Asia Regional Capacity Building on Using Renewable Energy Resource Assessment Data and Geospatial Analysis

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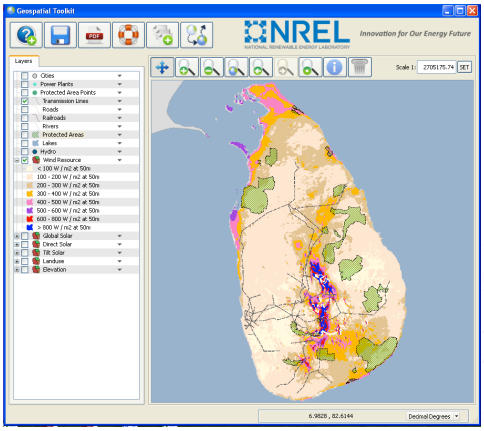

Photo: GeoSpatial Toolkit

The Geospatial Toolkit is a free and open-source application that allows users without expertise in GIS to:

- *View country-specific renewable energy resource data (e.g., solar, wind, and biomass) relative to roads, transmission lines, load centers, land use, and elevation*
- *Run queries to quantify the land area meeting certain criteria (e.g., minimum resource values, proximity to infrastructure, and restricted land use)*
- *Export resource data to analysis tools such as HOMER (a hybrid system optimization tool) for further assessment*

For more information on the GsT, see http://www.nrel.gov/international/geospatial_toolkits.html

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ABOUT THE PROGRAM

A comprehensive assessment of clean energy resource potential is a critical building block for planning and implementing a low emission development strategy (LEDS). The United States Government's Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) initiative[1] is launching a regional capacity building activity in Asia to support a community of practitioners in using tools and data to assess clean energy resources to more effectively develop and implement a LEDS. Primary objectives of this activity include:

- Building capacity in participating countries to effectively develop and manage renewable energy resource data, and to apply this data to address policy questions;
- Increasing exposure to spatial analysis methods in relevant ministries or research support institutes for use in planning; and
- Developing a regional community of practitioners with improved capacity to use state-of-the-art tools to support quantitative, analytical decision-making.

APPROACH

This regional capacity building initiative includes three broad activities:

GeoSpatial Toolkit development: The Geospatial Toolkit (GsT) is a map-based software application developed by the US Department of Energy's National Renewable Energy Laboratory (NREL) that provides a visual platform for exploration and analysis of a country's renewable energy potential. The regional initiative will support the creation a GsT for each participating country, leveraging existing efforts and country-specific data wherever possible.

Regional training workshop: The regional training workshop will focus on enhancing the ability of stakeholders to analyze renewable energy potential and identify next steps to support deployment, focusing on common technical and policy concerns across the region. The workshop will provide interactive training and facilitate discussion on resource data collection, maintenance, and dissemination; the use of the GsT and other spatial analysis tools; and specific applications of resource data and the GsT to address policy and planning.

Supporting a community of practice: The training workshop and development of country-specific GsTs will inform the identification of opportunities to foster a community of practice and peer-to-peer exchange on renewable energy resource assessment data, methods, and tools. Potential activities may include targeted curriculum development support to participating universities and technical institutions, enhancements to the GsT platform, or other technical support.

REGIONAL COORDINATION

With oversight and funding from USAID's Bureau for Economic Growth, Education, and the Environment (E3) and Regional Development Mission for Asia (RDMA), NREL and USAID's Low Emissions Asian Development (LEAD) Program are implementing the regional training in support of the EC-LEDS initiative. This project has been coordinated with USAID Missions in Bangladesh, Cambodia, India, Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

[1] *For more information on the EC-LEDS initiative, see http://transition.usaid.gov/our_work/environment/climate/policies_prog/leds.html*