

Joint Research Centre (JRC)



IE - Institute for Energy

REU - Renewable Energy Unit

Ispra - Italy

<http://ie.jrc.ec.europa.eu/>

http://re.jrc.ec.europa.eu/esti/index_en.htm

<http://re.jrc.ec.europa.eu/refsys/>

Project: Scientific and Technical Support to Sustainable Energy Development in Africa: Rural Electrification, Renewable Energy and Communication

Funded by: European Commission,
EuropeAid Co-operation Office

Implementing body: European Commission - Joint Research Centre,
Institute for Energy,
Renewable Energy Unit (REU)

Starting date: August 2009

Duration: 3 years



- Overall objective: to contribute to understand the potential for renewable energy options in Africa for increased access to electrification in rural areas.
- Project's purpose: to develop a common African scientific approach towards evaluating rural electrification methodologies.

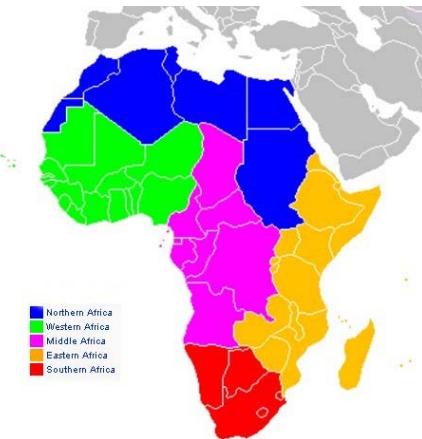
- The main activities are the following:

1. Capacity building of African researchers/students.



European Solar Test Installation Laboratory

2. Launch of the web-based African Renewable Energy Technology Platform (AFRETEP). This platform will consist of a network of African renewable energy research centres.

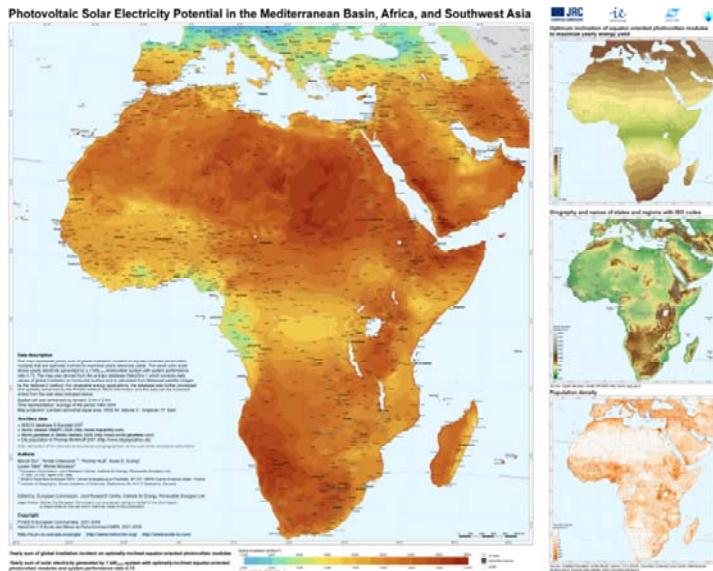


The selected renewable energy research centres will represent each region

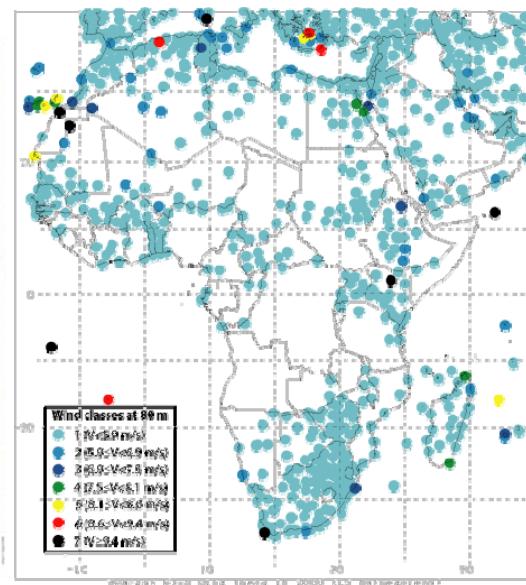
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3. High quality renewable energy resource information (solar, wind, hydro) in Africa and accessible via the AFRETEP website.

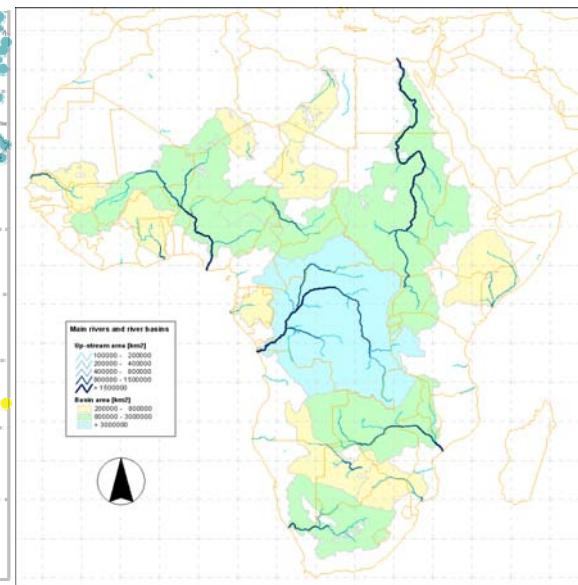
Solar resource



Wind resource



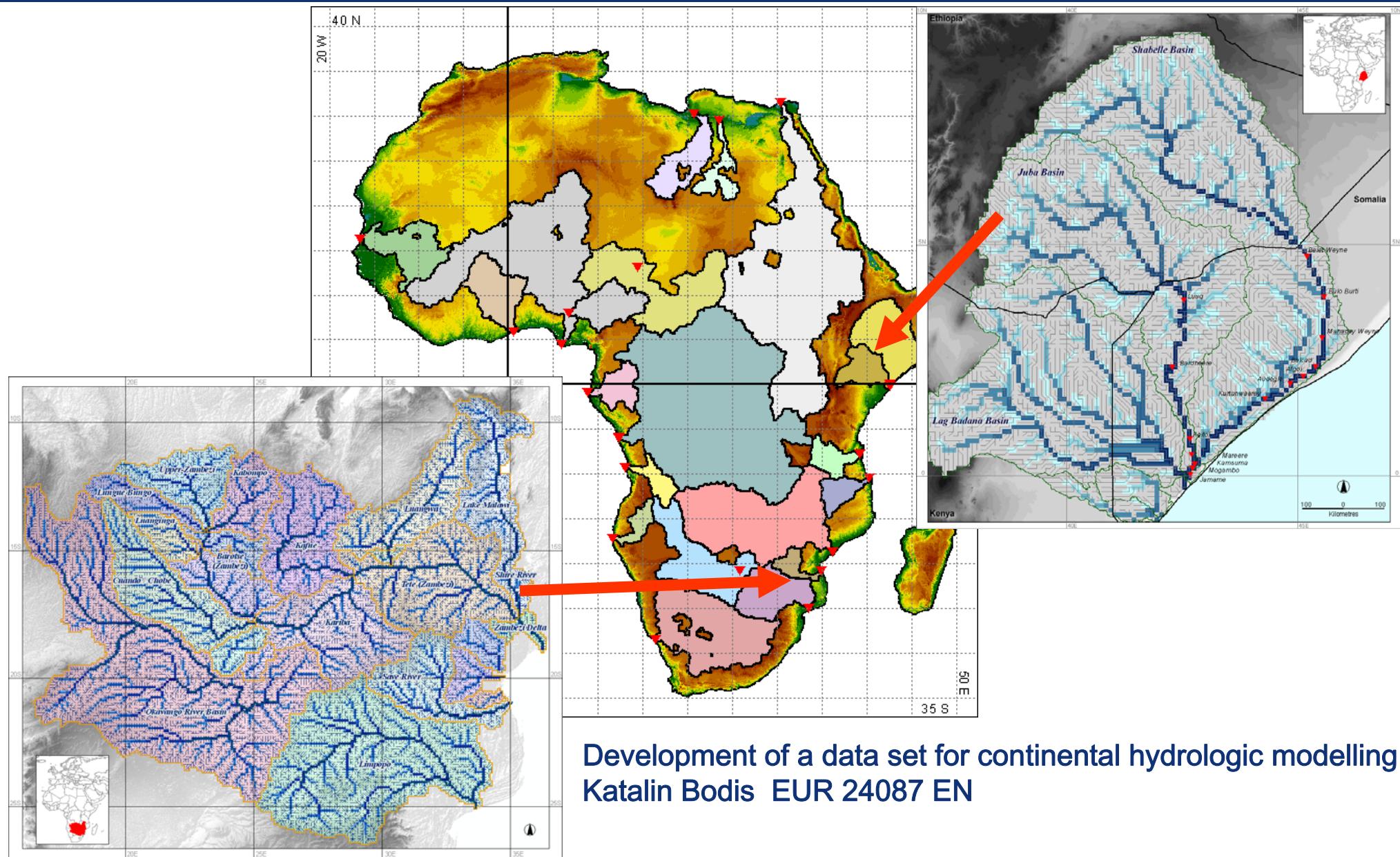
Hydro resource



Source: PVGIS, JRC IE REU
<http://re.jrc.ec.europa.eu/pvgis>

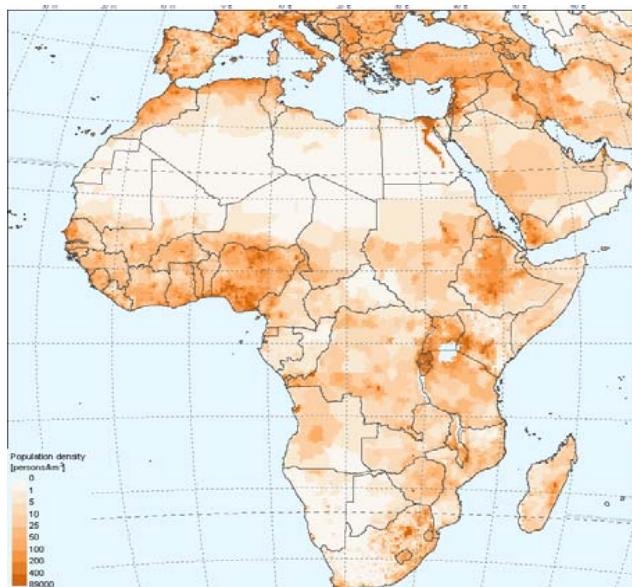
Source: Archer C. L.- Jacobson M. Z.
http://www.stanford.edu/group/efmh/winds/global_winds.html

Source: Derived data based on SRTM V4
<http://srtm.csi.cgiar.org/>

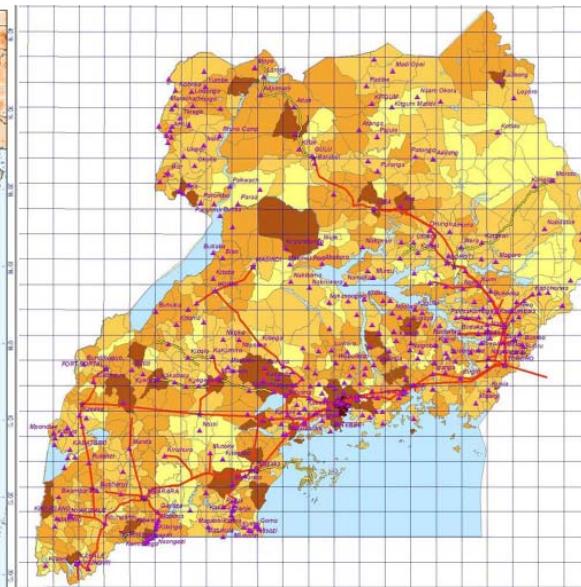


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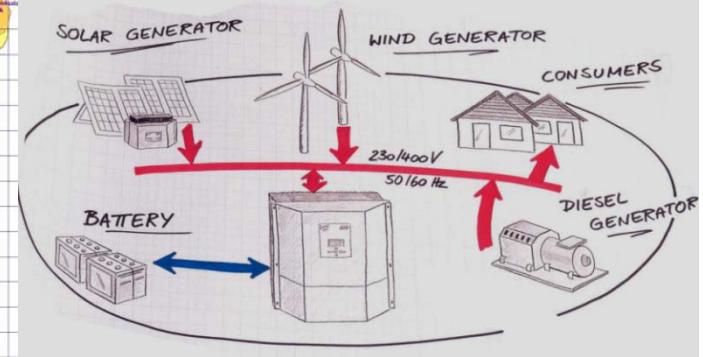
4. Develop a consolidated technical and socio-economic base for assessing rural electrification projects.
 - Define proper criteria for selection of grid extension vs. off-grid solutions.
 - Harmonization of existing tools and/or development of missing methodologies



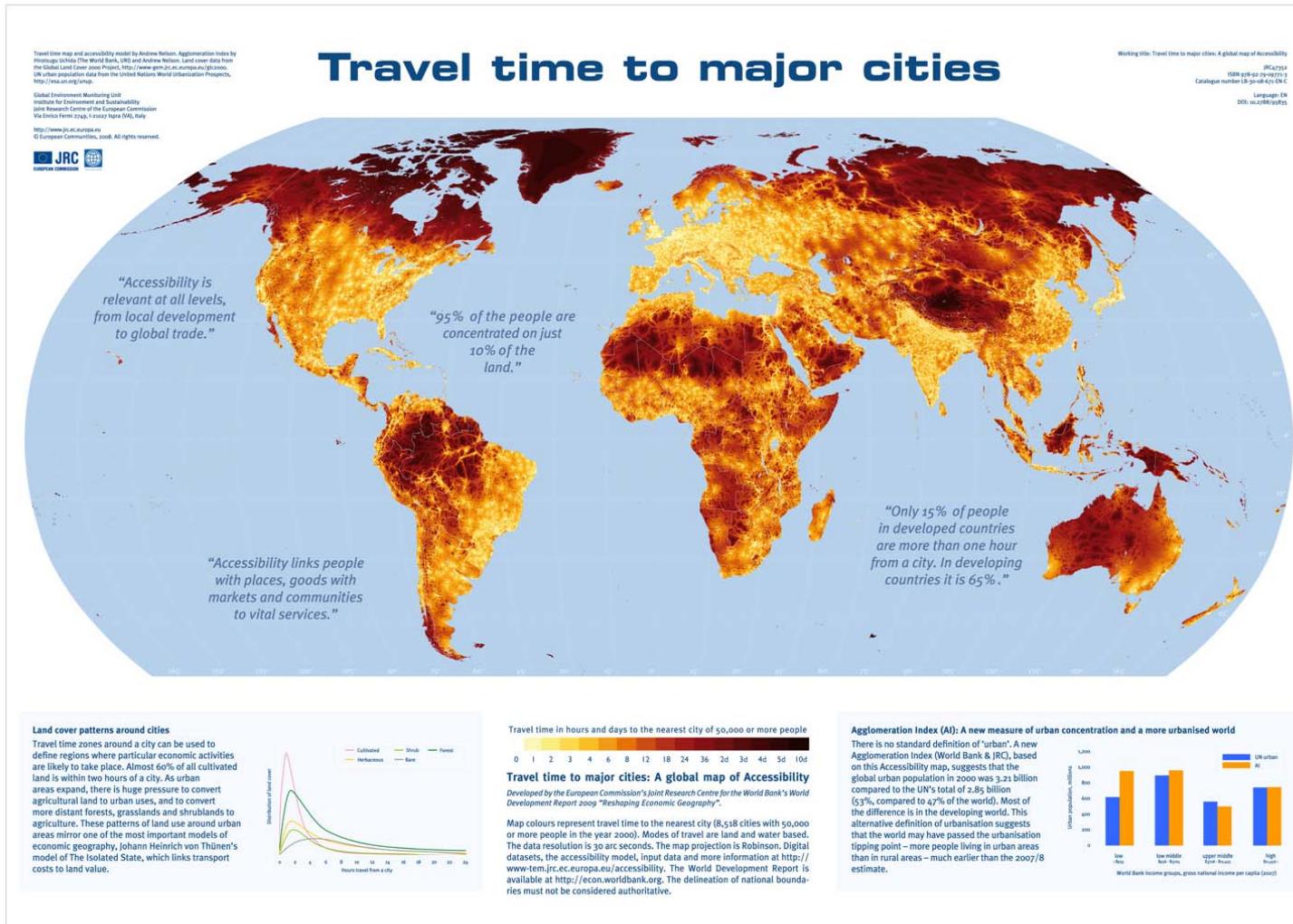
Population density (persons/km²)



Population density along the electricity grid



Example of hybrid system in isolated areas



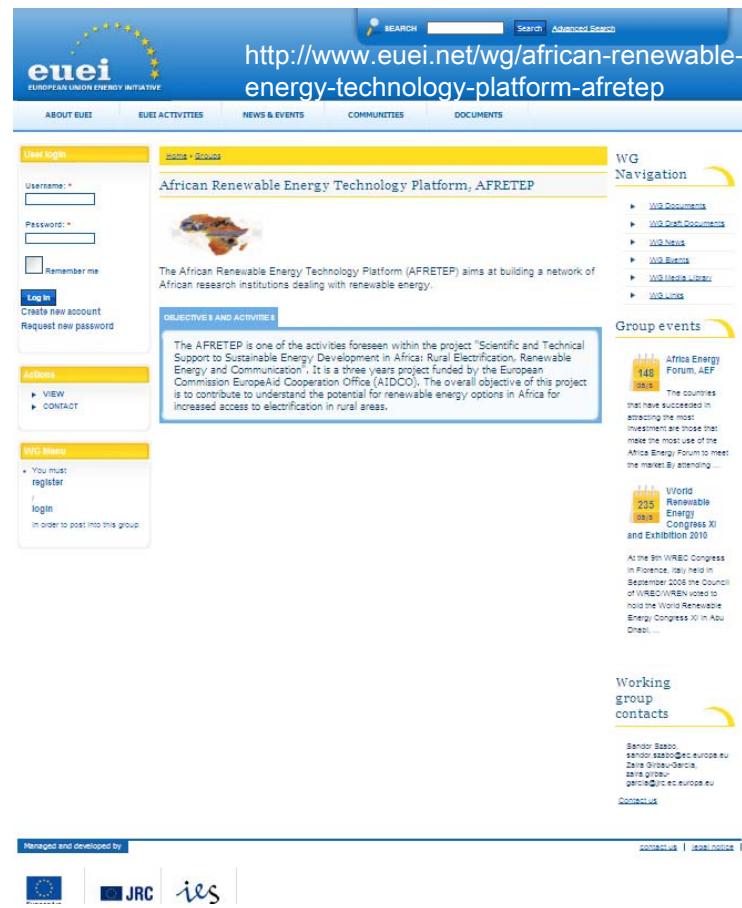
Information regarding the travel time to major cities can help us establish the diesel price for different locations. Thus, the furthest villages, would probably most benefit from renewable energy installations.

- The main activities are the following:

5. Provide a communication channel for decision and policy-makers and stakeholders. The AFRETEP web page will be accessible from the European Union Energy Initiative (EUEI) web site, www.euei.net.



The screenshot shows the homepage of the European Union Energy Initiative (EUEI) at www.euei.net. The header includes the EUEI logo and navigation links for About EUEI, EUEI Activities, News & Events, Communities, and Documents. The main content area features a 'News' section with a story about the Global Sustainable Biomass Fund, a 'In the focus' section with a story on the 2nd Call of ACP-EU Energy Facility, and a 'Events' section with a story about the AEEP High Level Meeting. There are also 'Useful links' and a 'CENTER' section with a search bar for related documents.



The screenshot shows the African Renewable Energy Technology Platform (AFRETEP) page on the EUEI website at <http://www.euei.net/wg/african-renewable-energy-technology-platform-afretep>. The page features a 'User login' section, a 'WG Navigation' sidebar with links to various documents and news, and a 'Group events' sidebar. The main content area describes the AFRETEP project, which aims to build a network of African research institutions dealing with renewable energy. It also includes a 'WG News' section and a 'Working group contacts' section at the bottom.