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GLOBAL NETWORK ON ENERGY FOR SUSTAINABLE DEVELOPMENT— A NETWORK FACILITATED BY UNEP

## Access to clean energy for urban poor needs to become part of basic infrastructure services

GNESD centres of excellence have carried out the initial assessment phase of the Urban/Peri Urban Energy Access study. The primary objective of the study under the broader theme on "Energy Access" was to carry out an initial assessment of the energy situation in the rapidly growing urban and peri-urban population in and around the mega-cities around the world, and identify viable and proven policy options in the context of a rapidly reforming energy sector that can assist in providing cleaner and more sustainable energy services to this target population. The study included assessing whether previous energy policy reforms had addressed these challenges or had they actually contributed to the growing problem of inadequate energy services, through neglect, for the poor living in the urban and the peri-urban areas in the developing world. This initial assessment also gave directions to future thematic areas of work based on the issues identified in each country.

The findings of the initial assessment phase have been summarized in a synthesis report based on regional reports. Each of the reports focussed on the two key end uses of energy, namely cooking and lighting, and identified the fuel usage patterns and challenges associated with the same within the geographical study area delineated by the centres.

In each of the countries, lack of data and information on the target segment—urban/peri urban poor and their energy consumption patterns was identified as one of the major challenges. There was found to be no clear definition or demarcation of poverty in urban and peri-urban areas, which would be necessary for formulating policies in order to achieve the objective of providing clean energy services to the target segment in the future.

In most of the countries that were covered in the study, households were found to use more than one fuel for cooking and lighting, depending on their availability, affordability and preferences. High upfront costs for electricity and LPG connections were found to be a deterrent for their regular usage. However electricity was accessed legally or illegally in most study areas and at times

dwellers ended up paying much more for illegal connections than what they would have for legal connections. Biomass was found to be used largely due to its local availability, and a need was stressed in many countries to look at its efficient usage and application.

At a broader policy level, it was revealed that clean energy per say was not on the urban reform agenda of most governments. Access to clean energy for urban poor was not looked upon as a basic infrastructure service, unlike water, sanitation, roads, and sewerage services. Hence a need to recognize clean energy access as a part of the overall urban development process has been emphasized. Last but not the least, was the lacunae in most of the urban planning procedures in most cities, which did not recognize many of the urban and peri-urban poor settlements legally and hence these households lived under conditions of uncertainty and lack of permanence, thereby discouraging them from investing in cleaner energy sources.





GNESD Group Photo: participants from the RE and Poverty workshop in India

# Regional Workshop on Renewable Energy and Poverty Alleviation

During the months of March and April this year GNESD facilitated three regional workshops. The workshop were held in Asia, Africa and the Latin America and the Caribbean regions on Renewable Energy Technologies (RETs) and poverty alleviation, to disseminate the findings of a two phase study on Renewable Energy Technologies (RETs) carried out by GNESD's developing country centres in all the three regions.

For the Asia region, TERI and GNESD organized the workshop on "Renewable Energy in Productive and Livelihood Generation Sector" in New Delhi from 7 to 8 March, 2007. The Adviser to the Ministry of New and Renewable Energy, Government of India inaugurated the proceedings where he emphasized on the importance of renewable energy in both livelihood generating sector and off grid rural electrification. He went on to say that there is still a lot to be done to fully realize the potential of renewable energy even in India. The technical sessions discussed issues on technology research, development, deployment and adaptation of RETs in the region. The workshop had participants from Bangladesh, Sri Lanka, Bhutan, Nepal, China, Thailand and Vietnam.

For the Africa region, ENDA-TM organized the regional workshop on "Renewable Energy and Poverty Reduction in Africa: Best practices for productive use and job creation" in Dakar, Senegal from 21 to 23 March 2007. The workshop was inaugurated jointly by the Minister Energy and Mines and the Minister of Agriculture and Biofuels. In their statements they highlighted the challenges that Africa faces in terms of Poverty alleviation and emphasized on the need to take urgent steps to adopt new energy trajectories which will ensure complementariness between all forms of energy and rational use and management of biomass resources. The workshop in its technical sessions and panel discussions had high focus on the issue of biofuels assessing the progress made in different countries in Africa and made recommendations for future course of action to be taken by the policy makers and other actors and institutions to ensure that the poor are not negatively affected by the potential biofuel boom in Africa. The workshop had participants from Burkina Faso, Mali, Chad, South Africa, Uganda, Tanzania, Kenya and Zambia.

For the Latin America and the Caribbean region, the Bariloche Foundation (FB) organized the workshop on "Renewable Energies and Poverty Alleviation" in Buenos Aires from 10 to 11 April 2007. The workshop was inaugurated by a panel, comprising of high profile policy makers, who stressed on



John Christensen head of GNESD speaking at the opening of the workshop in India

the need for articulating energy and development policies, with specific policies that target low income population in order that renewable energies can contribute to reduction of poverty. The workshop identified the critical issues related to the developments in biofuels in this region. The importance of complementing renewable energy projects with rational use of energy and energy efficiency measures and improving the quality of energy for the urban and the peri-urban poor was highlighted in the discussions. The workshop was attended by representatives from Argentina, Bolivia, Brazil, Chile, Cuba, Ecuador, Guatemala, Mexico, Peru and Uruguay.

All the three regional workshops were attended by policy makers, the donor community, the multilateral agencies, government organizations, private sector, financial institutions, NGOs, the civil society and researchers and academicians. The workshops were sponsored by GNESD and co-sponsored by UNDP and REEEP.

## GNESD completes Renewable Energy and Poverty Alleviation Study

GNESD has recently completed a two phase study on Renewable Energy Technologies (RETs). Carried out over the last two years, the studies aimed at understanding the role of renewable energy in contributing to poverty reduction in the developing countries. In the first phase a general diagnosis on RETs was carried out to identify potential niches which could play a significant role in poverty reduction through improvement in the quality of life of households. The second phase of the study developed the general framework from the first phase to identify fundamental technical knowledge and recommend concrete actions to overcome the barriers and develop specific renewable niches through national and regional programmes. The studies were carried out by GNESD centres in Asia, Africa and Latin America. The coordination of the thematic study was done by Bariloche Foundation (FB) from Argentina. The Summary for Policy Makers (SPM) which summarizes the findings of the second phase will be available from [www.GNESD.org](http://www.GNESD.org) during the first week of May.

## GNESD Introduces a New Theme:

# Energy Security and Energy Efficiency

The new research theme of GNESD focusing on Energy Security and Energy Efficiency (ESEE) is coordinated by the Asian Institute of Technology (AIT), Thailand. The objective of this theme is to analyze energy security issues from a developing country perspective. Most existing studies on energy security are focused on OECD countries and lack analysis of energy security issues of developing countries in general, and low income countries in particular. Moreover, the existing studies analyze the issue of energy security from the overall national perspective and not from the perspectives of users and individual sectors. This overlooks the fact that although a country may have enough energy resources to satisfy its overall needs, some economic sectors or segments of the population may still face difficulties to satisfy their energy needs. This research theme will therefore go beyond the common understanding of energy security and analyze the energy security issues from the micro level users perspective. It will also include the analysis of threats to the supply of a number of energy sources, including non-commercial ones (e.g. biomass).

Although a number of measures for energy efficiency improvement have been adopted by governments in many countries, their impacts on energy security have been rarely analyzed. The ESEE research theme will address this gap and analyze the impacts of energy efficiency on energy security in selected countries.

Established in Thailand in 1959, AIT is a leading postgraduate institution in Asia. AIT promotes technological change and sustainable development in the Asia-Pacific region through higher education, research and outreach. AIT is one of the nine developing country centres of excellence of GNESD.

The GNESD team at AIT comprises of Prof. Ram M. Shrestha (ram@ait.ac.th), Prof. S. Kumar (kumar@ait.ac.th) and Mr. Samuel Martin (Samuel@ait.ac.th). More information about AIT is available at [www.ait.ac.th](http://www.ait.ac.th).



Ram Shrestha



S. Kumar



Samuel Martin



A solar powered corner shop in rural India

## GNESD Annual Assembly

The Annual Assembly of GNESD was held in Nairobi 15 November 2006. A general review of the activities of 2006 was carried out and the study coordinators made presentations on the status of the ongoing studies. Gustavo Nadal, Fundacion Bariloche, Argentina presented the finding of the first phase of the Renewable Energy Theme Energy Access theme, Stephen Karekezi from AFPEPREN, Kenya gave a presentation of the Energy Access theme which in November 2006 can to an end. The extension of the Energy Access will focus on the urban peri urban issues in relation to Energy Access. The methodology and initial findings was presented by Akanksha Chaurey, from TERI, India. The Barriers and the problems faced in carrying out the studies were discussed in details. The presentation of the themes was summarized in a presentation by Ogunlade Davidson, GNESD Co-chair, introducing an upcoming GNESD publication on the links between energy and the Millennium Development Goal (MDGs)

A new thematic study on "Energy Security and Energy Efficiency" was commissioned during the assembly. Additionally detailed discussions took place on undertaking two short papers on Energy Security and Biofuel potential. The Assembly re-elected Mr. Ogunlade Davidson and Mr. Thomas Johansson to continue as Co-Chairs of GNESD.

The assembly was attended by most GNESD members and additionally representatives from REEP, GVEP and REN21 gave presentations on their activities.

## Reaching the MDGs and Beyond, GNESD launches new case study

During the upcoming CSD 15 in New York, GNESD will launch a paper at the on "Reaching the MDGs and beyond: access to modern forms of energy as pre-requisite". The paper aims to carry forward the already established linkages between energy and achieving of the MDGs. This is done by analyzing case studies from Bangladesh, Brazil, South Africa, Senegal and Kenya on Rural Electrification Programme, Use of biofuel in remote areas, The National electrification Programme, The LPG programme and Introduction of Treadle pumps respectively. The analysis shows that these interventions, among others, can contribute significantly towards achieving the goal of poverty reduction through generation of livelihood.

The paper demonstrates that though energy access is not an MDG in itself, adequate provision of energy is crucial for achieving the goals; and the case studies clearly bring out this linkage. Further, as the macro economic environment improves, so does the demand for modern energy services and consequently the improvement in the overall quality of life. The paper recommends the need to put in place an appropriate energy policy to achieve and sustain the MDGs by exploring specific energy options for productive use and promoting them for rural and urban poor.

### Upcoming event

#### Side event

#### Global Network on Energy for Sustainable Development (GNESD)

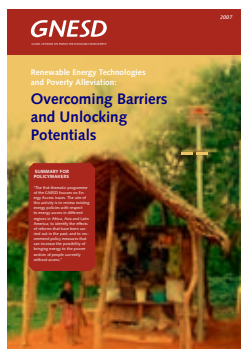
host's a Side Event at CSD 15, 8 May, 2007  
at 6:15 - 7:45, Conference Room B,  
UN complex, New York, USA.

### Upcoming Publications

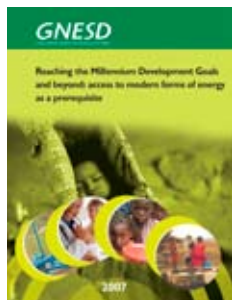
#### The revised GNESD in Brief



#### Renewable Energy Technologies and Poverty Alliviation A Summary for Policy Makers



#### Reaching the Millennium Development Goals and beyond: access to modern forms of energy as a prerequisite



# GNESD

#### Secretariat:

The GNESD Secretariat is located at Risø National Laboratory (RNL) at DTU, Denmark, which is also the host of the UNEP RISØ Centre (URC).

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A dedicated web site for the GNESD is located at [www.gnesd.org](http://www.gnesd.org). This newsletter provides information on the activities of GNESD and the views expressed do not necessarily represent those of UNEP or Risø National Laboratory. For additional information or comments please contact the editor, Mette Annelie Rasmussen ([mette.annelie.rasmussen@risoe.dk](mailto:mette.annelie.rasmussen@risoe.dk)). GNESD is printed on 100% recycled, chlorine-free paper. Layout by Finn Hagen Madsen, [finn@studio8.dk](mailto:finn@studio8.dk).

#### The GNESD Member Centres are:

##### Africa:

Environnement et Développement du Tiers Monde (ENDA-TM), Senegal.

The African Energy Policy Research Network/Foundation for Woodstove Dissemination (AFREPEN/FWD), Kenya.

The Energy Research Centre (ERC), South Africa.

Mediterranean Renewable Energy Centre (MEDREC), Tunisia.

##### Europe:

AEA Technology, Future Energy Solutions (FES), UK.

KFA Forschungszentrum Jülich, Germany.

The Department of Energy and Environmental Policies (EPE), Production and International Integration Economics Laboratory (LEPII), Université Pierre Mendès, France.

The Energy Research Center of the Netherlands (ECN), The Netherlands.

The Fraunhofer Institute for Solar Energy Systems (ISE), Germany.

The International Institute for Industrial Environmental Economics (IIIEE) at Lund University, Sweden.

UNEP RISØ Centre (URC), Denmark.

##### North and South America, The Pacific:

The Institute for Energy Economics at Fundación Bariloche (IDEE/FB), Argentina.

The National Renewable Energy Laboratory (NREL), USA.

The Stockholm Environment Institute's Boston Center (SEI-B), USA.

The University of the South Pacific (USP), Fiji.

CentroClima at the Federal University of Rio de Janeiro and CENBIO at the University of São Paulo in conjunction, Brazil.

##### Middle East and Asia:

Institute of Energy Economics (IEEJ), Japan.

The Asian Institute of Technology (AIT), Thailand.

The Energy and Resources Institute (TERI), India.

The Energy Research Group (ERG) at The American University of Beirut (AUB), Lebanon.

The Energy Research Institute (ERI) of the National Development and Reform Commission (NDRC), China.