2iE : AN INTERNATIONAL SCIENTIFIC AND CAPACITY BUILDING PLATFORM IN THE HEART OF AFRICA
High Education & Research Institution

- On site High Education: BSc, MSc and PhD
- Distance learning High Education: BSc and MSc
- Vocational training: short courses and professional degrees
- Research and Development: Focus on innovation
- Engineering
2010-2015 Research Activities

- Development of Research based on
  - An International PhD program
    - Partnership with 14 Universities (France, Ghana, Switzerland, Ivory Coast, Burkina and USA)
  - 4 thematic programs:
    - Secure Water for Africa: SWAF
    - Access to Sustainable Energy for All in Africa: ASENAA
    - Sustainable and Safety Urban Life: SSAUL
    - Innovation and Green Business for Africa: IGBA
  - 6 international standard laboratories:
    - Water
    - Energy (Renewable)
    - Environment
    - Eco-materials
Laboratory of Solar Energy and Energy Savings (SEESL)

- Accurate assessment of the solar resource and energy needs in Africa
  - Elaboration of database and maps of DNI (direct normal irradiation) in Africa
  - Elaboration of maps for energy needs in Africa (south of Sahara)
- Concentrating solar power plants (CSPP)
- Bioclimatic architecture & Solar PV / thermal (low temperature) Systems
- Optimal design and thermodynamic optimization of energy systems & Energy Efficiency
Pilot of « Flexy Energy »
Laboratory of Biomass Energy and Biofuels (LBEB)

- Alternative energy for rural areas: biomass and bio-fuel, thermochemical conversion
- Adaptation of gasoline engines to vegetal oils
- Esterification of vegetal oils to biofuels
- Activated carbon for water and waste treatment
2iE/LBEB: Research on Biofuels
www.2ie-edu.org

Merci!

Our main partners
2iE PHASE II 2011-2015

Secure Water for Africa (SWAf)

- An international research program to anticipate and adapt to water shortage due to climate change in Africa

- Goals (first phase):
  - Assess CC risks in West Africa and propose adaptation strategies based on local know how;
  - Capacity building through training water specialists on methods of adaptation to climate change
  - Facilitate political decision making process on ECOWAS scale, through providing efficient tools for decision making.
Secure Water for Africa (SWAf)

- **Expected results:**
  - Climate change impacts on water resources and environment are assessed, as well as political, social and economic risks in Africa
  - Tools are developed to assess climate change risks and impact on water resources
  - Qualified staff is trained to develop and implement risks reduction measures, climate change adaptation strategies
  - Efficient Water and environmental tools on national and regional scales are developed
Access to Sustainable Energy for All in Africa (ASENAA)

- An international research program to adapt and develop sustainable energy in favour of a wider energy access in Africa

- Goals (first phase):
  - West African Poor people energy assess is improved based on local potentialities development and adapted strategies;
  - Capacity building through energy specialists training on technology and methods on carbon saving economy
  - Facilitate political decision making process on ECOWAS scale, through the provision of efficient tools and accurate data..
Access to Sustainable Energy for All in Africa (ASENAA)

Expected results:

- Implementation and demonstration of efficient technology at small and large scale under local conditions to prevent potential negative impacts of these technologies.
- Biomass and solar energy technologies promotion to produce sustainable appropriate heat, power and transport fuels to satisfy African domestic market.
- Decision making tools and methodology are developed to allow the setting up of regulation appropriate to business development and to facilitate development of industries.
- SME private sector emergence through business incubation to ensure the dissemination and the appropriation of the technologies and deliver energy services to rural and peri urban areas.