

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/>

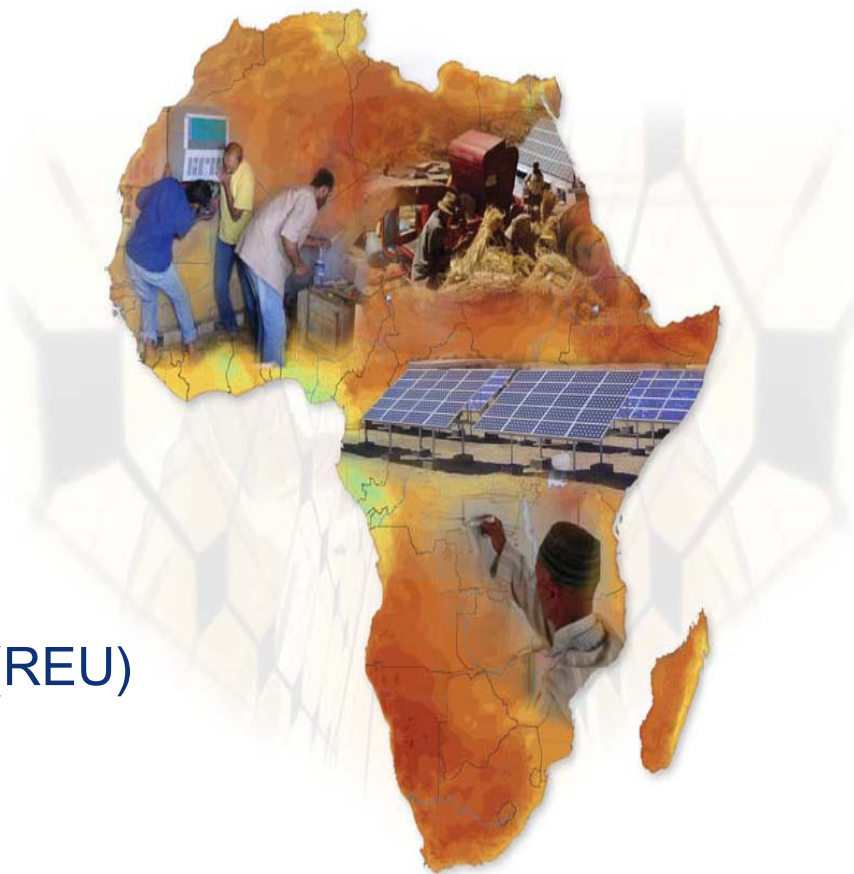
Project: Scientific and Technical Support to Sustainable Energy Development in Africa: Rural Electrification, Renewable Energy and Communication

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.

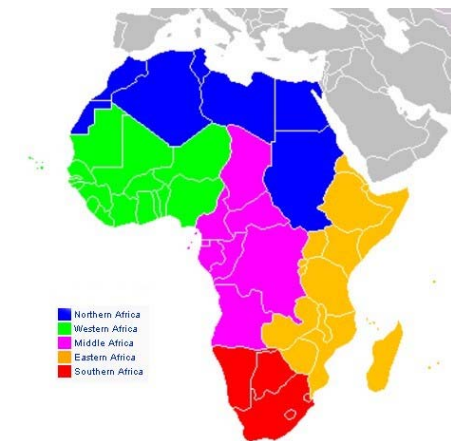
- The main activities are the following:

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.

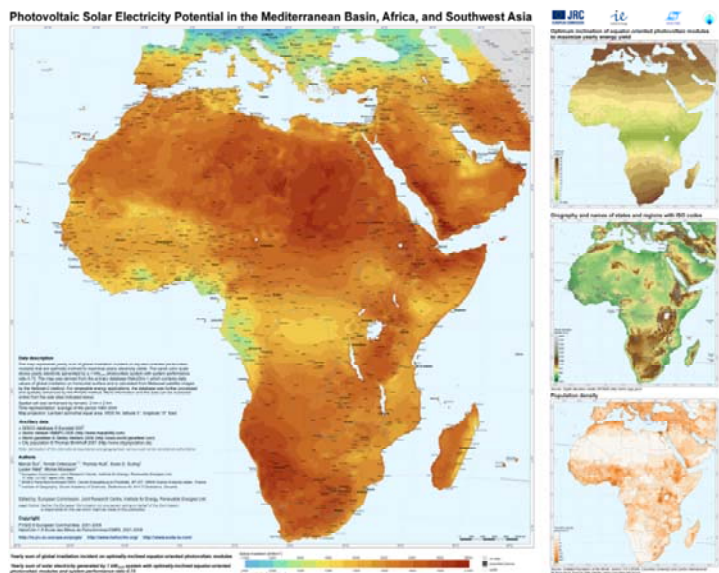


The selected renewable energy research centres will represent each region

• The main activities are the following:

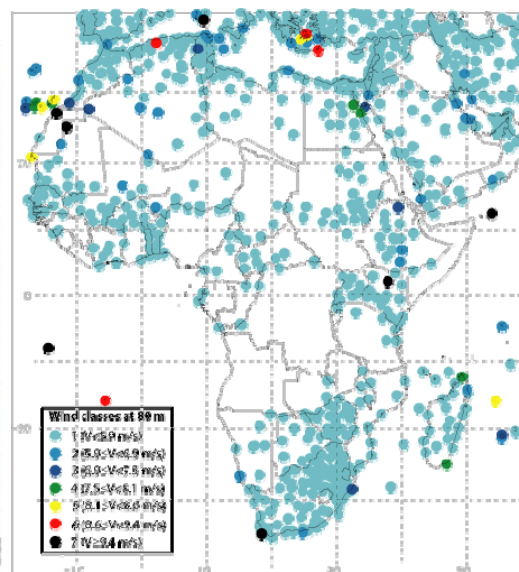
3. High quality renewable energy resource information (solar, wind, hydro) in Africa and accessible via the AFRETEP website.

Solar resource



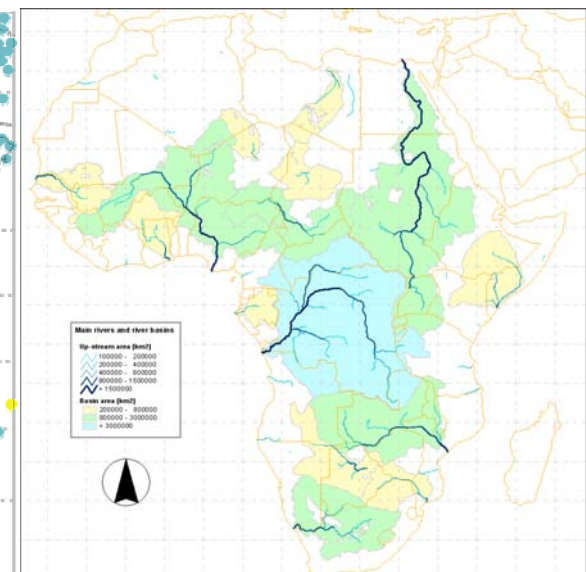
Source: PVGIS, JRC IE REU
<http://re.jrc.ec.europa.eu/pvgis>

Wind resource

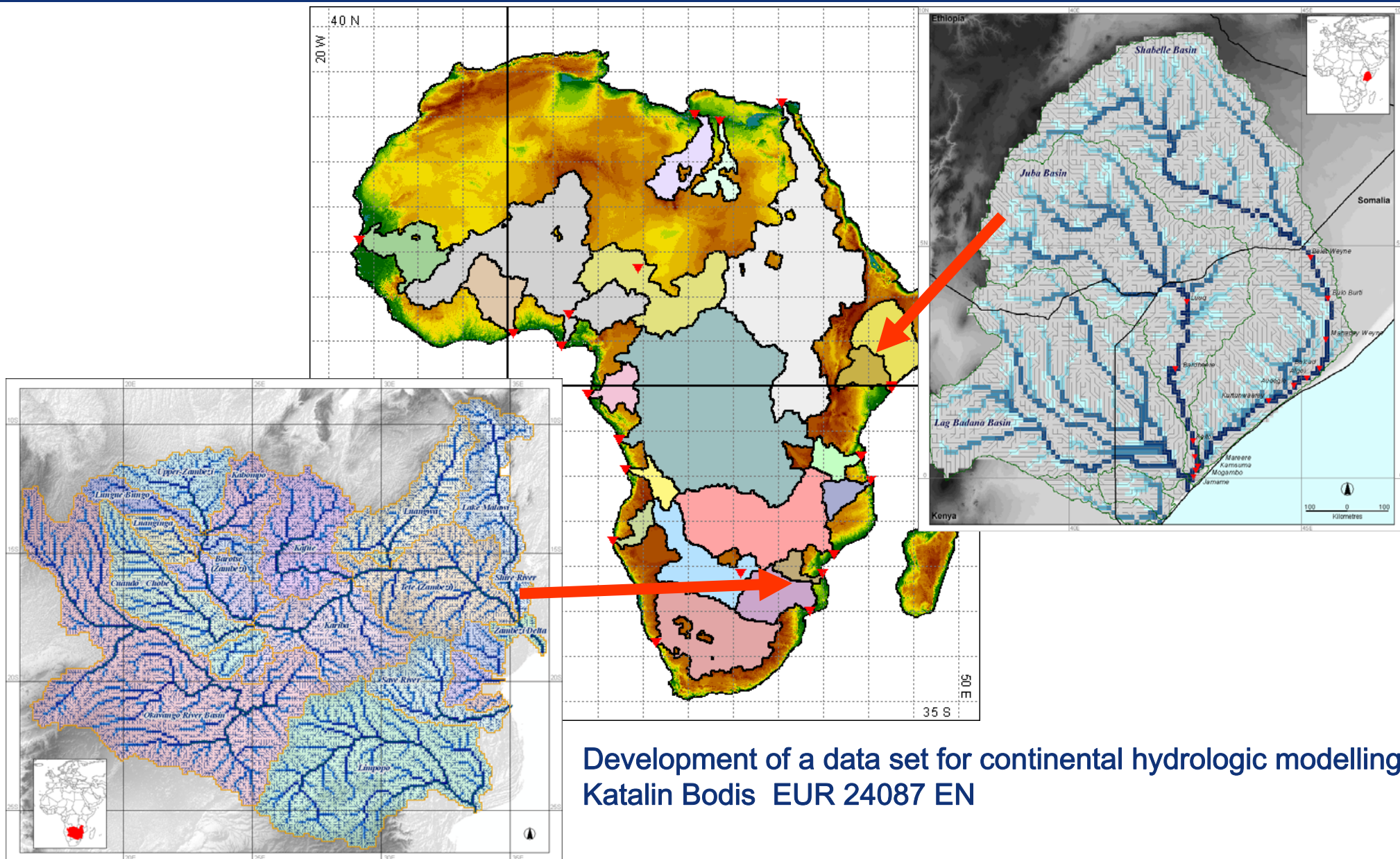


Source: Archer C. L.- Jacobson M. Z.
http://www.stanford.edu/group/efmh/winds/global_winds.html

Hydro resource



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

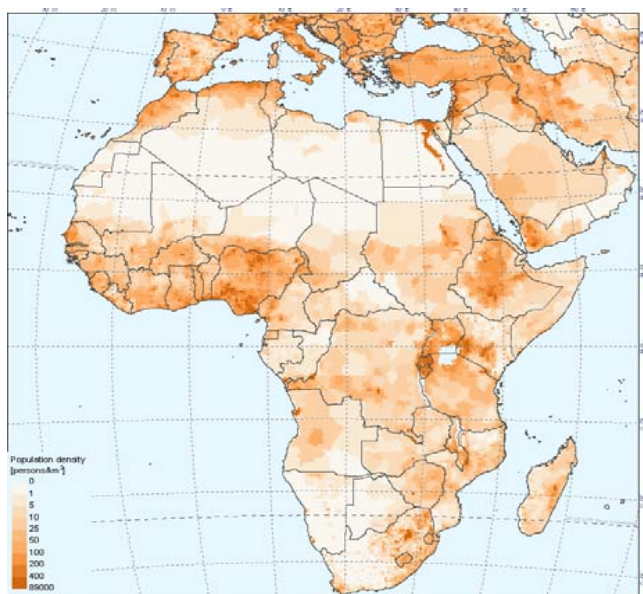


Development of a data set for continental hydrologic modelling
Katalin Bodis EUR 24087 EN

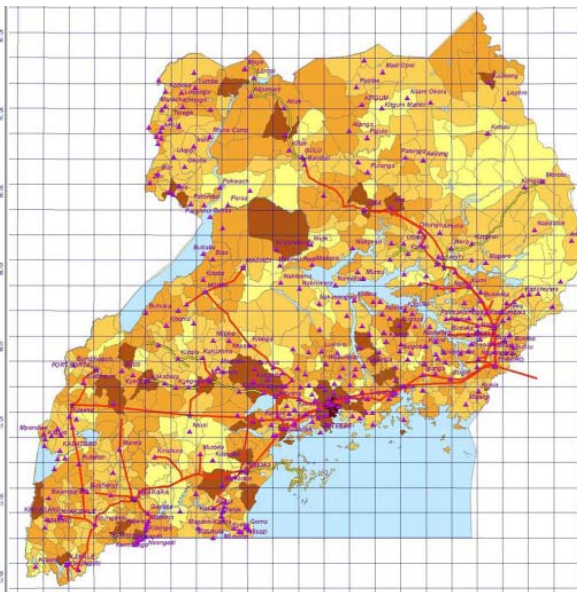
- The main activities are the following:

4. Develop a consolidated technical and socio-economic base for assessing rural electrification projects.

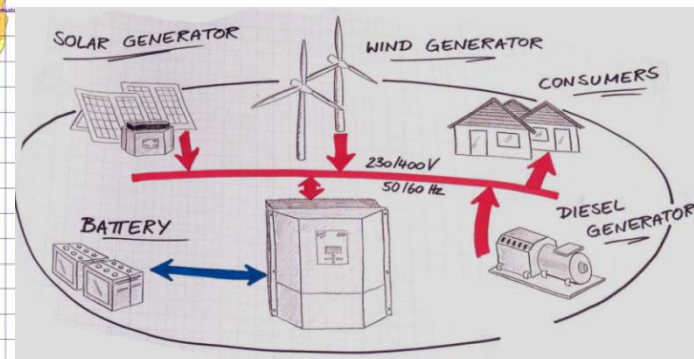
- Define proper criteria for selection of grid extension vs. off-grid solutions.
- Harmonization of existing tools and/or development of missing methodologies



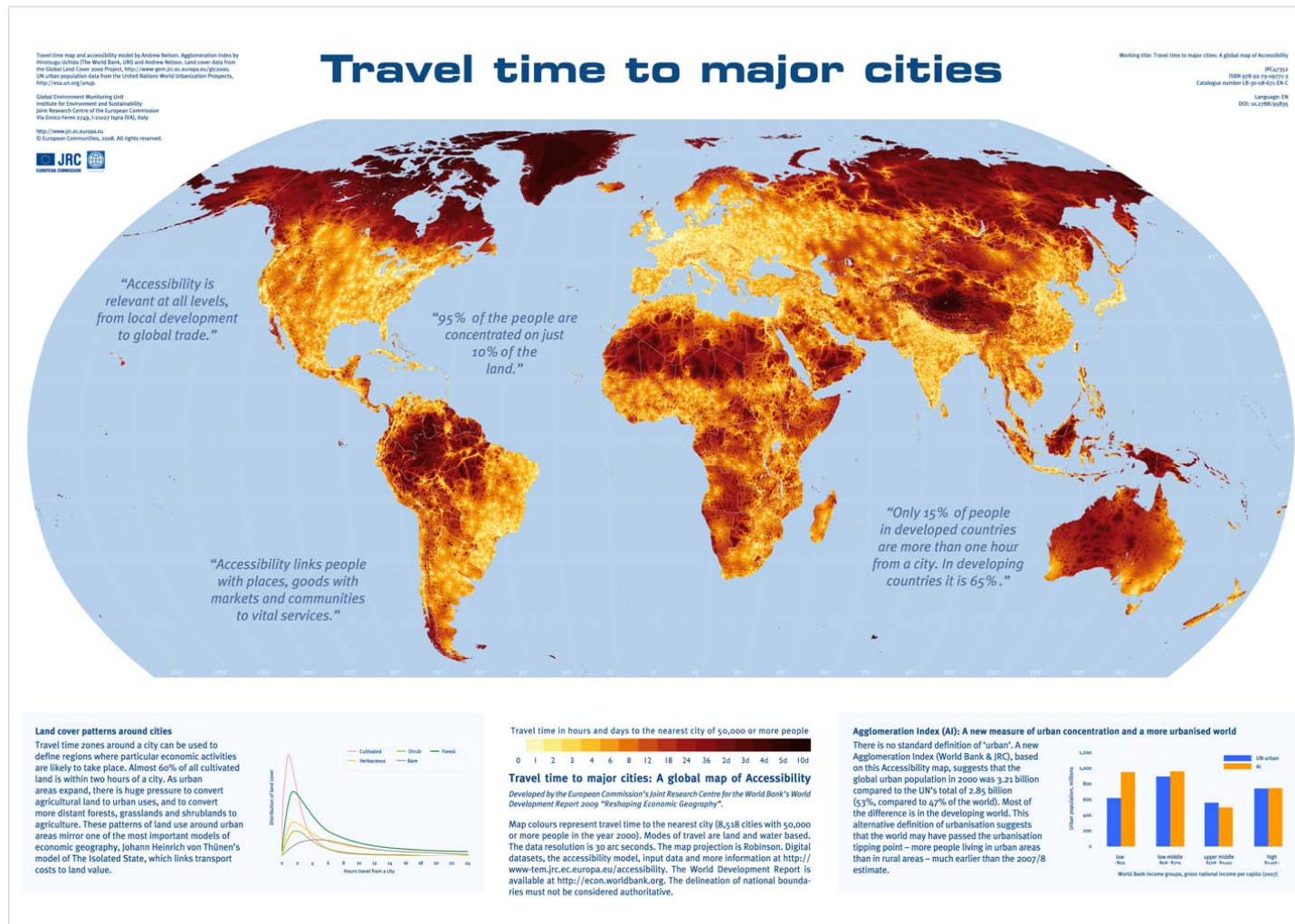
Population density (persons/km²)



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 EUEI website homepage. The header includes the EUEI logo, a search bar, and the URL www.euei.net. The main content area features a large banner for the "European Union Energy Initiative" with the text "contributes to provide the access to energy necessary for the achievement of the Millennium Development Goals." Below this, there are sections for "In the focus" and "Useful links". The "In the focus" section highlights "News on the 2nd Call of ACP-EU Energy Facility" and "Latest developments in the Africa-EU Energy Partnership". The "Useful links" section lists various partnerships and initiatives, including the Johannesburg Renewable Energy Coalition (JREC), Global Village Energy Partnership, and the Global Network on Energy for Sustainable Development (GNESD).



The screenshot shows the AFRETEP website page. The header includes the EUEI logo, a search bar, and the URL <http://www.euei.net/wg/african-renewable-energy-technology-platform-afretep>. The main content area features a large banner for the "African Renewable Energy Technology Platform, AFRETEP" with the text "The African Renewable Energy Technology Platform (AFRETEP) aims at building a network of African research institutions dealing with renewable energy." Below this, there are sections for "User login", "Actions", and "WG items". The "User login" section includes a form for username and password. The "Actions" section includes links for "VIEW" and "CONTACT". The "WG items" section includes a link for "register" and "login".