



UNITED NATIONS UNIVERSITY

Institute for Environment &
Human Security (UNU-EHS)
Bonn, Germany

Knowledge Management Tools Needs and Practice: Experience from UNU-EHS

WISER Knowledge Management Workshop
16 – 17 October 2016, UNECA – Addis Ababa

Dr. Erick G. Tambo
Associate Academic Officer

EduSphere

*Higher Education &
Capacity Development*

UNU
BONN





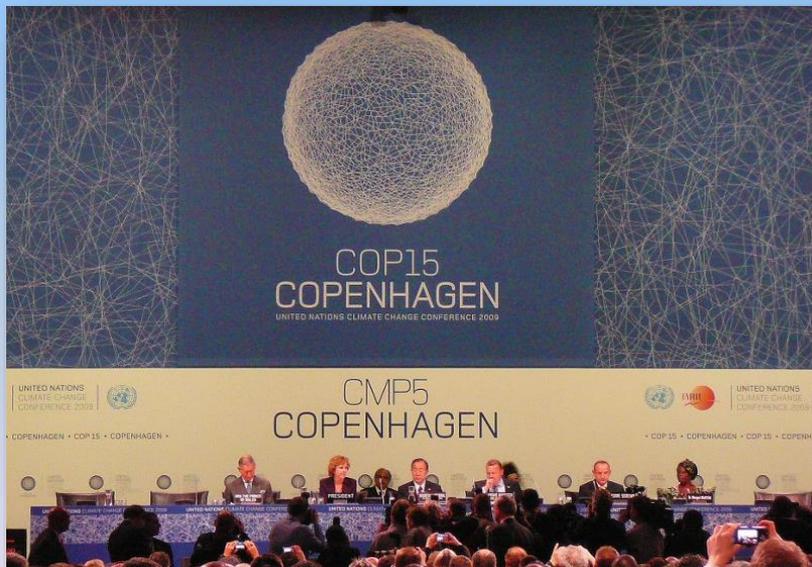
Topic and Outline

ICT supported methods and tools for capacity building, management and sharing of information, communication and dissemination of research findings, etc.

- Introduction of UNU
- KM Practice / Tools and Needs
 - Practice / Tools
 - eCourses – eLearning for Capacity Building
 - Learning Management Systems for eLearning and Project Management
 - Online Meeting Tools for Webinar, Web Meeting, Virtual Lectures, etc.
 - Online Community of Practice (CoP) Platform
 - Lecture Recording Systems
 - Needs
 - Localized and Smart Data
- KM Partnership
 - WASCAL
 - PAUWES

Mandate of UNU

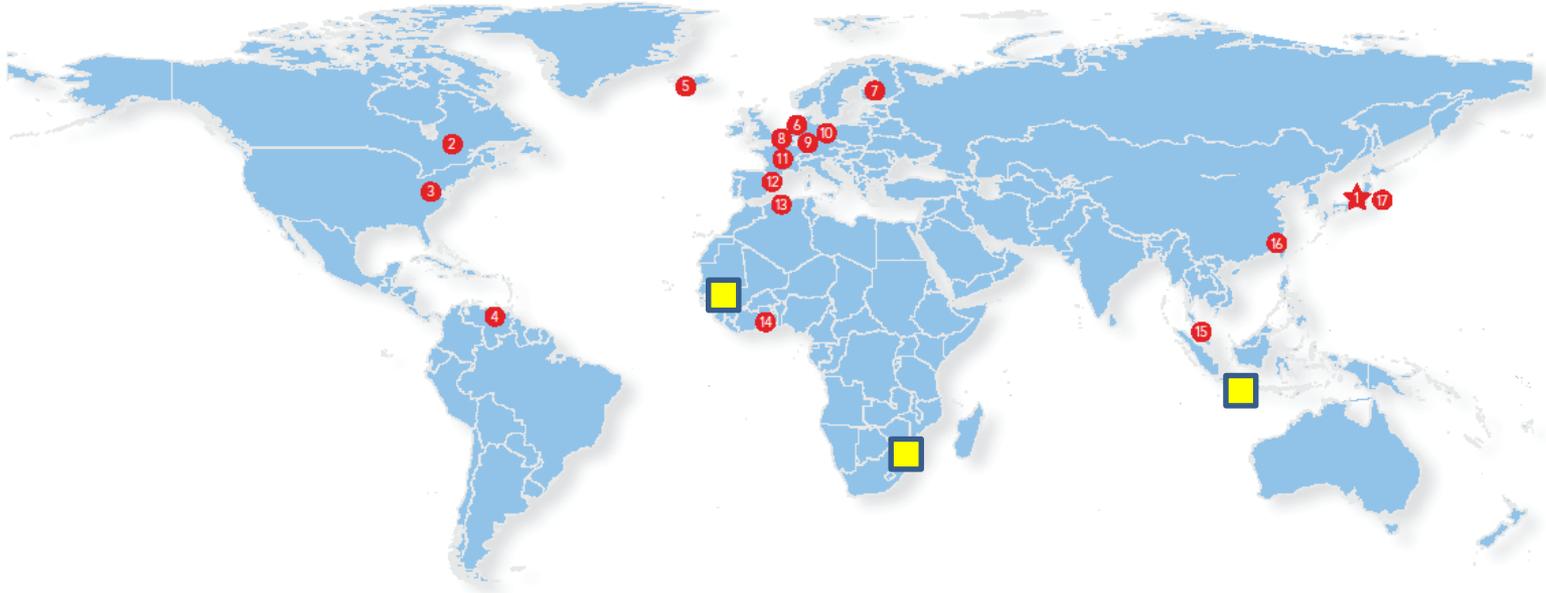
Established by the UN General Assembly in **1973** the **United Nations University (UNU)** represents the academic arm of the United Nations system implementing research and educational programmes in the area of sustainable development, **with the particular aim of assisting developing countries.**



Fostering Policy Dialogue & Education at high-level conferences

UNU Campus Worldwide

14 institutions in 12 countries



- 1 UNU-Centre ★
- 2 UNU-INWEH (Water)
- 3 UNU-ONY (Liaison)
- 4 UNU-BIOLAC (Biotechnology)
- 5 UNU-FTP, UNU-GTP, UNU-LRT (Fisheries, Geothermal Research, Land Restoration)

- 6 UNU-MERIT (Innovation & Technology)
- 7 UNU-WIDER (Development Economics)
- 8 UNU-CRIS (Regional Integration)
- 9 UNU-EHS (Human Security)/ VIE (Vice Rectorate in Europe)
- 10 UNU-FLORES (Integrated Material Fluxes)
- 11 Office at UNESCO (Liaison)

- 12 UNU-GCM (Culture and Mobility)
- 13 UNU-IRADDA (Sustainability in Africa)
- 14 UNU-INRA (Natural Resources)
- 15 UNU-IIGH (Health)
- 16 UNU-CS (Computing and Society)
- 17 UNU-IAS (Advanced Studies)

Organisation of UNU-EHS, Bonn



DIRECTOR / VICE-RECTOR

Academic Programmes



EMSVA

Environmental
Migration

Social Vulnerability
& Adaptation



VARMAP

Vulnerability
Assessment

Risk Management
Adaptive Planning

EVES

Environmental
Assessment

Ecosystem
Services

EduSphere

(Higher Education, Capacity development & Training)

Central Units

(Administration / Finance / Executive Office / ICT and Communication)

Design and Development of eLearning Resources/Courses



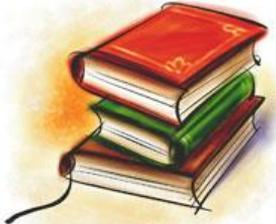
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and Human Security

1

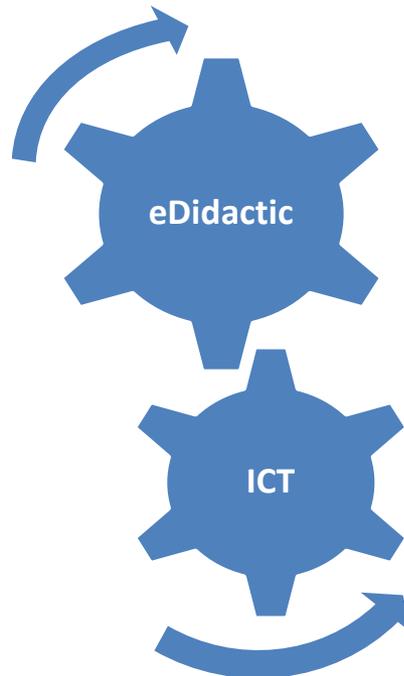
Scientific Content



Where the Rain Falls

2

Instructional Design



3

eLearning resources

Content Package



Open Standard
Conform



4

Context of Use

Projects

Block Courses

Summer
Academy

Master

Shared
Repository

eSeminar

...

Design and Development of eLearning Resources/Courses

Example Content...

Menu Notes

- Energy Storage
- Introduction
- Principle of operation of batteri...
- Typical Values for Different Batt...
- Open-circuit voltage
- Charging of batteries
- Charging Process
- Constant current charging met...
- Constant voltage charging met...
- IU - Charging
- Fuel cell: Principle of operation**
- Cathode Reaction
- Exercise 1: Charging of a NiMH...
- Experiment Setup
- Analysis Exercise 1
- Measurement
- Activity
- Exercise 2: characteristic U-I-gr...
- Lithium - Polymer Accumulat...
- Experimental setup:
- Analysis exercise 2: Characte...
- Pb Graph
- In Lab Experiment
- Exercise 3: Hydrogen productio...
- Experimental Setup (1)
- Experimental Setup (2)
- Experimental Setup (3)

Search...

Energy storage

Photo Gallery | Imprint | Exit

Energy Storage

Pan African University
Institute of Water
and Energy Sciences

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Fuel cell: Principle of operation

A fuel cell is a device that converts the chemical energy from a fuel into electricity through a chemical reaction of positively charged hydrogen ions with oxygen or another oxidizing agent. Similar to a battery, a fuel cell is comprised of many individual cells that are grouped together to form a fuel cell stack. Each individual cell contains an anode, a cathode and an electrolyte layer.

Hydrogen gas (H₂) enters the fuel cell on the anode side. On the cathode side, oxygen gas (O₂) is forced through the catalyst.

← PREV NEXT →

Design and Development of eLearning Resources/Courses



Energy Storage Experiment
By: Prof. Dr. Ing. Thorsten Schne

Characteristic Of a Solar Cell Experiment
By: Prof. Dr. Ulf Blieske

Grid-Connected PV System Experiments
By: Prof. Dr. Ulf Blieske

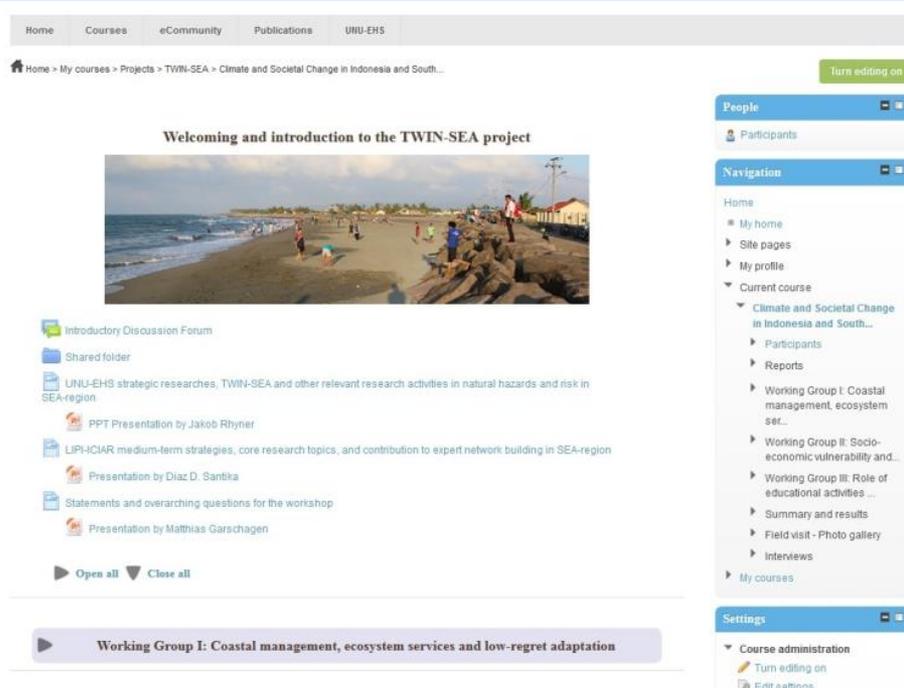
Water Discharge and Velocity Measurements
By: Prof. Christian Jokiel

Hybrid PV-Wind Street Lighting Systems Experiment
By: Prof. Dr. Ing. Thorsten Sch.

Wind Energy Experiment
By: Prof. Dr. Ing. Thorste

Membrane Basics
Reverse Osmosis Membrane Systems Experiment
By: Prof. Dr. Ompe Aimé Mudimu

Digital environment for online activities



Home Courses eCommunity Publications UNU-EHS

Home > My courses > Projects > TWIN-SEA > Climate and Societal Change in Indonesia and South...

Turn editing on

Welcoming and introduction to the TWIN-SEA project



- Introductory Discussion Forum
- Shared folder
- UNU-EHS strategic researches, TWIN-SEA and other relevant research activities in natural hazards and risk in SEA-region
- PPT Presentation by Jakob Rhyner
- LPHCIAR medium-term strategies, core research topics, and contribution to expert network building in SEA-region
- Presentation by Diaz D. Santika
- Statements and overarching questions for the workshop
- Presentation by Matthias Garschagen

Open all Close all

Working Group I: Coastal management, ecosystem services and low-regret adaptation

People

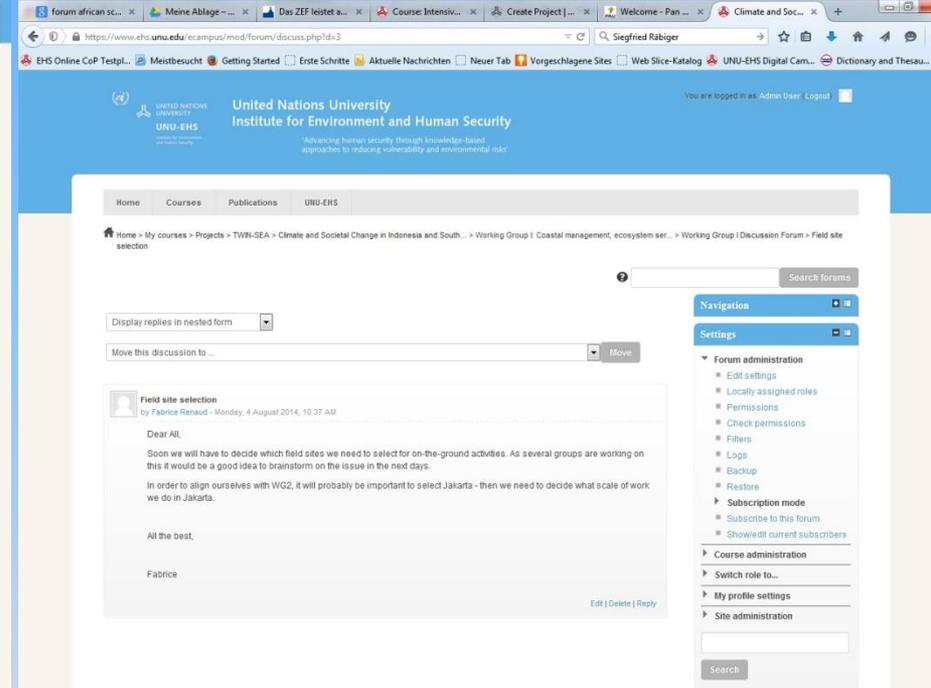
- Participants

Navigation

- Home
 - My home
 - Site pages
 - My profile
- Current course
 - Climate and Societal Change in Indonesia and South...
 - Participants
 - Reports
 - Working Group I: Coastal management, ecosystem ser...
 - Working Group II: Socio-economic vulnerability and...
 - Working Group III: Role of educational activities ...
 - Summary and results
 - Field visit - Photo gallery
 - Interviews
- My courses

Settings

- Course administration
 - Turn editing on
 - Edit settings



forum african sc... Meine Ablage... Das ZEP leistet a... Course: Intensiv... Create Project... Welcome - Pan... Climate and Soc...

https://www.unu.edu/ecampus/mod/forum/discuss.php?id=3

Siegfried Rábiger

EHS Online CoP Testpl... Meistbesucht Getting Started Erste Schritte Aktuelle Nachrichten Neuer Tab Vorgeschlagene Sites Web Slice-Katalog UNU-EHS Digital Cam... Dictionary and Thesau...

United Nations University
United Nations
UNU-EHS
Institute for Environment and Human Security
Advancing human security through knowledge-based approaches to reducing vulnerability and environmental risk

You are logged in as Admin User. Logout

Home Courses Publications UNU-EHS

Home > My courses > Projects > TWIN-SEA > Climate and Societal Change in Indonesia and South... > Working Group I: Coastal management, ecosystem ser... > Working Group I: Discussion Forum > Field site selection

Search forums

Display replies in nested form

Move this discussion to ... Move

Field site selection
by Fabrice Renaud - Monday, 4 August 2014, 10:37 AM

Dear All,

Soon we will have to decide which field sites we need to select for on-the-ground activities. As several groups are working on this it would be a good idea to brainstorm on the issue in the next days.

In order to align ourselves with WC2, it will probably be important to select Jakarta - then we need to decide what scale of work we do in Jakarta.

All the best,

Fabrice

Edit | Delete | Reply

Navigation

Settings

- Forum administration
 - Edit settings
 - Locally assigned roles
 - Permissions
 - Check permissions
 - Filters
 - Logs
 - Backup
 - Restore
- Subscription mode
 - Subscribe to this forum
 - Show/hide current subscribers
- Course administration
- Switch role to...
- My profile settings
- Site administration

Search

- Virtual space with content (lectures, interview, pictures) from workshops
- Tools to support interaction, communication and collaborative work



Online Meeting Tools

- **Live Communication:** Webinars, Web Meeting, virtual lectures/seminars, Online Courses



Online Meeting Tools: Webinars



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- Webinars, virtual lectures/seminars, Online Courses



PAUWES-UNU WEBINAR SERIES 2016



WATER TRACK

**"WATER SECURITY AND ITS LINK
TO THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT"**

FEBRUARY 17TH, 2016 @3PM CET

REGISTER ON www.PAUWES-COP.NET AND JOIN OUR WEBINAR



OUR GUEST LECTURER

Dr. Zafar Adeel

*Director of the United Nations
University Institute for Water,
Environment and Health
(UNU-INWEH).*

ABOUT OUR GUEST:

Zafar Adeel (originally from Pakistan) is the current Director of UNU-INWEH. He also served as the Chair of UN-Water in 2010 and 2011; a group that coordinates water related work in 31 United Nations organizations and a number of international water organizations. He has experience in a range of water and environmental issues including monitoring and control of water pollution, water management in dry areas, solutions to industrial environmental problems, modeling of environmental systems and environmental policy formulation.

ABOUT THE WEBINAR:

This webinar will present the main goals and mega trends the Agenda 2030 suggests for global water security. Our speaker will especially deal with the policy, financial and practical challenges that have to be faced on the way to implement SDG number 6, to "ensure availability and sustainable management of water and sanitation for all."



Deutscher Akademischer Austausch Dienst
German Academic Exchange Service

PAUWES Online CoP on Water, Energy and Climate Change in Africa



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➤ Stakeholders



Get in touch with stakeholders and explore new collaboration potentials

Networking and Interaction

Regularly updated- post job, internship and scholarship opportunities and find suited candidates

Companies and Job Database

Online Events / Webinars

Advertize and manage events (offline and online i.e. Webinar)

Knowledge-sharing and Discussion

Discuss trends and exchange ideas ,co-creation and use and share content of the social library

PAUWES Online Community of Practice Platform



➤ Profile Management: experts, companies, NGOs, private actors, intergovernmental organizations, etc.

➤ Events Management

es-cop.net/members/?profile_type=

Pan African University Institute of Water and Energy Sciences PAUWES CoP

Members: All Members, People, Companies, Universities/Think Tanks, NGOs, Intergovernmental Organization

Search Members

- David Paulus**
 - Works at UNU-EHS
 - Lives in Born, Germany
 - Groups: Test Group and 30 others
 - Add Contact: Ogechi Nwadiaru is a mutual friend and 10 others
- Test User**
 - Studied at Test School
 - Works at Test Company
 - Lives in Cologne, Germany
 - Groups: Test Group and 3 others
 - Add Contact: Mugumya Andrew is a mutual friend
- Lena Passelewitz**
 - Groups: PAUWES Community of Practice and 11 others
 - Add Contact: Ogechi Nwadiaru is a mutual friend and 7 others
- Jean Marie Pascal KWISANGA**
 - Studied at Pan African university of Water and Energy sciences
 - Lives in
 - Groups: PAUWES Community of Practice and 8 others

People You May Know

Pan African University Institute of Water and Energy Sciences PAUWES CoP

Events: Upcoming Events, Past Events, My Events, Create New Event

Past Events

- 30 SEP** IOREC 2016
 - September 30, 2016 12:00 AM
 - host by IRENA
 - The Conference is being organized by IRENA in partnership with the Kenya Ministry of Energy & Petrol...
- 18 JUL** International Symposium and W...
 - July 18, 2016 11:00 PM
 - host by Anastasia Zabanitovu, Dr.Eng., Professor A.U.Th., Head of Chemical Engineering Lab and leader of Biomass group
 - The major objective of the symposium is to promote the scientific dialogue supporting the sustainab...
- 11 JUL** Water, Engineering and Develop...
 - July 11, 2016 12:00 AM
 - host by KNUST, Kumasi, Ghana
 - Ensuring Availability and Sustainable Management of Water and Sanitation for All The conference ...
- 13 JUN** Communication Training for CoP...
 - June 13, 2016 6:00 AM
 - host by Mohammed MOHAMMEDI
 - During 1,5 – 2 hours, the following content will be covered: - Use of social media - ...
- 25 MAY** International Conference on Env...
 - May 25, 2016 12:00 AM
 - host by Leonie Schoelen
 - The aim of this conference is to promote environmentally safe and economically sustainable renewable...
- 24 MAY** International Conference on Env...
 - May 24, 2016 4:00 PM
 - host by David Paulus
- 17 MAY** African Utility Week & Clean Po...
 - May 17, 2016 12:00 AM
 - host by Leonie Schoelen
 - Exhibition - 250 exhibitors on 12,000sqm This market leading trade exhibition is the first port of ...
- 15 MAY** WISA Biennial Conference 2016...
 - May 15, 2016 12:00 AM
 - host by Water Institute of Southern Africa
 - The theme will be supported by the following sub-themes: Community Water Supply and Sanitation E...
- 27 APR** SDG Global Day
 - April 27, 2016 12:00 AM
 - host by Martin Lyambai
 - The Geek Club Tiemcen and PAUWES CoP to collaborate on their next event, an information day
- 21 APR** 19th International Water Technol...
 - April 21, 2016 12:00 AM
 - host by International Water Technology Association
 - After seventeen years of success, the Conference now aims at collecting all the multidisciplinary ex...

Keyword: Search events...

Sort by: Start Time

Event Category: All categories

Geben Sie einen z...

Radius (mile):

Start Time:

End Time:

Search

Tags: renewable energies (5) water (5) energy (4) South Africa (2) climate change (2) paowes (2) green growth (2) University of Tiemcen (1) EU (1)

PAUWES Online Community of Practice Platform



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Groups (public and private)

- Discussions, File sharing, Events planning and management, Poll, Members overview, Etc.

Groups [Browse Groups](#) My Groups Create New Group

Categories

- Energy
- Entrepreneurship
- PAUWES Community of Practice
- Water
- Webinars

Active Groups Popular Groups Newest Groups

Change Management, Awareness and...
Active 7 months ago
5 members

Content, Didactic and Lab Experiments
Active 7 months ago
2 members

Quality and Accreditation
Active 7 months ago
2 members

E-Learning for Renewable Energy in ...
Active 7 months ago

Entrepreneurship
Active 7 months ago

Webinars
Active 9 months ago

E-Learning for Renewable Energy in African Higher Education
by [David Paulus](#)
Active 7 months ago 10 members

Basic Information:
E-Learning for Renewable Energy
Contact

This group has been initiated out of the E-Learning in renewable energy (RE) for Africa workshop, organized in cadre of the international Africa-EU Symposium on Renewable Energy Research and Innovation from 8-10 March 2016 in Tiemou, Algeria. Members of this group are encouraged to exchange, share knowledge and information, network and cooperate in the development of new ideas and projects in the field of E-Learning in Renewable Energy for Africa. The group consists of the three subgroups to organize discussions around specific topics of the overall theme of E-Learning in Renewable Energy for Africa:

1. Quality and Accreditation
2. Content, Didactic and Lab Experiments
3. Change Management, Awareness and Networking

What's New Members (10) Discussions Events Albums (1) Files (3) Polls Videos Useful Links

What's on your mind?
Input Tags: By tagging your posts, they will be added to the Library.

Water
Engineering
Policy
Consultancy
Water Management
ICM
IWRM

Recent Albums
Create Album
RECP Workshop- E-Learning 4 RE
By Erik Gankam Tambo
March 15

Recent Videos
Create New Video
No videos have been added in this group yet.

Most Active Members

Sub Groups
Quality and Accreditation
Owner David Paulus in E-Learning for Renewable

Rolux Muceka joined the group E-Learning for Renewable Energy in African Higher Education

PAUWES Online Community of Practice Platform



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➤ Social Library: participative approach, multimedia content (print, audio, video, etc.), management of content (search, tags, etc.),

This screenshot shows the main interface of the PAUWES Social Library. At the top, it features the Pan African University (PAU) logo and the text 'Institute of Water and Energy Sciences PAUWES CoP'. A search bar and user profile for 'Erick Gankam Tambo' are visible. The main content area is titled 'Social Library' and includes a 'Browse Social Library' button, 'My Social Library', and 'Create New Topic Spaces'. A 'Categories' section lists 'Energy' and 'Water'. Under 'Energy', sub-categories include 'Renewable Energy', 'Grid Systems', 'Energy Management', 'Consultancy', 'Policy', and 'Engineering'. Under 'Water', there are sections for 'Biomass', 'Engineering', 'Policy', and 'Consultancy', each with a grid of icons representing different content items.

This screenshot shows a detailed view of a 'Policy' topic page within the Social Library. The page header includes the PAUWES CoP logo and navigation options like 'Browse Social Library', 'My Social Library', and 'Create New Topic Spaces'. The topic name 'Policy' is prominently displayed. Below it, 'Basic Information' shows statistics: 'Total Feeds: 2', 'Total Topics: 0', 'Total Files: 0', 'Total Folders: 0', 'Total Videos: 1', and 'Total Photos: 1'. There are tabs for 'What's New', 'Photos (1)', 'Files', 'Videos (1)', and 'Useful Links'. A text input field asks 'What's on your mind?'. A post by 'Mohammed MOHAMMEDI' is visible, with tags 'Engineering and 2 others'. Below this is a video player for 'Career day interview - Eva and Lucas', with a description: 'Ms. Eva Muthoni Kimonye PAUWES Student in Water Policy and Mr. Hugo Lucas former Director for Policy at International Renewable Energy Agency IRENA'. The video was posted on 'October 5' and has '6 others like this'. At the bottom, another post by 'Eva Kimonye' is partially visible, with the text 'The water engineering and policy class career day session with Hugo Lucas' and tags 'Engineering and Policy'.

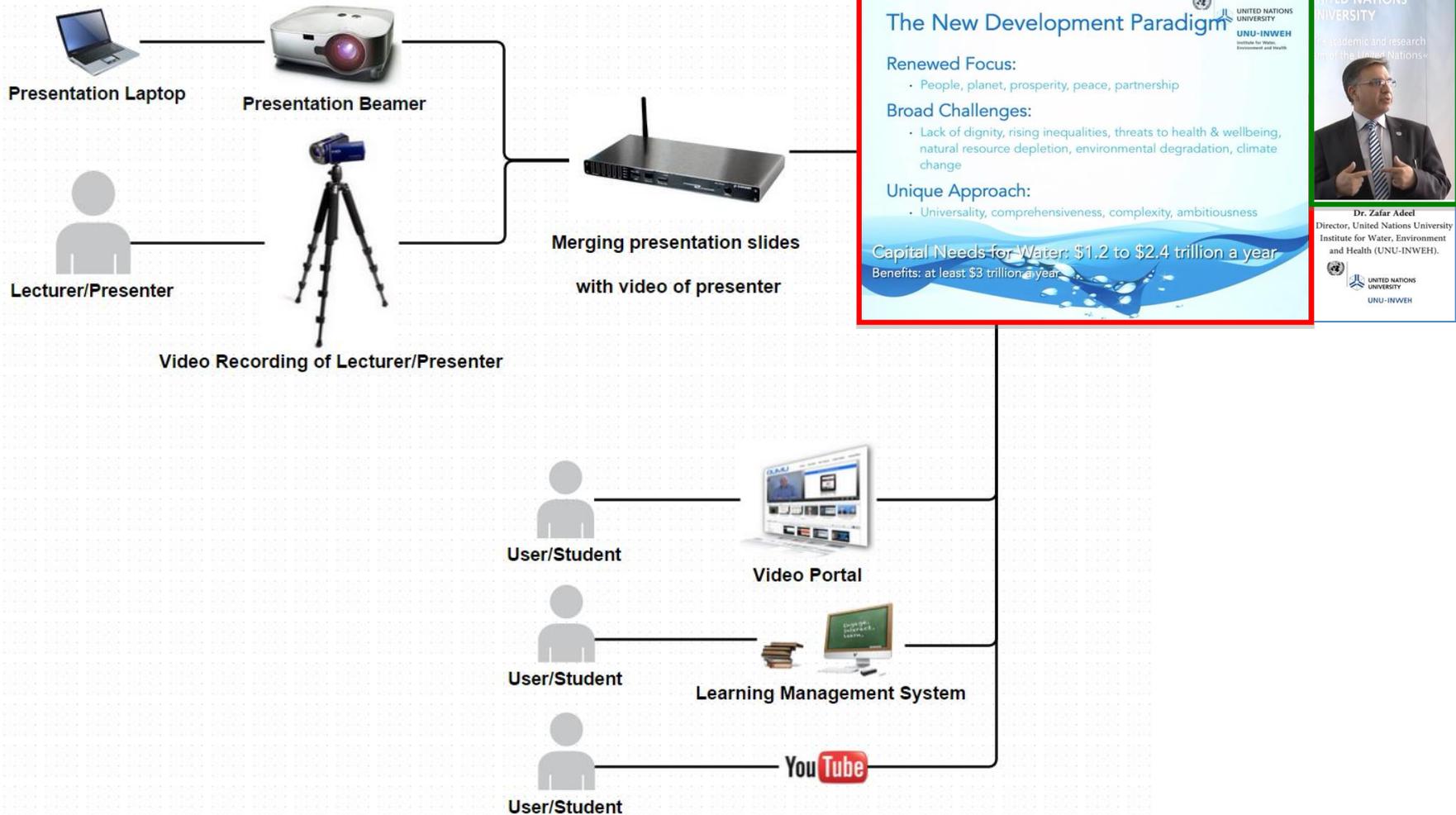
Lecture Capturing Systems



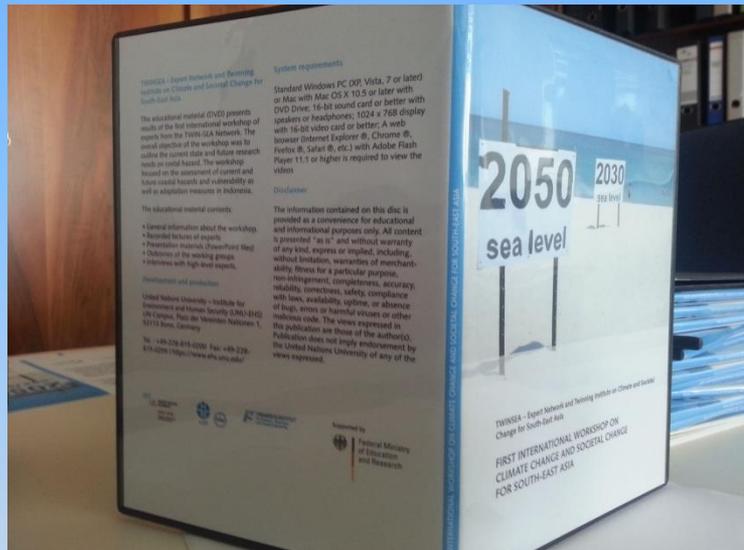
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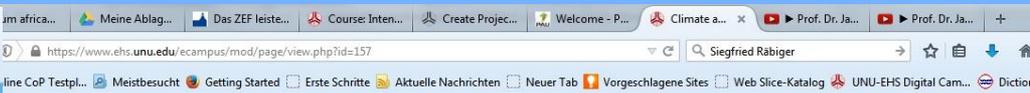
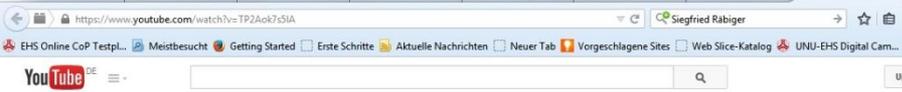
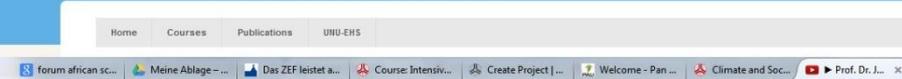
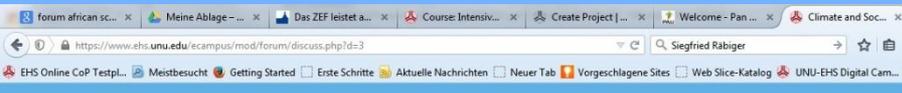


Educational resources for offline purposes



- Educational DVD with content (lectures, interview, pictures) from the workshop in Indonesia

Recorded lectures and videos



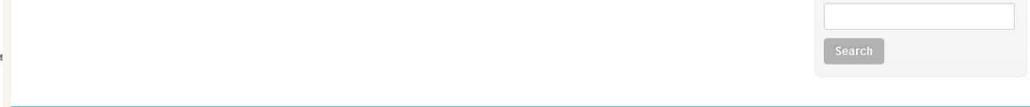
Observed and expected Climate Change impacts on various sectors in the coastal areas

by Dr. Budi Suhari, DEA / BKMG



Download: Presentation by Budi Suhari

Last modified: Thursday, 24 July 2014, 11:33 AM



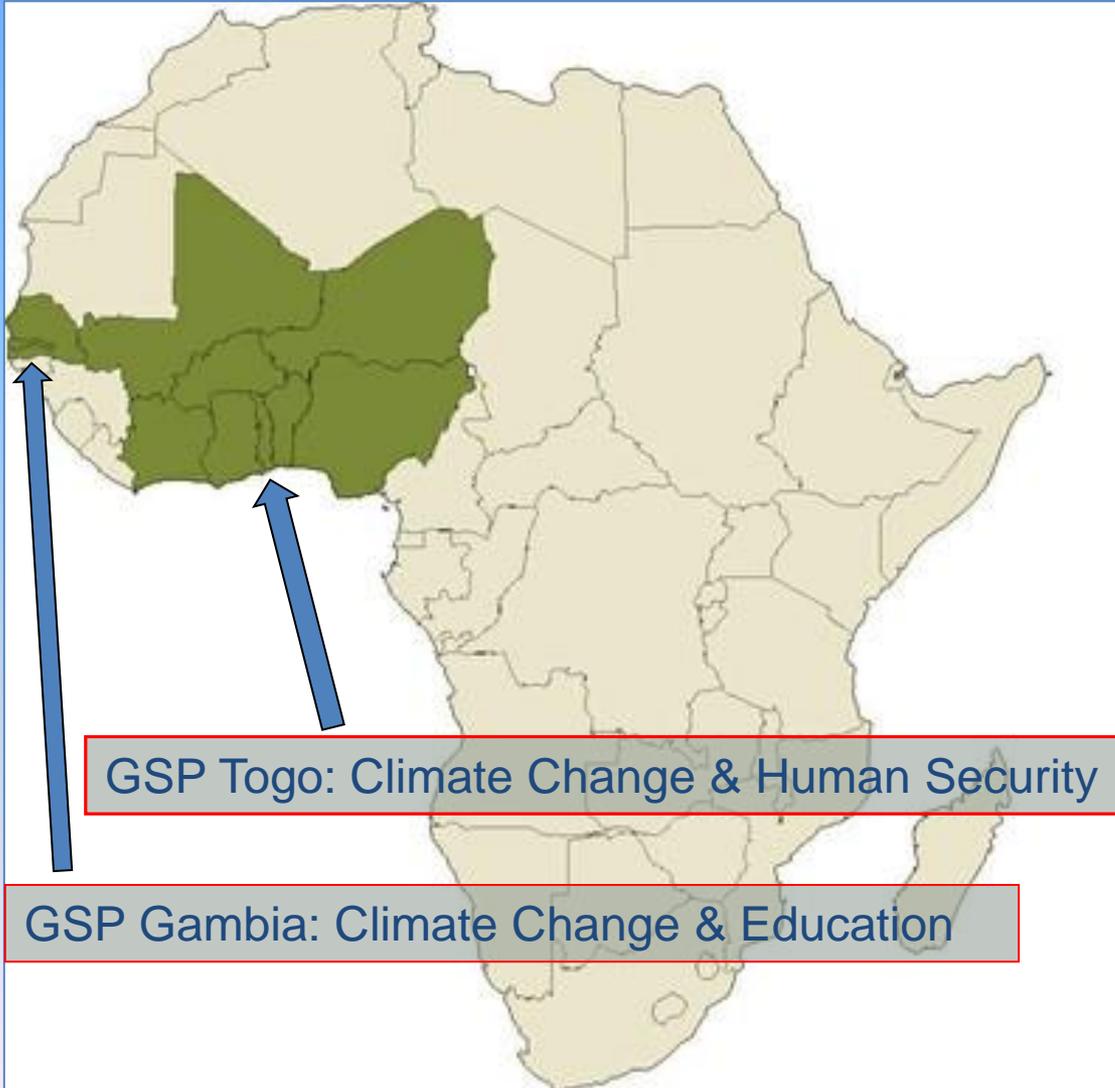
- social media channel (youtube)
- Virtual space of the project

West African Science Service Center on Climate Change and Adapted Land Use (WASCAL)



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Funded by the Federal Ministry of Education and Research (BMBF)



Major components of WASCAL:

1. **Competence Center**
2. Core Research Program
3. Graduate Studies Program

The Graduate Studies Program, involving the creation of ten graduate schools in West Africa, will contribute to the education of the next generation of African scientists and policy makers in the field of climate change and land management.

Hazard monitoring service development

WASCAL regional service:

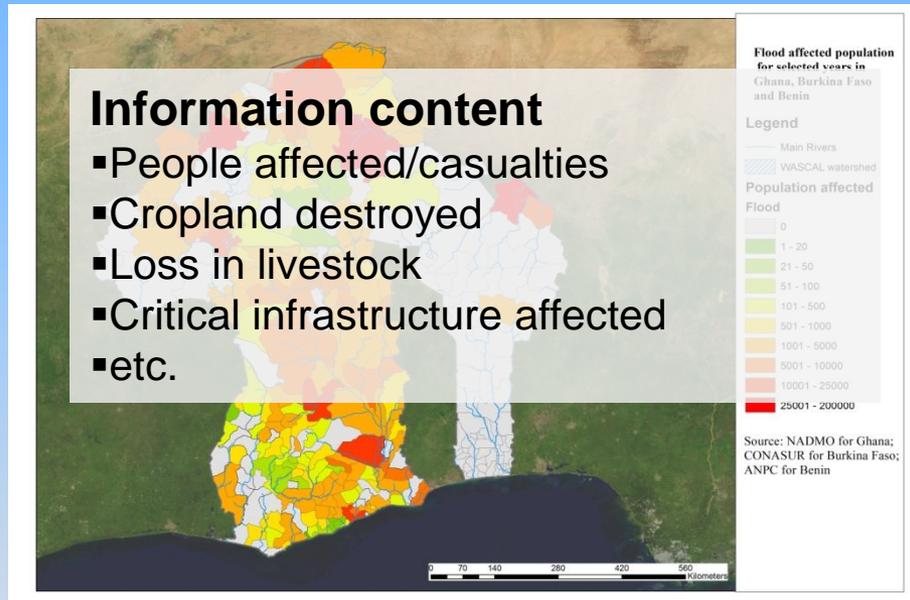
- Storing national hazard event data
- Accessing regional hazard event data
- Harmonized data collection (add new variables)
- Enable trans-national collaboration



Event Database Table	
ID:	
Event No:	Frequency:
Event Year:	Affected Area (km ²):
Date begin:	Communities:
Date end:	Households:
Country:	Number of deaths:
Region:	No_male:
District:	No_female:
Dist_ID:	No_children:
Commune_BF:	Number of people affected:
DisMain_Type:	No_male affected:
DisSub_Type:	No_female affected:
DisSub-sub Type:	No_children affected:
DisNo (EM-DAT):	Number of livestock killed:
GLIDENumber:	Cropland destroyed (Ha):
Dartmouth Register_annual DFC:	Crop type:
Sources:	Forest land (Ha):
Disaster Main Type:	Value_crops (USD):
Main Cause:	Value_livestock (USD):
	Value_housing (USD):
	Value_pers effects (USD):
	Value_public infras (USD):
	Intangible damage:
	Spatial extent:

Perspective

- Addressing DRM agencies of all WASCAL member states

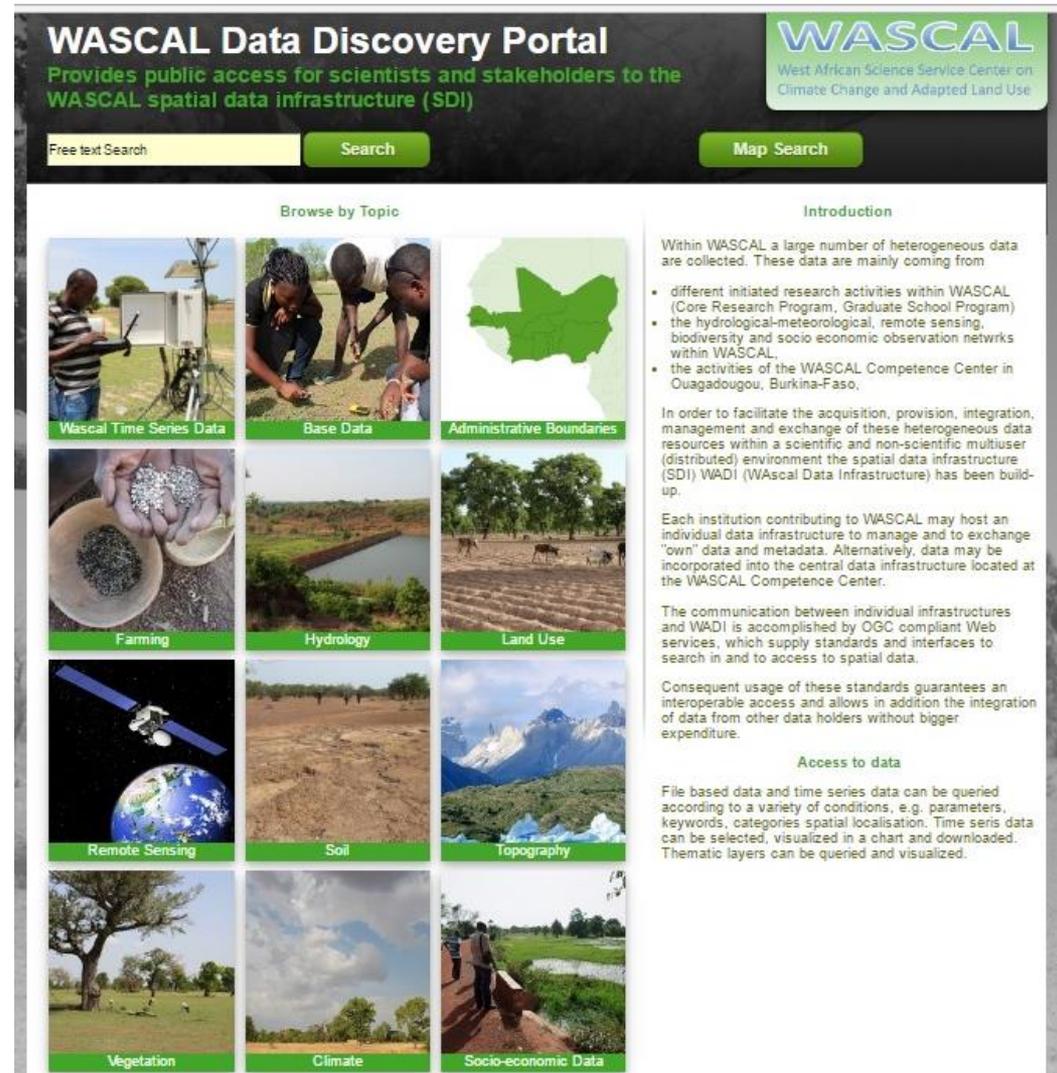


Disaster risk management (DRM) agencies:

- Provision of hazard event data for risk assessment research

Topics

- Remote Sensing
- Climate
- Time Series Data
- Socio/economic Data
- Farming
- Vegetation
- Land Use
- Hydrology
- Vegetation
- Soil
- Topography



WASCAL Data Discovery Portal
Provides public access for scientists and stakeholders to the WASCAL spatial data infrastructure (SDI)

Free text Search Search Map Search

Browse by Topic

- Wascal Time Series Data
- Base Data
- Administrative Boundaries
- Farming
- Hydrology
- Land Use
- Remote Sensing
- Soil
- Topography
- Vegetation
- Climate
- Socio-economic Data

Introduction

Within WASCAL a large number of heterogeneous data are collected. These data are mainly coming from

- different initiated research activities within WASCAL (Core Research Program, Graduate School Program)
- the hydrological-meteorological, remote sensing, biodiversity and socio economic observation networks within WASCAL.
- the activities of the WASCAL Competence Center in Ouagadougou, Burkina-Faso.

In order to facilitate the acquisition, provision, integration, management and exchange of these heterogeneous data resources within a scientific and non-scientific multiuser (distributed) environment the spatial data infrastructure (SDI) WADI (WAscAl Data Infrastructure) has been build-up.

Each institution contributing to WASCAL may host an individual data infrastructure to manage and to exchange "own" data and metadata. Alternatively, data may be incorporated into the central data infrastructure located at the WASCAL Competence Center.

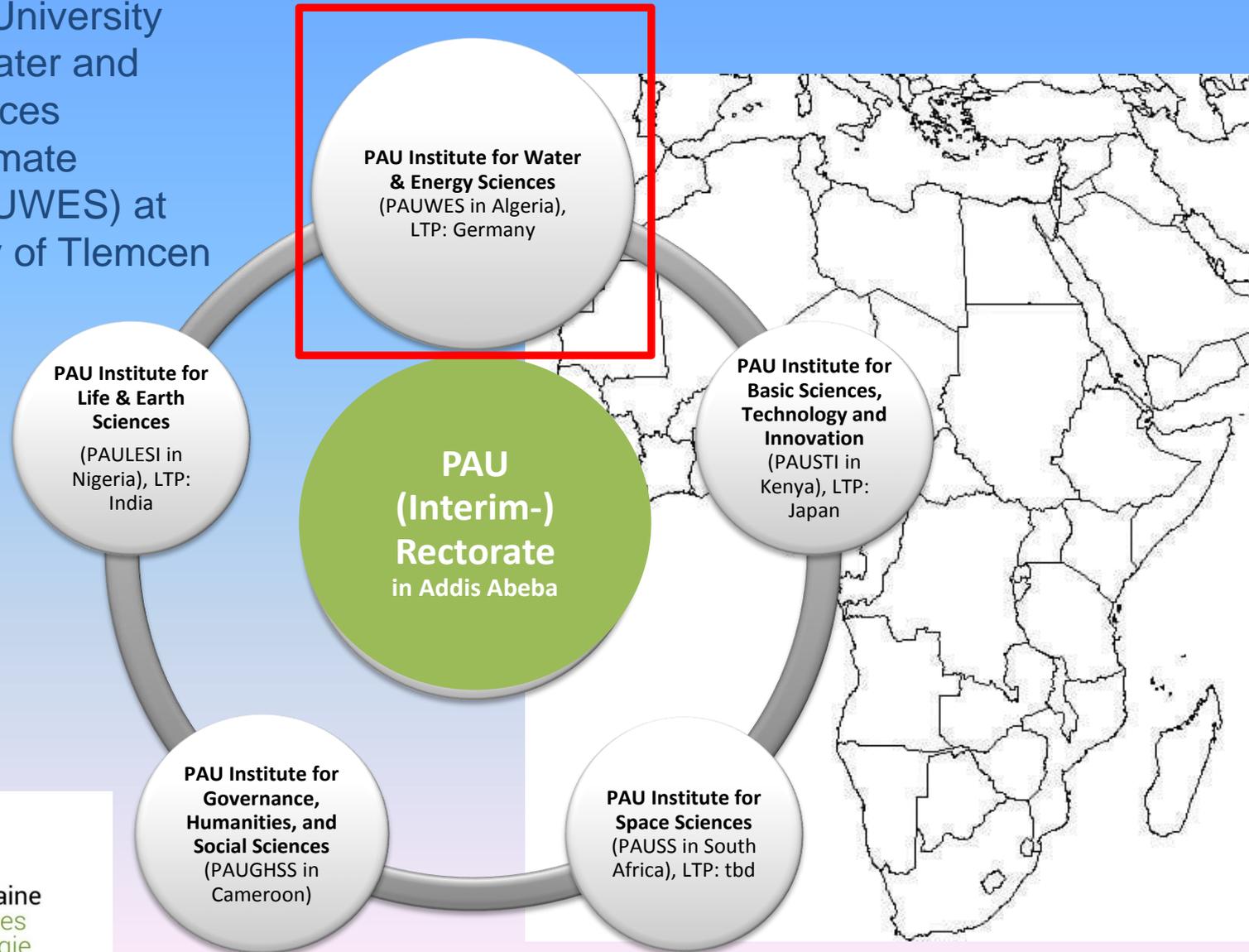
The communication between individual infrastructures and WADI is accomplished by OGC compliant Web services, which supply standards and interfaces to search in and to access to spatial data.

Consequent usage of these standards guarantees an interoperable access and allows in addition the integration of data from other data holders without bigger expenditure.

Access to data

File based data and time series data can be queried according to a variety of conditions, e.g. parameters, keywords, categories spatial localisation. Time series data can be selected, visualized in a chart and downloaded. Thematic layers can be queried and visualized.

- Pan African University Institute of Water and Energy Sciences (including Climate Change) (PAUWES) at the University of Tlemcen in Algeria



Research Questions

Uptake of data and information

- How to collect, manage and share data with regards to energy, water and climate change nexus (localized data, smart data, Internet of Thing, Mobile Data, data and knowledge management platform, etc.)
- What are the socio/economic benefits of data
- What level of certainty of data?
- Risk analysis related to data
- Etc.



Federal Ministry
of Education
and Research



Université PanAfricaine
l'Institut des Sciences
de l'Eau et de l'Energie

For further information



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“Education is the most powerful weapon which you can use to change the world.”

Nelson Mandela