

SASEI – Southern African Sustainable Energy Initiative



PROJECT IMPLEMENTATION PERIOD

October 2013 - May 2017

CONSORTIUM

- Namibia University of Science and Technology (NUST), Namibia
- National University of Lesotho (NUL), Lesotho
- University of Botswana (UB), Botswana
- Hochschule Darmstadt, Germany

Associated partners:

- Ministry of Higher Education, Namibia
- Namibia Qualifications Authority, Namibia

PROJECT CONTACT

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PROJECT WEBSITE

<http://sasei.nust.na>

SUMMARY OF RESULTS

- Southern African Sustainable Energy Network (SASEN).
- Master of Sustainable Energy Systems at NUST.
- Bachelor of Engineering with specialisations in Renewable Energy Engineering at UB.
- Short courses in Sustainable Energy at NUL.

BACKGROUND

The southern African region lacks the professional capacity to develop and implement effective strategies and policies in the energy sector. By establishing the regional initiative, it was anticipated that a more implementation-based, policy-informing process would be facilitated, which would raise the necessary questions concerning the current food security response mechanisms, adaptation and options for sustainable practices. Specific challenges to be addressed in the development of national strategies on access and application of sustainable energy sources were:

- Improved network co-ordination for data management.
- Competitive technology advancement and adaptation (local application) considering regional consumer dynamics and consumption habits.
- General trend analysis in the energy sector, monitored to develop an improved understanding of energy consumption, demand, impacts and vulnerability of ecosystems and societies.
- Knowledge management support and international co-operation required to improve sustainable management of renewable sources.

METHODOLOGY

Situational baseline studies

Desktop studies to establish the energy situation in partner countries. Each Higher Education Institution (HEI) reviewed the energy situation in their respective countries through a literature review. The source documents were mainly the policies and strategies in place, as well as other relevant reports.

Stakeholder consultations

Needs assessment workshops and benchmarking to establish relevant training programmes and curricula. Stakeholder workshops in each country were conducted with representatives of national education and energy stakeholders. As a result of deliberations, an energy report was produced and needs assessed of the three participating African countries.

Training and material development

- Curricula development for Bachelor's and Master's in Sustainable Energy Systems.
- Training-of-trainers courses for staff and beneficiaries in sustainable energy.
- Student renewable energy research projects year.
- Create University–Industry linkages

Curricular development

Development of a Master of Sustainable Energy Systems degree (MSES) at NUST; a Bachelor of Engineering degree in Renewable Energy Engineering at UB; and the development of short courses in Sustainable Energy at NUL.

Publications and reports

- Energy situation report in partner countries published.
- Conference proceedings.
- Journal established.

Networking and best practise analysis

- North-South and South-South knowledge sharing.
- Creation of a platform for international co-operation between universities, for capacity building and regional integration in the energy sector.



RESULTS

→ Outputs

Capacity building

- A training-of-trainers (TOT) programme (20% female) with training materials. 25 academic/teaching staff trained on:
 - Energy efficiency and management.
 - Photovoltaic power systems.
 - Energy economics.
 - Renewable energy resource assessment.
- Staff exchanges initiated among partner institutions to enhance experience and skills development.
- 66 external (non-HEI) professionals and 12 academic/teaching staff trained during short courses.

Curriculum development

- Accredited Master in Sustainable Energy Systems programme (NUST).
- Accredited specialisation modules in Renewable Energy Engineering approved (UB).

- 10 accredited short courses in Sustainable Energy (NUL).
- Solar photovoltaic systems short course included a practical demonstration of installation of the solar system.

Documents

- Energy report based on a needs assessment in the partner countries, detailing the requirements for capacity building in the energy sector.
- Factsheet.
- Policy brief.
- Energy data manual.
- Energy Data Requirements for Sustainable Development: A Survey of Botswana, Lesotho and Namibia.

Publications

- Journal of Renewable Energy and Energy

- Efficiency of Southern Africa (JREEESA)
- IRES publications were published in JREEESA Vol.1.
- Conference Journal publication in Energy Procedia (Elsevier).

Networking

- Registration (February 2016) of the international journal of the Southern African Sustainable Energy Network (SASEN).

Visibility

- International Renewable Energy Symposium (IRES), Windhoek, 2015.
- International Renewable Energy Conference (IREC), Gaborone, 2016.

Website

- Project website.

↑ Outcomes

- SASEN facilitates knowledge alliances linking HEIs decision makers and key industry players
- HEIs are competent in the development of curricula in sustainable and renewable energy.
- Staff have knowledge and skills in sustainable and renewable energy systems.

🎯 Impacts

Usage

- Professional short courses in Sustainable Energy will contribute to the development of the renewable energy sector in the southern African region.
- The National University of Lesotho is further developing a curriculum with an MSc in Sustainable Energy based on the short courses it has developed.

Policy implications

- Capacity has been enhanced for national

and regional planning, development and implementation of sustainable energy systems and projects.

- The SASEN conferences attracted regional and international scientists, politicians, government officials, private companies and academics. Combined with the project activities capacity in national and regional planning, development and implementation of sustainable energy systems and projects has been enhanced.

Sustainability

- A pool of expertise has been created, whilst SASEN will continue administration of some of the activities. The courses developed will continue to be offered and will be supported via student tuition fees. Strong support has been received from the governments, especially ministries responsible for energy as well as regional offices, such as the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE).

TESTIMONIAL



Aili Shigweda,
Lecturer, Department of
Electrical Engineering,
NUST, Namibia

“The project perfectly aligns with our institution’ and Namibia’s development goals which aim to increase access to clean energy and develop capacity in sustainable energy research and training. I expect to see an increase in the number of collaborative research published in

reputable journals and a better management of sustainable energy resources in the region as a result of the knowledge gained and network established. The public’s interest in the programme is overwhelming.”

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

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Financed by the European Union