EDULINK

EDULINK II
ACP-EU Co-operation Programme
in Higher Education

Energy Access and Efficiency
Forestry and agronomy engineering

ANEER – African Network for Education in Energy Resources

Delivery of the training course certificates to local technicians in Gaza province, Mozambique.

PROJECT IMPLEMENTATION PERIOD
October 2013 – October 2017

CONSORTIUM
- University of Córdoba, Spain
- José Eduardo dos Santos University (FCA-UJES), Angola
- Higher Polytechnic Institute of Gaza (ISPG), Mozambique

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PROJECT WEBSITE
http://www.aneer.org

SUMMARY OF RESULTS

A diagnostic study on the situation of the energy sector in Angola and Mozambique was concluded with recommendations to adapt courses to the labour market requirements and gender considerations. Academic and management skills have been strengthened in the field of energy efficiency in two higher education institutions. Qualifications of teaching staff have been improved and six specific energy-related courses have been adapted, implemented and approved in both countries.

BACKGROUND

Angola and Mozambique have abundant natural and energy resources, including oil and gas. However, the majority of the population do not have access to these resources with less than 20% enjoying regular access to domestic energy. Energy distribution is inefficient, expensive, and unstable. In both countries, there is a demand for qualified technicians and energy professionals.

On the other hand, most of the Angolan and Mozambican population use natural biomass (wood or coal), resulting in an over-exploitation of natural resources. The lack of monitoring mechanisms and management knowledge from government administrations is a threat to the environment.

Focused on energy access and efficiency, the intervention aimed to build high-quality tertiary education capacity in two Higher Education Institutions (HEIs) in Angola and Mozambique. The secondary objective was to build on the existing relationships of the partnership and expand the network to other institutions and stakeholders in the sector.

METHODOLOGY

Study on energy implementation and natural resource use and efficiency

Identification of labour market needs, design of the academic curriculum including gender approach and awareness of other institutions related to the management of natural resources with energy objectives.

Teacher training programmes

Training in innovative education techniques such as blended learning and in new technologies such as web resources and virtual campus.

Management training

Management and planning capacities, including creation of teacher mobility plans, adaptation of curricula and coordination with other universities.

Training of technicians

Technicians employed by governmental and administrative services trained in energy efficiency technology and natural resource management

Curricula improvement

Modules designed according to the recommendations of the study and institutional interests. Specific energy-related disciplines implemented in both countries through the common Virtual Classroom

Establishing a network of education on energy

A virtual platform 'African Network for Education in Energy Resources' (ANEER) including a free documentation centre, the virtual campus and a web viewer (African Geobussola) with important cartographic information related to the management of natural resources for energy purposes.

ANEER
African Network for Education in Energy Resources

UNIVERSIDAD DE CÓRDOBA

UJES

ISPG

RESULTS

Outputs

Capacity building

- 12 teachers (9 male, 3 female) trained in energy efficiency.
- 6 new modules in Forestry Engineering and Agronomic Engineering Degree.
- 102 student placements (80 male, 22 female) in energy efficiency and natural resources management.
- 17 professionals (12 male, 5 female) trained in biomass transformation processes and energy efficiency applied to processes.

Common virtual campus

- 1 virtual campus for forums, questions, assessment and subjects.

Virtual platform

- ANEER: http://www.aneer.org
- Digital Documentation Centre, virtual campus (African Geobussola).

Documents

- Study of Angola's energy reality: labour market needs in the energy sector.
- Study of Mozambique's energy reality: labour market needs in the energy sector.

Visibility

- "Scientific August 2013": New Technologies in Interuniversity Cooperation: Scientific and Academic Networks for Sustainable Energy Development in Angola and Moçambique.
- "Scientific August 2016": Study of Angola's energy reality: labour market needs in the energy sector.
- "Scientific August 2016": African-Geobusssola platform: a platform for the formation and exchange of energy information in Angola and Mozambique.
- Workshop at ISPG (December 2015): African-Geobusssola platform: "Study of the energy reality of Moçambique: labour market needs in the energy sector".
- VI Scientific Conferences of ISPG in August 2017: "New technologies in inter-university cooperation: scientific and academic networks for sustainable energy development in Angola".

Outcomes

- Study on energy implementation and natural resource use and efficiency.
- Teachers competent in the delivery of academic programmes in energy efficiency in agronomy and forestry engineering.
- HEI staff competent in the use of new technologies and in the management of HEI networks and administration of courses.

Impacts

Usage

- The increase in the number of qualified higher-education teaching personnel will benefit the university community.
- The 102 students enrolled in the adapted courses will improve the energy sectors in Angola and Mozambique.

Policy implications

- The newly qualified professionals will increase the number of local staff incorporated into companies and public institutions.
- The reported good practices could be incorporated in the political decision making in the energy sector.

Sustainability

- The incorporation into the curricula of new disciplines related to energy management and efficiency places the two participating institutions in the top rank of HEIs working in natural resources management in Angola and Mozambique.
- The relationships formed with the public and private institutions are guaranteed through signed agreements.

Visit to a biomass processing plant during the teacher mobility programme.

Professional training course in biomass transformation processes (improved kitchens) in the rural community of Chichongue, Mozambique.

TESTIMONIAL

Prof. Arão Raimundo Finiasse, Instituto Superior Politecnico of Gaza, Mozambique

"We aim to improve the forestry engineering curriculum at ISPG and train new professionals and strengthen the monitoring and evaluation mechanisms to prevent the over exploitation of natural resources. On a personal level my teaching skills have been enhanced and I am able to improve the design of classes I teach, especially in the discipline of Environmental Impact and Geographic Information Systems."

ACP-EU Co-Operation Programmes in the fields of Higher Education and Science, Technology and Research

http://www.acp-hestr.eu/

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