The Global Renewable Energy Atlas
Partnership for the bioenergy component
**Mandate:** “To promote the widespread and increased adoption and the sustainable use of all forms of renewable energy, [...] produced from renewable sources in a sustainable manner”. This includes, inter alia: bioenergy, geothermal energy, hydropower, ocean energy (including inter alia tidal, wave and ocean thermal energy), solar energy and wind energy”.

**Foundation:**
- Founding Conference: 26 January 2009, Bonn, Germany
- 1st Assembly: 4-5 April 2011, Abu Dhabi, United Arab Emirates

**Membership:** As of October 2012, IRENA has 159 affiliates, which are:
  - Members: 103 (102 States and the European Union)
  - Signatories of the Statute/applicants for membership: 56
Why a Global Atlas?

What share of my energy mix can be supplied by renewable energy? Where are the resources located?

What is the most cost-effective combination of technologies? Is there a large enough market for sustaining a supply chain?

What amount of investments does it represent? How many jobs?

Global Atlas

Resource mapping

Technical and economic potentials

Technology data, ancillary datasets (grid, land, costs..)

Scenarios and strategies

RE-market

Enabling conditions: policy and financial instruments, human capacities, public awareness.
Overall objective

Bridge the gap between nations having access to the necessary funding, technologies, and expertise to evaluate their national potentials, and those deprived of those elements.

- Access to data and methods
- Access to training materials and courses
- Access to finance
- Access to a network of experts
Statement of interest for the Global Renewable Energy Atlas
Current Solar and Wind Partnership

• A truly international initiative to jointly develop the reference for Solar and Wind potentials

• Building on the existing systems and databases and available knowledge

Statement on the Global Renewable Energy Atlas

Partner organisations

IRENA
UNEP

Research institutes

DLR
cener
JRC
Masdar Institute

Organisations

REN21
REEP
MINES ParisTech
NREL

Private companies

GeoModel Solar
prognos
WindGuard
Non-country partners
Products

- Web portal
- Database
- Learning

Map interface
- Manipulate / tools
- Video tutorials
- Disclaimer / limits

Search / add
- Link to partners
- Case studies
- IRELP, Policy databases
- Theory of potentials
Solar and wind component

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<td>Terrain, population, landcover</td>
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<td>TBD</td>
<td>Policy, Grid infrastructure, roads</td>
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Future possible partners:
- Int.: ADB, ESMAP, UNDP, WMO, AFRETEP/EU JRC, European Commission
- Regional: ECREEE, RCREEE, OLADE, SPC.
- Countries: Chile, Lebanon, Nigeria, GCC countries.
- Private companies: GL/GH, Sanders & partners (KfW)
1. Conducted extensive literature review to identify relevant datasets

2. Ranked Datasets according to their frequency in literature

3. Identified data owners and relevant networks

4. Prototype group for the development of the Bioenergy component of The Global Atlas
Timeline

- Presentation of the proposal for the Activity Group, November 2012.

- Announcement of the Activity Group during the IRENA Assembly, January 2013.

- Mobilization of GBEP Partners and Observers and constitution of the Activity Group, Q1 – Q2 2013.

- First working session of the Activity Group, definition of the work programme, Q2 2013.

- First work programme for the Activity Group, Q3 2013.

- Implementation phase starting, Q4 2013/ Q1 2014.
Thank you for your attention

potentials@irena.org
Databases:

- FAOSTATS
- IIASA, GAEZ (FAO)
- USGS, Global Land Cover dataset (DISCover), 1 km
- EEA, CORINE Landcover (EU12)
- European National Forest Inventory Network (ENFIN), European Forest Data Centre (EFDAC)
- RIVM (NL), IMAGE database – input FAOSTAT, Eurostat, IEA
- USDA, National Agricultural Statistics Service (NASS)

Methods:

- IIASA, Chalmers University (SE), University of Utrecht (NL) – methods (Biomass energy Europe, REFUEL)
- Inter-American Institute for Cooperation on Agriculture (IICA), extensive work on Americas
Global Agro Ecological Zones (GAEZ) Spatial analysis
Inter-American Institute for Cooperation on Agriculture

Global Land Cover dataset (DIScover)
European Forest Data Centre (EFDAC)
National Agricultural Statistics Service (NASS)
Global Land Cover dataset for Assessing the Environment

IRENA GLOBAL ATLAS (Bioenergy)
WISDOM - Forests
FAOSTAT
CORINE