Swera-Brazil Objective and Status

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SWERA activities in Brazil provide general technical support, data compilation, qualification, integration and GIS formatting; and mapping activities in Brazil, extensive to the South America continental area and Caribbean region. Information on several accessible activities of solar and wind resource assessment in Brazil are reviewed, mainly for data sets and the associated data retrieval methods. All the reviewed information were organized into a metadata bank and implemented into the international SWERA website (http://swera.unep.net/swera/index.php) for wide dissemination. On e of the key task of the project was to assist UNEP/GRID in the development of an Internet world-wide-web site. This site houses the archive, act as a clearinghouse for searches, and disseminate products across the Internet. Several training activities have been organized by a joint effort between CBEE, INPE/CPTEC, and LABSOLAR for data acquisition and assimilation, including WAsP, and satellite modeling procedures for solar energy resource assessment. Test sites facilities for development of solar and wind resource assessment models, validation, and estimation of confidence levels of model estimations were set up in the northeast of Brazil. Through a collaborative effort between INPE/CPTEC and LABSOLAR a satellite model for solar resource assessment was implemented for operationally map the solar resources of the entire South American continent in coarse resolution (40 x 40 km) and in fine resolution (10 x 10 km) for Brazil. The target is to publish a comprehensive Atlas of solar energy resources (GHI, DNI, Tilted Plan, Diffuse and PAR irradiation) built with a state of the art method provided by the BRASIL-SR model and using a 10-year time series of satellite images. The implementation of GIS components of project SWERA is being made in cooperation with several national agencies such as ONS, CEPEL, IBAMA, FUNAI, ANP, ANEEL, ELETROBRÁS, LABSOLAR and others. This activity consists of customizing and modifying the solar and wind datasets and also the available supplementary datasets (electric grid lines, transport, population, social information, etc.) to be handled by the GIS tool pack that is being developed by NREL to help users and investors in the evaluation of the national potentials for new investments in solar and wind energy. To conclude, in a close cooperative effort between CEPEL, INPE/CPTEC, CBEE, and LABSOLAR, the project will make an effort to demonstrate the long-term strategic potential of renewables by creating a number of alternative business development scenarios in energy supply business for Brazil. The project has officially started in 2001 and will finish by late 2005.

SWERA Brasil – Análise de Dados de Vento e Validação de Atlas Eólico
SWERA Brazil – Wind Data Analysis and Wind Atlas Validation

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Um dos objetivos do Projeto SWERA no Brasil é quantificar os dados de vento disponíveis e analisar a qualidade dos mesmos para fins de definição de potencial eólico. Além disso, já foram elaborados dois mapas do potencial eólico Brasileiro e vários trabalhos de mapeamento