#### Towards Regional Renewable Energy Markets : The Mission of the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE)



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> Mr. Mahama Kappiah Executive Director of ECREEE

www.ecreee.org



- 1. Energy situation & challenges in the ECOWAS region
- 2. Regional energy strategy of ECOWAS and UEMOA
- **3**. Reasons for the establishment of ECREEE
- 4. ECREEE objectives and activities
- 5. Governance structure
- 6. Supporting partners
- 7. Report on ECREEE activities



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Interrelated challenges of energy poverty, energy security and climate change mitigation and adaptation

## Low energy consumption and service access

- With 4% of the global population West Africa accounts only for 1.7% of the total global energy consumption;
- The poor spend more of their income for low quality energy services than better-off for better quality services;
- Rural areas mainly rely on traditional biomass to meet their energy requirements;
- Household access to electricity services is only around 20% (40% in urban and 6-8% in rural areas);
- Electricity networks mainly serve urban and peri-urban areas; lack of decentralized systems in rural areas;
- Energy poverty has severe impacts on the social, economic an environmental development of the region;

## Energy security concerns

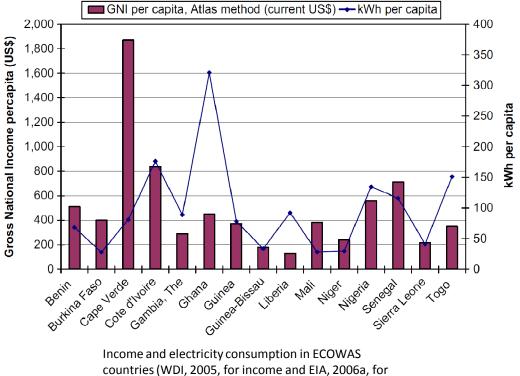
- High energy vulnerability of the region through fossil fuel price volatility (60 % of electricity generation from oil)
- Gap between rising urban energy demand, available generation capacities and limited investment capital;
- Lack of regional energy trade (region has considerable but unevenly distributed resources: e.g. gas, oil, hydro);
- High losses in the energy systems (e.g. high energy intensity and low demand and supply side efficiency);
- Energy crisis hampers social, economic and industrial development (e.g. cost of blackouts and load shedding)

### Climate changes concerns

- Increasing energy related GHG emissions (new investments determine GHGs for the next 20 -30 years)
- Climate change impacts vulnerable West African energy systems (e.g. water flows, extreme weather events)



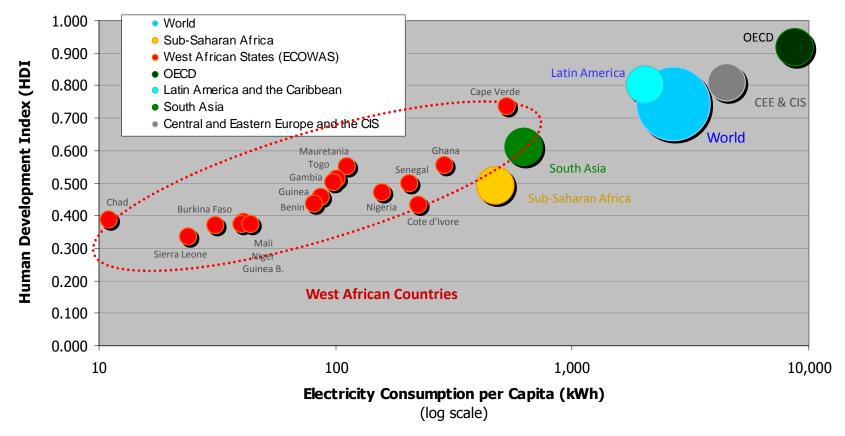
ECOWAS - Region	
Socioeconomic Indicators	
Number of Countries	15
GDP (current US\$)	160 billion
Population	270 million
Surface (sq. km)	5.11 million
Energy Indicators (2005)	
Installed capacity	9,916 MW
Electricity generation (TWh)	34.65 TWh
Electricity Consumption (TWh)	33.52 TWh
	129 KWh
Yearly Energy consumption per capita	Data from IEA, 2007: AFRICA: 578 kWh WORLD: 2,752 kWh OECD: 8,477 KWh



electricity consumption)



## Lack of energy and its implications for the HDI (Focus on West Africa)



Source: UNDP - http://hdr.undp.org/en/



## " ECOWAS/UEMOA regional response to the challenges

- Creation of the West African Power Pool WAPP;
- Implementation of the West African Gas Pipeline Project WAGP;
- Implementation of the White Paper on access to energy services for rural and peri-urban areas;
- Establishment of ERERA and ECREEE;

## The creation of ECREEE

- The Ouagadougou Declaration from 12 November 2007 highlighted the need for a regional RE&EE Centre; initial pledge by the Austrian Minister for Foreign Affairs;
- Foundation laid by Regulation C/REG.23/11/08 of the 61st Session of ECOWAS Council of Ministers in Ouagadougou, Burkina Faso, on November 23, 2008;
- Official launch of the ECREEE preparatory phase in November 2009 with support of the ECOWAS Commission, the Austrian Development Cooperation (ADC), the United Nations Industrial Development Organization (UNIDO) and the Government of Cape Verde;
- In 2010 the Spanish Government pledged extensive support to ECREEE from 2010 to 2015;



RE & EE play an important role to address the energy challenges in West Africa simultaneously

## RE potentials so far unexploited

- 23,000 MW of feasible large and small hydropower potential (16% exploited);
- Huge potential for all forms of bioenergy (e.g. biomass, biogas, biofuel);
- Average solar radiation of 5-6 kWh/m2 per day throughout the year;
- Considerable wind power potential in some countries;
- Considerable tidal, ocean thermal and wave energy resources in some countries;
- RETs are particularly effective in combination with EE measures;
- EE potentials so far unexploited
  - Wide range of options to improve supply and demand side efficiency (including energy saving)
  - e.g. Equipment labeling and building standards;
  - e.g. Cleaner production in industry (e.g. process heat);
  - e.g. Technical and commercial losses in the electricty system;



## Various technical, economic, financial, institutional, legal an capacity related barriers for RE&EE exploitation:

- . Lack of tailored RE&EE policy, legal and regulatory frameworks;
- . Lack of RE & EE quality standards and appraisal tools;
- . Low capacities and RE&EE knowledge base of key groups in public and private sectors;
- Lack of awareness of key groups in public and private sectors on different levels (e.g. federal, provincial); lack of advocacy and lobby groups;
- . Lack of risk and investment capital and tailored financial schemes;
- . Lack of technology transfer and adaptation of technologies;
- . Lack of regional approaches, forums and information exchange of likeminded key groups;



#### **Overall Objective**

To contribute to the sustainable economic, social and environmental development of West Africa by improving access to modern, reliable and affordable energy services, energy security and reduction of energy related GHG emissions and climate change impacts on the energy systems;

#### **Specific Objective**

Creation of favorable framework conditions and an enabling environment for RE&EE markets by supporting activities directed to mitigate existing barriers;

#### **ECREEE** Activities

- Lead and coordinate the implementation of the ECOWAS/UEMOA regional action plan and White Paper on energy access by promoting RE&EE technologies and services;
- Coordination, implementation and fund mobilization for the following activity programs in cooperation with national focal points, international organizations and private sector:
  - . Tailored policy, legal and regulatory frameworks and quality standards;
  - . Capacity building of key groups of different sectors;
  - . Advocacy, awareness raising, knowledge management and networking;
  - . Execution of renewable energy programs and projects for demonstration;
  - . Execution of energy efficiency programs and projects for demonstration;



#### **ECREEE Secretariat:**

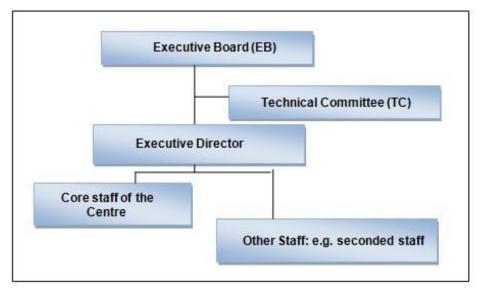
- "Executive Director of ECREEE
- "Renewable Energy and Energy Efficiency Experts
- "Biomass Energy Expert
- "Energy Policy and Capacity Building Expert
- "Information & Communications Technology Officer
- "Business Development and Investment Specialist
- "Finance and Administration Officer
- "Other support staff & int. seconded experts

#### National Focal points:

"To be announced soon

#### Executive Board (EB):

- "Representative of the ECOWAS Commission (Chair)
- "Executive Director of ECREEE
- "Rotating repr. of the ECOWAS Ministries of Energy
- "Rotating repr. of the ECOWAS Ministries of Environment
- "UNIDO representative
- "Expert from each contributing donor
- "Renewable Energy/Energy Efficiency expert from the ECOWAS region



#### Technical Committee (TC):

- Executive Director of ECREEE (Chair)
- "Representative of the ECOWAS Commission
- "Rotating technical expert from ECOWAS Ministries of Energy
- "Rotating technical expert from ECOWAS Ministries of Environment
- "Technical expert from each contributing donor
- "Professional staff of the Centre
- "Expert of energy associations or enterprises
- <sup>27</sup> Expert of energy related civil society







"Preparatory phase of ECREEE is nearly completed:

- . Office space established and operational; training facilities identified;
- . Initial staff recruited;
- . Headquarters agreement finalized;
- . Internal structures under preparation (accounting and administrative system, procurement rules, internal knowledge management system);
- . Preparation of a draft interim work plan for 2010/2011;
- "ECREEE has already initiated first operational activities in the fields of:
  - Fund raising and leverage of additional project funds;
  - Knowledge Management and Communication;
  - . Partnerships and Networks;
  - Program and Project Activities;



Financial base for initial program and project activities sustained;

#### 2010 - 2015 Indicative Budget - 11 million Euro

- . ECOWAS Commission 1.8 million Euro
- . Austrian Development Agency (ADA) 1.8 million Euro
- . Spain 7 million Euro
- . UNIDO 0.6 million Euro
- ECREEE is aiming at fur ther leverage effect through the attraction of additional cofinance from public and private sectors for its regional projects and programs;
- There is still a lack of funds for ECREEE to fulfil its mission to stimulate RE&EE market creation in a mid-term view;
- ECREEE is currently discussing additional support and cooperative frameworks with USAID, Brazil, IRENA, EC, GFSE, Casa Africa and the Government of Canary Islands;

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- Informal network and information exchange with national ener gy institutions in West Africa and on international levels established;
- A MoU on cooperation with the Renewable Energy and Energy Efficiency Partnership (REEEP) will be signed soon. It was decided that ECREE E acts as the future focal point for REEEP activities in West Africa;
- UNIDO, GEF and ECREEE are currently discussing an agreement on a collaborative framework on the implementation of the ener gy component of the GEF Strategic Program for West Africa;
- An ECOWAS-Brazilian Summit is intended to be held in June 2010. Renewable energy is one focus area of the conference. This opens up possibilities for cooperation with ECREEE especially in the area of bioenergy (e.g. biofuels);

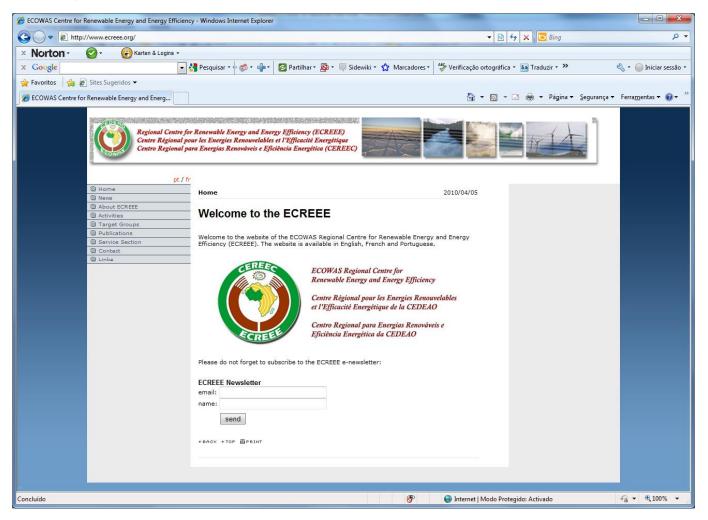


- A trilingual CMS website and brochures were elaborated; the website can be accessed through <u>www.ecreee.org</u>;
- " ECREEE started to send E-Newsletter to interested experts and maintains a related contact database;
- Initial planning for an internal knowledge management system (intranet) which interlinks the ECREEE Secretariat with the national focal points started;
- ECREEE was invited to speak at the High Level Meeting of the EU-Africa Energy Partnership and the Global F orum on Sustainable Energy, Vienna, 2010;
- Participation of ECREE E in the forthcoming Delhi International Renewable Energy Conference from 27 to October 2010;



#### Website in English, French and Portuguese

Sign-up for E-Newsletters





- Submission of regional RE&EE project proposals to the current call of the EU Energy Facility in cooperation with other partners;
- Regional EE workshop organized by ECREEE in cooperation with other partners was held from 12 to 13 April 2010 in Burkina Faso. It defined the priorities for a comprehensive West African Energy Efficiency Program to be coordinated by ECREEE. Organization of workshop with ISO and UNIDO on EE management standards & EE equipment and labeling standards by the end of 2010.
- Official opening a of the Centre and related outreach activities (regional RE workshop, project appraisal training) to be held from 26 to 30 July 2010.

#### <sup>"</sup> Preparations for:

- . regional RE resources assessments;
- . regional solar thermal initiative for warm water heating, process heat, drying and cooling;
- . concentrated solar power initiative; wind power initiative; small hydro power initiative;
- . Regional Carbon Finance Guide for West Africa;



## Muito obrigado!



ECOWAS Regional Centre for Renewable Energy and Energy Efficiency

Centre Régional pour les Energies Renouvelables et l'Efficacité Energétique de la CEDEAO

Centro Regional para Energias Renováveis e Eficiência Energética da CEDEAO

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