Knowledge Management Tools Needs and Practice: Experience from UNU-EHS
WISER Knowledge Management Workshop
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EduSphere
Higher Education & Capacity Development
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
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.
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)
Design and Development of eLearning Resources/Courses

1. Scientific Content
   - PPT
   - Book
   - Clico
   - MOVE
   - Where the Rain Falls

2. Instructional Design
   - eDidactic
   - ICT

3. eLearning resources
   - Content Package
   - Open Standard Conform
   - SCORM 2004

4. Context of Use
   - Projects
   - Block Courses
   - Summer Academy
   - Master
   - Shared Repository
   - eSeminar
   - ...
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.
Design and Development of eLearning Resources/Courses

10/20/2016

Dr. Erick G. Tambo
Digital environment for online activities

- 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

- 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 5, which is to “ensure availability and sustainable management of water and sanitation for all.”

Implemented by:

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

- **Stakeholders**

  - Companies Startups
  - NGOs, Think Tanks
  - Experts Policy makers
  - Researchers
  - International Partners
  - Students Alumni
  - Association Representatives

- **Get in touch with stakeholders and explore new collaboration potentials**

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

- **Networking and Interaction**

- **Companies and Job Database**

- **Online Events / Webinars**

- **Knowledge-sharing and Discussion**

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

- **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**
PAUWES Online Community of Practice Platform

Groups (public and private)
- Discussions, File sharing, Events planning and management, Poll, Members overview, Etc.

[Image of website interface with groups and categories]
PAUWES Online Community of Practice Platform

- Social Library: participative approach, multimedia content (print, audio, video, etc.), management of content (search, tags, etc.),
Lecture Capturing Systems

The New Development Paradigm

Renewed Focus:
- People, planet, prosperity, peace, partnership

Broad Challenges:
- Lack of dignity, rising inequalities, threats to health & wellbeing, natural resource depletion, environmental degradation, climate change

Unique Approach:
- Universality, comprehensiveness, complexity, ambition

Capital Needs for Water: $1.2 to $2.4 trillion a year
Benefits: at least $5 trillion a year

Presentation Laptop

Presentation Beamer

Merging presentation slides with video of presenter

Video Recording of Lecturer/Presenter

User/Student

Video Portal

User/Student

Learning Management System

User/Student

User/Student

YouTube
Educational resources for offline purposes

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

- social media channel (youtube)
- Virtual space of the project
Lecture Capturing Systems - Media Portal

- Videos are stored locally and can therefore be accessed without internet connection when the user is inside the campus intranet
- The portal stores videos of: lectures, presentations, conferences etc.
- Content is searchable by free-text and by categories
West African Science Service Center on Climate Change and Adapted Land Use (WASCAL)

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.

GSP Togo: Climate Change & Human Security
GSP Gambia: Climate Change & Education
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

Perspective
- Addressing DRM agencies of all WASCAL member states

Information content
- People affected/casualties
- Cropland destroyed
- Loss in livestock
- Critical infrastructure affected
- etc.

Disaster risk management (DRM) agencies:
- Provision of hazard event data for risk assessment research
WASCAL Data Discovery Portal

**Topics**
- Remote Sensing
- Climate
- Time Series Data
- Socio/economic Data
- Farming
- Vegetation
- Land Use
- Hydrology
- Vegetation
- Soil
- Topography
PAU Institutes, Host Countries and LTPs

- Pan African University Institute of Water and Energy Sciences (including Climate Change) (PAUWES) at the University of Tlemcen in Algeria
  - PAU Institute for Water & Energy Sciences (PAUWES in Algeria), LTP: Germany
  - PAU Institute for Life & Earth Sciences (PAULESI in Nigeria), LTP: India
  - PAU Institute for Basic Sciences, Technology and Innovation (PAUSTI in Kenya), LTP: Japan
  - PAU Institute for Governance, Humanities, and Social Sciences (PAUGHSS in Cameroon)
  - PAU Institute for Space Sciences (PAUSS in South Africa), LTP: tbd

PAU (Interim-) Rectorate in Addis Ababa
PAUWES Research Agenda

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.
For further information

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

Nelson Mandela