# *"Capacity building in applied renewable energy technologies in Guyana and Suriname"*

## *(RE.edu project)*


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# Applicant and Partners

- **Anton de Kom University of Suriname as applicant,** represented by the Institute for Graduate Studies and Research (*IGSR) and the Faculty of Technology - Mechanical Engineering, Infrastructure Engineering and Electro Engineering)*

- **Partners:**
  - *University of Guyana. Guyana*
  - *Catholic University of Louvain (KULeuven), Belgium*

- **Duration of the action:** *42 months (ends 4 april 2017)*
  *A pending request for extension (6 months)*

# Background RE.edu project

- Difficulties in providing sustainable and reliable electricity access to its inhabitants. Especially in the hinterland and rural areas / the poorest parts of both countries
- Dependence on fossil fuels for power. (most imported, now local production ↑, in the future the source ↓)
- Difficulties in providing affordable electricity – at this moment all is subsidized.
- An ineffective and inefficient decision making process. Mostly because the roles, responsibilities and directives are most of the time unclear or poorly defined.

# Overall objective RE.edu project:

To improve the universities' capacity to deliver programs and courses in applied renewable energy (RE) technologies to support the sustainable economic and social development of Guyana and Suriname.

# Specific objectives RE.edu project:

- Improving the universities' capacity to develop and deliver educational programs and courses in renewable energy with specific emphasis on hydropower, biomass, solar and wind energy, including Energy Efficiency and Social-technical aspects.
- Strengthening the universities' research infrastructure linked to the educational program in renewable energy.
- Developing 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.

# Target groups

- Students, Technicians, Lecturers, Researchers, Professionals, Policy makers

# Final Beneficiaries

- Rural and hinterland (tribal) communities, Business entities, Energy companies, Government agencies, departments and institutions, NGO's (the potential company spin-offs in the RE technology field)

# Main activities planned

- Development of a curriculum for a new master of science program in renewable energy technology
- Development of 7 professional modules (social sciences).
- Training of staff from AdeKUS and UG, who will be competent to lecture and do research for the courses.
- Development of quality standards for courses and MSc program.
- Delivery of a first edition of the master program with students from Guyana and Suriname.
- Research facilities which will be used during the courses and program are put in place and are operational.
- Symposia with experts, policy makers and stakeholders are organized to increase a climate and acceptance of renewable energy.

# Deliverables/Results RE.edu project

- A joint Master of Science program in Renewable energy Technology (MscRET) at the universities of Suriname and Guyana
- Applied educational and research capacities for students and staff in hydropower, energy from biomass, solar and wind energy are improved
- Four staff members of AdeKUS and UG had a upgrading training program in Belgium
- Renewable energy debate in Guyana and Suriname has been stimulated
- Stakeholders meetings, seminars, a regional symposium to increase a climate and acceptance of renewable energy.
- 7 professional and policy related courses are developed
- A international congress on RE education )in planning)

# Implementation strategy RE.edu project

- the upgrading of the staff of both universities, by:
  - training abroad
  - offering the position of counterparts of the lecturing professors for each course

- The upgrading of the private and public sector, by:
  - stimulating the debate on RE
  - inviting experts from the public and private sector for guest lectures and debates within the MScRET program
  - Organizing stakeholders meetings, seminars, a regional symposium to increase a climate and acceptance of RE
  - integrate relevant topics and issues in the student assignments.

- The improvement of lab facilities for educational and research purposes
  - purchase of relevant equipment
  - training of students and staff to built own systems

# Impact of the RE.edu project

- Increased capacity in the field of RET: lecturers/ researchers upgraded, knowledge flow to the energy sector, MScRET graduates (in training)
- The dialogue on RET is stimulated
- Through the MScRET program development the quality standards for courses and MSc programs were improved

# Challenges RE.edu project

- Lack of good and unconditional ownership and support from the partner institutions at all levels: at universities managerial level; at project managerial level; supporting technical staff
- Inadequate facilities (labs and IT) at one of the partner university to support distance learning and e-learning education
- Inefficient investment in the upgrading of staff (1 of the 4 left)
- Unexpected introduction of new procedures and regulations at the lead university regarding the establishment and implementation of new master programs,
- No priority for the MScRET program by external lecturers.
- Lack of seed money for research of researchers/lecturers and students. And for an effective (regional) networking.

# Things to do better…..

- ***Better budgeting in the future:*** *budget for scholarships or study grants for students and researchers, possibilities for direct up topping of salaries and grants for staff, more direct budget for applied research and more budget for the purchase of equipment.*
- ***Better business approach within collaborations*** *(sign MoU's, including the tasks and workprograms of all partners)*

# Way forward

- More capacity building by the development of educational program – interdisciplinary - on different levels – and in different forms
- Better integration of the energy sector in the development and implementation of educational programs (for customized programs)
- Stronger research agenda's and promotion of collaboration within local institutions.
- Pronounce the established success by e.g. the establishment of database of technical information and reports, the establishment of local/regional networks, strengthening the roles of the universities within the networks (Knowledge Centre, advisory role, etc.)
- More regional and international cooperation
- More dialogue and cooperation in the fields of energy accessibility and efficiency

# Asante!!!