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ENERGY, CLIMATE AND SUSTAINABLE DEVELOPMENT

A Newsletter of UNEP Risoe Centre (URC) and UNEP
November 2006

Development and Climate Change:

A Marriage of Necessity

Climate change considerations must be a principle element of planning and development to both reduce climate change impacts and adapt to them, according to climate and development experts attending two days of meetings, 25 – 26 September, in Copenhagen co-organised by the Danish Ministry of Foreign Affairs and URC.

Opening the Climate Resilient Development Strategies meeting, the Danish Minister for Development Cooperation, Ulla Tørnæs, said that climate change does not belong to a distant future, "it is here now and developing countries are in the front line".

"This is why Denmark has decided to make climate change a priority theme in Danish development co-operation….and to support 'climate proofing development," she told a diverse group of 180 participants from the scientific, government, donor, NGO and private sectors.

That sentiment was very much at the centre of remarks by Environment Minister for Tanzania, Mark Mwandosya, who said his country is already starting to suffer effects of climate change. Minister Mwandosya cited his country's four-year drought as evidence for the need to directly integrate climate change and increased variability into infrastructure planning. Dams that were planned for a once in 30-year drought are now only able to generate about half the power required.

As well, the melting snows of Kilimanjaro from climate change will not only affect the tourism industry, but also the source of water for the local region that depends on water from the mountain's glacier. The Minister also noted that malaria is now found in regions that were formerly free of the disease.

He crystallized the challenge of climate change and development when he told participants "it is impossible to understand an impact 40 years into the future when you are trying to survive to the next day". In Tanzania, he added, if the rains come, people will forget about climate change.

"Climate is what gives you life.
It affects the land, the air and the water.
Either you deal with consequences or deal with consequences together with the cause"

Mark Mwandosya, Environment Minister Tanzania

Bob Watson, World Bank and Mark Mwandosya, Environment Minister, Tanzania speaking at the Copenhagen meeting 25 November, 2006

Attending by videoconference, senior adviser to the UN Secretary General, Jeffery Sachs from the US-based Earth Institute at Columbia University, said that it was imperative that climate change was part of the mainstream process in the development of so-called Poverty Reduction Strategies Papers, a concept developed by the World Bank to identify national development strategies to reduce poverty.

The World Bank's Chief Scientist, Bob Watson, said that there are "very few people now who would argue that we are not affecting the climate… the debate now is what to do about it." Watson added that three billion people in developing countries are likely to be affected by climate change, twenty times the rate of those in developed countries.

URC's Kirsten Halsnaes said many countries are presently not able to adapt to current climate impacts, let alone more severe future impacts from climate change. She cited initial URC work under the Danish Development and Climate Action Programme to identify climate impacts in Mozambique where a major flooding in 2000 displaced 400,000 people, with the likelihood that such flooding will continue in the future. "My impression is that there is no really detailed forecasting about the likelihood of such events, so people are not very well prepared for coming events. There is a need to do more to know where future flooding is likely to happen," she said.

To address such issues, Halsnaes says that URC's approach is to mainstream climate concerns into development planning and policies to make them more resilient. In the Danish Climate Action Programme, for example, URC is collaborating with Danish development cooperation countries on initial assessments of their capacity to deal with climate change vulnerability and adaptation.

P. R. Shukla from Indian Institute of Management noted that strategies for dealing with sustainable development and climate change have many common elements, and aligning these would deliver multiple dividends but would require increased 'institutional capacities'.

However, Sachs said in his address that developing countries have few places to go for support to adaptation projects, with events proceeding "far, far faster than most countries can adapt". There is little or no capacity in finance or planning ministries, and environment ministries are often "on the fringe of economic policy".

Climate change has to be coordinated with public health, agriculture, water, and energy bodies and integrated in a cross cutting manner into development strategies, he said. The OECD's Richard Manning said environment and development practitioners speaking the same language "doesn't happen automatically. New collaborations between, for example, the insurance and development sectors could be very productive".

Along this line, finance requirements were also considered a key issue with Watson noting that billions will be needed for both development and adaptation. Although these are significant amounts, Watson pointed out that costs of adaptation will be relatively modest in relation to cost of inaction.

If there was any political will at all, he added, the tens of billions needed could be raised without problem. However, URC's John Christensen said the timescale was important. "Even if the money were available right now, we wouldn't know where to spend it wisely". Christensen says we need to determine the most effective ways to address these issues.

In spite of the long timeframe, Christensen said he was optimistic and sees a willingness to act now that the debate is over about whether climate change is a serious challenge. "The debate has also shifted from talking about adaptation as a stand alone activity for climate reasons, to how you integrate climate change into development, which is where the future lies," he said.

Summing up the meeting, Head of the Department for Environment and Sustainability within the Danish Ministry for Foreign Affairs, Gert Aagaard Andersen, said that the conference showed that "things are moving quickly now". The biggest challenge is to realise that "climate change is not a sector", but an issue that cuts across all economic, social and environmental sectors. The 'ivory tower' approach where ministers of health and finance sit in a different place with no links to environment and science ministers is over," he said.

Planning rural electrification for productive use

With liberalisation of the energy sector and the proliferation of NGO's as local development actors supporting energy-systems, there is a need to develop new approaches for rural electrification planning. The new approaches need to integrate local knowledge and prioritising scarce development resources. This challenge is addressed by IMPROVES-RE (Improving the Economic and Social Impact of Rural Electrification); an ongoing project which is financed by the European Commission's COOPENER programme. The project, which is implemented in a partnership between IED (France), ETC (Netherlands), and the URC, cooperates with national organisations in four African countries; Mali, Burkina Faso, Niger and Cameroon. http://www.improves-re.com/

The Improve-re planning approach has three important new elements: Focus on identifying development poles to ensure the maximum impact, integration of local and national priorities and use of geographic information system (GIS) as at tool to increase visibility and to enhance efficiency.

Development poles

Towns or villages, which are judged to have a high likelihood of future economic development, are defined as development poles. They are given high priority in the planning of electricity supply, in order to favour productive use of electricity in its widest sense. Productive use of electricity is in this approach not only motive power for enterprises, but is also includes lighting to schools, health centres, administrative users and marketplaces. One of the main issues in the approach is therefore to identify and test, which indicators are valuable in the definition of development poles

Integration of local and national planning concerns

While local participation is an essential element in all kinds of planning, it still remains an important question how to integrate the concerns at local level with national priorities. The IMPROVES-RE addresses this dilemma in an interactive process, involving stakeholders, at village and regional level at multi-stakeholder workshops. Discussions at these workshops are based on draft plans, which are later revised according to new information of local conditions. Such information can for example be existence of local entrepreneurs interested in setting up and financing an electrification system or it can be a historical rivalry between villages or towns, which makes a shared system a risky affair. The consolidated plan remains a 'working plan', which serves to provide guidance to donor-agencies and national electrification agencies, when prioritizing, where to develop detailed projects.

Geographical information system

Geographical Information Systems (GIS) are increasingly used in developing countries, and population census data and infrastructure data are often available in an electronic format. The project tests the advantages of using GIS to visualise the draft electrification plans, and to make the plan more accessible to technicians as well as other interested parties.

The project commenced in April 2005 and will be concluded in April 2007.

For further information, contact Ivan Nygaard, ivan.nygaard@risoe.dk +45 46 77 51 15

Sustainable Transport
Moves Forward in Latin America

The transport sector supports a large part of economic activity, but it comes with substantial negative impacts. Just one of the negative impacts - traffic congestion - costs money, increases pollution and decreases health. To address these issues and help Latin American countries create sustainable transport networks, URC facilitated the creation of the Network for Environmentally Sustainable Transport in Latin America and the Caribbean, or NESTLAC. With support from the Global Environment Facility (GEF), NESTLAC promotes the benefits of sustainable transport to politicians, decision makers and other stakeholders in Latin America.

NESTLAC's first project was initiated in March 2006 and is currently undertaking four main activities:

1) Supporting the Municipality of Guatemala City to conduct a number of studies/activities needed to achieve a more economic, social and environmentally sustainable outcome of the second corridor (West line) of Guatemala City's BRT system (Bus Rapid Trasit) Transmetro.
2) Supporting the Transit and Road Transport Authority of Panama to undertake studies and activities required for a more economic, social and environmental transport programme to improve the planning and regulation of the urban bus system of Panama City.
3) Supporting the Executive Transport Secretariat of the Chilean Government (SECTRA) in designing and implementing a major information and dissemination campaign aimed at promoting the widespread use of a 24 kilometres bicycle lane in Concepción, Chile;
4) Promoting and disseminating guidelines for implementing sustainable transport projects.

"Promoting Sustainable Transport in Latin America" is a separate three-year project under NESTLAC and expected to be completed in 2009. The project was initiated by a kick-off meeting held in Concepción, Chile in May this year.

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Donor Disappointment:

Why Local Institutions Don't Evolve as Planned

Development agencies and NGO's have argued strongly in recent years for certain types of development, particularly decentralised state authorities and privatised public services such as water and electricity. But research by Ivan Nygaard, URC seriously questions policies that try to create local democratic institutions operating independently of donor support.

The research, for which Nygaard was awarded a PhD at Roskilde University's International Development Studies Unit, consisted of three case studies of donor-supported institutions in two small rural towns of Northern Burkina Faso. Those case studies included village groups, municipalities and electricity cooperatives, which were all supported and funded by external development agencies.

"My research shows that the existing relationships between patrons and clients have gradually been enhanced to include relationships between donors and recipients, which creates new structures of dependency", says Nygaard.

This dependency is so pervasive that the institutions begin to differ from - and in some cases contradict - what was originally intended. Nygaard shows, for example, that donors see village groups as institutions to undertake activities that generate income, rather than what the local population in his study area sees, which are institutions as instruments to access development resources.

In his study, Nygaard further argues that different types of institutions attract people from different social groups. Institutions such as municipalities, he explains, symbolically compete with traditional institutions, such as local chiefs. The municipality, therefore, attracts customary powers more than other externally supported institutions, such as village groups and electricity cooperatives that symbolically compete with traditional working institutions.

"This is an important element to explain why the current decentralisation process in Burkina contributes to a re-institutionalisation of customary powers, rather than providing leverage for the poor" he says.

Nygaard concludes that the widespread criticism of the dysfunctional state and inefficient power utilities seems to have paved the way for an unrealistic optimism of what is possible when creating new decentralized and privatised institutions.

For further information please contract Ivan Nygaard, ivan.nygaard@risoe.dk

Carbon farming en-route in Africa

With deforestation accounting for almost a quarter of global carbon emissions, a new initiative to promote CDM in the agricultural and forestry sectors in Sub-Saharan Africa is being jointly implemented by URC and UNEP, in partnership with The French Agricultural Research Centre for International Development (CIRAD) and the French National Forestry Office. Participating countries are expected to include Benin, Cameroon, DRC, Gabon, Madagascar, Mali and Senegal. The Project primarily aims at enhancing *expertise* to generate carbon credits in land use, land use change and forestry (LULUCF) as well as bioenergy activities. Assistance shall include institutional support, training workshops, and both regional and international knowledge transfer. Pilot projects and case studies in potential asset classes such as plantation forestry, community agro forestry and biofuels will open up opportunities for African *participation* in the CDM and the voluntary carbon market. In addition, the project facilitates the establishment of a stakeholder *network* for technical cooperation and linkages between buyers and sellers. Finally, the Project's findings can contribute to the *policy* evolution towards a post-2012 climate regime, casting light on key issues such as eligibility of avoided deforestation and land degradation projects in CDM-type initiatives. The Project is funded by the French Global Environment Facility.

For further information, please contact Glenn S Hodes glenn.hodes@risoe.dk

Upcoming events

URC commitments during the COP12 /MOP2 in Nairobi, Kenya

6 – 17 November 2006:

UNEP and URC Side event:

13 November, 2006,
Supporting successful implementation of CDM projects,
15:15-16:45
Room: Acacia

URC Presentations:

10 November, 2006
Africa and the CDM,
13:15 - 14:45
Room: Acacia

10 November, 2006
Bioenergy and the CDM,
13:15-14:45
Room: African Blackwood Tree

13 November, 2006
Integrated development and climate policies: how to realise benefits at national/international level,
13:15 -14:45,
Room: The EU-pavilion

15 November, 2006
World Energy Outlook 2006: Alternative Policy Scenario and Beyond: Energy Efficiency, Renewable Energies and Policies for a Sustainable Energy future, Round Table
15:15 - 16:45,
Room: Gigiri 2

15 November, 2006
Global Network on Energy for Sustainable Development (GNESD)
Assembly, at Savona Panafric Hotel, Nairobi, Kenya
9:30 - 18.30

Experiences with
The Danish Action Programme

The first three scoping missions in the Danish Climate and Development Action Programme have been completed in Mozambique, Tanzania, and Vietnam. From these studies it was concluded that there are strong linkages between current development activities in the countries and climate change. It was also recognized that even though countries already have experienced serious damages from flooding, cyclones and droughts there is very little information and capacity available about climate change impacts and coping strategies. The scoping missions suggested a number of activities that could support a stronger capacity in climate change vulnerability and adaptation in the countries.

In Mozambique it was suggested to focus on raising awareness about climate change and development impacts, including training programmes related to climate forecasting. It was also suggested to conduct interdisciplinary masters and PhD training, and to make a provincial-level case study that combines climate and flooding forecasts and socio-economic data and to use this in dialogues about policy implementation. In Tanzania the major activity proposed was to establish a broader interdisciplinary work on climate change. This would include experts in climate modeling, agriculture, water management, energy and health, in addition to experts with a background in general economics and social research. Some of the areas suggested for more in-depth analysis in Tanzania are: Agriculture, water supply, malaria control, and land use planning that balance the strong demand from crop production, pasture, wildlife, and biomass energy. In Vietnam it was suggested to study development and climate change more in-depth in a number of areas. This includes the use of seasonal forecasts for short term agricultural coping strategies, integration of climate change impacts in environmental impact assessments for large infrastructure projects, hydropower planning and management, and flood coping strategies based on information about household living standards and capabilities in flood prone areas.

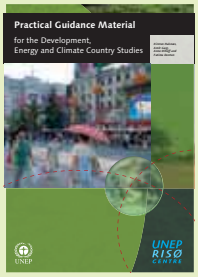
The side event programme

Chairperson: John Christensen, Head, UNEP RISOE Centre (URC).

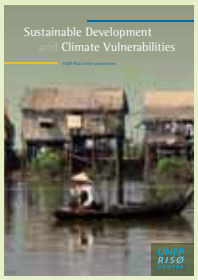
3:15 – 3:20 pm	Welcome Remarks John Christensen
3:20 – 3:25	Capacity Building in the Environment Sector Achim Steiner, Executive Director, UNEP
3:25 – 3:30	Netherlands support to CDM process Christine Pirenne, DGIS, Netherlands Ministry of Foreign Affairs
3:30 – 3:40	UNEP's Technical Assistance in CDM Sami Kamel, Carbon Finance Coordinator, URC
3:40 – 3:50	Analytical Results from CD4CDM's CDM Pipeline & Database Jorgen Fenhann, Senior Energy Scientist, URC
3:50 – 4:00	Web-based CDM Bazaar: Design & function Daniele Violetti, Team Leader, CDM Registration & Issuance Unit, UNFCCC Secretariat
4:00 – 4:10	Bioenergy & CDM: Prospects and Challenges Glenn Hodes, Energy Economist, URC
4:10 – 4:20	Pitfalls in CDM Project Monitoring Einar Telnes, DNV
4:20 – 4:30	Financing CDM Projects: Approaches & Lessons Learned Francisco Ascui, Ecosecurities
4:30 – 4:45	Concluding remarks & closure.

New Publications

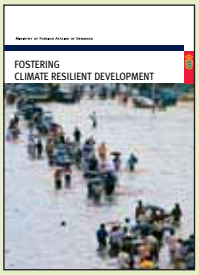
- **Sustainable Development, Energy and Climate – Exploring Synergies and Tradeoffs**



- **Practical Guidance Material for the Development, Energy and Climate Country Studies**

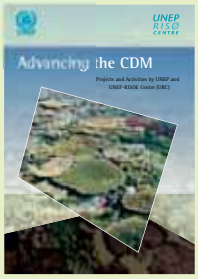


- **Sustainable Development and Climate Vulnerabilities**

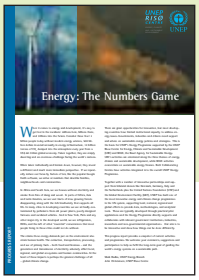


- **Fostering Climate Resilient Development**

- **PDD Pitfalls Guidebook Pitfalls: Spanish and French languages**



- **Advancing the CDM**



- **URC & UNEP Energy Progress Report 2006 - 2007**

GNESD Update

GNESD has successfully achieved the milestones set out at the beginning of 2006. The Policy Implementation Phase of the Energy Access Theme has been completed The RETs Policy Implementation phase is also near completion and is expected to be finalized by the end of 2006. The Summary for Policy Makers on first study under the Renewable Energy Technologies Theme was completed in April 2006 and was disseminated during CSD14 held in New York in May 2006. The Summary for Policy Makers on the Energy Access theme has been completed and is expected to be launched in November. A new thematic study on Energy Access for Urban and Peri-urban poor has been commissioned and the Inception Reports on the study have been completed by the participating centres. The upcoming Annual GNESD Assembly will be held on 15 November, 2006 at the Savona Panafric Hotel in Nairobi. The Assembly will be attended by delegates including the Steering Committee members and Centre representatives, Network Partners, Representatives of other Type II partnerships, Donors, NGOs, and the Private sector.

New Staff

Dr. Chia-Chin Cheng,
Energy Scientist

Cheng has recently joined the URC as Energy Scientist. She holds a PhD form MIT in Boston USA. She has been working on energy efficiency and sustainability related issues in China and India throughout her PhD studies, and her previous work with TERI, India. Her research interests mainly focus on integrating energy efficiency into development strategies in developing countries. She specializes in electricity demand modeling and projection, energy efficiency technology assessment, and electricity demand-side management policy research.

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Dr. Ivan Nygaard,
Energy researcher

Nygaard has recently concluded his PhD thesis on local development institutions (see announcement in this issue) defended at Roskilde University. Before joining URC as a doctoral student, Nygaard was employed at the Danish Energy Agency, where he was engaged in energy planning and development of biomass energy in Denmark and abroad. Nygaard's main research interests are energy policy issues and organisation of access to energy in Africa. Nygaard is currently assigned to assisting Forum of Energy Ministers of Africa (FEMA) and to a projects testing and demonstrating new methods of rural electrification (IMPROVES-RE). Besides a PhD in International development studies, Mr. Nygaard holds a Masters in Engineering from the Technical University of Denmark.

Contact Ivan Nygaard, at UNEP Risoe Centre:
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Dr. Julia Schmid,
Environmental Economist

Schmid has recently joined the URC. She holds a Ph.D. in Forestry from the Technical University of Munich, Germany. Her experiences lie in the field of forest management and valuation, conservation and regional development and land use issues in Southern Africa. At URC, she will mainly focus on promoting LULUCF projects under the CDM.

Contact Julia Schmid, at UNEP Risoe Centre:
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Mogens Riise Hansen,
Administrator

Riise Hansen has been employed as URC Centre Administrator. He holds a Masters degree in Macro-economics and a Diploma of Accounting. He has extensive experience in Financial Management and has lately been working as a Danida Financial and Administrative Advisor for three different projects in Tanzania. Two of the projects were in the environmental sector, preservation of natural forests and wetlands respectively. The third project was in the agricultural sector.

Contact Mogens Riise Hansen, at UNEP Risoe Centre:
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Dr. Xianli Zhu,
Economist

Dr. Xianli Zhu has recently joined the URC from China. She holds a PhD in Economics from the Graduate School of Chinese Academy of Social Sciences in Beijing. Her experiences include working on a major CDM Capacity Building project in China and participating in research about promoting the CDM development dividend and energy sustainability in China. Her PhD thesis is about post-2012 international climate regime from developing countries' perspectives. At URC her time will be allocated between CDM and the more general topic of integrating climate security and energy security considerations into sustainable development. She also supports other China-related research activities at URC.

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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.uneprisoe.org/newsletters.htm. To receive an electronic or printed copy of E+, please register on our website www.uneprisoe.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).

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