

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.

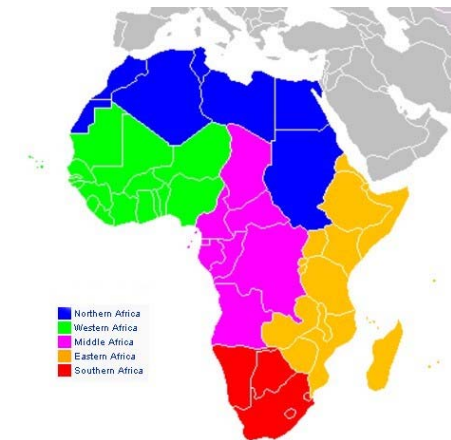
- The main activities are the following:

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.

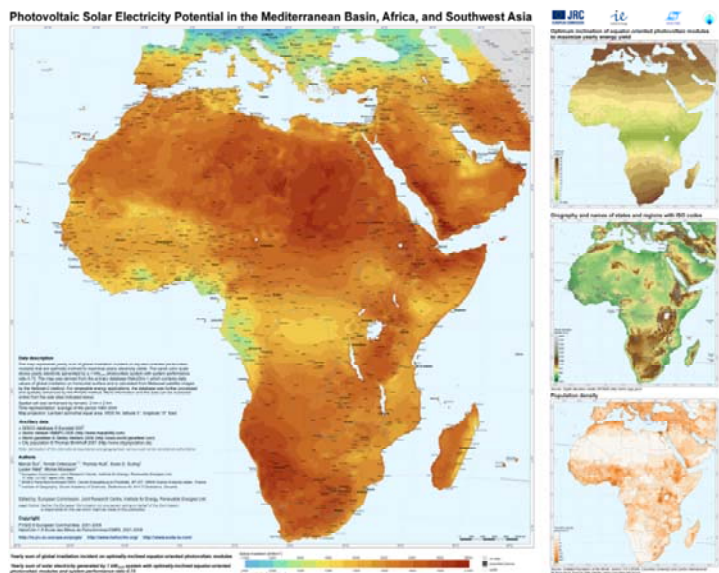


The selected renewable energy research centres will represent each region

• The main activities are the following:

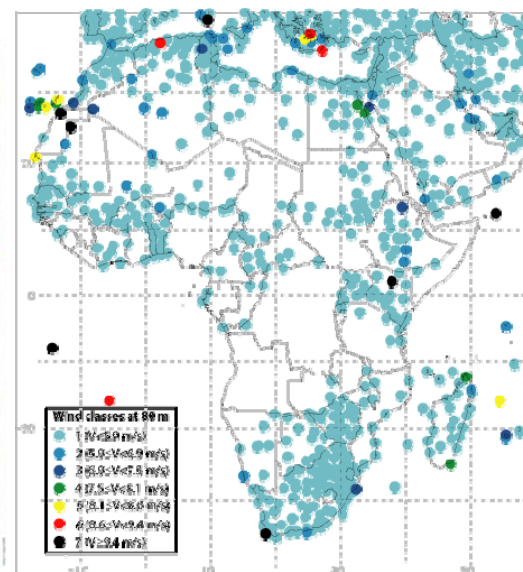
3. High quality renewable energy resource information (solar, wind, hydro) in Africa and accessible via the AFRETEP website.

Solar resource



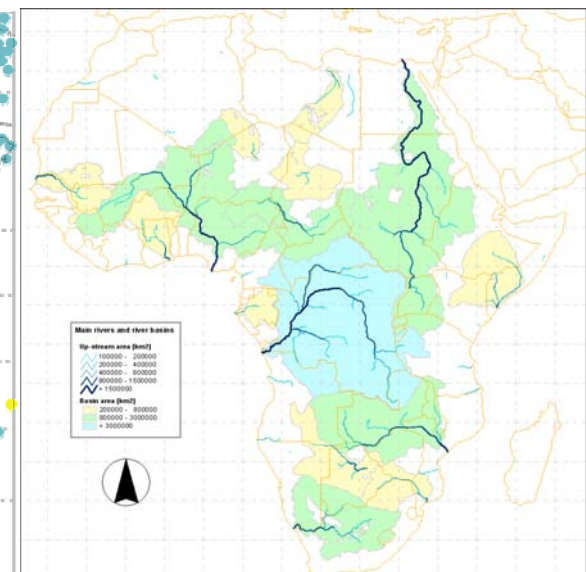
Source: PVGIS, JRC IE REU
<http://re.jrc.ec.europa.eu/pvgis>

Wind resource

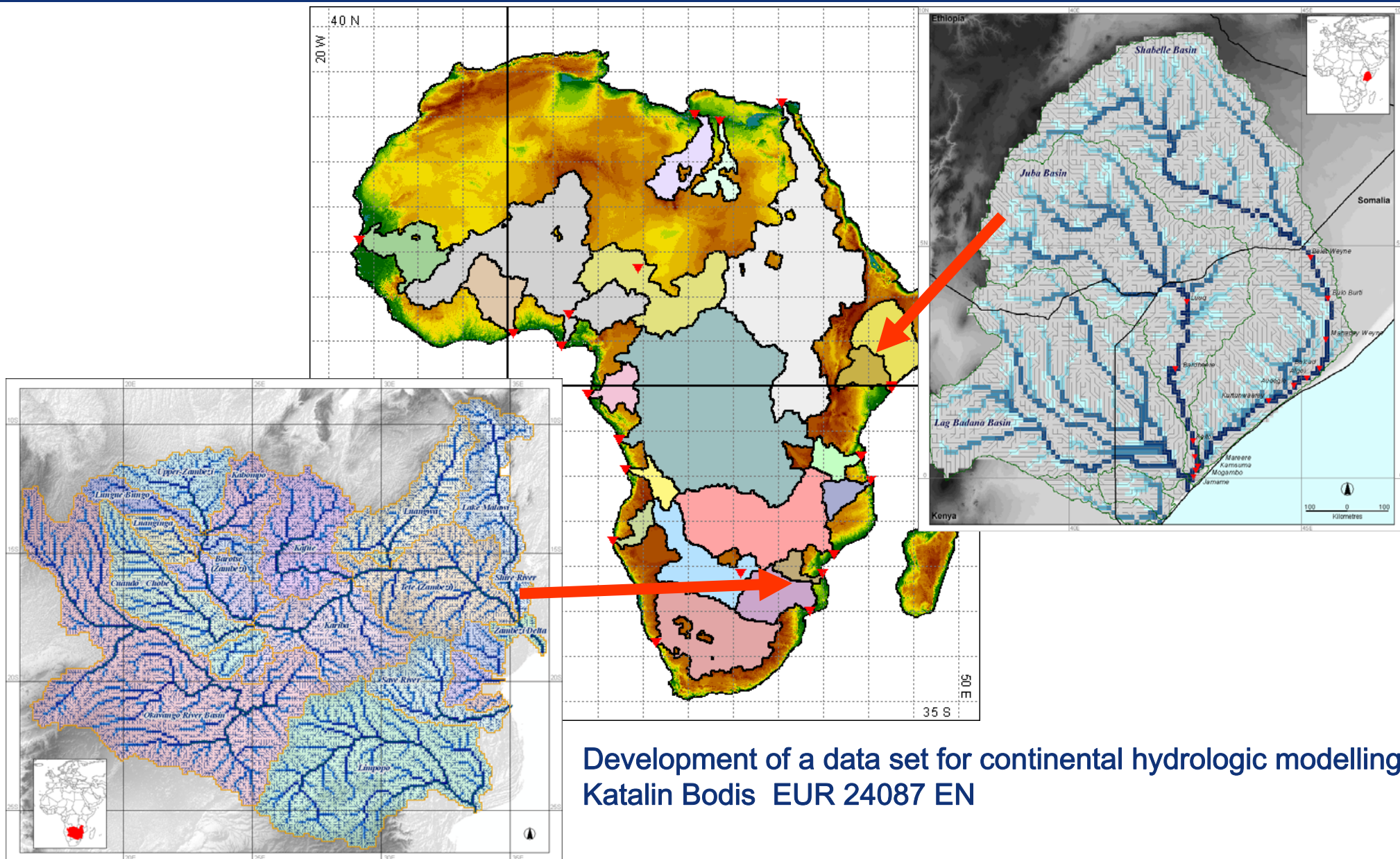


Source: Archer C. L.- Jacobson M. Z.
http://www.stanford.edu/group/efmh/winds/global_winds.html

Hydro resource

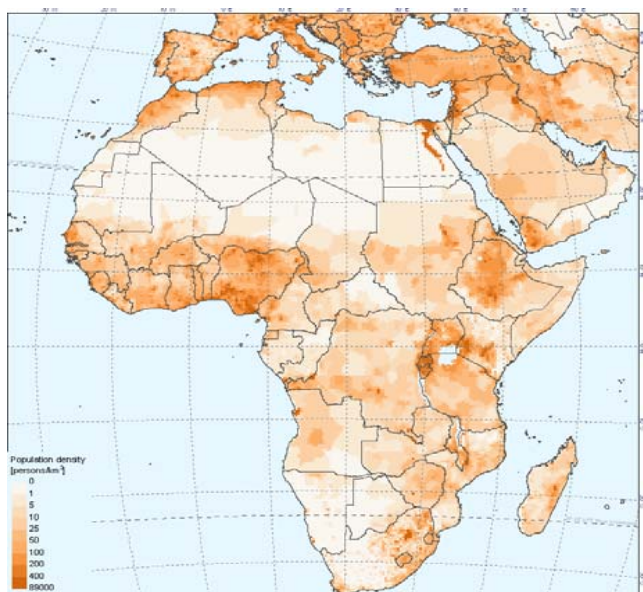


Source: Derived data based on SRTM V4
<http://srtm.csi.cgiar.org/>

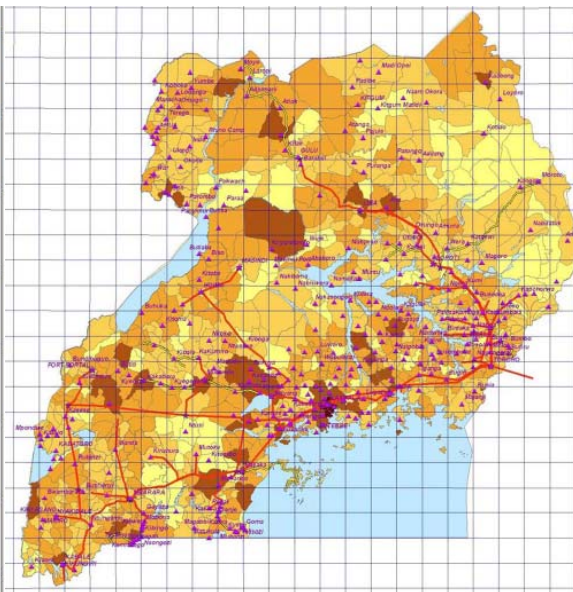


Development of a data set for continental hydrologic modelling
Katalin Bodis EUR 24087 EN

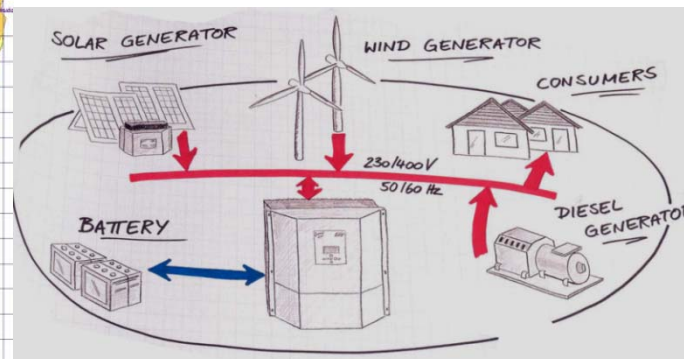
- The main activities are the following:
 4. Develop a consolidated technical and socio-economic base for assessing rural electrification projects.
 - Define proper criteria for selection of grid extension vs. off-grid solutions.
 - Harmonization of existing tools and/or development of missing methodologies



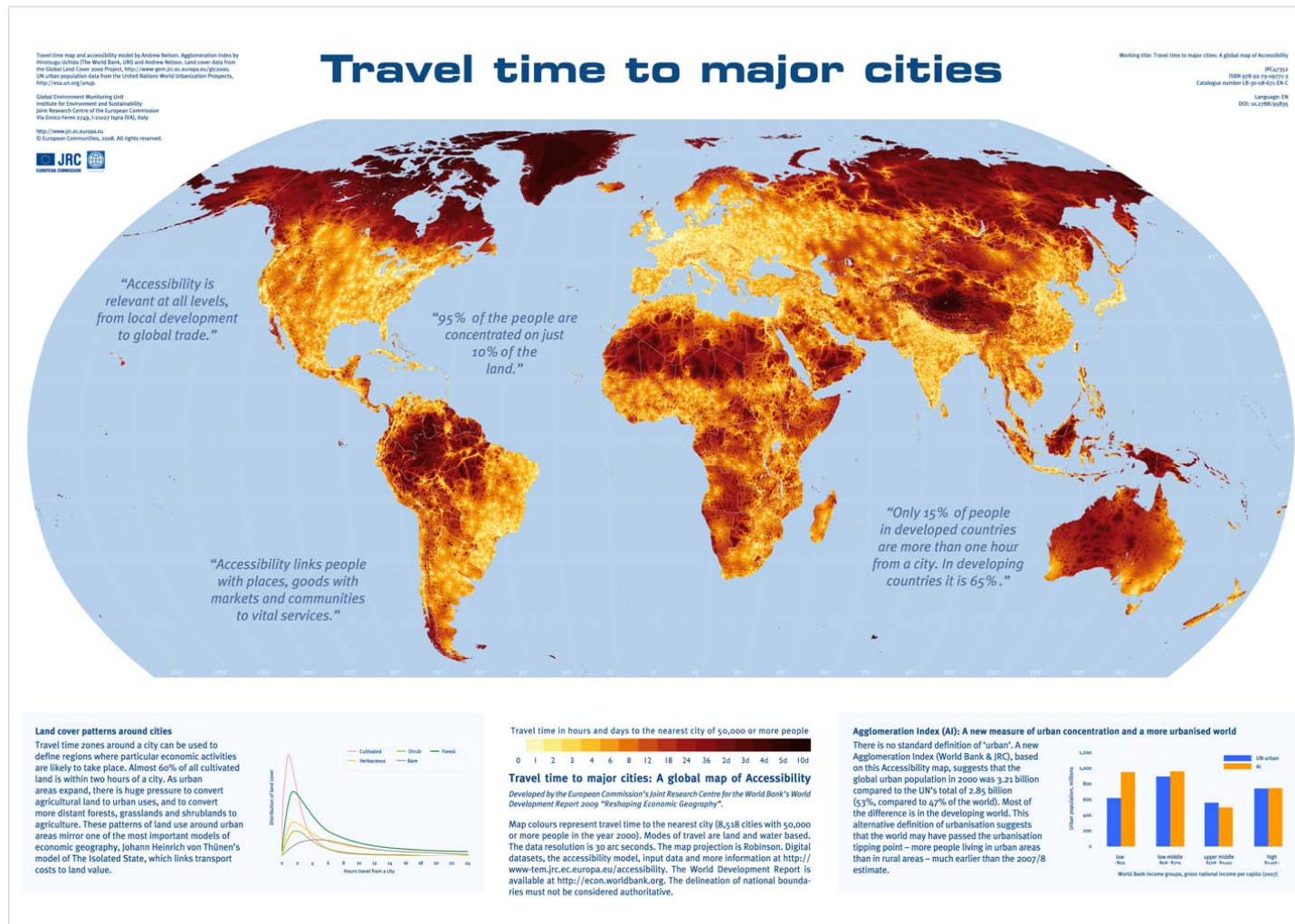
Population density (persons/km²)



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 homepage of the European Union Energy Initiative (EUEI) website. The header includes the EUEI logo, a search bar, and the URL www.euei.net. Navigation tabs for 'ABOUT EUEI', 'EUEI ACTIVITIES', 'NEWS & EVENTS', 'COMMUNITIES', and 'DOCUMENTS' are visible. 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' (highlighting the 2nd Call of the ACP-EU Energy Facility and latest developments in the Africa-EU Energy Partnership) and 'Useful links' (listing various energy partnerships and forums). A 'News' section on the right mentions the Global Sustainable Biomass Fund. The footer includes logos for the European Union, JRC, and IES.



The screenshot shows a specific page on the EUEI website, titled 'African Renewable Energy Technology Platform, AFRETEP'. The URL in the address bar is <http://www.euei.net/wg/african-renewable-energy-technology-platform-afretep>. The page features a 'User login' section with fields for 'Username' and 'Password', and a 'Log in' button. Below this is an 'Actions' section with 'VIEW' and 'CONTACT' links. The main content area describes the AFRETEP project, stating it aims to build a network of African research institutions dealing with renewable energy. It also mentions the project's objectives and activities. On the right, there is a 'WG Navigation' section with links to 'WG Documents', 'WG News', 'WG Events', 'WG Links', and 'WG News'. Below this is a 'Group events' section listing the 'Africa Energy Forum, AEF' and the 'World Renewable Energy Congress XI and Exhibition 2010'. The footer includes logos for the European Union, JRC, and IES.