



***UNEP Experiences on the
transition to Renewable
following a Sustainable Path***

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UNEP main areas in helping the transition to renewable energy

- *Solar and Wind Energy Resources Assessment (SWERA)*
- *Global Network on energy for Sustainable Development (GNESD)*
- *Other Initiatives in LA&C*
 - Brazil Rural Energy Enterprise Development Initiatives.
 - Energy Efficiency Financial Mechanisms.
 - Energy Policy Making for Sustainable Development in the Caribbean.
 - Capacity Development for the Clean Development Mechanism.
 - Eastern Caribbean Geothermal Energy Project.
 - Generation and Delivery of Renewable Energy Based Modern Energy Services.



SWERA: Solar and Wind Energy Resource Assessment

- Overview
 - Pilot Project to compile Solar and Wind data in 13 countries
 - Development of new informational tools for Energy Planners and project developers
 - Regional and National maps of Solar and Wind and GIS
- Aim
 - To support informed decision-making, develop policy based on science and technology and increase investor interest in renewable.
- LA&C Partners
 - Brasil, Cuba, El Salvador, Honduras, Guatemala and Nicaragua.
- Outcomes
 - Consistent, reliable, verifiable and accesible global data.
 - Better targeting and increased confidence for solar and wind.
 - Increased awareness among key stakeholders
 - Increased capacity to plan for solar and wind



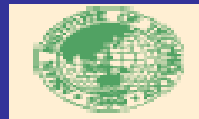
GNESD: Global Network on Energy for Sustainable Development

- **Major objectives**
 - Reduce pollution from energy activities while allowing developing countries to meet growing needs for energy services
 - Enhance the capacity of national institutions to develop policies and undertake planning and research efforts that integrate solutions to energy, environment and development challenges.
- **These objectives will be accomplished by**
 - Strengthening the ability of partners to acquire, assimilate, and apply existing knowledge and experiences.
 - Improving the understanding of links between sustainable energy and other development and environment, technology and policy options.
 - Assisting governments and the private sector to change policies, programs and investments that favor development of energy resources for sustainable development.



The GNESD Access Theme

AFRE-REN-FWD



ERI



- African Energy Policy Research Network (Theme Coordinator), **Kenya**
- Asian Institute of Technology, **Thailand**
- Environment et Développement du Tiers Monde, **Senegal**
- Energy and Development Research Centre, **South Africa**
- Energy Research Institute, **China**
- Bariloche Foundation, **Argentina**
- UFRJ/USP, **Brazil**
- TERI - The Energy and Resources Institute, **India**

Assessment

Status:

Energy services and technologies currently available to the poor

Energy services and technologies appropriate for the poor:

Needs, poverty alleviation, sustainable development

Assessment of Energy reforms:

Quick review and assessment of impacts

Draft policy options:

Options for improving access for the poor to energy services



The GNESD Access Theme: First Phase

- Objective
 - “Identify viable and proven policy options that can assist in providing cleaner and more sustainable energy services to the world’s poor in the context of a rapidly reforming energy sector”
- Reaction to the reality
 - Near 2,8 billion people surviving on less than US\$ 2,00 per day.
 - 1,6 billion people without access to electricity. Near 2,4 billion people use traditional biofuels to satisfy their energy needs.
- First Phase: Elaboration of a common approach on ***Reform options and impacts on access to energy***
 - Sub-regional perspectives
 - Focus on electricity
 - Reliance on empirical evidence
 - Assessment of reform based on agreed common indicators.



First Phase: key outcomes

- The poverty in LA&C as an increasing urban reality
- Paradoxically: energy and poverty in LA&C was more often focused on rural poverty.
- Impact of lack of access to energy could be more dramatic in urban than in rural areas.
- The importance of analyzing the *connections* between energy sector reforms, macroeconomic reforms and their impact on the poor, and the generation of new poverty levels.
- The role of RETs in helping the access to energy: off grid and on grid options.
- The “natural” connection to an activity on Renewable.



The GNESD RETs Theme

- Looking for
 - Practical means of moving forward
 - How to move on
 - Room to move on
 - Which sources and technologies?
 - Links between Renewable and Sustainable Development
 - Links with the Access theme
- Principia
 - Specially suitable for decentralized application
 - Rely mainly on renewable and local resources
 - Simple technologies “as much as possible”
 - Solutions addressing simultaneously: economic growth, social equity and friendship with the environment
 - Common approach but considering regional specific characteristics



RETs: some dilemmas and challenges

- Articulate RETs to countries energy policies objectives and priorities.
- To guarantee the sustainability of the life cycle.
- A pro active behavior looking for our Own Agenda in Renewable.
- Adequate estimation of the role that renewable could play.
- Be careful in generation of perverse effects → Energy Dualism.
- Risk of creating a new source of technology dependence.
- Broad approach on adapted technologies, related to:
 - Wood and Charcoal, Biogas, Bio-fuels, Biomass, Mini-hydro, Solar and Wind, etc.



RETs Key Issues

- Factors conditioning the role of renewable
- Poverty to be addressed → Rural or Urban?
- Final needs to be addressed
- Role of renewable for poverty alleviation in the context of other tools
- Renewable energy services for productive uses
- Financing mechanisms
- Demand side analysis as a first step, Supply side analysis as a second one



Actions for RETs

- The need of Oriented Public Policies
- Barriers as a dynamic reality
- Assess the potential role of RETs in facilitating Sustainable Development
- Look for their economic, social and environmental niche
- Assess new strategies to promote and expand RETs.



Finally

- Requested by the organizers, the UNEP - GNESD Network is elaborating a paper on “Capacity Development for Renewable” to be presented at the International Conference for Renewable Energies.