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



## Poverty Reduction

### *Can Renewable Energy make a real contribution?*

**The Global Network on Energy for Sustainable Development – GNESD – is, as its contribution to the International Action Programme for Renewable Energies from Bonn RE2004, aiming to provide an operational response to questions about how and how much RE can contribute to poverty reduction.**

Considerable amounts of money, time and human resources have been devoted to the analysis of the renewable energies issue, and to the planning and implementation of projects all over the world. But in spite of a large number of studies offering clear identification of barriers and opportunities, progress has been painfully slow.

The main objectives of the second major GNESD study were therefore identified as providing *unbiased analysis of the actual and potential contributions RE can make to poverty alleviation and identify concrete policy guidance on how countries can profit from RE opportunities and overcome the previously identified barriers to expanded application of RE.*

The first phase of this study is now completed and results focus on:

- Country specific and sub-regional assessments of current RE applications and impacts, plus an identification and prioritization of major barriers for RETs expansion
- Policy guidance to overcome the identified barriers
- Recommendations for future actions and strategies to increase the integration of RE in the national policy.

Results have been presented in detailed sub-regional reports; a comparative analysis and a summary for policy makers (see [www.gnesd.org](http://www.gnesd.org)). Based on the results of this first phase the GNESD members are currently analyzing the major policy options identified for each sub-region with the aim of providing specific guidance on how to enhance implementation of RE technologies in areas where it is most appropriate at present.

The results so far show that in countries where there has been stable and long-term policy frameworks like for example in Brazil, China and South Africa significant progress has been achieved in selected areas like biofuels, mini hydro, domestic solar hot water and drying systems, small scale wind etc. While electricity producing technologies dominate, the importance on non-electrical RE technologies must not be underestimated in relation to affordable energy services to the poor. With biomass providing the cooking fuel for most poor households more efficient and clean stoves can have a major impact on fuel consumption and indoor air pollution.

In order to address the poverty issues it is important not only to focus on improving domestic energy services but also to focus on contributions to improving the productive uses of



▷ energy as a way of contributing to income generation. In order to improve agricultural productivity the use of wind or even treadle pumps for irrigation and solar devices for crop drying show significant potential esp. in the African studies and for South Asia.

In summary some of the general findings are:

- The role of RETs for poverty alleviation is generally found to be important in all countries studied, and contrasts with the low level of development and priority assigned to the area.
- The role of RETs for poverty alleviation varies among countries, depending on resources, capacities, existing energy infrastructure and population distribution (urban/rural).
- Relevance of non-electrical technologies for satisfying priority household and productive energy requirements (cooking, water heating, heating, water pumping) is high in many countries.
- In some of the countries (e.g. Brazil), large scale RE projects are an option for poverty alleviation through increased economic activity in rural areas and through adequate access to energy.
- High potential for local job generation through system manufacture, O&M and renewable resource extraction and processing.

In order to strengthen the application of RETs action should focus on:

- Need to develop political will, commitment and application of adequate policies and strategies supported by both the public and private sectors.
- Policies should be formulated to fit each country and playing rules be sustained in time.
- Overcoming the widespread high investment cost barrier relative to household income level by innovative and adapted financing schemes.
- Using RETs as a tool for developing income generation activities as a key element for project sustainability
- RETs should become an integral part of development programmes (opposite to isolated and technology driven projects).
- Availability of adequate databases matching population distribution, energy requirements, and income level and energy resources is generally lacking and would be very useful for planning.
- Coordination of activities and stakeholders is required to avoid wasting resources and efforts (adequate institutional cross-sector framework).
- Equipment manufacturing and O&M infrastructure are generally weak, though some capacity exists (variable among countries) and should be strengthened through cooperation.
- R&D should be coordinated and focus on technologies that correspond to priority energy requirements and local capacities.

The current second phase of the GNESD study is focusing on providing detailed analysis of key regional priority action options and developing concrete policy advice on how implementation can be successful. The results of this work will be available in second half of 2006 and will be presented and discussed at regional workshops in Africa, Asia and Latin America.

## Access to Modern Energy Key to reaching the MDGs

The link between access to modern energy services and poverty eradication is strong, and as a result it has taken centre stage in national, regional as well as international development agendas. Increasing access to affordable, adequate and reliable modern energy services remains a major challenge in developing countries. Much of the population, particularly the rural poor, do not have access to modern energy services, including access to electricity that is deemed crucial for economic opportunities and subsequent poverty reduction.

The GNESD decided to focus on "Energy Access" as the initial theme because it emerged as one of the major energy issues at the World Summit on Sustainable Development where GNESD and the other Type II Initiatives were launched. The work on energy access is carried out in the sub-regions of East Africa, West Africa, Southern Africa, South and South East Asia, Latin America and Caribbean and at the country level in the large countries like Brazil, China and India.

The activities were structured to try to address the impacts of energy sector reforms on the poor and to provide empirical evidence of such impacts. The focus was selected based on the fact that most other studies of the impacts of energy sector reforms in the developing countries mainly had focused narrowly on the effects of reforms on the performance of the Power utilities and to some extent on electricity tariffs. The "Energy Access (EA)" working group of the GNESD has examined this gap in impact analysis of the reforms to respond to two questions:

- Have energy policy reforms addressed the "Energy Access" challenge facing the poor or have the reforms actually contributed to the growing problem of inadequate energy services for the poor in the developing world?
- Which are the proven and robust policy options that would facilitate reforms leading to improved, cleaner and more importantly sustainable energy services for the poor in the developing countries?

For each region and the countries the key findings and recommendations have been presented and some common findings are that impact of power sector reforms on the poor has in many cases been negative, but positive examples exist and with the right policies reforms can be improved to better deal with the access and some key options are:

- Ring-fencing funds for electrification of the poor
- Sequencing of the reforms
- Explicit focus on the poor
- Participation of the poor in the electrification process.

The lessons learnt from the different regions have been analysed in a technical synthesis report based on the individual case studies. The analysis indicates that "doing it right" from the outset of reforms provides better and cost effective results than trying to rectify the shortcomings after the reforms have been implemented. While a number of pro-poor reform initiatives have been identified in the study, the major concern of non-inclusion of the poor's needs in designing reform by the Governments and their lack of real political commitment continue to be a major barrier to increased energy access.

## GNESD Network Assembly approves new Work program 2005-2007

In November 2005 GNESD approved a new work plan at its annual assembly, which was held in Beijing, China. The assembly was attended by the steering committee members, centre representatives from developing and industrialised countries, network partners, donors and NGOs representatives. The Assembly selected a new steering committee and Thomas Johansson and O. Davison were re-elected as Co-chairs for the Network.

The basic functionality of the Network is now fully in place, the Secretariat will therefore focus on providing more substantial support to the theme coordinators in the coming years and contribute to strengthen the capacity of all Centres in the developing countries. The ultimate test of the effectiveness of the Network is the real world effects and impacts. Estimating the impacts on national and international policies and their results in terms of moving forward on energy for sustainable development will in principle require a longer lifetime of GNESD and evidently it will not be possible to separate GNESD impacts clearly from effects of other events, but the Assembly identified some initial indicators based on responses from Member Centres:

- Contribution to national policy documents
  - Electricity tariff policy in Lebanon
  - Pro-poor rural electrification in Kenya
  - RE law in China
- Review of tariffs to ensure explicit subsidies for the poor (Lebanon)
- Access work used by national institutions
  - Utilities in Argentina
  - Energy Secretariat of Argentina
- Establishment of close links with government ministries and other institutions (Brazil)

### *The Road Ahead*

By mid-2006 GNESD will launch a new theme, after consultations with the Members. In 2006 the Network will publish several new documents including a Millennium Development Goal and Energy Paper, a Summary for Policy Makers on the RETs theme, and the Technical Reports on RETs by all the Members. A review of the centres performance will be conducted during the second half of 2006 and the Network has presently secured its funding to continue activities through 2007.



## Creating Synergies – Closer Ties between GNESD and other TYPE II Partnerships

GNESD is one of several Type II partnerships in the field of Energy that were launched at the World Summit on Sustainable Development (WSSD) in Johannesburg, September 2002. Since then GNESD has increasingly co-operated with a number of the other partnerships in order to maximise the impact of the work carried out in GNESD and to create synergies across the partnerships. The main cooperation is with the Global Village Energy Partnership (GVEP), the Renewable Energy and Energy Efficiency Partnership (REEEP) and the EU Energy Initiative (EUEI).

To move from ad-hoc collaboration to a more formalised approach GNESD has signed a Memorandum of Understanding (MoU) with both GVEP and REEEP. These MoUs were signed at GNESD's annual assembly in Beijing. Collaboration will focus on concrete actions ranging from assessment of project proposals by other initiatives to joint outreach and workshop activities. Feed-back from the policy activities of the other initiatives will also help shape the future themes in GNESD.

### *Partnership in Practices at the CSD*

As another example of the motivation to create synergies between the different partnerships, EUEI, GVEP, REEEP and GNESD is hosting a common partnership discussion forum at the upcoming Commission on Sustainable Development (CSD) 14 in New York. The 90 minute discussion forum will focus on Energy and Access, which is a common theme all the initiatives give high priority.

# Consolidated Workshop Report on Electricity and Development



In order to present the results of the access studies and discuss the linkages between electricity and development and to debate innovative ideas to address issues related to financing, governance and sustainable development, the GNESD, in collaboration with the UNDP, UNEP Risoe Centre and IEA organised a series of three regional workshops in Africa, Asia and Latin America in the second part of 2005. The consolidated workshop report summarises the key ideas presented at the workshops under the four main themes: Electricity and Development Linkages, Financing, Governance and Sustainable Development of the Power Sector. The report concludes that the provision of modern energy service is crucial to overall social and economic development. Further, the report argues that Renewable Technologies must have a larger share in the energy mix of developing countries if environmental degradation is to be limited. For this to happen, the playing fields between conventional power generating and RETs must be levelled and policy-makers must re-examine the widely held notion that RETs are more expensive than conventional sources of energy as in many cases is not the case.

The Report can be downloaded from the GNESD website or ordered as a printed version from the GNESD Secretariat at gnesd@risoe.dk or Tel.: +45 4677 5131

## Upcoming Events

GNESD will participate in the upcoming Commission on Sustainable Development 14 (CSD14) and have three events under the heading Energy and Poverty Reduction

- 8 May, GNESD Partnership in Practice Presentation at 4:30 – 5:10
- 8 May GNESD Side Event at 1:15 - 2:45
- GNESD in collaboration with GVEB, REEEP and EUEI host a Discussion Forum on Energy and Access

GNESD is also planning three regional workshops in the second half of 2006 focusing on the contributions RETs can make to poverty alleviation. These workshops will be held in Argentina, India and Senegal. Dates and agendas will be posted on the GNESD website.



## GNESD in brief

A short introduction to the global network on energy for sustainable development now available. The introduction can be ordered from the secretariate or downloaded from the website.

## Upcoming Publications

### RETs Renewable Energy and poverty reduction

- Summary for Policy Makers
- Technical summary and comparative analysis
- Technical sub-regional reports from 8 participating Centres

# GNESD

## Secretariat:

The GNESD Secretariat is located at Risø National Laboratory (RNL), 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). GNESD is printed on 100% recycled, chlorine-free paper. Layout by Finn Hagen Madsen, finn@studio8.dk.

## Energy Access

- Summary for Policy Makers
- Technical summary and comparative summary
- Technical sub-regional reports from participating Centres

## MDG and Energy paper

Reaching The Millennium Development Goals And Beyond: Access To Modern Forms Of Energy As A Pre-requisite

## New staff at the GNESD secretariat



Dr. Moinul Islam Sharif has joined GNESD as Program Officer starting from the 1st. of February 2006. He is a Bangladesh national and comes from a position as Senior Fellow at the Bangladesh Center for Advanced Studies. Major interests in the past few years have been in areas of Energy (commercial and renewable), Climate Change (mitigation and CDM issues) Sharif has led a number of energy and climate studies in Bangladesh.



Mette Annelie Rasmussen M.A. has joined GNESD as and Outreach and Information officer. She is a Danish national and holds a Masters degree in Communication Studies and History from Roskilde University Centre. Previously, she has worked in the interface between communication and development. She brings with her international communications development experience from Zambia and Georgia, where she has worked as a project manager and communications consultant.

For further information on GNESD activities please see [www.gnesd.org](http://www.gnesd.org) or contact The GNESD Secretariat at +45 4677 5189