

ENERGY, CLIMATE AND SUSTAINABLE DEVELOPMENT

A Newsletter of
UNEP Risoe Centre (URC)
and UNEP
May 2007

The Energy Globe is the "World Award for Sustainability" and considered today's most prestigious and acknowledged environmental award bestowed on projects from all over the world "which make careful and economical use of resources and employ alternative energy sources". Each year, more than 700 entrants compete for the Award in six categories.



Indian Solar Loan Programme Wins Prestigious Energy Globe

After helping more than 100,000 people in 18,000 Indian households finance clean energy from their PV solar electric home systems, the United Nations Environment Programme's Indian Solar Loan Programme has been honoured with the prestigious Energy Globe.

"The award shows that improving access to finance can help to influence the shift towards cleaner energy in the developing world," says the UNEP Executive Director, Achim Steiner. "In the past there has been a lot of money invested in market development schemes, particularly subsidies to lower capital costs, but with little success."

Launched in 2003 with support from the UN Foundation and Shell Foundation, the four-year Indian Solar Loan Programme was a partnership between UNEP, the UNEP Risoe Centre, and two of the largest banking groups in India, the Canara Bank and the Syndicate Bank. The Programme helped to establish a consumer credit market for financing solar home systems (SHS) in Southern India where the conventional electricity grid is absent or unreliable.

The innovative financing arrangement involved an interest rate reduction, market development support, and a process to qualify solar suppliers. The interest rate reduction was phased out during the Programme and today the market for financing solar home systems is on purely commercial terms.

Although the solar home sector was a small, cash-only business in 2003,

today the market is growing with more than 50% of sales financed by banks. There are now 20 banks with networks of more than 2000 branches offering solar financing.

URC's Jyoti Painuly says that one of the major reasons for the success of the Indian Solar Project is the extensive consultation with different stakeholders. "We didn't prescribe solutions, but tried to look at what the banks needed, and then supported them to succeed". Flexibility was also important, he says, adding that "when we needed to change we could".

"More and more, ownership can be transferred to stakeholders. When the initiative is with users rather than institutions, things can move much faster," he says.

Painuly also pointed out that the Indian Solar Loan Programme was successful because a reliable grid is lacking in many parts of India. "People are hungry for power, so what can they do? The Indian Solar Loan Programme filled an important niche."

UNEP has used the success of the Indian Solar Loan Programme to expand into other areas, including solar water heating loan programmes now underway in Morocco and Tunisia and others in development for Algeria, Indonesia, Mexico and Chile.

Contacts: Jyoti Painuly, UNEP Risoe Centre j.p.painuly@risoe.dk or Eric Usher, UNEP DTIE, Eric.Usher@unep.fr



During her first visit at URC, the new Director meets the other boardmembers. From left: Wagn Winkel, Minister Counsellor, Ministry of Danish Foreign Affairs, John M. Christensen, Head of URC, Geert Aagaard Andersen, Ambassador, Ministry of Danish Foreign Affairs, Sylvie Lemmet, Director of UNEP, Division for Technology, Industry and Economy, Mark Radka, Chief of Branch, Energy Branch, DTIE, UNEP, Hans Larsen, Head of Systems Analyses Department, Risoe.

Interview with

Sylvie Lemmet

Director of UNEP Division of Technology, Industry and Economics

Ms Sylvie Lemmet was recently appointed the new Director UNEP's Division of Technology, Industry and Economics in Paris. E+ had a chance to ask her a few questions about her new role.

Can you tell the E+ readers a little of your background and why you decided to take up the Director's position at UNEP DTIE?

My background is in management, including most recently working in the field of humanitarian emergency assistance as the Chief Financial Officer and Executive Board member of Médecins sans Frontières (Doctors without Borders). I've also worked with The World Bank, where my responsibilities included large-scale projects in the areas of environment and sustainable development.

My academic work includes a Master's Degree in Public Administration from Harvard University and École Nationale d'Administration (ENA), as well as a Master's

Degree in Business Administration from École des Hautes Etudes Commerciales and a degree in Economics from Sorbonne University.

I decided to take up the position at UNEP because I believe that environmental issues are the greatest challenge of the 21st Century – and the UNEP Division of Technology, Industry and Economics can play a key role to address this challenge.

With your 'new eyes', what do you see as the most important challenges for the UNEP and the Division?

The greatest challenge is to really have an impact, particularly in the field of climate change. This is an area where URC will have a significant and increasing role. But we must also be able to 'tell the story' of what we are doing so that what we have done can be of use to people all over world. Fortunately, we have a good story to tell. As noted in the recent Energy Globe awards, some of our projects, such as the Indian Solar Loan Programme, are achieving good and interesting results that can be useful to other countries and institutions.

With all the international talk about the need for partnerships and collaboration, where do you see the most productive partnerships for UNEP?



UNEP is directing considerable effort at our partnership with the United Nations Development Programme. This is part of a wider UN effort to coordinate what we do, but it also makes good sense as both organizations have complementary skills. At the same time, I think it will be important to find good working partnerships with regional development banks and bilateral agencies.

African Energy Ministers Emphasize Energy for Development

One of the most urgent development challenges for African countries is to secure stable and affordable energy services. With crippling drought reducing hydroelectric power, some of those challenges are short-term, while others, such as the lack of access to grid electricity, must be addressed over a longer term.

These challenges were at the heart of a conference convened by the Forum of Energy Ministers of Africa (FEMA) from 28-30 March in Maputo, Mozambique. Energy Ministers and high-level representatives from more than 30 African nations met with representatives from regional economic communities, regional power pools and development partners to discuss policy options and necessary actions at national, regional and continental levels. With 160 participants, the conference was a solid endorsement of FEMA (www.fema-africa.org).

With organisational and substantive support from URC and UNEP, and financial support from a number of donor agencies, the FEMA conference focused on how large-scale access to modern energy services is strongly dependent on ensuring necessary investments and performance in the power sector, and reducing the dependence on increasingly expensive oil and gas.

The conference concluded with the Maputo Declaration where Ministers agreed to compile a prioritized set of joint initiatives to expand energy services and address energy security and sustainability needs through national and regional programs.

The Ministers also agreed to support energy financing initiatives such as the African Petroleum fund, urge their governments to prioritize energy in national budgets, and

CDM Update

Parallel to the impressive expansion in the global CDM market, CDM technical assistance activities at UNEP RISOE Centre (URC) are witnessing growth both in scope and depth. With the completion of the first phase of the CD4CDM project activities in 12 developing countries, the second phase of this Dutch-funded initiative has started. Project activities in Peru, Nicaragua and Tanzania have commenced. Contracting of in-country project teams in Algeria, Mauritius and Tanzania is underway, while scoping and needs assessment missions are being planned for Bangladesh, Sri Lanka, and Suriname. Unlike the first phase, technical assistance activities in the second phase are expected to be completed within eighteen months.

URC has completed its CDM capacity building project activities in Thailand, which was implemented through funding from Danida. Similarly, the Using Carbon Finance to Support Sustainable Energy in Africa (CF-SEA) project is coming to an end within two months. The project is being implemented jointly with the World Bank's Community Development Carbon Fund (CDCF) in five Sub-Saharan African countries with the aim of building human and institutional capacities on CDM while also identifying potential CDM projects for CDCF's procurement of emissions reductions.

URC will soon be providing CDM technical assistance and capacity building activities in China through two

different Danida-funded initiatives. First initiative is a research project focusing on assessing the potential for implementing CDM energy efficiency programs in China. URC will be working closely with a number of Chinese research institutions to survey such potential and devise methodological approaches for specific opportunities and programs. The second initiative involves provision of capacity building support to stakeholders in a number of provinces in China in the area of CDM & bioenergy.

Through collaboration with EcoSecurities, URC will soon be launching a new guidebook on how to finance a CDM project. The new publication aims at demystifying the CDM for developing country bankers with the objective of facilitating a bigger role for developing country banks in providing financing to CDM projects.

URC, in collaboration with the OECD Secretariat, have completed a study on over coming barriers in CDM. The study was prepared upon a request from the Annex-I Expert Group on Climate Change and presents an overview of the various types of barriers facing CDM, with special focus on "removable" barriers and how to overcome them through policies, measures and activities. The study is expected to be formally released in May, 2007.

Contact Sami Kamel, UNEP Risoe Centre, sami.kamel@risoe.dk

liaise with Ministers of Environment to improve the use of existing carbon finance for developing the energy sector. As important, they called on development partners such as the World Bank and the EU to support a new, coordinated approach to scaling up access to energy services.

The outputs from the conference and the declaration will be presented at a side event hosted by FEMA at the CSD-15, 10 May, 2007 at 13:15 – 14:45 pm in the Dag Hammarskjöld Library Auditorium

Contact: Ivan Nygaard, UNEP Risoe Centre, ivan.nygaard@risoe.dk

The President of Mozambique, H.E. Armando Emilio Guebuza speaking at the Official Opening of the Ministerial Meeting



UNEP and UNDP Partnership Targets Climate Change

A new partnership between the UN Development Programme (UNDP) and the UN Environment Programme (UNEP) will help to 'climate proof' African development while securing a greater share of the international carbon finance market for the world's poorest countries, particularly those in sub-Saharan Africa.

Under the banner "Helping countries achieve sustainable development in the face of a changing climate," the UNDP-UNEP Partnership on Climate Change, reflects renewed commitment by both agencies to echo to the spirit of the UN Secretary-General's reform agenda aimed at making the UN system as a whole more effective and streamlined.

Achim Steiner, a UN Under-Secretary General and UNEP Executive Director, says: "Investments in roads, railways, hospitals, fisheries and power systems are underway across the sub-Saharan African region but few if any are being planned with future climatic impacts in mind".

The partnership also constitutes UNDP's and UNEP's contribution to the Nairobi Framework for directing specific assistance to increasing sub-Saharan Africa's access to the Clean Development Mechanism (CDM). The Nairobi Framework, first announced at the 2006 UNFCCC Conference in Nairobi, also includes the World Bank Group, the African Development Bank, and the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC).

Concrete activities are being planned to fill out the framework. One of the first activities on carbon finance is a UNDP project funded by Spain and Sweden to enhance the planning and CDM capacity for up to seven countries in southeastern Africa, including a carbon facility linked to the Millennium Development Goals. URC will provide training and project development while UNDP provides support at the financing level.

With more than 80% of adaptation activities expected to be undertaken as adjustments to development activities, one aim of the UNDP/UNEP partnership is to provide a "rapid response service" to requests by governments trying to factor climate change impacts into infrastructure projects and other vulnerable areas of economic life.

URC's John Christensen says that while in-depth studies and national adaptation plans are needed, a "rapid response service" can allow a minister faced with a planning application, to pick up the phone and have 'climate proofing' expertise on his or her door step within a matter of days. "In this way small targeted efforts can really help move things along".

Contact: John Christensen, Head of UNEP Risoe Centre, john.christensen@risoe.dk



URC Assists New Programme for Climate Change Adaptation in Africa

URC is participating in an international program to improve the capacity of African people and organisations to adapt to climate change in ways that benefit the most vulnerable members of society. The Climate Change Adaptation in Africa (CCAA) Program is a joint effort by Canada's International Development Research Centre (IDRC) and the United Kingdom's Department for International Development (DFID).

Under the CCAA URC is a research partner in a three-year project called *Managing climate risk for agriculture and water resources development in South Africa*. Assisted by the URC and International Research Institute for Climate and Society (IRI), the project will be undertaken by three South African institutions, University of The Free State (UOVS), University of Cape Town (UCT), and University of KwaZulu-Natal (UKZN),

The first objective of the Project is to develop the capacity of South African and regional institutions in the private

and public sectors to better integrate information about climate change and climate variability into water resources policy, planning and management. The second objective is to demonstrate how this information can be used to evaluate alternative strategies and projects for adjusting or adapting to climate change and climate variability in other regions.

URC's role is to train Ph.D. students at UCT and UOVS, members of key stake holder groups in the Western Cape and, more generally, African researchers in the development and use of integrated assessment models of river basins to evaluate the incremental costs and benefits of "climate proofing" water resource development projects.

Contact: Mac Callaway, UNEP Risoe Centre, mac.callaway@risoe.dk

Climate Screening Project Enters Second Phase

The second phase of the Danida and URC *Climate Screening Project* to develop an overall approach to climate screening and assistance for climate change adaptation will include Bangladesh, Bolivia, Nicaragua, and Uganda. Phase two builds on the initial work carried out in Mozambique, Tanzania and Vietnam last year.

"The aim of the climate screening process is to help partners screen national development planning activities for potential impacts of climate change in relevant sectors and key programmes," says URC's Kirsten Halsnaes.

Climate change issues and adaptation processes, as well as the design of specific adaptation projects, are also explored in the partner countries. The project considers the relationship between national development goals and climate change, and provides a focused screening of climate sensitive investments/projects.

Climate screening also provides expertise for developing new approaches to the design of climate change adaptation programmes in the target countries, while exploring 'windows of opportunity' for raising key policy issues and influencing the design of development programmes and investments.

The *Climate Screening Project* started as an outcome of the Danish Climate and Development Action Programme launched by the Danish government in 2005. The aim of the programme is to "climate proof" Danish development aid and put into use assessments of the links between development cooperation programmes and climate change.

Contact: Kirsten Halsnaes, UNEP Risoe Centre, [Kirsten.halsnaes@risoe.dk](mailto:kirsten.halsnaes@risoe.dk)

Assessing energy as a development catalyst in Africa

Energy end-uses in developing countries include a multitude of activities, ranging from irrigation and water heating to health and education services. Over the last decade, consensus has steadily increased about energy's potential contribution to the achievement of sustainable development. Yet, much remains to be clarified about the specific links through which energy contributes to development as well as the conditions under which it can be expected to contribute in the future.

One reason for the lack of such information is that the performance of most energy projects is assessed in technological and financial terms, not by the interventions' impacts on end-users. Sponsored by the European Commission's COOPENER programme, the "Development and Energy in Africa" project addresses this shortcoming.

The DEA project (<http://deafrica.net>) has developed and applied a methodology for the assessment of impacts from small or medium-scale energy interventions, with a view to improve future energy interventions. The end-product is the result of a fruitful collaboration between six case African partner institutions, the URC, and the ECN in the Netherlands, with input from an international expert group assembled by GVEP.

Pilot applications of the methodology in each of the African countries have shown that energy projects can



indeed have considerable developmental impacts under a wide range of circumstances. However, energy often enters as one of several inputs into other development projects. The coordination, implementation and contexts of those projects therefore influence what may ultimately be attributed to energy. Accordingly, another successful effort of the project has been to engage local cross-sector stakeholder groups, from areas like health, water supply, agriculture and education, in the consideration of energy as a key element in the achievement of the Millennium Development Goals.

The lesson learnt from the DEA project will be presented at a side event at the CSD 15, 8 May 2007, during an M&E learning session organized by GVEP.

Contact: Gordon Mackenzie, UNEP Risoe Centre, gordon.mackenzie@risoe.dk

UNEP Study Assesses Biofuels to Power Communications

UNEP recently completed a study to assess the feasibility of biofuel production in Tanzania to fuel diesel generators that power mobile phone antennas. The study was commissioned by telecommunications giant Ericsson to promote environmentally sustainable business development.

"The study found that Jatropha is the most suitable crop due to its suitability to the region's climatic conditions, the yield per hectare, and minimal investment and maintenance requirements," says UNEP's Martina Otto.

However, the study found that jatropha has two main disadvantages: it takes about 3 years before the plants

start to provide reasonable yields, and Jatropha is still relatively unknown as a dedicated agricultural crop.

The study also found that the jatropha oil should be used directly in diesel generators without conversion first to biodiesel. "The technical complexities and risks involved with modifying a limited number of diesel engines to use (if required at all), are much smaller than those involved with commercial scale biodiesel production," says Otto.

Ericsson is now considering a possible business model with potential jatropha producers.

Contact: Martina Otto, UNEP DTIE, martina.otto@unep.fr

Upcoming publications

New Website for the UNEP Risoe CDM/JI Pipeline Analysis and Database



Last updated: 13. March 2007

Content of CDM/JI Pipeline

- » Home
- » Expected growth of 2012 CERs
- » Top countries by issued CERs
- » CDM projects with CERs issued
- » Buyers

With the May 2007 update of the UNEP Risoe CDM/JI Pipeline this very popular database is improved with the addition of a new website. This is done because the Pipeline has grown substantially, and the graphs can be difficult to find in the large spreadsheets.

To address this, URC has created a website under the www.cd4cdm.org site with the main figures and graphs on several pages. These include: CDM projects by type, CDM projects by host region, CERs, Approved CDM methodologies, JI projects, and DOEs/AIEs.

Contact: Jørgen Fenhann, UNEP Risoe Centre, j.fenhann@risoe.dk



The UNEP project CD4CDM

Guidebook to Financing CDM Projects

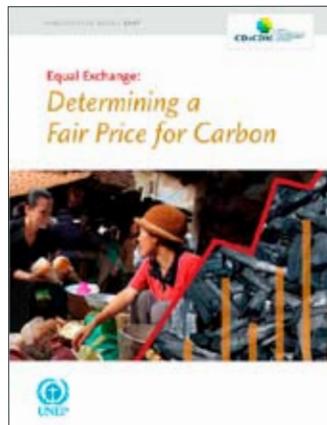
UNEP

EQUIS EQUITY SECURITIES

late May 2007 and will be attended by bankers and credit officers from financial intermediaries in Sub-Saharan African countries and aims at building their capacities in the area of CDM project appraisal. The World Bank is co-sponsoring the event along with URC, DBSA, and possibly a number of bilateral donors.

CDM Bazaar

The UNEP Risoe Centre and the Secretariat of the UN Framework Convention on Climate Change have agreed to jointly establish a web based portal, a so-called CDM Bazaar for facilitating information relating to projects under the Clean Development Mechanism (CDM) of the Kyoto Protocol.



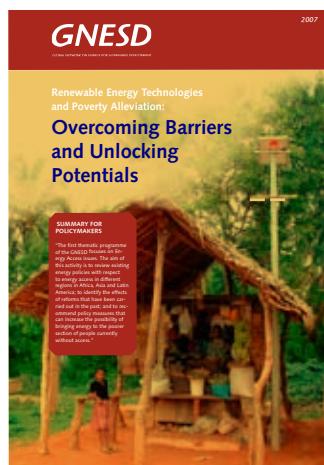
CD4CDM

Equal Exchange:
Determining a Fair Price for Carbon

UNEP

Perspectives Series

The first issue of a new annual publication entitled *Perspectives Series* will be released by URC in May 2007. The publication is a compilation of contributions by a number of carbon market experts' on their views regarding what is a fair price for carbon.



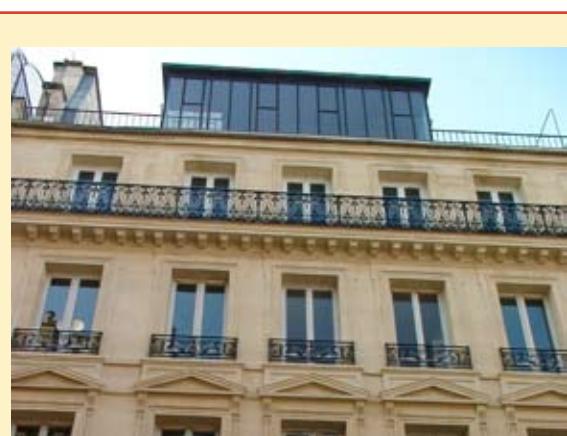
GNESD

Renewable Energy Technologies and Poverty Alleviation:
Overcoming Barriers and Unlocking Potentials

SUMMARY FOR POLICYMAKERS

2007

dissemination; and the formulation of policy outlines and instruments to overcome the barriers. The publication is available from www.gnesd.org



The UNEP DTIE Paris Office is moving!

As of April 30, 2007, the UNEP DTIE Paris Office will be at the following address: 15 rue de Milan 75441 Paris CEDEX 09 France.

Telephone and fax numbers will remain the same
Tel +33 1 44 37 1450 Fax: +33 1 4437 1474

Upcoming Events

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.

URC is organizing a side event 15 May, 2007 at the SBI in Bonn, Germany with the objective of presenting CDM analytical and research results implemented by URC and its collaborating partners and institutions.

Risø International Energy Conference 22 - 24, May 2007. URC is in collaboration with the World Bank's CF-Assist, IETA and OLADE, URC is currently preparing for the second Latin American Carbon Forum 5-7 September 2007, Lima, Peru.

New Staff at URC



Todd Ngara, Senior Researcher

Ngara joined URC 1 April. He holds a Ph. D on agriculture meteorology from the University of Zimbabwe. His earlier experience lies in climate change and variability in Southern Africa and more recently in developing and refining an internationally-agree methodology and software for the calculation and reporting of national GHG emissions and removals for the 2006 IPCC Guidelines. At URC, his work will mainly focus on Adaptation and CDM issues in Africa.

Contact: Todd Ngara, URC todd.ngara@risoe.dk



Adrian Lema, Research Assistant

Adrian Lema holds a Masters degree in International Development Studies from Roskilde University and Copenhagen Business School. At URC he is assigned to the CDM Pipeline and is also researching issues of technology transfer and capability building for sustainable development.

Contact Adrian Lema, at UNEP Risoe Centre: adrian.lema@risoe.dk



Nethe Veje Laursen, Research Assistant

Nethe Veje Laursen holds a Masters degree in economics from Copenhagen University with specialization in environmental and development economics. At URC she is assigned to work with climate change vulnerability change and adaptation research.

Contact Nethe Veje Laursen, at UNEP Risoe Centre, nethe.laursen@risoe.dk

GNESD Update

The annual assembly of GNESD was held in Nairobi in 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 study ongoing studies on "Urban and Peri-urban Energy Access (UPEA)" and "Renewable Energy Technologies (RETSII)". The Barriers and the problems faced in carrying out the studies were discussed in details.

A new thematic study on "Energy Security and Energy Efficiency was commissioned during the assembly and additionally two short papers on "Energy Security" and "Biofuel potential" were undertaken. 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 REEEP, GVEP and REN21 gave presentations on their activities.

Three regional workshops were held on the "Renewable energy and Poverty Alleviation" theme in Asia, Africa and Latin America during March and April 2007. The objective was to disseminate the findings of the recently completed studies on RETs. The three workshops generated a lot of interest on the identified niches and the barriers to the diffusion of RE in different countries and how can they be overcome. There was special focus biofuels in the workshops In Africa and Latin America where the potentials and risks were discussed in great depth. A summary of the three workshops has been published and is available at www.gnesd.org.

GNESD has launched two publications at the CSD15 and they are "Renewable Energy Technologies and Poverty Alleviation: Overcoming Barriers and Unlocking Opportunities" based on the RETs thematic study and "Reaching the MDGs and beyond: Access to modern forms of energy as a prerequisite". These studies are also available at www.gnesd.org

E+ provides information on the activities at URC and UNEP. The views expressed here do not necessarily represent those of UNEP, Risø National Laboratory or Danida. Back issues can be found at www.unepri-soe.org/newsletters.htm. To receive an electronic or printed copy of **E+**, please register on our website www.unepri-soe.org or contact Maria Andreasen (maria.andreasen@risoe.dk) at the URC number below. For all other information or comment, please contact the editor, Mette Annelie Rasmussen (mette.annelie.rasmussen@risoe.dk).

UNEP Risoe Centre on Energy, Climate and Sustainable Development (URC), Risø National Laboratory, PO Box 49, DK 4000 Roskilde, Denmark Tel: +45 4632 2288, Fax +45 4632 1999, www.unepri-soe.org

From 1 January 2007, Risø National Laboratory, the Danish Institute for Food and Veterinary Research, the Danish Institute for Fisheries Research, the Danish National Space Center and the Danish Transport Research Institute have been merged with the Technical University of Denmark (DTU) with DTU as the continuing unit

UNEP Energy Programme, Division of Industry, Technology and Economics, 15 rues de Milan, 75441 Paris Cedex 09, France Tel: +33 (0) 1 4437 1429, Fax: +33 (0) 1 4437 1474, www.uneptie.org/energy

E+ is printed on 100% recycled, chlorine-free paper.
Layout by Finn Hagen Madsen (finn@studio8.dk)