Capacity building in applied renewable energy technologies in Guyana and Suriname (Re.edu)

The objective of the project is to deliver improved programs and courses in applied renewable energy technologies with specific emphasis on hydropower, biomass, solar and wind energy. The partners’ research infrastructure will be targeted and linked to the educational program in renewable energy, including the capacity to review and recommend relevant policy and legislative structures that would facilitate the use of renewable energy sources by public and private entities.

The partners will develop a curriculum for a new joint master program (at AdeKUS and UG) in applied renewable energy technologies. Further seven renewable energy development and policy related courses will be developed for the capacity building of professionals. In order to lecture and undertake research for the courses staff members from AdeKUS and UG will be trained. The aim is to deliver at least a first edition of the master program and some of the module courses during the lifetime of the project.

Challenge

Suriname and Guyana are two neighbouring countries with similar geography; vast land size, but small populations and small universities with limited budgets to develop new courses and expertise.

Without the necessary expertise these countries will not be able to effectively develop renewable energy resources or apply proper relevant technologies nor make critical contributions toward policy.

Both universities are aware of this deficiency and want to develop more expertise in the areas of renewable energy technology and management so that they can contribute more towards the social and economic development of their populations in this respect.

The most challenging issue within the execution of the project can be absence of ownership and commitment of the different involved stakeholders. An optimal availability of facilities and financial resources and the accessibility of information and knowledge about proven technologies and other relevant topics can also be limiting factors within the realisation of the project objectives.

Focus

The Re.edu project will focus on the capacity development of the universities in renewable energy with specific emphasis on hydropower, biomass, solar and wind energy. The universities’ research infrastructures will be strengthened and in order to develop capacity with regards to policy and legislative structure the social, economic and political discussion on renewable energy in both countries will be stimulated.

1st Solar Energy project (5MW) under construction (Brokopondo, Suriname)
Rationale
Guyana and Suriname have only limited access to the latest technologies and innovations, with weak research infrastructure and limited access to educational resources for staff and students, including weak scholarship programs for students’ mobility to foreign universities. To some extent this leads to brain drain in both countries. Students and university staff are compelled to gain their own financial resources for further studies, which does not bind them to return to their homeland after the graduation. Taking this in consideration it is of crucial importance for both universities to provide trained cadres for the whole nation based on the demand for the region. Increasing the capacities of UG and AdeKUS in renewable energy is a good strategy and will have a much wider impact than applying for incidental scholarships for individuals.

The universities are the main ‘Think Tanks’ of these nations as well as the main centres for technology development and application. Research therefore needs to be applied and should focus on the sources of renewable energy. Research should not stand on its own, but be integrated in education.

Concurrently there should be linkages with policy entities, government agencies and private companies in the sector in order to anticipate the ongoing development and the demand.

Method
The main methodology is concentrated around the development of a master of science program in renewable energy and seven additional short courses. The quality of all courses and the program will be guaranteed by the integration of research in the curriculum and the development of quality standards.

Results
All the project activities aim to develop local expertise on renewable energy. The following results are expected:

- a Master of Science program in Renewable Energy
- seven special modular courses on policy in renewable energy
- upgraded universities research facilities
- strengthened universities staff with technical competences
- an active discussion about the development and utilization of renewable energy.

To ensure the sustainability of this project there will be invested in the capacity strengthening of laboratories and staff. The outline will be developed through consultation with the stakeholders via stakeholder meetings, assessment forms, symposia, workshops and seminars. The developed master program and courses will be delivered at the AdeKUS and UG.