REGIONAL VALIDATION/TRAINING WORKSHOP ON THE USE OF GEOGRAPHIC INFORMATION SYSTEMs (GIS) IN THE ENERGY SECTOR

26th - 29th July 2016,
Novotel,
Dakar, Senegal

Funded By the European Union

Partners

Background

In October 2012, ECREEE in collaboration with United Nations Industrial Development Organization (UNIDO), aiming to address the poor-quality of data and information about the energy sector in the ECOWAS region, developed the ECOWAS Observatory for Renewable Energy and Energy Efficiency (ECOWREX). ECOWREX is a web-based information platform designed to support decision making in the member states. It integrates the use of Geographic Information System (GIS), to help visualize and analyse the energy resource potential in combination with other human factors, to aide in planning and siting of new energy generation plants.

For efficient spatial data processing, information sharing, knowledge transfer and interoperability of the ECOWREX GIS framework, ECREEE and its partners in 2013, submitted a proposal in response to the call for proposals of ACP-EU Science and Technology Programme II (ACP S&T II) and was awarded a grant for the improvement of ECOWREX. The project is titled "Promoting Sustainable Energy Services through the use of Geospatial Technology in West Africa" (ECOWREX2), and is been implemented for a period of 29 months (March 1st 2014-July 31st 2016).

The main objective is to improve the ECOWREX GIS framework by developing a complete Spatial Data Infrastructure (SDI), fully compliant with the Open Geospatial Consortium (OGC) standards, appropriate for data interoperability, effective data processing, information sharing and knowledge transfer. Also to be carried out, is capacity building for the member states, to increase their technical knowledge on the use of GIS for energy planning, including support for standardization of data and metadata.

It is within this context that ECREEE in collaboration with the project partners (University of Geneva, the Energy Centre KNUST, the Ministry of Energy Cabo Verde, and Noveltis S. A. S.), are jointly organizing a Regional Validation/Training Workshop scheduled from the 26th to 29th of July 2016, in Dakar, Senegal. The workshop is fully funded by the European Union. The training on hydro power resource assessment will also be held back-to-back as planned in the ECOWAS Small Hydro program, which is funded by the Austrian Development Agency (ADA) and the Spanish Agency for International Development Cooperation (AECID).

Objectives of the workshop

The main objective is to validate the outcome of the project ECOWREX2 project, valorize the project results and strengthen capacity within the member States on the use of GIS tools for promoting sustainable energy development.

The specific objectives are to:

- Valorize ECOWREX2 project results.
- Share experiences on energy planning, specifically using GIS tools.

- Train participants on Hydro Power (HP) resource assessment and mapping.
- Validate the maps and tools developed in the ECOWREX2 project.
- Train participants on how to use the ECOWREX GIS platform.
- Validate a data collection strategy for ECOWREX.
- Discuss the proposed indicators and data collection methods for monitoring the implementation of the national Sustainable Energy Country Action Plans[1]
- Provide a platform for sharing experiences and best practices.

Expected outcomes

Participants are expected to:

1. Develop an understanding of the project benefits and how ECOWREX can support the member states.
2. Gain more knowledge on promoting sustainable energy development through the use of Geospatial technology.
3. Gain understanding of the approaches and methodologies for the development of the energy access software - Intigis, including its application for energy planning.
4. Brainstorm and develop a strategy for data and metadata collection for ECOWREX
5. Share experiences on GIS implementation (or other alternatives used for energy planning) in their respective member states.
6. Gain understanding of Hydro Power Resource mapping and Potential, including climate change scenarios.
7. Provide feedback to ECREEE on the proposed indicators and data collection methods in the template for the annual reports on the implementation of the Sustainable Energy Country Action Plans

Participants

Targeted groups includes experts involved in planning from the various energy directorates, energy experts, GIS experts, Energy data Scientist and Hydro Power experts.

[1] These are the National Renewable Energy Action Plans (NREAP), National Energy Efficiency Action Plans (NEEAP) and Sustainable Energy for All (SE4ALL) Action Agendas.

Agenda

		Day 1 – Tuesday 26 July, 2016
08:00		***Registration of participants***
WELCOME SESSION		
09:00		**Opening session** - Executive Director - ECREEE - Minister of Energy – Senegal - European Union Representative- (TBC)
10:00		***Coffee Break and Photo***
SESSION 1 (ECREEE GIS framework Overview)		
10:30		**Overview of the ECOWREX2 Project - ECREEE**
11:00		**Presentation of ECOWREX Spatial Data Infrastructure (SDI) - UNIGE** - Benefits of Implementation - Demonstration of tools and functionality - Discussion
13:30		***Lunch break***
SESSION 2 (GIS Maps)		
14:30		**Presentation of Maps developed by - UNIGE** - Discussion of the process and methodology - Validation
15:30		**Presentation of solar and wind site assessment - NOVELTIS** - Discussion of the process and methodology - Validation
16:30		**Share experience of solar and wind site assessment in member states –** Noveltis **Country experiences** - **Discussions**
17:30		***End of day 1***

Day 2 – Wednesday 27 July, 2016

SESSION 3: Data Strategy	
08:30	**Monitoring and reporting framework for Sustainable Energy Action Plans – ECREEE** - Overview of the framework - Presentation of Reporting Template - Proposed Data collection strategy/methodology
10:45	***Coffee Break***
11:00	**ECOWREX Data collection strategy – ECREEE** - Presentation of the Country Profile Portal - Discussion and adoption of Data collection Strategy
13:30	***Lunch break***
SESSION 4: GIS for planning	
14:30	**Presentation of the Intigis Software - KNUST** - IntiGIS model - Methodology - Demand and Technologies Analysis - Validation
16:00	**Presentations by each member States on:** - Energy planning tool - GIS implementation - Energy Information systems
17:30	***End of day 2***

		Day 3 – Thursday 28 July, 2016
SESSION 5: Introduction to SH resource assessment		
09:00		**Introduction to the Training on Hydro Power potential resources on ECOWREX** - Summary of the Project (ECREEE) - Hydropower potential theoretical background (POYRY)
10:30		***Coffee Break***
SESSION 6: SH Data		
11:00		**Data challenges, lessons learned (POYRY)**
12:00		**Flow estimation for West Africa (water balance) (I) (POYRY)**
13:00		***Lunch break***
14:30		**Flow estimation for West Africa (water balance) (II) (POYRY)**
15:30		**Climate change prospections (POYRY)**
17:30		***End of day 3***

Day 4 – Friday 29 July, 2016

SESSION 7: Hydro Potential	
09:00	**Hydropower estimation in West Africa, classification for hydro power plant size – POYRY**
10:30	***Coffee Break***
11:00	**Hydropower estimation in West Africa, classification for hydro power plant size - POYRY**
12:00	**Hydropower estimation in West Africa, classification for hydro power plant size - POYRY**
13:00	***Lunch break***
SESSION 8: Group Training	
14:30	**Training group work for different regions in West Africa – POYRY**
15:30	**Training group work for different regions in West Africa - POYRY**
17:30	***End of day 4***