

ENERGY +
SUSTAINABLE
DEVELOPMENT

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URC and UNEP
June 2003*



Sustainable Mobility

Moving in the Right Direction

Transportation and mobility issues are some of the most complex and daunting challenges to sustainable development. As one of the fastest growing sectors today, transport energy demand is steadily increasing in developing countries, a trend that is likely to continue. The use of energy – particularly fossil fuels – is expected to double by 2020, with the transport sector's share expected to increase from 28% in 1997 to 31% in 2020 (World Energy Outlook, 2000).

Increasing income levels in many of the developing countries are leading to changing lifestyles and new patterns of mobility, particularly the use of personal motorised transport. "This development has serious impacts on public health and on local and global environments, which can counteract efforts to stabilise GHG concentrations," says UNEP Risoe Centre's Jorge Rogat. Without sustainable mobility options, he adds, this current development and its consequences are likely to continue.

Rogat is in charge of developing a long-term strategy to deal with – and avoid – the negative effects of increased transportation in developing countries, including both local and global environmental impacts. Currently the Centre is developing activities linked to other Centre projects in three main areas:

- *Economic Instruments*
- *Sustainable Transport Systems*
- *Information Exchange on the Health and Economic Impacts of Air Pollution*

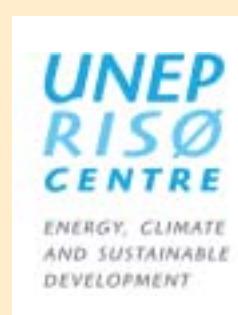
In the area of economic instruments, the UNEP Risoe Centre project, *Research on Fuel Pricing Policies in the Latin American (LAC) region*, analyses current pricing policies in eleven countries of the region, and the economic and environmental implications they may have. The project is conducted in collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC) with the objective to provide policy guidance on fuel pricing. As part of the research project, a regional consultation meeting was held at ECLAC's head quarters in December 2002 in Santiago, Chile. Representatives of a number of governments, decision makers and other stakeholders from the Latin American region participated in the event. The work will be published in July-August 2003.

In the Asia-Pacific region, the Centre has been conducting research with the Japanese Institute for Global Environmental Strategies (IGES) to develop integrated policy instruments for environmentally sustainable urban transport systems in Asian and Pacific cities. In addition to developing strategic options for sustainable urban transport, the project is also creating a prototype "Good Practices

UCCEE Changes Name

UNEP Executive Director, Klaus Töpfer, took the opportunity during his keynote address at a recent Risoe-hosted energy conference (see article next page) to announce a change of name for UCCEE. The former UNEP Collaborating Centre on Energy and Environment will now be known as the **UNEP Risoe Centre on Energy, Climate and Sustainable Development**, or simply as the UNEP Risoe Centre (URC).

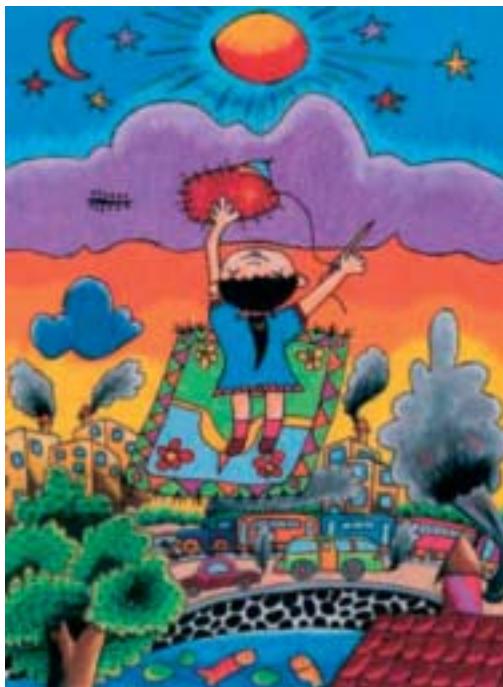
Head of Centre, John Christensen, says it was difficult to continue as 'the' collaborating centre because UNEP has established a number of partnerships with other centres over the last few years that also have a collaborating centre status. BASE and NREL, for example are collaborating centres in the energy area, and a collaborating centre on water issues was started also in Denmark 2 years ago. So the underlying idea is to clearly mark Risoe's unique and clear links with UNEP, including the hosting of the GNESD Secretariat, which will also be managed by Christensen.



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Laila Nuri, aged 8, Indonesia,

Risoe Conference Explores Post-Kyoto Energy



More than 120 researchers and policymakers attended an international conference at Denmark's Risoe National Laboratory in May to explore energy technologies to meet post-Kyoto targets. Co-sponsored by Risoe and UNEP with organizational assistance by the Centre, the conference presented new developments and trends in energy technologies that may become main contributors to overall energy supply in the next 15 to 20 years, and the critical actions required now to encourage those technologies.

Conference topics included:

- Future requirements derived from global scenarios
- Advances in traditional supply technologies
- Advances in present renewable technologies, wind, solar, biomass
- Emerging futuristic renewable technologies
- Integrating new technologies into the energy systems
- Economic and policy issues.

In his keynote address, Executive Director of UNEP, Klaus Töpfer, said that cleaner and more efficient energy technologies are "essential for sustainable development and critical for meeting the Kyoto targets". With Kyoto ratification due later this year, Töpfer emphasized that the focus of policymakers in developing countries will be to provide access to reliable and affordable energy services for expanding populations and industries, ensuring economic growth that leads to improved living standards.

Too many people in developing countries still lack access to electricity (percentage of the population with access 2000)



Töpfer noted a number of initiative's under UNEP's Energy Programme designed to provide energy services to the world's poor and which also support the *Johannesburg Plan of Implementation* adopted at the World Summit on Sustainable Development and the *Millennium Development Goals* - both of which highlight the need for improved access to reliable and affordable energy services for sustainable development.

"The scale of bringing clean energy to developing countries is huge. In Africa, Asia, and Latin America 1.6 billion people lack access to electricity and only 15 percent of large cities in developing countries have acceptable air quality, largely due to the way energy is used in homes and industries and for transport," says Töpfer.

Although renewable energy technologies hold great potential, Töpfer said that policymakers "must be pragmatic about their contribution in the medium term" as fossil fuels would be the primary energy option for at least the next couple of decades. The challenge, he added, is how to use fossil fuels more efficiently and how to reduce their negative environmental effects.

The transition to cleaner and more advanced fossil fuel technologies is also essential in supporting sustainable development. "Many developing countries have large reserves of fossil fuels, and it is natural to expect that they will use these to meet rising demands for energy services," he says.

Also discussed was the Clean Development Mechanism as a major incentive for stimulating technology transfer, where developing countries can use "technology leapfrogging" to advance their sustainable development objectives while reducing greenhouse gas emissions.

For more information go to: <http://www.risoe.dk/konferencer/energyconf/>

Upcoming 2003 UNEP-Risoe Events

24-26 September, Perth, Australia

Traversing Boundaries, 15th Conference of the International Society for Environmental Epidemiology.

The conference will explore the trend towards trans-disciplinary approaches to environmental epidemiological research. As part of the event, UNEP and the UNEP Risoe are sponsoring an international workshop on socio-economic factors and air pollution health effects. The workshop will promote discussion of public policy motivations, current research results, data gaps and future research directions for studying the interaction of socio-economic conditions and air pollution as determinants of population health. For more information go to <http://www.eventedge.com.au:8080/isee>

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New REED Project for China

With backing from the United Nations Foundation, UNEP will soon launch another Rural Energy Enterprise Development (REED) initiative. The *China Rural Energy Enterprise Development Project* (CREED) will focus on the northwestern part of China's Yunnan province and surrounding areas that are globally recognised for their rich biodiversity. After an implementing partner meeting in early June in Paris, the project will be launched in the later northern hemisphere summer.

CREED is particularly focused on preserving the region's rich biodiversity. UNEP's CREED representative Aki Maruyama says that while biodiversity loss in the area is heavily related to past logging practices, the unsustainable harvesting of fuelwood to meet basic cooking and heating needs is exacerbating the problem; affecting environmental services such as watershed protection and increasing greenhouse gas emissions.

The current local practice of burning large quantities of wood in open, indoor fires also has large, direct, and adverse health consequences for rural people. CREED's aim is thus to create a sustainable energy development path for these people while improving rural health and alleviating deforestation and the resulting loss of biodiversity.

CREED activities will be delivered through a combination of local professionals and working relationships with research entities, NGOs and others. The main CREED project partners, TNC, E+Co and UNEP, will work with a number of local and national organisations, including clean energy enterprises, consumer credit agencies, micro enterprise and income generation intermediary organisations, financial institutions, and government entities. Maruyama says this work can help to influence broader shifts regarding energy and development that are underway in China and redirect existing sources of finance and support to achieve sustainable energy goals.

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Felaisi wood pile



Morocco Windmill and Aerial of Egypt

Mediterranean Renewables Project Advances

The UNEP project to promote new finance options for renewable energy in the Mediterranean region continues to advance with preliminary renewable energy technology and policy assessment reports prepared for Morocco, Tunisia and Egypt.

Promotion of Renewable Energy Technologies in the Mediterranean Region is being co-ordinated with the International Energy Agency, the Observatoire Méditerranéen de l'Energie (OME) and the Mediterranean Association of the National Agencies for Energy Conservation (MEDENER) and backed by the Italian Ministry of Environment and Territory.

Financial consultants Econergy International have won the tender to prepare an overview of the renewable energy finance sector for the Mediterranean region and to prepare a discussion paper on potential UNEP-sponsored financial mechanisms to support renewable energy deployment. UNEP's Eric Usher says those mechanisms could include both "patient capital" funds utilizing a mix of public and private funds which allows for long finance periods and lower rates of return, and Certified Emission Reductions units generated by CDM projects and tradable renewable energy certificates.

The Project will also focus on strengthening policy frameworks and building private sector project development capabilities. A stakeholder consultation process will be carried out in July 2003 for the three project countries and a preliminary brief, detailing the proposed financing support mechanisms, will be prepared for September. Usher says the first mechanism(s) could be in place by fall 2003.

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Publications



Managing Technological Change, a summary of an IPCC document on Technology Transfer, is now available in five other languages: Chinese, Russian, French, Spanish, and Arabic. Copies are available from UNEP Energy (see contact details in box)



Electricity Reform: Social and Environmental Challenge, Njeri Wamukonya, UNEP-Risoe Centre, June 2003. The book documents the processes and social/environmental implications of power reform across the globe, including employment, access to electricity, quality of service delivery, general welfare and environmental impacts. Available from the UNEP-Risoe Centre (see contact details in box)

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Inventory" that includes an "Innovative Instruments" directory. The work will be completed and published by September 2003.

Centre research is also addressing barriers to non-motorised transport (NMT) in Africa. "Too often, legislation, regulations and policies of all levels of government inhibit the growth of non-motorised transportation such as walking and cycling, which are primary means of transportation for people in many developing countries," says Rogat. As part of the research, the Centre is undertaking two activities: 1) evaluating techniques for measuring NMT activity and demand, evaluating NMT conditions, and incorporating non-motorised travel into transport planning; and 2) examining barriers to NMT and reviewing case studies of successful NMT integration transport policy.

As part of efforts to increase global awareness and research collaboration regarding the environmental impacts of air pollution, including pollution from the transport sector, the UNEP Risoe Centre has led the development of the AirImpacts website (www.airimpacts.org). The project was launched in April 2002 and includes research from a number of collaborating organizations, including the US Environmental Protection Agency, the US National Renewable Energy Laboratory, the World Bank, OECD, and universities in Asia, Latin America and the USA.

In September, UNEP and the UNEP Risoe Centre will also sponsor an international workshop on socio-economic factors and air pollution health effects. The workshop will be part of the 15th Conference of the International Society for Environmental Epidemiology. (See "Upcoming Events").

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New Staff at URC

Miriam Hinostroza is a new Centre researcher working on the CDM capacity building in Latin America and the process of CDM implementation. Miriam holds a PhD in Energy Planning from the University of Campinas in Brazil and was a post doctoral researcher at the Institute of Energy and Electrotechnics of the University of São Paulo analysing the CDM implementation process in Brazil's energy sector. She has also been involved in several projects focused on energy economics and the environment, particularly relationships between climate change mitigation options and energy policy.

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Anne Marie J. Jensen is for 1 year substituting the URC administrator/editor of E+ Stine Skipper who is on maternity leave. Anne Marie holds a Cand.merc. degree from the Aarhus School of Business. Anne Marie spent several years in the southern part of Africa where she worked as Administrative and Financial Adviser for Danida Projects and Sector Programme Support in Tanzania, Mozambique and Zimbabwe.

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New Staff at DTIE, Paris



Aki Maruyama joined UNEP in May 2002 to work with the REED programme in China as well as some of the projects and new initiatives related to CDM and sustainable energy financing. Before joining UNEP, Aki worked at the Institute for Global Environment Strategies (IGES) based in Japan where she researched climate change financial mechanisms and international cooperation. She also worked as a short-term consultant to the World Bank and Deutsche Bank and holds MSc in Environmental management from University of Oxford.

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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.unepribose.org/newsletters.htm. To receive an electronic or printed copy of E+, please register on our website www.unepribose.org or contact Maria Andreasen (maria.andreasen@risoe.dk) at the URC number below. For all other information or comment, please contact the editor, Anne Marie J. Jensen (amj.jensen@risoe.dk).

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