Joint Research Centre (JRC)

IE - Institute for Energy

REU - Renewable Energy Unit

Ispra - Italy

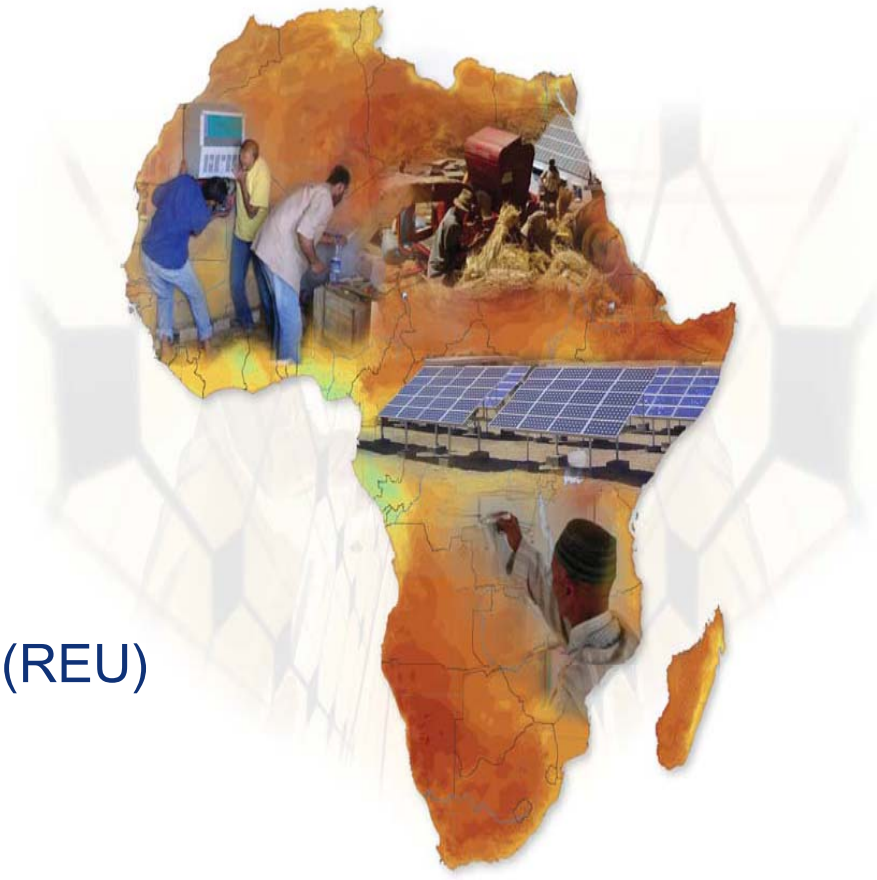
http://ie.jrc.ec.europa.eu/
http://re.jrc.ec.europa.eu/esti/index_en.htm
http://re.jrc.ec.europa.eu/refsys/

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.

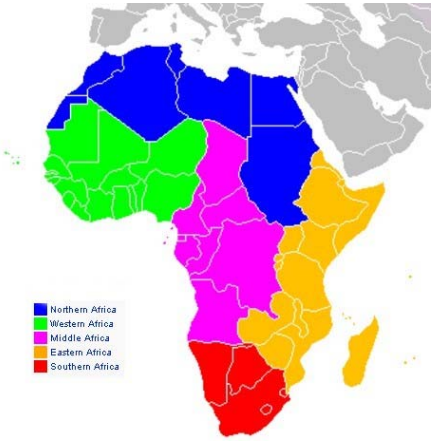
Project's purpose: to develop a common African scientific approach towards evaluating rural electrification methodologies.

- The main activities are the following:

1. Capacity building of African researchers/students.

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.

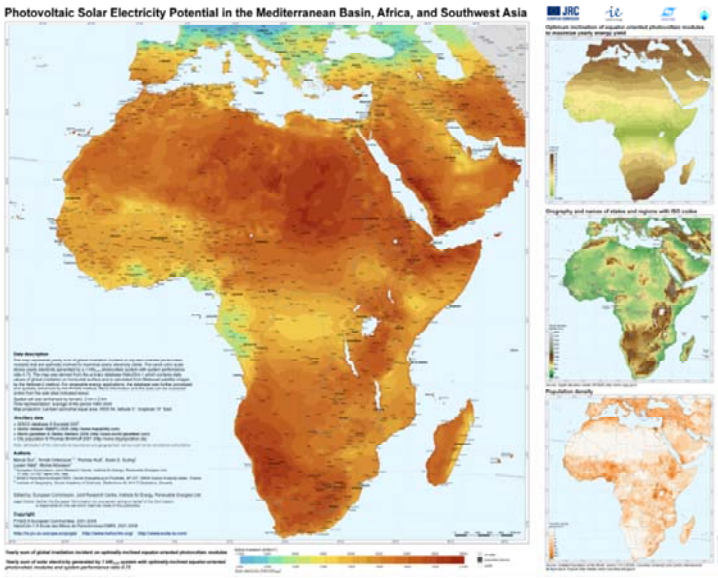
European Solar Test Installation Laboratory



The selected renewable energy research centres will represent each region

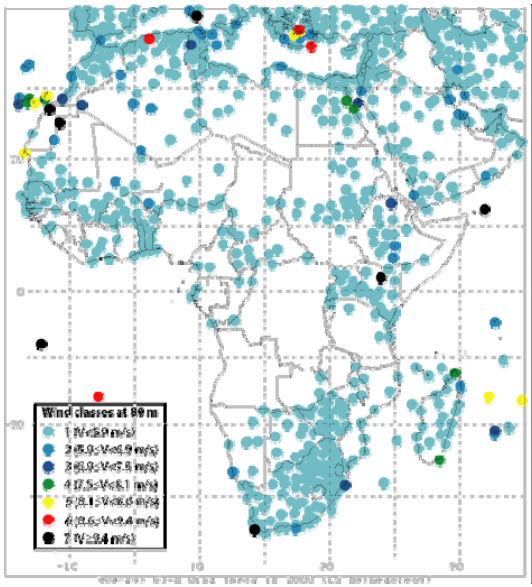
- The main activities are the following:
  3. High quality renewable energy resource information (solar, wind, hydro) in Africa and accessible via the AFRETEP website.

Solar resource



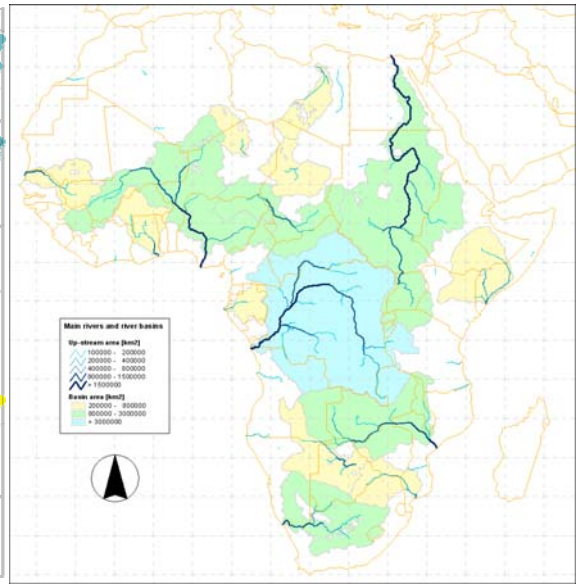
Source: PVGIS, JRC IE REU
http://re.jrc.ec.europa.eu/pvgis

Wind resource

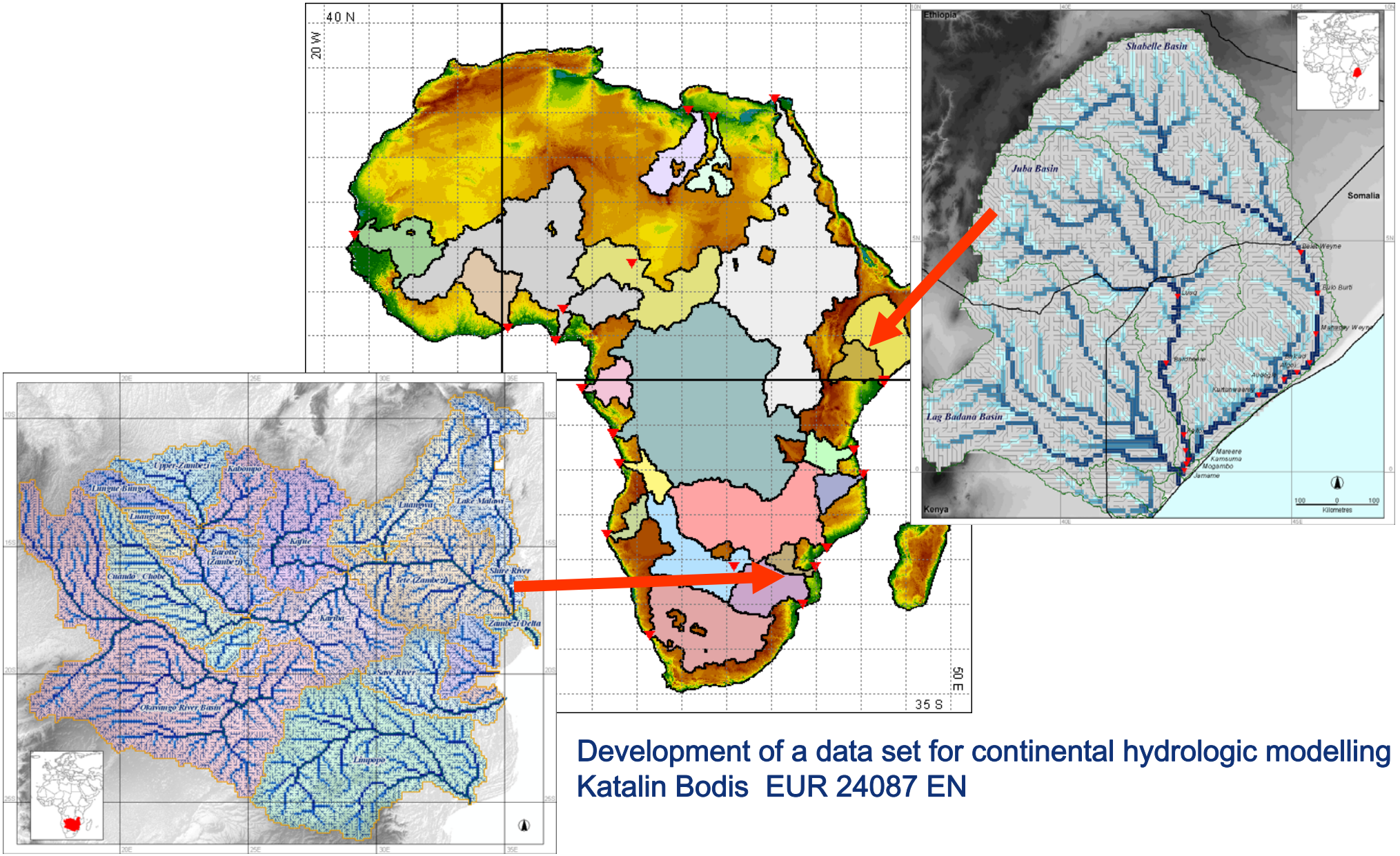


Source: Archer C. L.- Jacobson M. Z.
http://www.stanford.edu/
group/efmh/winds/global_winds.html

Hydro resource

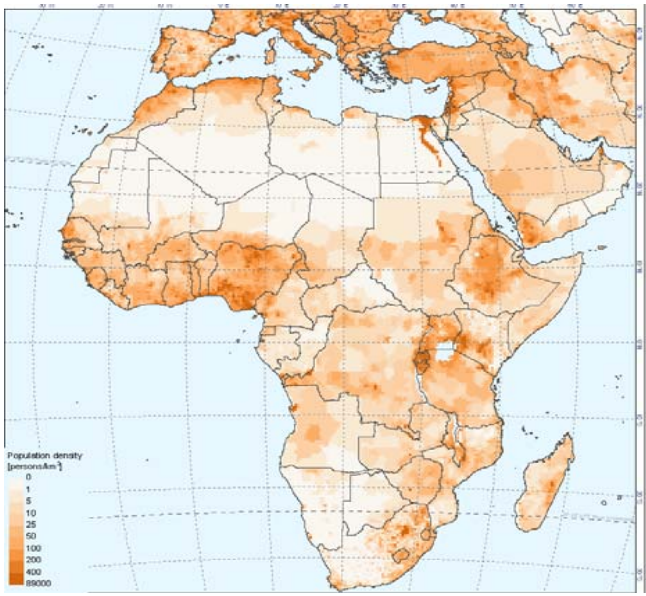


Source: Derived data based on SRTM V4
http://srtm.csi.cgiar.org/

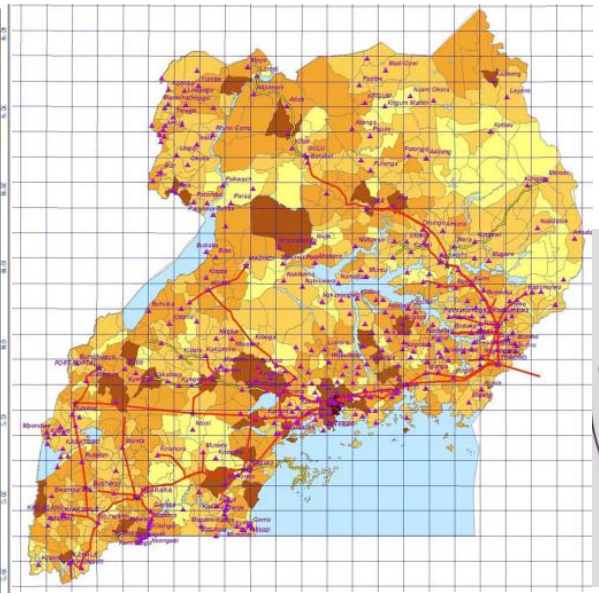


Development of a data set for continental hydrologic modelling
Katalin Bodis EUR 24087 EN

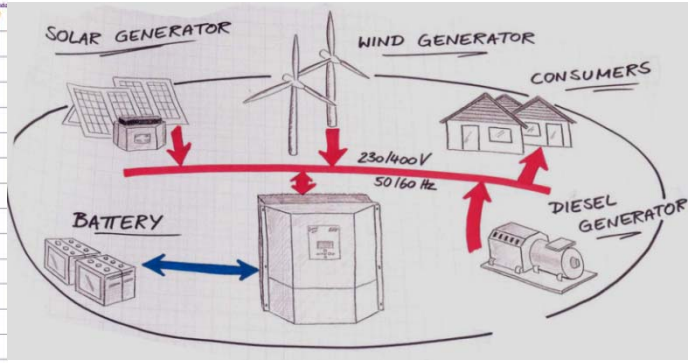
- The main activities are the following:
  4. Develop a consolidated technical and socio-economic base for assessing rural electrification projects.
     - Define proper criteria for selection of grid extension vs. off-grid solutions.
     - Harmonization of existing tools and/or development of missing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



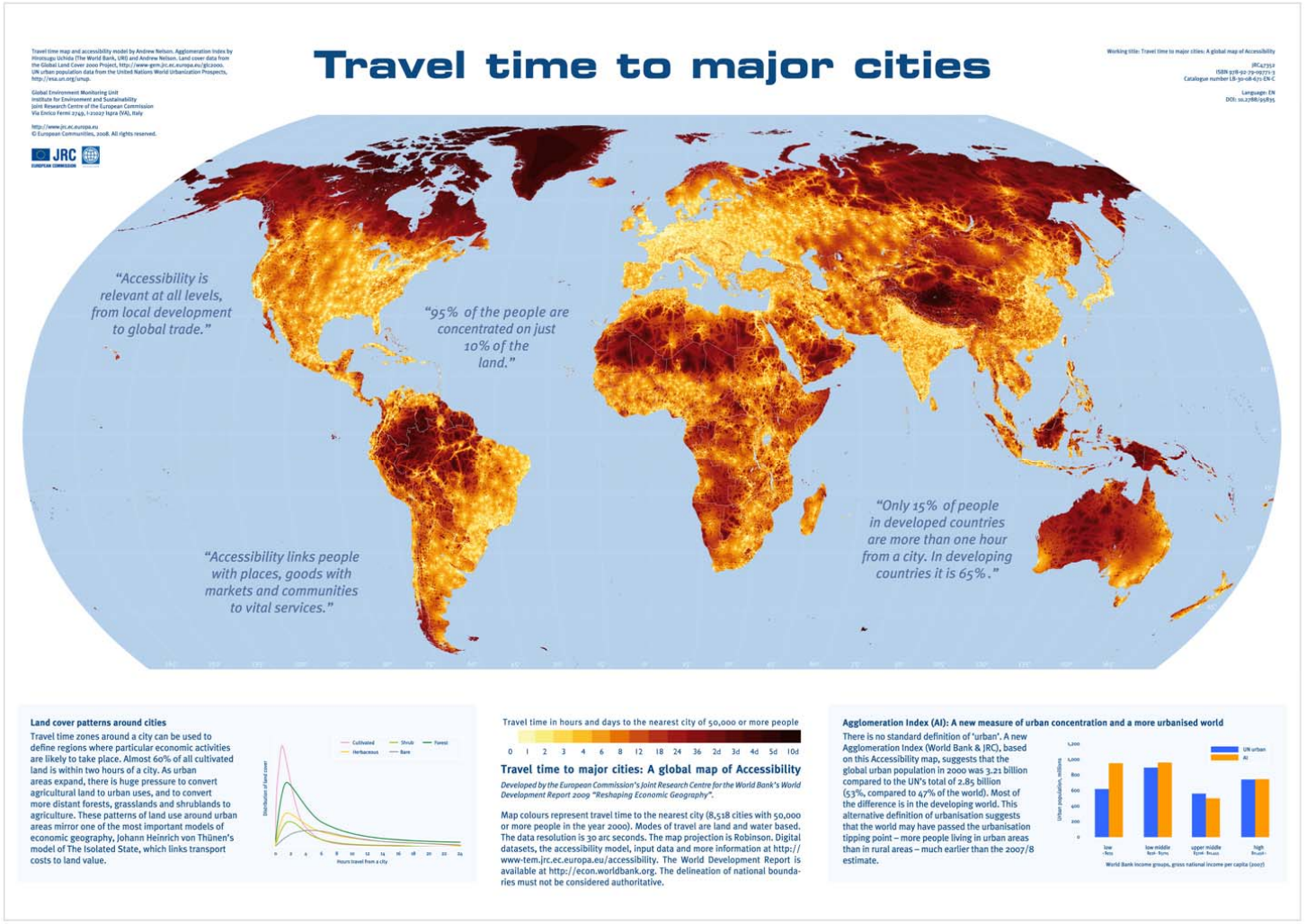
Population density (persons/km^2)



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.