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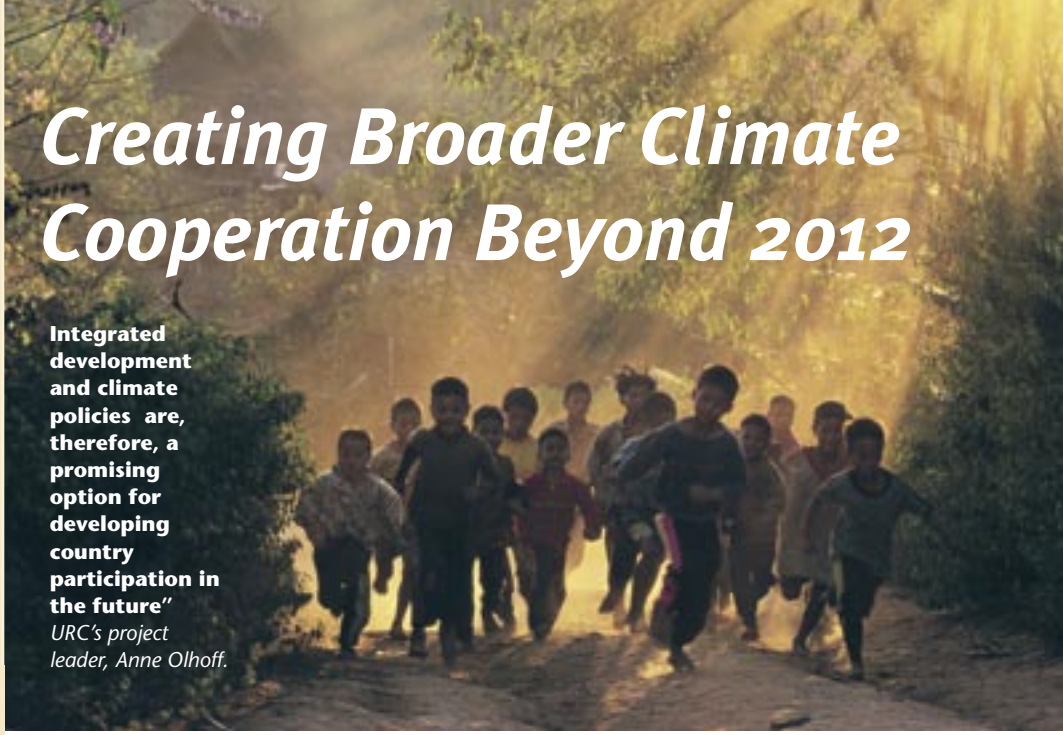
ENERGY, CLIMATE AND SUSTAINABLE DEVELOPMENT

A Newsletter of URC and UNEP
March 2005

Creating Broader Climate Cooperation Beyond 2012



Integrated development and climate policies are, therefore, a promising option for developing country participation in the future" *URC's project leader, Anne Olhoff.*

The key challenge for future climate policy cooperation is to achieve what the Kyoto Protocol has been unable to: Broad participation in reducing greenhouse gas emissions at the global level. To meet this challenge, there is a need to explore and develop new approaches to global climate policy cooperation.

The 'Climate Policy Frameworks Beyond 2012' project is one of the URC activities carried out in 2004 that specifically addressed broad participation in future climate policy cooperation. The URC part of the project has explored the possibility of a less polarised way of meeting the challenges of sustainable development and climate change. This effort has resulted in the development of a common analytical framework for integrated assessment of development and climate policies. The framework is based on development priorities that are vitally important to developing countries. Climate policies remain marginal to the pressing issues of poverty, employment, food security, etc., in many developing countries. "At the same time, development policies addressing these issues often have positive side benefits on climate. Integrated development and climate policies are, therefore, a promising option for developing country participation in the future", says URC's project leader, Anne Olhoff.

She explains that the idea behind the framework is to provide a structure for coherent and rational analysis of the outcomes of alternative development and climate actions. The common framework assists coordinated and consistent national policy analysis and enables evaluation of key linkages between national development goals and climate change policies. The common framework provides national authorities with a basis for selecting and designing policies in a way, where they create, exploit, and maximise synergies between the two. "The framework also ensures consistency and comparability between studies from different countries. This is important, because it supports crosscutting international discussions about sustainable development strategies", says Olhoff. How the framework can be applied in practice is illustrated in two country studies prepared by partners from India and South Africa.

The "Climate Policy Frameworks Beyond 2012' project was commissioned by the Climate Group under the Nordic Council of Ministers and carried out by URC and CICERO, Norway. In addition to the framework and country studies mentioned above, the project outputs include a paper by CICERO exploring different frameworks for participation and a URC paper looking at the way different countries and stakeholders have reacted to the incentives as well as to the obligations constituted by the UNFCCC and the Kyoto Protocol in practice. The idea is that analysis of the actual policies and initiatives can provide an important basis for understanding future perspectives of international climate policies.

A stakeholder conference was organised by URC in Copenhagen in October 2004, and the findings of the project were presented at the 10th Conference of the Parties to the Climate Convention (COP10) in Buenos Aires, Argentina, in December 2004.

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The project has identified flexibility, differentiation, and cost-effectiveness to be central principles to pursue for future climate change cooperation based on broad participation. Anne Olhoff explains the interrelationship of these issues:

Establishing cost-effective incentives is a key to broader participation and to minimise the costs of action in the future and this in turn implies that frameworks for future cooperation need to be more flexible than they are at present.

"In practise, this means that future development and climate frameworks should be designed to support national policy implementation and recognise differences between countries, diversity in their approaches and in their national policy goals", she says.

All of the outputs mentioned above are included as chapters in a forthcoming synthesis report, which will be available from the URC web site. In addition, proceedings from the stakeholder conference can be downloaded from the project web site at http://climatenordic.org.

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Photo: AFREPREN

Regional Workshops on Electricity and Development

UNEP and URC are jointly with UNDP and the International Energy Agency (IEA) sponsoring three regi–onal workshops focusing on electricity and development. The key theme for all three workshops is addressing the dual challenge of ensuring electricity for national economic development and at the same time provide increased access to the poor parts of the population. The ambition is to forge new, cost-effective approaches to help create a sustainable energy future. Special focus will be put on the role of energy in achieving the Millennium Development Goals (MDGs).

The three regional workshops will build on a joint IEA and UNEP global workshop on the same theme convened in Paris January 2005 at the IEA with approximately 100 participants spanning expertise on energy policy, finance, economic development and poverty issues. The workshop discussed the electricity challenge in the various developing regions. The common understanding emerging was that there is a need to address the challenges in their specific national context and that the earlier tendencies to use "one size fits all" approaches are now increasingly being abandoned.

The three regional workshops are organised by the Global Network on Energy for Sustainable Development (GNESD) with three member centres responsible for hosting and organising the events. The workshops will take place during April and June 2005 and the scheduling is:

- 13-14 April 2005 in Rio de Janeiro, Brazil. Jointly hosted by the Universities of Rio de Janeiro and São Paulo;
- 28-29 April 2005 in Bangkok, Thailand. Hosted by AIT;
- May/June 2005 in Nairobi, Kenya. Hosted by AFREPREN.

Presentations and summery report will be made available electronically from UNEP and GNESD by mid-2005.

Sida

AREED Gets Swedish Boost

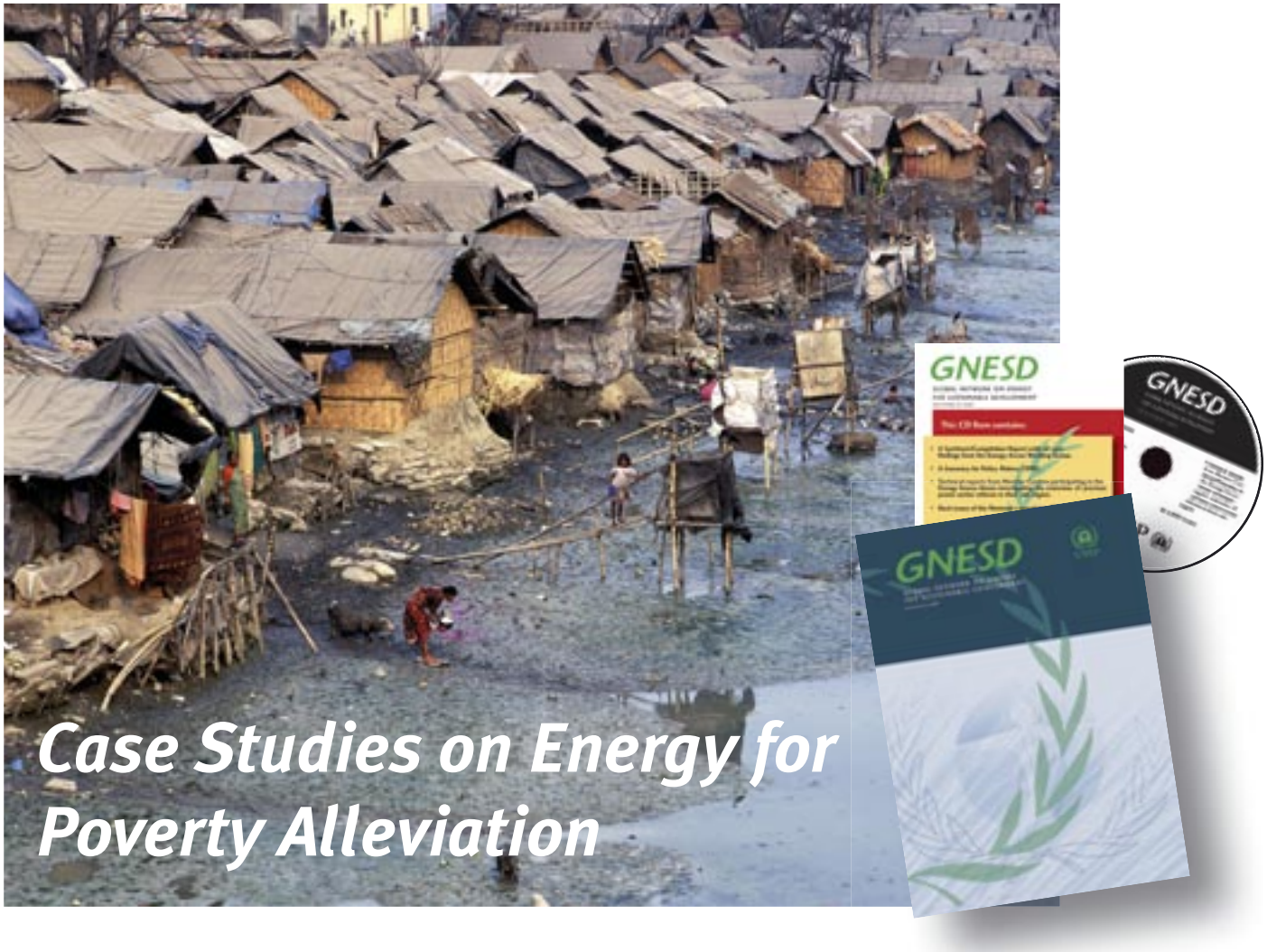
The Africa Rural Energy Enterprise Development (REED) Programme has received substantial new support from the Swedish International Development Cooperation Agency (Sida).

Enterprise Development Services (EDS) - such as business development and accurate business plans - have been an essential and successful component of the REED programme. EDS is also an expensive 'transaction cost' of investing in new entrepreneurs; and because it is difficult to fund, it can easily become the 'weak link' in an otherwise substantial and innovative programme, according to UNEP's Eric Usher. "We have learned that one of the main concerns is how to sustainably deliver enterprise development services so that REED-type seed capital investing can become a less costly business to deliver on the ground," he says. Fortunately, AREED's local partner organizations have incorporated the enterprise development service as a core function, without which such a expansion of the AREED would not work, he says.

AREED will also target regional governments and policies to encourage small and medium enterprises (SMEs). The aim is to motivate policy makers to create and/or improve policy frameworks that encourage the growth of the clean energy SME sector as a strategy for sustainable development.

Sida's two years support includes a direct contribution of $350, 000 in the AREED programme, which also will trigger $300,000 in new seed investment capital from the United Nations Foundation (UNF). The Sida funding will provide service to entrepreneurs and will help them to access the AREED seed fund facility and the German KfW finance facility established with E+Co at the 2004 Bonn Conference for Renewable Energies.

Information on AREED can be found at http://www.AREED.org Contact: Eric Usher, UNEP, tel: +33 (0)1 4437 7614, email: eric.usher@unep.fr



Case Studies on Energy for Poverty Alleviation

The Global Network on Energy for Sustainable Development (GNESD) is one of the main Type II outcomes from the World Summit on Sustainable Development (WSSD) and is facilitated by UNEP and supported by donations made by the UN Foundation, UNDP, EdF and the governments of Denmark, France, Germany and the United Kingdom.

The outcomes of GNESD's work on how power sector reforms affect access for the poor clearly show that reforms need an explicit pro-poor dimension. Reforms focusing solely on market efficiencies have had neutral or adverse impacts on the poor, with the electrification for the poor often simply overlooked. Key findings of the Energy Access work include:

- There is a need to protect (ring-fence) financing for electrification for the poor;
- Policy makers should pay attention to the sequencing of reforms: Preferably electrify the poor first, then privatise (or in parallel);
- If possible, ensure that the poor are represented in key decision-making bodies.

The GNESD Member Centres will in 2005 be working on detailed case studies based on analyses of the application of the key findings. The work will help fill the information gap on linkages between poverty alleviation and power sector reform options in developing countries.

On the Renewable Energy Technologies (RETs) theme, the initial results show that there is a lack of well-integrated programmes and policies involving RETs aimed at solving general poverty and development problems. This translates into a lack of coordination between stakeholders, duplication of efforts and an inefficient use of resources. Other preliminary results include:

- There is low stimulus for market establishment due to often unattractive and unreliable conditions for private investors;
- Potential RETs users lack knowledge about opportunities for using RETs;
- Infrastructures for RETs R&D do not comply with adapted technology requirements and are often more related to laboratory research than the requirements of the users.

The work on the RETs theme will continue in 2005 with case studies and analyses of select key policy options. The overall objective of the RETs theme is to identify the possible contributions of RETs to poverty alleviation in developing countries and to provide concrete policy guidance.

Final reports on both the Energy Access and the RETs theme will be available by late 2005. All material produced so far by GNESD is available online at www.gnesd.org and on CD-ROM. Common reports are also available in print.

GNESD's second Network Assembly, which took place in December 2004 in the Netherlands, extended GNESD Membership to include the Tunisian Centre, MEDREC (The Mediterranean Renewable Energy Centre). The Assembly delegates also approved to extend the GNESD mandate for an additional three years.

For more information, contact the GNESD Secretariat at gnesd@risoe.dk or visit www.gnesd.org

PRUDENCE Integrating Climate Change into European Economic Policies

URC staff have developed a conceptual framework for increasing the relevance and quality of distributed climate information for socio-economic and policy assessments.

This work has been carried out as part of the European Union supported PRUDENCE project focusing on the prediction of regional scenarios and uncertainties for defining European climate change risks and effects.

URC's Kirsten Halsnæs, who has been working on the project together with Molly Hellmuth and Jesper Kühl from URC, explains that there are a number of structural and conceptual differences between the information provided by climate change models and the input that is needed in economic policy analysis. Physical impact modelling and economic analysis can, therefore, often not fully benefit from added climate detail. "From a policy perspective, detailed climate information is often not well defined and targeted for use in economic models, which as a result tends to draw conclusions based on more general and aggregated climate information", she says.

The conceptual framework addresses this problem by integrating climate information into economic assessments and has so far demonstrated the economic consequences of climate change on agriculture yield on both micro and macro level.

URC has conducted detailed assessments of climate change impacts on wheat production distribution in Danish regions. The model was used to estimate the relationship between wheat yield and variables such as production inputs, soil conditions, management practices, temperature and precipitation. Results show that regional and time specific climate variations are major factors behind production outputs. "By linking detailed farm surveys and climate data the framework provides key information to the assessment of vulnerabilities and adaptation strategies", says Molly Hellmuth.

URC and the International Institute of Applied System Analysis, IIASA, are currently using the framework in a European scenario study focusing on the interaction between climate change, agricultural production, agricultural policy and economic feedbacks from agricultural markets.

Molly Hellmuth explains that the economic analysis consists of a base case, business as usual scenario, and two counterfactual scenarios, a liberal market-oriented scenario and an environment-oriented scenario. "The exercise gives insight into whether the use of finer scale climate information in climate change assessments will lead to different economic impact estimates compared to assessments done based on larger scale data", Hellmuth says.

The conceptual framework is described in detail in the URC working paper 'Climate Change Impacts and Adaptation Analysis – How to Link Physical Climate Data and Economic Studies'. The paper includes an introduction of economic concepts applied to climate change impact and adaptation policy assessment using illustrative case study examples based on other PRUDENCE contributions and focus areas. The case studies include assessment of the climate change impacts on the profitability of agricultural investment decisions, the health impacts resulting from heat waves and the climate change impacts on hydrological systems and hydropower production in Scandinavia.

Results of the described efforts will in addition shortly be published in a special issue of the journal "Climate Change", where the URC has jointly contributed two papers with PRUDENCE partners.

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IPCC's Fourth Assessment Report with URC Footprints

The Intergovernmental Panel on Climate Change (IPCC) is currently preparing its Fourth Assessment Report on policy-relevant scientific, technical and socio-economic information relevant for the understanding of climate change and options for mitigation and adaptation.

URC staff members are contributing to this Assessment with a coordinated set of activities on climate change, impacts, vulnerability, adaptation and mitigation policies. "We find this work important as IPCC is a major international body playing a key role in forming the basis for sound climate change and development policies", says URC's Kirsten Halsnæs, a coordinating lead author of IPCC's Working Group III. She is together with Amit Garg, also of URC, currently contributing to chapter 2 of Working Group III's Assessment Report focusing on the relationships between climate change and sustainable development. The chapter will provide a theoretical understanding and scoping of issues such as risk and uncertainty, decision-making frameworks, mitigation, vulnerability and adaptation relationships and technology issues.

Kirsten Halsnæs and Amit Garg's input will form the base for specific studies in subsequent chapters of the Assessment Report that go in-depth with study results for the energy sector, land use, industry, transportation and waste management.

Parallel to his involvement in the Assessment process, Amit Garg is coordinating the Energy volume of IPCC 2006 Greenhouse Gas (GHG) Inventory Guidelines. These guidelines form the technical basis for GHG inventory reporting to the UNFCCC by all countries. Amit Garg explains that the guidelines will provide new methodologies, emission sources and improved emission factors while at the same time trying to improve the overall representation of developing country constraints. The first order draft is now near completion and the review process is expected to start by the end of February.

Jørgen Fenhann – also from URC – is contributing to the Assessment work as a lead author of the Report's energy supply chapter, and is here specifically working on the assessment of renewable technologies in terms of potential, costs, sustainable development impacts and policy instruments.

An additional URC contribution to the Assessment will come from Fatima Denton when she joins the URC team from March 2005. She is actively involved as a lead author in the Assessment's Working Group II on integrated assessment of adaptation and mitigation policies and sustainable development as a policy framework. An example of the issues that are addressed by Fatima Denton's work is to determine to which extent adaptation and mitigation policies can go hand in hand with development needs when taking into account that poor people in the world are very vulnerable to climate change.

The outcomes of the Fourth Assessment will be subject to extensive review work including two full "review rounds", the first one being a scientific review and the second a combined government and scientific review. IPCC expects that more than 1000 experts will have commented on the Fourth Assessment Report by its finalisation, which is scheduled for late 2007. There is, therefore, little doubt that URC staff will be kept on their toes in the coming years.

Book

Energy Subsidies: Lessons Learned in Assessing Their Impact and Designing Policy Reforms.

Edited by Anja von Moltke, Colin McKee and Trevor Morgan. The book provides an analytical framework which aims to set the scene for the detailed discussion of energy subsidy issues at the country level. It considers how subsidies are defined, how they can be measured, how big they are and how their effects can be assessed. Published by Greenleaf publishing in association with UNEP.

International evaluation praises URC activities

An international evaluation of UNEP Risoe Centre's (URC) work programme and institutional arrangements for the period 2000 – 2004 has come out highly positive. The evaluation, which is the third since the Centre's inception in 1990, was undertaken by Dr. Ramani from Malaysia for UNEP.

The head of the URC, John Christensen, is very pleased with the evaluation outcome which provides a very positive foundation for the next four year performance contract with UNEP, Danida and Risoe. "Dr. Ramani has in addition made a number of recommendations, which will be very valuable for the further development of the Centre", he says.

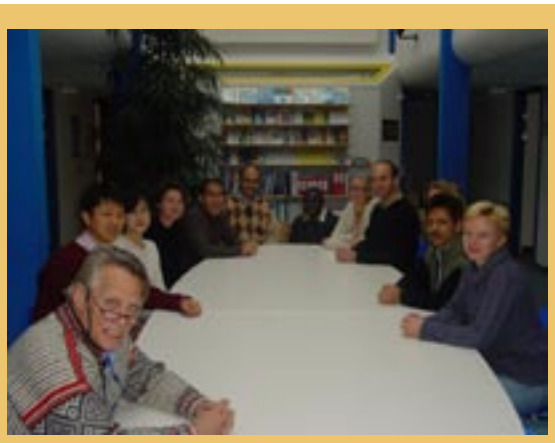
Christensen explains that during the period covered by the evaluation, the URC experienced a rapid growth in its work programme and with an increase in the number and diversity of activities. This took place against the backdrop of notable shifts in global priorities concerning energy and the environment, crucially after WSSD. The evaluation addresses this fact in its main conclusion:

"The Centre was able to rise above the challenges it was set and emerged with a convincing demonstration of its capabilities and potential. It met or exceeded all its short-term objectives and made distinct inroads into its longer term objective of bringing about change in energy policies and strategies conducive to environmental goals. It yielded crucial financial, institutional and developmental returns to its founding institutions."

Some of the key recommendations of the evaluation include paying more attention to energy for poverty reduction, rural fuel issues, energy security in the context of global energy market uncertainties, implications of trade in energy services, and alternatives to Kyoto mechanisms to reduce emissions.

On the institutional arrangements it is proposed that the Management and Policy Committee (MPC) of the Centre should concentrate more on providing strategic guidance and policy direction while the Scientific Advisory Panel (SAP) could play a more active role in assessing the relevance, quality and impact of the Centre's ongoing and planned activities. "The recommendation regarding the institutional arrangements have now been discussed with the MPC and SAP and will as far as possible be implemented in the coming years", says John Christensen.

The overall purpose of the evaluation was to determine the relevance, efficiency, effectiveness and impact of the Centre. Regular international evaluations are an integral part of the foundation for the collaboration between UNEP, Danida and Risoe.



During 2000-2004 the URC implemented 39 projects worth almost US$ 30 million. Its research activities generated 181 published and 134 unpublished outputs, consisting of policy studies, planning tools, analytical techniques, information packages and databases. In the same period, it organized more than 100 capacity building events involving around 7,500 participants in more than 30 countries.
URC provided inputs to key global events, such as IPCC, WSSD, several COPs of UNFCCC and the Bonn International Conference on Renewable Energies. It also assisted UNEP in creating the Global Network on Energy for Sustainable Development under the WSSD framework.

New in staff

Fatima Denton joined URC in March 2005 as Senior Energy Scientist. Prior to that, she worked for the Energy programme of Enda Tiers Monde, Dakar, Senegal as Policy analyst and Programme Manager. Her research has been essentially on energy and environment issues particularly with relation to adaptation, equity and vulnerability. Fatima has studied at several universities: Cheikh Anta Dip (Senegal), Besançon (France) Sorbonne (France) and latterly at Birmingham (U.K.) where she undertook doctoral studies in political science and development studies.

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, Stine Skipper (stine.skipper@risoe.dk).

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