

MaMaSe
Mara River Geospatial Sustainable Water Initiative

Improving water safety and security in the Mara River Basin

Home About News Live Data Stream Mara Geospatial Toolbox Knowledge Platform

INTERACTIVE MAPS
EXPLORE GEOSPATIAL DATA AND MAPS
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News
FOREST PROTECTION AND RESTORATION IN THE UPPER MARA BASIN
GRAZING FOR CHANGE EVENT
Published in the 2017, 6th edition of the East Africa Sustainable Tourism Report
BUILDING PROFITABLE BUSINESS MODELS FOR ENTERPRISES ALONG THE MARA BASIN
Embracing business economics and cooperative entrepreneurship

Featured Map

Real Time Data

Depth (cm)	Time
0.0	17:50
0.1	
0.2	
0.3	

SNIEAU Benin Couches Cartes Documents Utilisateurs Groupes

Open Source Software for Preprocessing GIS Data for Hydrological Models

Système National d'Information sur l'Eau du Bénin

SNIEAU est une plateforme open source de partage de cartes et données géospatiales.
Besoin d'aide pour commencer?

32 Couches
Cliquez pour rechercher des données spatiales publiées par d'autres utilisateurs, organisations ou de sources publiques. Téléchargez ces données dans des formats standards.
[Ajouter des couches »](#)

23 Cartes
Les données sont disponibles pour la visualisation, l'agrégation, la création et la définition de styles afin de construire des cartes qui pourront ensuite être publiées et partagées publiquement ou uniquement pour certains groupes ou utilisateurs particuliers.
[Créer des cartes »](#)

94 Utilisateurs
GeoNode permet aux utilisateurs enregistrés de déposer sur le serveur des données spatiales dans différents formats dont les Shapefiles et les GeoTIFF.
[Voir les utilisateurs »](#)

Onderwijs in Open Source GIS voor Water Management in Ontwikkelingslanden

Hans van der Kwast



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162
Countries

15,000
Alumni in the world

87%
Graduates in the
water sector

IHE Delft Institute for Water Education is the largest international graduate education institute in the field of water. The institute confers fully accredited MSc degrees and promotes PhDs.

Since 1957 the Institute has provided graduate education to more than 15,000 water professionals from over 162 countries, the vast majority from the developing world.

136 PhD fellows are currently enrolled in water-related research. The Institute carries out numerous research and capacity development projects throughout the world.

Vision

IHE Delft Institute for Water Education envisions a world in which people manage their water and environmental resources in a sustainable manner, and in which all sectors of society, particularly the poor, can enjoy the benefits of basic services.



Mission

The mission of IHE Delft Institute for Water Education is to contribute to the education and training of professionals, to **expand the knowledge** base through research and to **build the capacity of sector organizations**, knowledge centres and other institutions active in the fields of water, the environment and infrastructure in **developing countries and countries in transition**.



Core activities

The core activities of IHE Delft are:

Education

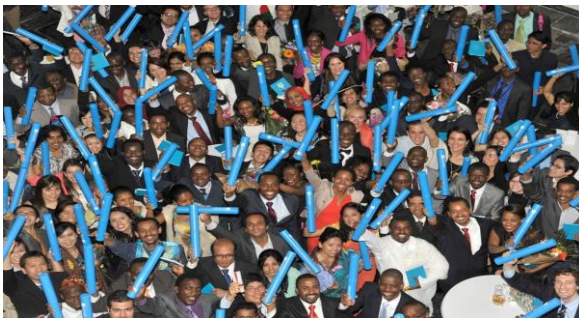
IHE Delft offers a wide range of flexible, high quality, specialized educational programmes to respond to the needs of diverse clients from the water sector.

Research & Innovation

With over 139 academic staff, 136 PhD fellows and 16 post-docs active in water-related, problem-focused and solution oriented research on development issues, IHE Delft has a vibrant multicultural and multidisciplinary research atmosphere.

Capacity Development

IHE Delft strives to strengthen the programmes of universities and research institutes as well as the knowledge and capacity base of ministries and other water sector organizations.



MSc programmes

Water Management

The scientific study of water resources with practical planning and management skills.

Urban Water & Sanitation

Water supply, sanitation and water engineering and management, particularly in urban areas.

Environmental Science

Conservation and prudent use of natural resources for the benefit of society.

Water Science & Engineering

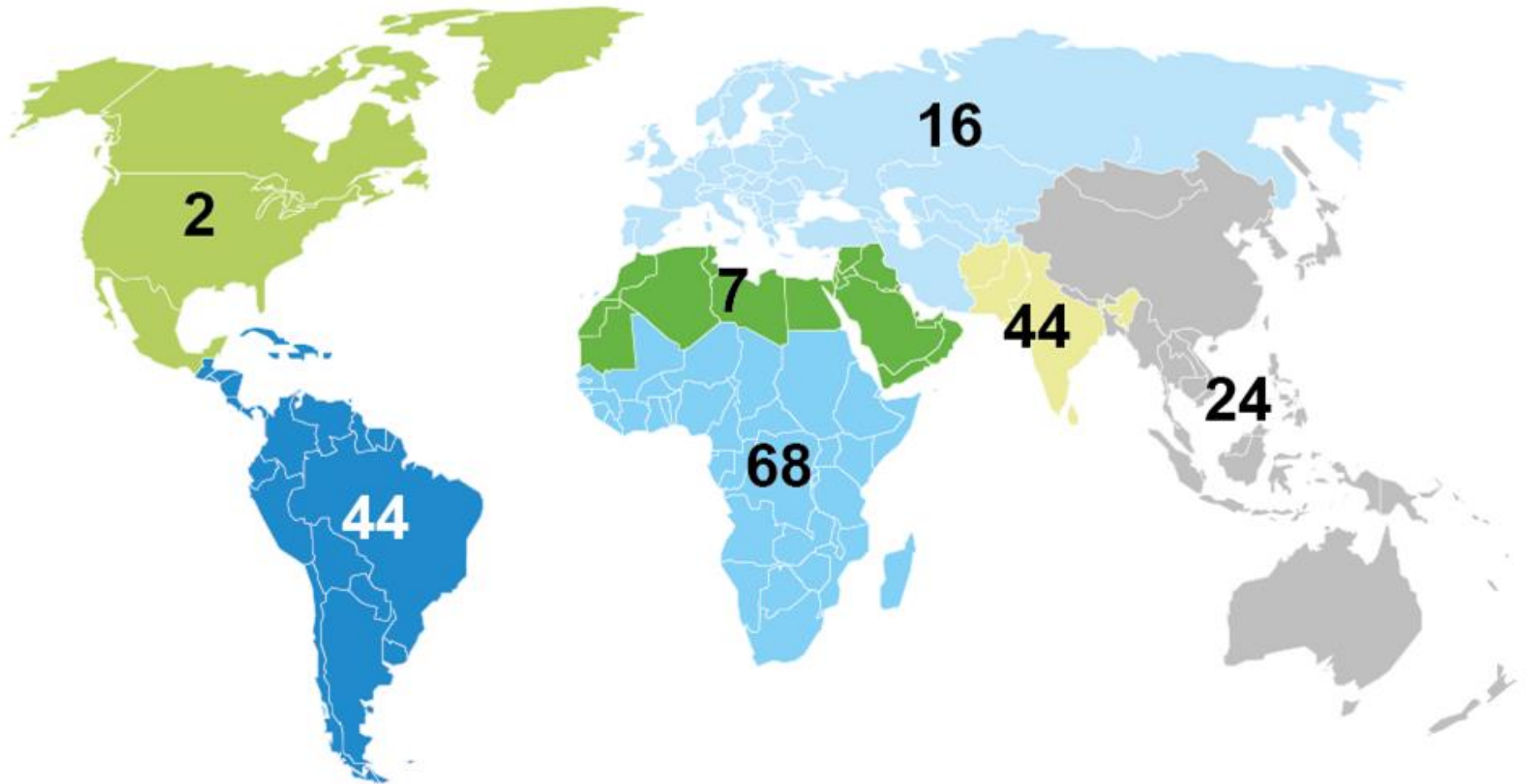
Hydrological and hydraulic processes and modelling tools for improved water management in coastal zones, river basins and agricultural areas.

Joint MSc programmes

Joint programmes are offered in collaboration with renowned partner institutes, have varying start and end dates, and part of the programme is given at a partner institute, often in another country/ continent.



MSc students per region of origin in 2016



Open Source GIS in Education

- MSc programmes (3 out of 4, appr. 100 students)
 - Introduction to GIS (QGIS)
 - Georeferencing, digitizing vectors
 - Import tables, join, interpolation
 - Map algebra
 - Catchment delineation
 - OpenStreetMap, Open Data, Mapathon
 - Fieldwork preparation (ES)
 - Fieldwork implementation (WSE)

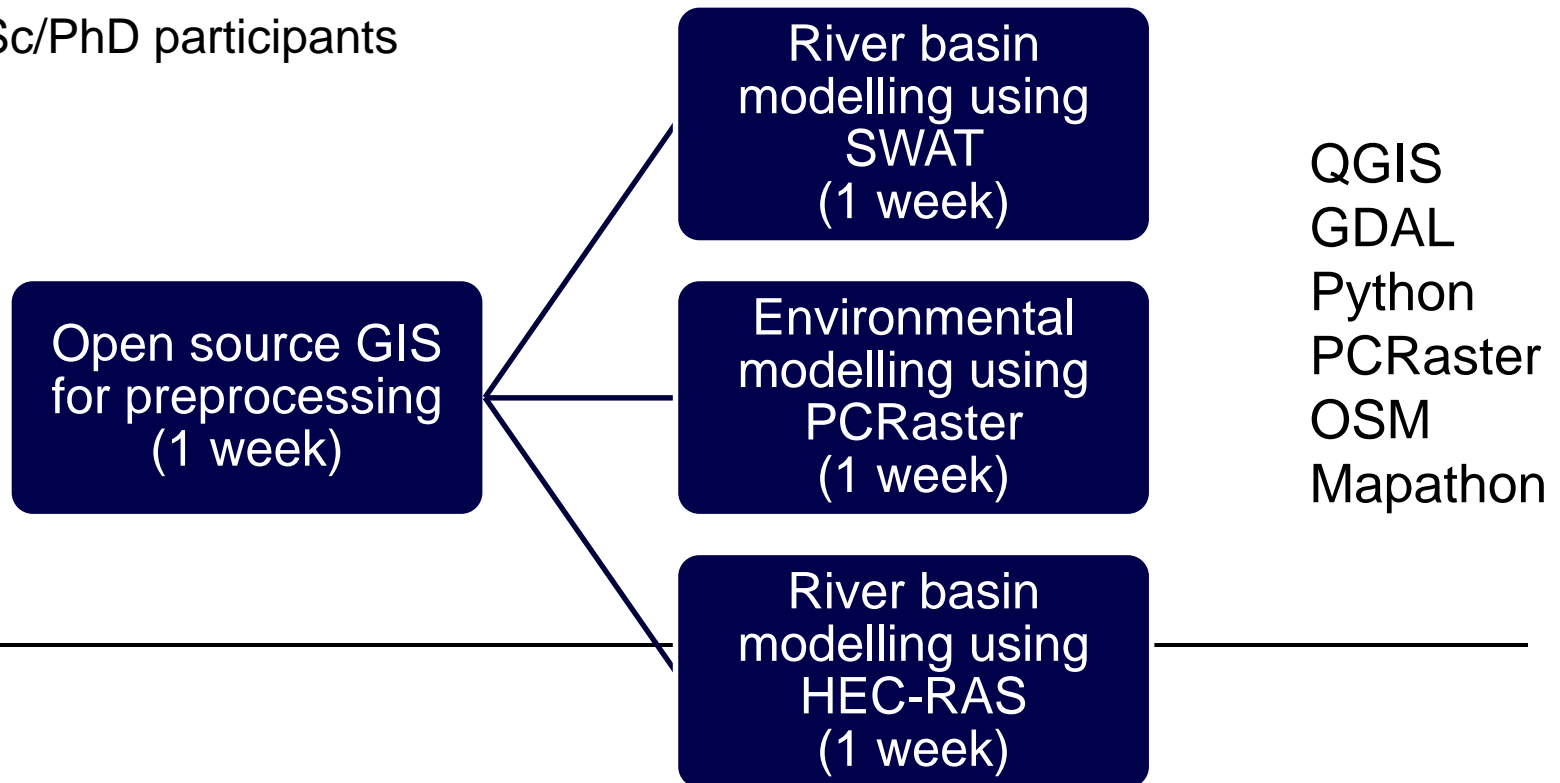


Open Source GIS in Education

- Short courses (50 students 2017):

- External participants
 - Scholarships
 - Self-payers
 - Project partners
- MSc/PhD participants

www.un-ihe.org/short-courses



Capacity development

To strengthen knowledge and capacity base of

- universities
- research institutes
- ministries
- water sector organizations
- in Africa, South-America and Asia/Pacific

Capacity development activities

- training water professionals on-the-job
- creating water education networks
- joint research
- policy advice
- distance & e-learning
- participation in innovative projects
- facilitating knowledge sharing



Tailor Made Trainings

- QGIS
- GDAL
- Python
- PCRaster
- SDI
 - GeoNode
 - Geoserver
 - OpenLayers
 - OCG standards
 - SLD
 - ...

Examples:

QGIS for water companies in Uganda

SDI for the water sector in Benin

SDI for water managers in the Mara River Basin, Kenya

Water productivity training in Benin

← Tweet



Hans van der Kwast

@hansakwast

Day 2 of #waterproductivity training #Benin using #FAO #WaPOR portal for #SDG 6.4.1 and other applications @DUPC_2 @UnescoIHE @fao #opendata



8:04 a.m. · 20 Jun 17 from Benin

VIEW TWEET ACTIVITY

SDI and trainings



MaMaSe
Maa Mara Serengeti Sustainable Water Initiative

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Advanced Search

SEARCH THE SITE

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17.90

www.mamase.org

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www.sniewau.bj

SEARCH

Hans VanDer Kwast

Système National d'Information sur l'Eau du Bénin

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IHE
DELFT

SDI and trainings



WELCOME | KARIBU

This is an open source platform for sharing geospatial data and maps, deployed for Mau Mara Serengeti Sustainable Water Initiative.







Need help? [Getting Started!](#)

[Explore Layers](#)

[Explore Maps](#)

LATEST LAYERS

Total: 14

-  [Field observations ground truth for land-use map](#)
Layer from jvdlovrast, 2 weeks, 2 days ago
From July 11-15 2015 125 land-use samples (polygons) were taken for training and testing of a remote sensing based land-use/land-cover classification of the Mara River Basin.
11 views 3 downloads Average rating (1 votes) [Download](#) [Create a map](#)
-  [Roadplan for groundtruth mission RAS July 9-16 2015](#)
Layer from jvdlovrast, 2 weeks, 0 days ago
Proposed routes for groundtruth mission RAS for land-use map. Mission from July 9-16
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-  [Tanzania_MaraRiverBasin_Landuse](#)
Layer from kellyfouchy, 1 month, 1 week ago
Layer showing landuse/land cover of the Tanzanian part of the Mara River Basin.
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-  [Kenya_MaraRiverBasin_Landuse](#)
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Layer showing landuse/land cover of the Kenyan part of the Mara River Basin.
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-  [river_utm30s](#)
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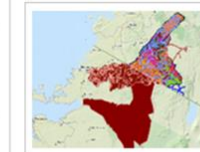
MaMaSe enables you to upload, manage, and browse data layers. Search for data that is valuable to you, or upload your own data.

[Upload Layers](#)

MaMaSe enables you to compose and share maps. Create a map with our cartography tool, or explore maps shared by others.

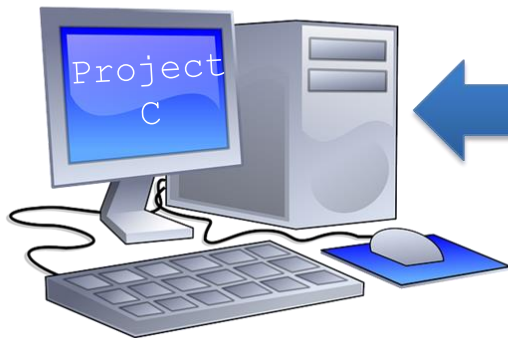
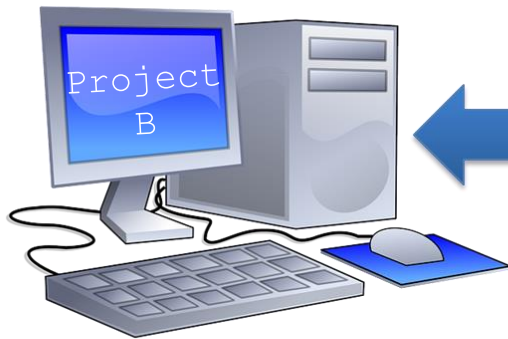
[Create a Map](#)

LATEST MAPS



[Map of the Mara River Basin](#)
Map from jvdlovrast, 1 week, 1 day ago
This map shows the Mara River Basin boundary and some other GIS layers.

7 views 0 downloads Average rating (0 votes) [Download](#) [View](#)



Sharing of:

- Spatial data
- Metadata
- Documents (e.g. Open

Access papers)

- Profiles (social media)



ocw.un-ihe.org

☰ OCW IHE DELFT ENGLISH (EN) ▾ You are currently using guest access ([Log in](#))

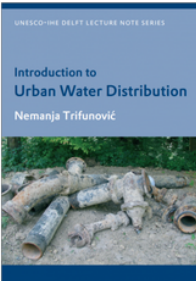
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Calendar

IHE DELFT OPEN COURSEWARE

Available resources

 [Introduction to Urban Water Distribution \(the eBook\)](#) 


Teacher: [Nemanja Trifunovic](#)



UNESCO-IHE DELFT LECTURE NOTE SERIES

Introduction to Urban Water Distribution
Nemanja Trifunovic

These open educational resources are part of the [online course on Water Transport and Distribution](#). The eBook 'Introduction to Water Distribution' elaborates on general principles and practices in water transport and distribution in a practical and straightforward way.

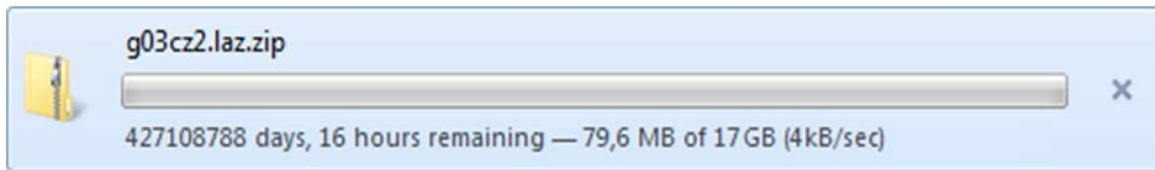


OpenCourseWare

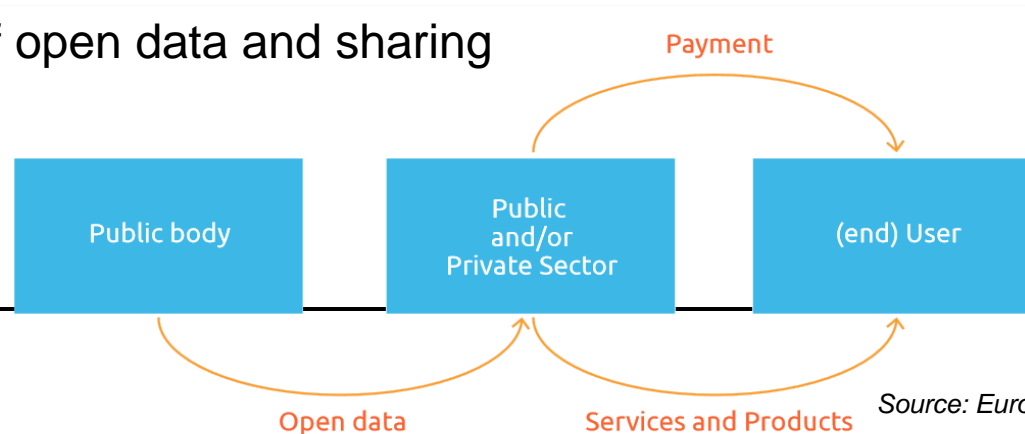
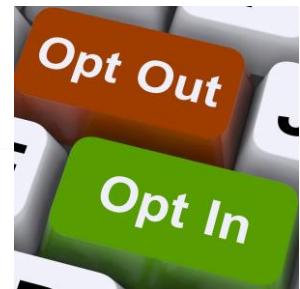
IHE DELFT is committed to solving the world's water crisis by educating the water leaders of the future, particularly those from developing countries and countries in transition. The demand for water education by far exceeds the number of professionals that the Institute can train.

Challenges

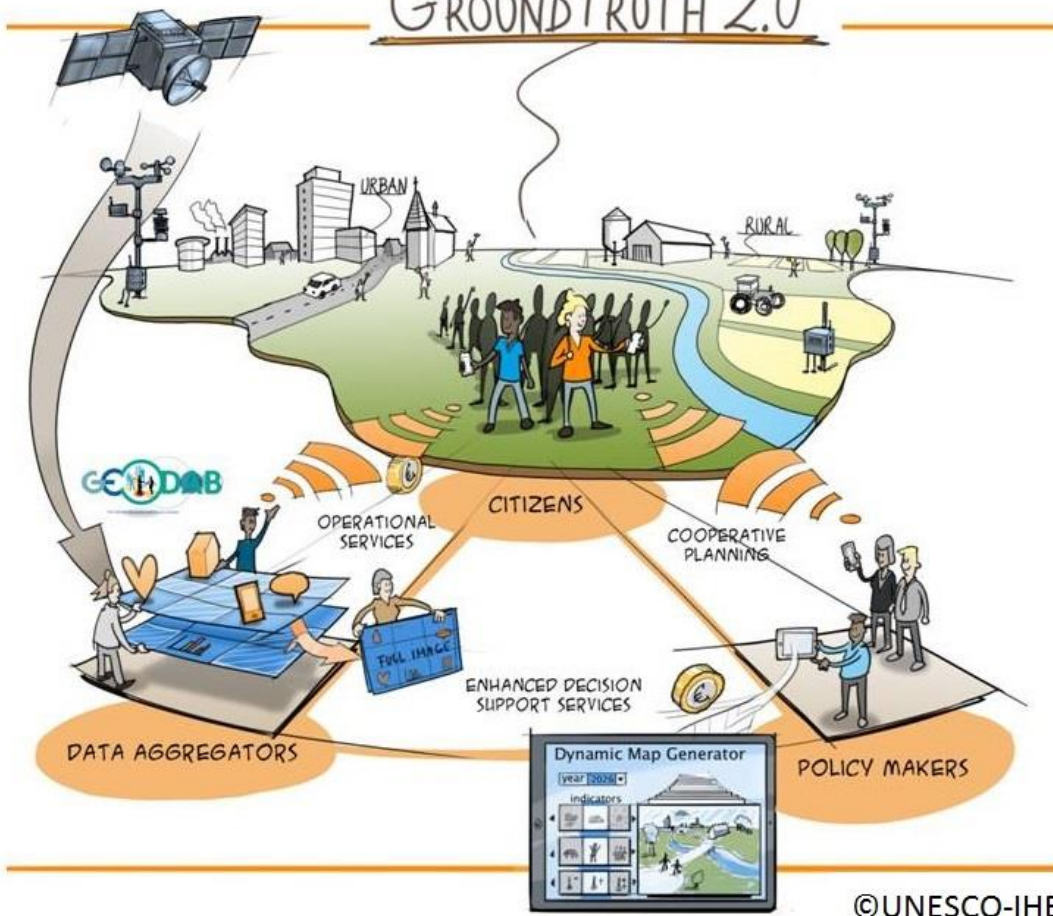
- Diversity of MSc participants
 - Didactic issues
 - Computer literacy
 - Language
- For tailor made trainings: internet connection on location



- Acceptance of open source (internal and external)
- Acceptance of open data and sharing



GROUND TRUTH 2.0



... from citizen-based data collection to knowledge sharing for **joint decision-making, cooperative planning and environmental stewardship**

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IHE Delft Institute for Water Education

www.un-ihe.org



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