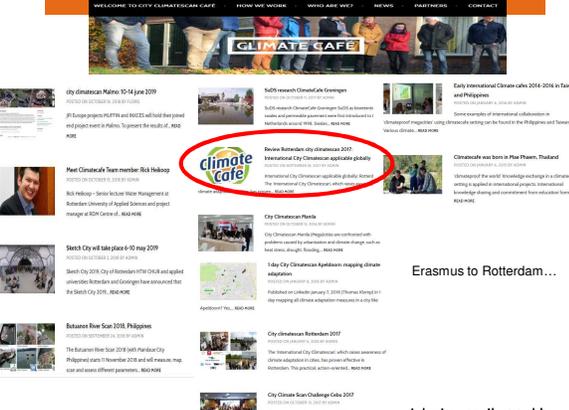
2 maart • Groningen





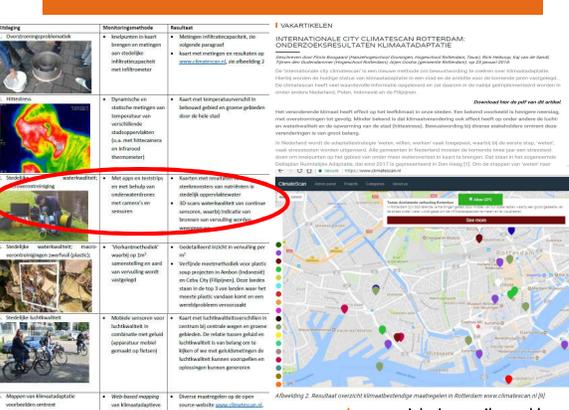

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## Erasmus to Rotterdam ...



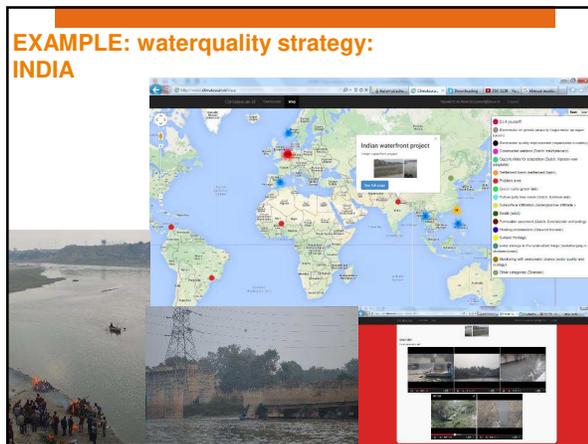
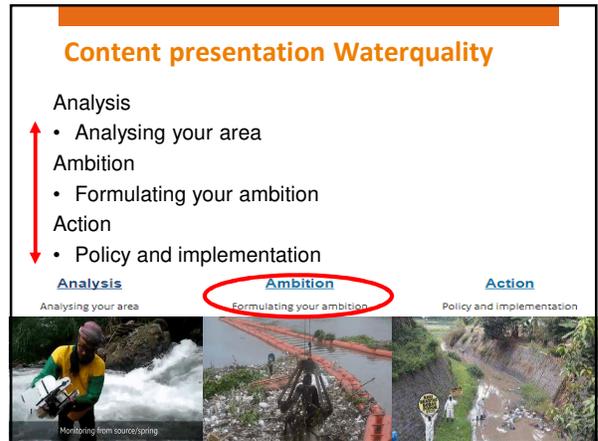
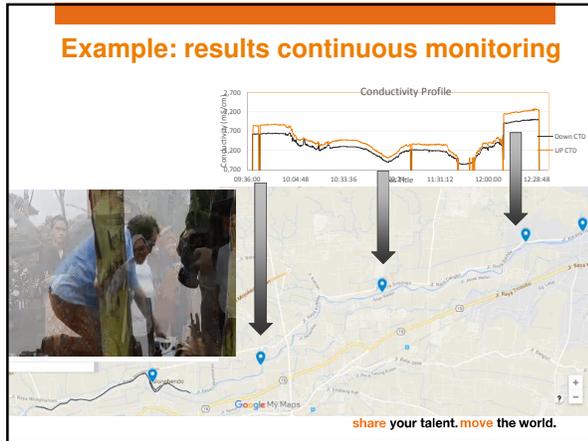
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## INTERNATIONALE CITY CLIMATESCAN ROTTERDAM: ONDERZOEKRESULTATEN KLIMAATDAPATIE



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WELCOME TO CITY CLIMATE CAFE

city climaticas/Manila 10-14 Jan 2019  
 JPI Longue project PAFIR and BICEP2 will hold their second project meeting in Manila, 10-14 January 2019. BICEP2 will be held in Manila, 10-14 January 2019. BICEP2 will be held in Manila, 10-14 January 2019.

Meet ClimateCafe's team member Rick Holberg  
 Rick Holberg - Senior Science Manager at Amsterdam University of Applied Sciences and project manager at EON Centre of Excellence.

Slack City will take place 6-10 May 2019  
 Slack City 2019 City Collaboration (CC) will be held at the Amsterdam University of Applied Sciences and Groningen University on 6-10 May 2019.

Batanes Blue Sea 2018 Philippines  
 The Batanes Blue Sea 2018 will be held in Manila, Philippines from 7 November 2018 and will discuss, map, and assess different parameters.

SAIS research ClimateCafe Groningen  
 SAIS research ClimateCafe Groningen is focused on the development of a climateCafe in Groningen, the Netherlands. The project aims to establish a climateCafe in Groningen, the Netherlands.

Review Rotterdam City ClimateCafe 2018  
 Rotterdam City ClimateCafe 2018 will be held in Rotterdam, the Netherlands. The project aims to establish a climateCafe in Rotterdam, the Netherlands.

City ClimateCafe Manila  
 City ClimateCafe Manila will be held in Manila, Philippines. The project aims to establish a climateCafe in Manila, Philippines.

ClimateCafe was born in The Netherlands  
 ClimateCafe was born in The Netherlands. The project aims to establish a climateCafe in The Netherlands.

Some examples of international collaboration in climateCafe  
 Some examples of international collaboration in climateCafe. The project aims to establish a climateCafe in The Netherlands.

From Ambition, the next first step to Action

our talent. move the world.

Amsterdam FREE

Flood Free Manila

706 weergaven

https://www.youtube.com/watch?v=8Cfbir1-EIA&t=2s

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MANILA PASIG CITY

PHOSPHATE (PPM)

Effective international knowledge exchange in stabilizing rivers in urban deltas: case study Metropolitan Manila

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CURRENT SITUATION LONGGANISA BENEFITS & IMPLEMENTATION

AMBITION

HOW IT WILL BE

BEFORE

The Longganisa for a cleaner Pateros River

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Waste: (inter-)national comparative cases

world.

Map these Solutions: share

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## Take an orientating step towards Action 'The Longanissa': design and implementation



## Content presentation Waterquality

### Analysis

- Analysing your area

### Ambition

- Formulating your ambition

### Action

- Policy and implementation

#### Analysis

Analysing your area

#### Ambition

Formulating your ambition

#### Action

Policy and implementation

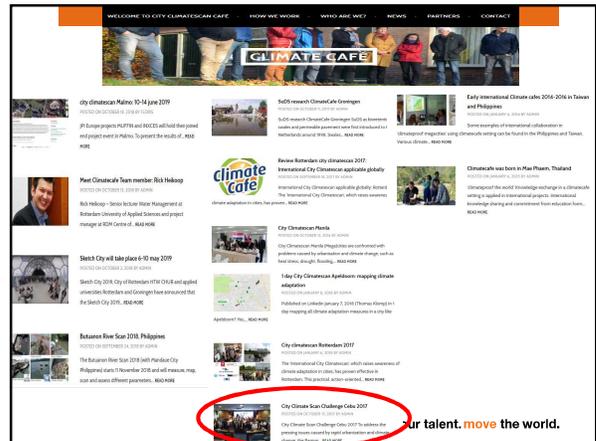


## Action

BMPs?  
Straight to Ambition and  
Action

Raising awareness  
Capacity building (young  
professionals)  
Dissemination  
upscaling

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## Cebu



## Taking samples (N,P) downstream



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### The cebu climatecafe 2017

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### Impression Cebu 2017

Impressie pressure cooker Cebu climate City Scan  
<https://www.youtube.com/watch?v=d4Wwv3rPX5Y> share your talent.move the world.

### Wetlands: student becomes teacher

- 2017 vs 2018
- Tangible results
- More time
- Video photo material for raising awareness
- High level event: river summit
- More high equipment and consultancy
- Erasmus/MoU

Student = teacher  
 More stakeholders (triple helix)  
 Guidance document 2.0  
 Stronger competence  
 More groups and output  
 Multidisciplinair/international  
 Building on climatecafe (dissemination) (scientific) publications  
 .... More fun?

### Floating wetlands

So.... We have tangible results, we look for  
 Cost effective solutions  
 feasible  
 Local materials and skills  
 Multifunctional  
 Transnational  
 Multidisciplinair (from technical to .. Art?)  
 .... what do you think? Discuss in climatecafe....

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### Final words: We share challenges

Amsterdam 1970  
 Amsterdam 2016  
 Dutch princess swims Amsterdam canals for charity

### Development wastewater management: Concrete underground sewers, urban drainage, WWTP

Capital index

1992 2016 2025

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### More Info?

#### Publications and books... 😊

Effective international knowledge exchange to rehabilitate rivers in urban delta's: Case Study Metropolitan Manila

ResearchGate  
LinkedIn  
Twitter

30 years later, Amsterdam still...  
IWASTO!

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### More Info?

#### Participate in climatecafe Butuanon

The City Scan Challenge

The Butuanon River: A Brief History

Thank You

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