



ECOWAS SMALL-SCALE HYDRO POWER PROGRAM



Data Collection, Training and Development of the Small-Scale Hydro Power sector in West Africa

BACKGROUND

Small-scale hydro power (SSHP) - an almost untapped potential in West Africa - can address the challenges of energy security, energy access and climate change mitigation. The main constraints for SSHP development are barriers related to awareness, hydrometric data, technical skills and capacity, policy and institutional framework as well as financing. The ECOWAS SSHP program was developed by ECREEE in cooperation with local hydro power stakeholders and adopted by the ECOWAS Ministers of Energy in October 2012. The feasible SSHP potential (up to 30 MW) in the ECOWAS region is estimated to be between 1.900 MW to 5.700 MW. The budget need to implement the first phase of the 5 year SSHP Program amounts to 15 Million EUR.

SUPPORTED BY



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OBJECTIVES

The program aims to increase the necessary skills and qualifications, to measure the necessary data, and to establish an enabling environment for small-scale hydro power investments and markets in the ECOWAS region. In ECOWAS Validation Workshop small-Scale Hydro Power was defined as pico, micro, mini and small hydro power from less of 5kW up to 30 MW. In ECOWAS region only 15 plants in the range of 1 to 30 MW are operative.

The Program aims at the following outcomes:

- Policy and regulatory SSHP frameworks are strengthened
- Capacities of different SSHP market enablers are strengthened and applied
- Knowledge management and awareness raising on SSHP is strengthened
- SSHP investments and businesses are promoted

PROJECTS & ACTIVITIES

Using the existing limited funds ECREEE focusses on key activities:

- GIS Hydro Power Resource Mapping of all ECOWAS river basins: modelling HP potentials of 10.000s of river reaches on the basis of discharge, precipitation, climatic and topographical data.
- Open and free data collection on the ECREEE observatory www.ECOWREX.org
- Training of stakeholders on how to use these data for development of the SS HP sector
- Upgrading the hydro-meteorological network and training of hydro-scouts and hydrologists
- Analyses and lessons from the few operative SS HP plants for use in trainings and manuals
- Support countries in accessing financing of selected SS HP plants

IMPACT

Impacts will be shown in all 4 mentioned objectives. A special focus will be on capacity building, GIS modelling of HP potentials and hydrological trainings and measurements.

Comprehensive capacity building for micro and mini hydropower technology, including planning, design, manufacturing of equipment, operation and maintenance, up to about 500 kW range, is realistic and of highest priority.

Above 500 kW the focus of local capacity is on resource assessment, financing and policy aspects, but not on planning, design or equipment manufacturing.

The range of the impact in the four program areas will strongly depend on the received co-funding to the program.

BENEFICIARIES & PARTNERS

The following stakeholders will benefit:

- Policy makers, institutions, and utilities
- Project developers and investors
- Hydrological experts and national hydrological institutions, hydro scouts, River Basin Authorities
- Consultants, planners, equipment manufacturers and other interested organizations like NGOs
- Financing institutions will have better capacity to assess the viability of SSHP projects (due diligence, risk assessment).
- Trained experts and officials in developing and financing national and regional SSHP programs such as NFIs.



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