



Funded by the European Union



# REGIONAL TRAINING WORKSHOP ON Geographical Information system for energy planning ECOWREX GIS: Role and Opportunities



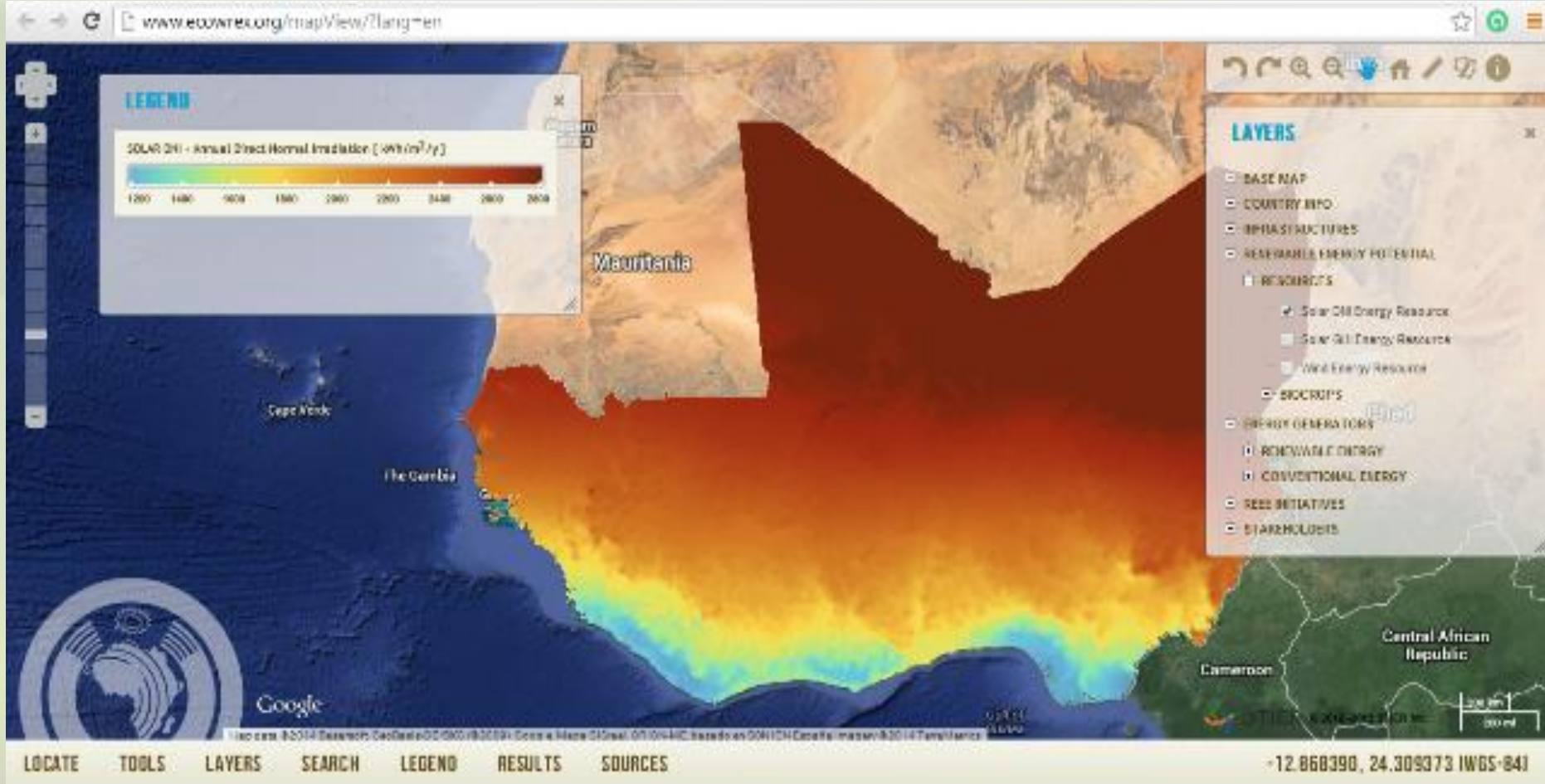
11th August, 2014

# Presentation Outline

- ❑ Introduction to ECOWREX GIS
- ❑ Opportunities
- ❑ Challenges



# ECOWREX



# PURPOSES OF ECOWREX GIS

The ECOWREX GIS provides framework to help gather, display and analyse information about the energy resources in relation to the infrastructure and other human activities in the ECOWAS region

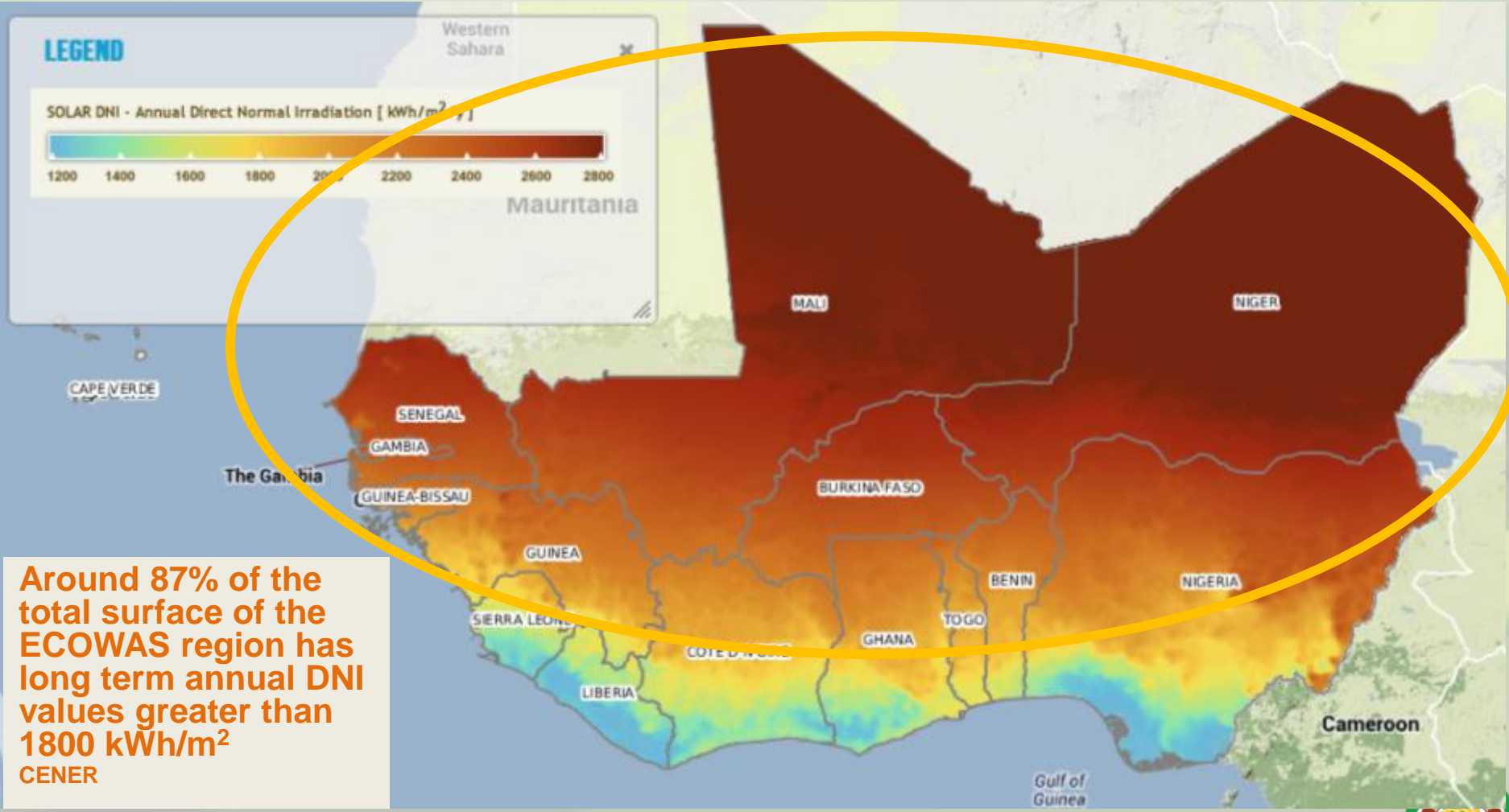
It is meant to serve as a decision support tool for promoting investment in the region

# ECOWREX GIS DATA

The datasets currently available on ECOWREX GIS include:

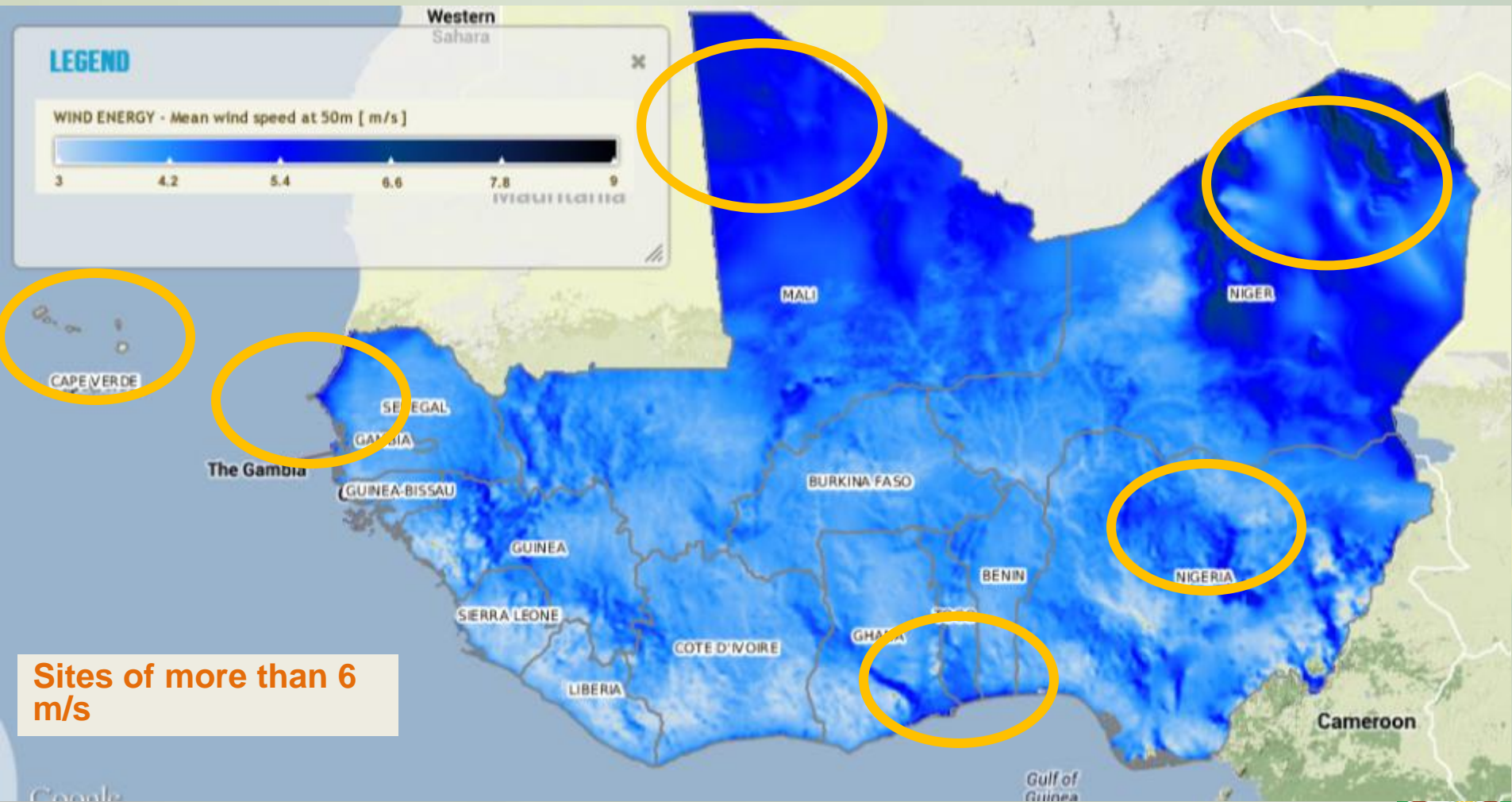
1. Electrical transmission and distribution grids
2. key stakeholders in the energy sector
3. RE resource and potential maps
  - Solar Resource DNI
  - Solar Resource GHI
  - Average Wind Speed
  - Biomass potential (Bio-crops)
  - Small Hydro power plants
4. Population. Land cover
5. Power plants - existing and planned
6. Infrastructure - Roads, Railway, Airports, Ports, Gas pipeline
7. RE and EE initiatives

# SOLAR POTENTIAL



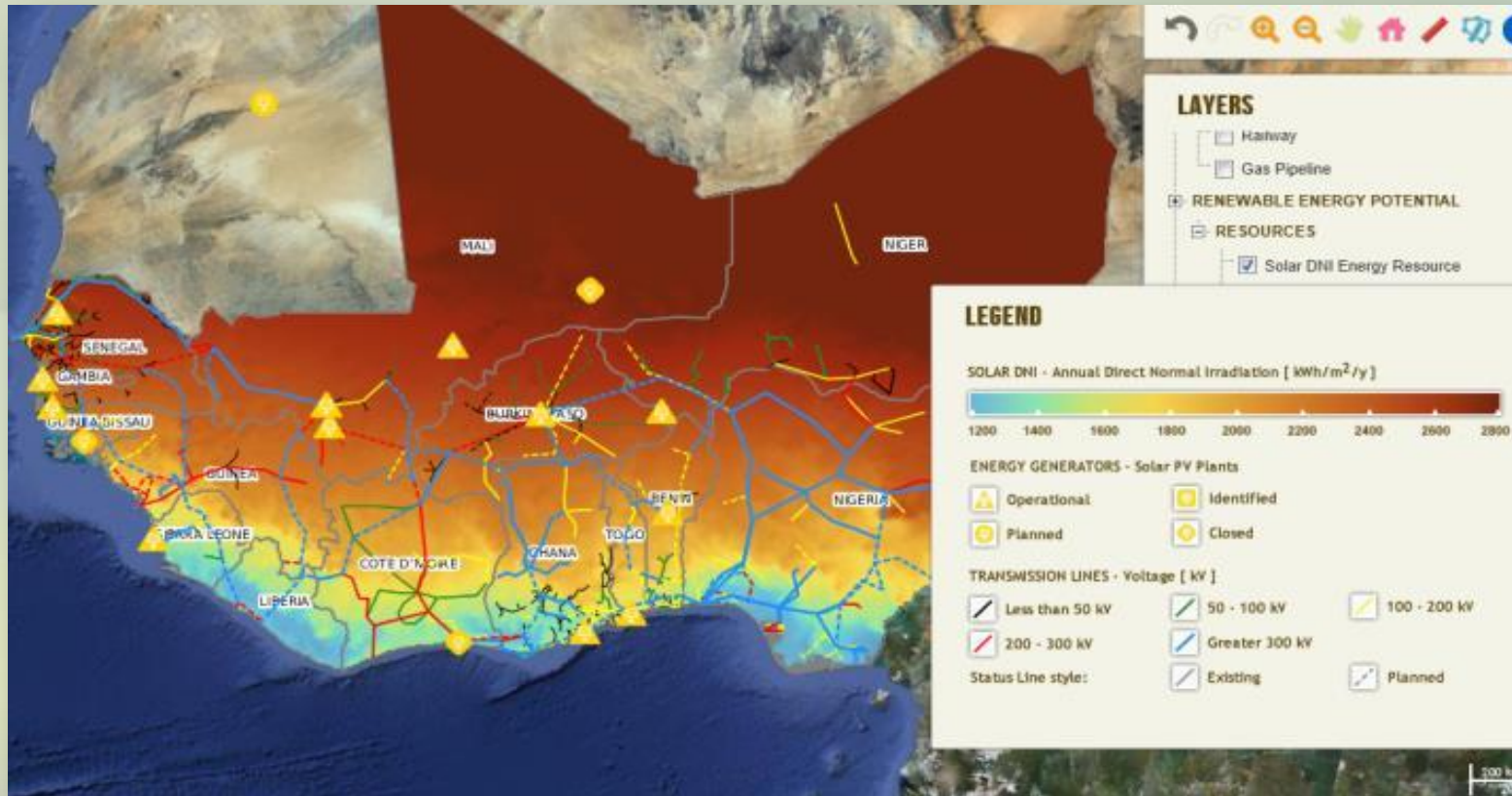
**Around 87% of the total surface of the ECOWAS region has long term annual DNI values greater than 1800 kWh/m<sup>2</sup>**  
CENER

# WIND POTENTIAL



Sites of more than 6 m/s

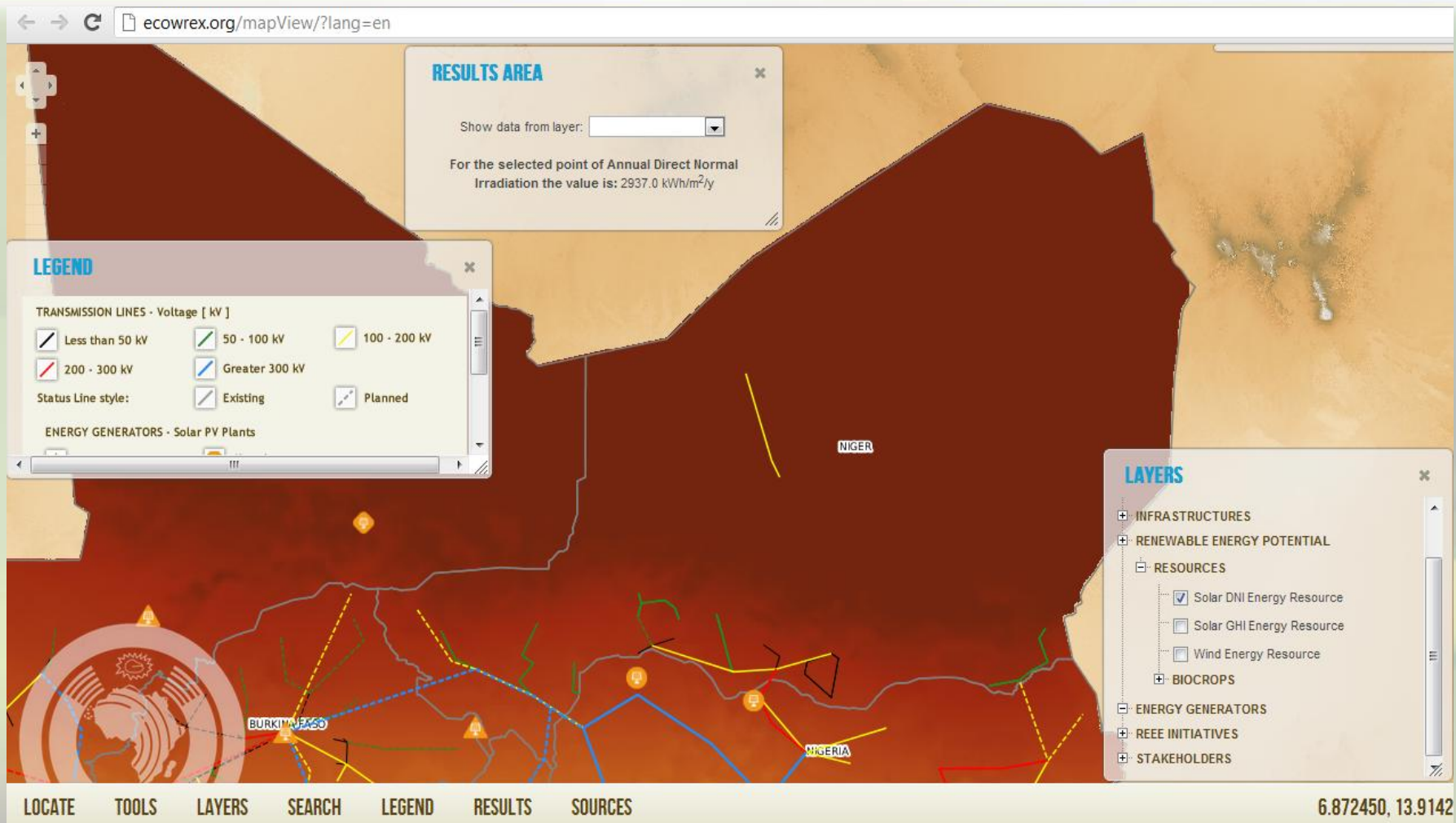
# Resources



Combining human activities, infrastructure and our resources helps us to define “where” and “when” specific RE technologies can be deployed



# Resources



Niger- High solar potential untapped

# Combined Resources

**RESULTS AREA**

Mali Niger

Show data from layer: Gas Pipeline

Country	City	Information
Nigeria	Benin	

**LAYERS**

- BASE MAP
- COUNTRY INFO
- INFRASTRUCTURES
- RENEWABLE ENERGY POTENTIAL
- RESOURCES
- ENERGY GENERATORS
- RENEWABLE ENERGY
- CONVENTIONAL ENERGY
- REEE INITIATIVES
- STAKEHOLDERS



Evolution of the Gas pipeline  
– Increasing number Gas power plants at the Gas stations

# Opportunities of ECOWREX GIS

**Spatial planning is key to identifying where and when we invest. ECOWREX GIS can support**

- **Planning for Installation of power plants**
- **Efficient Transmission Line Siting**
- **Provide deeper understanding, faster decisions**
- **In the mitigation of climate change and adaptation**
- **To capture and cultivate renewable resources**
- **To identifying residential energy efficiency opportunities.**
- **Rural electrification**

# Highlight of Activities on ECOWREX GIS

- 1. Small Hydro Resource assessment**
- 2. EREF project on supporting the identification of small scale Renewable Energy power plants**
- 3. West Africa status report with REN12**
- 4. Energy efficiency maps**

# Challenges

1. **Data ?????**
2. **Resources ???**
3. **Technological ?????**

# WHERE IS OUR GIS DATA?



# Thank You! Merci! Obrigado!

Visit our website: [www.ecowrex.org](http://www.ecowrex.org)

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