

## Global Atlas updates (March 2013)

Dear partners, dear colleagues,

The Global Atlas was released during the last IRENA Assembly, and is available online at: <http://www.irena.org/Global Atlas> and [www.res-atlas.org](http://www.res-atlas.org).

Since its release at the last IRENA Assembly, the website received 18,000 visits. 26 additional countries joined the initiative, bringing the total to 39. The participating countries are: Albania, Australia, Belgium, Denmark, Egypt, Ethiopia, France, Gambia, Germany, Grenada, Honduras, India, Iraq, Israel, Kuwait, Lithuania, Mali, Mexico, Mongolia, Nicaragua, Niger, Nigeria, Norway, Peru, Qatar, Saudi Arabia, Senegal, Seychelles, South Africa, Spain, Swaziland, Switzerland, Tunisia, UAE, Uganda, UK, Uruguay, USA, and Yemen. Additional countries are currently joining the initiative.

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**Propose your news for the ‘news from partners’ section, by email at: [potentials@irena.org](mailto:potentials@irena.org)**

**Follow us on LinkedIn – group on Renewable Energy Resource Mapping, jointly operated with ESMAP.**

## Latest map additions

The default map of the Atlas was updated and reorganised (<http://irena.masdar.ac.ae/>) . Several categories were added in an effort to make available information relevant to prospect renewable energy potentials, as studied by the IRENA benchmark of existing literature (1). Please see section 'future plans' for more information:

- The folder 'protected areas' was updated with the World Database of Protected Areas. This very unique dataset is managed at UNEP-WCMC in Cambridge, UK and supported by IUCN staff and members of the World Commission on Protected Areas all over the world. The original website for this information layer is: [www.protectedplanet.net](http://www.protectedplanet.net)
- The folders now display two new categories 'Landcover' (GLC 2000), and 'Elevation' (SRTM data). These, and other datasets, were made available by our partner Geomodel.
- Similarly, the folder 'Base maps' displays the world's population density with a spatial resolution of 1km. This information is crucial to understand where the energy demand lies, and to compare with the resources available locally.

New resource maps were added to the data catalogue, and are featured through the default map:

- The DNI map of Namibia, 1km resolution, developed by Geomodel, <http://geomodelsolar.eu/>
- The GHI map of Mali, and a part of West Africa, from the project 'Feasibility of renewable energy resources in Mali': <http://frsemali.org>. All data layers from the project can be accessed through the data browser – search term: Mali
- The wind map of (part of) East Africa, 9 km resolution, shared by our partner Vortex. The full global wind map can be displayed directly from [www.vortex.es](http://www.vortex.es) and <http://www.vortex.es/signup>
- The wind map of Mali, 7.5 km resolution, from the project 'Feasibility of renewable energy resources in Mali': <http://frsemali.org>. All data layers from the project can be accessed through the data browser – search term: Mali

- (1) Available through <http://irena.org/Global Atlas/>, under section 'learning about potentials': [http://irena.org/Global Atlas/potentials\\_pdf/19\\_11%20reference%20studies%20on%20potentials%20benchmarked.pdf](http://irena.org/Global Atlas/potentials_pdf/19_11%20reference%20studies%20on%20potentials%20benchmarked.pdf)

## Updates to the data catalogue

For sources which can be allowed for download, but may have copyright restrictions, the catalogue now provides mandatory copyright and IPR acceptance in the "Download" option. The system complies with most situations of IPR protection, allowing in particular to reference datasets from the private sector, after an IPR agreement is signed with IRENA.

This catalogue upgrade includes the automatic creation of thumbnails for harvested resources, and the automatic creation of a summary view for a dataset. For each dataset, the catalogue displays a list of icons on the right side that reflect the categories under which the resource is referenced (e.g. solar, wind).

## Future plans

The first version of the Global Atlas was released at the third Assembly of IRENA. The platform enables to search for hotspots and acts as a repository of the existing works at international, national and sub-national level. It is displaying a number of datasets from the contributing partners, and has yet limited functionalities to exploit those datasets.

In 2013, the consortium will focus on reinforcing the services provided by the Atlas, with the aim to perform preliminary assessments of the technical potentials, and help on the identification of primary zones for further prospection.

In this process, the Atlas will link to external databases providing relevant information for mapping energy potentials. The Ren21 policy database, OpenEI, IRENA-IEA policy database, the upcoming IRENA Statistics database, or IRELP are amongst the few relevant databases that the end-users will be able to query from the Global Atlas interface.

A data quality evaluation process will be created to provide basic indications on the relevant scope of use of the datasets. This information is required to avoid misuse of the data.

The learning section will progressively be reinforced, by providing links to relevant databases, and integrating original content. Your advice to integrate relevant additional material is very welcome.

The initiative started by the development of the Global Solar and Wind Atlas in 2011 and 2012. It would expand into a Global Renewable Energy Atlas, reinforcing the solar and wind components and progressively including bioenergy, geothermal energy, and hydropower in 2013 and 2014, and marine energy in 2015.

In this regard, the main objective for 2013 is to engage the dialogue with the respective renewable energy communities, and precisely scope the role and added-value of the Global Atlas for each one.

## New tutorials are online

The tutorials of the Global Atlas are centralised on <http://www.youtube.com/user/GlobalAtlasTv>, and can be accessed through the website and the GIS interface. The tutorials can be used by experts ('advanced' tutorials) and non-experts ('basics' tutorials), to learn about loading information, using the basic features, overlaying information, using the Atlas for prospecting regions, creating and saving specific projects by thematic and/or region.

See: <http://www.irena.org/GlobalAtlas/howtousemapinterface.html> and <http://www.irena.org/GlobalAtlas/howtousethedatacatalogue.html>

Two new advanced tutorials were developed by our partners Mines ParisTech and MASDAR Institute. They were designed for helping potential data providers to share information with the Global Atlas. Those tutorials explain how to share information over the web (<http://youtu.be/wHseR5hqQLc>), and having the list of datasets and related metadata referenced by the Global Atlas data catalogue (<http://youtu.be/xKqkxrP5bO0>).

A new advanced tutorial developed by DLR explains how the interface of the Global Atlas is programmed (<http://youtu.be/DsRNyeKUV4Y>).

## Review of the Atlas website and GIS interface

We would be pleased to get your feedback on the Global Atlas. Open comments are welcome at: [potentials@irena.org](mailto:potentials@irena.org) about the website, the map interface (GIS), the data catalogue and the learning section.

### Did you know?

1. You can easily create your own maps and projects with the Atlas, focusing on a specific technology and/or region.

Please refer to the tutorials: a/ Creating a new project -

<http://www.youtube.com/watch?v=BiGIXu4lvX8>, b/ Loading and ordering data layers in your own project - <http://www.youtube.com/watch?v=5rarcprQeo4>, and c/ overlaying the information and highlighting selected values - [http://www.youtube.com/watch?v=mjP\\_fklqmbQ](http://www.youtube.com/watch?v=mjP_fklqmbQ)

2. You can embed the Global Atlas widget to your own website. The widget was developed by our partner OpenEI, and can be downloaded at: [http://en.openei.org/wiki/IRENA\\_Global\\_Atlas](http://en.openei.org/wiki/IRENA_Global_Atlas)
3. The Atlas is using open standards, which enable to link to any compatible platform. It is therefore possible to visualise and manipulate data which is not listed by the Atlas. It can be done either by indicating the link to the Geoserver, or the catalogue where the layer is listed. See tutorial <http://www.youtube.com/watch?v=Nc2vPFh8bSY>

### Upcoming revision of [www.irena.org/potential\\_studies](http://www.irena.org/potential_studies)

The database contains 10,000 references of studies on renewable energy potentials, accessible by country, and by renewable resource. We received additional references to the database, and will initiate a review in the coming weeks. Please do not hesitate to recommend missing studies or materials to this new release.

### News from partners

#### The ESMAP-World Bank renewable energy resource mapping initiative

Mapping national renewable energy resources at the country level is a crucial step in helping governments support the sustainable expansion of renewable power generation, and can provide crucial data to improve the Global Atlas. The Energy Sector Management Assistance Program (ESMAP), a multi-donor trust fund administered by the World Bank, is launching a major new initiative to support country level resource mapping and spatial planning for biomass, small hydropower, solar, and wind resources. The objective is to support the scale up of renewable

electricity generation by providing governments and the private sector with better information on the location and commercial viability of potential areas for development. By working closely with international partners, ESMAP also hopes to improve the quality and availability of global datasets on renewable energy resources. The data from the ground-based measurement campaigns will be made available to the Global Atlas under a partnership arrangement between ESMAP and IRENA.

[http://esmap.org/RE\\_resource\\_mapping](http://esmap.org/RE_resource_mapping)

### **Saudi Arabia KA CARE – White paper submitted for comments / procurement portal**

The Kingdom of Saudi Arabia (KSA)'s renewable energy Competitive Procurement Program (CPP) is being designed applying best practices from similar procurements worldwide, and customized to meet KSA's energy mix targets. Multiple procurement rounds preceded by an Introductory Round are being envisioned over the first two to three year of the program.

K•A•CARE is establishing a standalone government-backed entity, the Sustainable Energy Procurement Company (SEPC), responsible for administering the procurement and executing and managing the PPAs. Qualified proponents will be able to submit proposals electronically through this portal. The evaluation of proposals will combine price and non-price factors, enabling alignment of the CPP with the broader objectives of K•A•CARE. Prior to the launch of each round, qualified proponents will have the opportunity to review and comment on draft RFPs and the terms of the PPAs, and K•A•CARE/SEPC may consider using this feedback in finalizing the RFPs and PPAs. More at: <http://www.kacare.gov.sa/cpp/>

### **Group on Earth Observations acknowledges the Global Atlas**

The Global Atlas builds on the GEOSS recommendations on interoperability and the respect of international standards (OGC/ISO). The Global Atlas will be enhanced in the coming months by many other datasets coming for many participating countries, which are members of IRENA. This will contribute to increase the share of renewable energy globally.

The Global Atlas is listed in the GEO Work Plan as an infrastructure key activity in the EN-01-C1 Task Component Sheet: "Tools and Information for the Resource Assessment, Monitoring and Forecasting of Energy Sources (including solar, wind, ocean, hydropower, and biomass) and Geological Resources (including mineral and fossil resources, raw material and groundwater)".

[http://www.earthobservations.org/art\\_201301\\_irena.shtml](http://www.earthobservations.org/art_201301_irena.shtml)

### **New IRENA publications (January – March 2013)**

New publications available at <http://www.irena.org/Publications/>

- L'Afrique et les énergies renouvelables : la voie vers la croissance durable
- Doubling the Global Share of Renewable Energy: A Roadmap to 2030
- Renewable Power Generation Costs in 2012: An Overview
- Renewable Energy Policy in Cities: Selected Case Studies

- Renewable Energy Country Profiles for Asia (January 2013 edition)
- IRENA-IEA-ETSAP Technology Briefs
- Financial Mechanisms and Investment Frameworks for Renewables in Developing Countries
- 30 Years of Policies for Wind Energy: Lessons from 12 Wind Energy Markets
- Kiribati Renewables Readiness Assessment 2012
- Mozambique Renewables Readiness Assessment 2012
- Senegal Renewables Readiness Assessment 2012
- Africa's Renewable Future: the Path to Sustainable Growth