United Nations Environment Programme (UNEP)

Evaluation of UNEP Risø Centre on Energy, Climate and Sustainable Development (URC)*

EVALUATION REPORT

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CONTENTS

Acronyms and Abbreviations

ACE	ASEAN Centre for Energy
ADB	Asian Development Bank
AREED	African Renewable Energy Enterprise Development
BASE	Basel Agency for Sustainable Energy
BREED	Brazilian Rural Energy Enterprise Development
CDM	Clean Development Mechanism
CEIT	Country with Economy in Transition
DANCED	Danish Cooperation for Environment and Development
DANIDA	Danish International Development Agency
DNA	Designated National Agency (for CDM projects)
DTIE	Division of Technology, Industry and Economics (UNEP)
EC	European Commission
EPA	Environment Protection Agency
GATS	General Agreement on Trade in Services
GEF	Global Environment Facility
GNESD	Global Network on Energy for Sustainable Development
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH
IPCC	Intergovernmental Panel on Climate Change
NREL	National Renewable Energy Laboratory (USA)
MDG	Millennium Development Goal
MoFA	Ministry of Foreign Affairs
MPC	Management and Policy Committee
SAP	Scientific Advisory Panel
UCCEE	UNEP Collaborating Centre for Energy and Environment
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
UNF	United Nations Foundation
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
URC	UNEP Risø Centre on Energy, Climate and Sustainable Development
VROM	The Netherlands Ministry of Spatial Planning and the Environment
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

EXECUTIVE SUMMARY

Introduction

URC was established in October 1990 under an agreement between UNEP, DANIDA and the Risø National Laboratory, Denmark. It operates as an independent UNEP project, based within the Risø National Laboratory, to support UNEP in energy-environment matters. Its main focus is on the environmental dimension of energy planning and policy, with emphasis on developing countries. It supports developing country research and capacity-building, co-ordinates projects, disseminates information and conducts in-house research in collaboration with national and international institutions. Its work programmes address climate change mitigation analysis and capacity building, environmental and development economics, national and international policy instruments, energy sector reform, energy efficiency, renewable energy, and transport.

Project Outcomes

During 2000-2004, URC implemented 39 projects worth US$ 29.2 million. Its research activities generated 181 published and 134 unpublished outputs, consisting of policy studies, planning tools, analytical techniques, information packages and data bases. In the same period, it organized 104 capacity building events involving 7,534 participants in 31 countries. Additionally, it assisted the development of national and sectoral plans, supported advisory facilities, and undertook an extensive institution-building exercise at the national levels to help developing countries to operationalise the Clean Development Mechanism under the Kyoto Protocol. These activities were designed and implemented in collaboration with a group of 43 partner institutions in Africa, Asia, Latin America and the Caribbean, Europe and North America.

At the international level, the Centre provided inputs to key global events, such as IPCC, WSSD, COP 10 of UNFCCC and the Bonn International Conference on Renewable Energies. It made significant contributions to the IPCC process through lead roles played by its professional staff in a number of IPCC working groups, assessments and special reports. It provided inputs to the WSSD Plan of Action in which linkages between energy, environment and sustainable development were elaborated and global priorities for action established. It also assisted UNEP in creating the Global Network on Energy for Sustainable Development under the WSSD framework.

The highlights the Centre's achievements during the evaluation period were:

- Its ability to leverage core funds of US$ 8.6 million dollars from its founding institutions to mobilize an additional US$ 20.6 million from 17 other donors in support of its work programme.
- A significant expansion of its work programme compared to the earlier period, accompanied by greater emphasis on climate change, and sustainable development from the viewpoint of developing countries.
- The involvement of a large number of representatives from governments, private sector, research institutions, NGOs and other stakeholders in its capacity building activities.
- The high quality of its research publications and their relevance to the priorities defined under its work programme framework.
- Its success in establishing/strengthening linkages with its partner institutions, UN agencies and other international organizations, national banks and multilateral financing institutions.

Findings and Conclusions of the Evaluation

During the period covered by the evaluation, the Centre experienced a rapid growth in its work programme, an ensuing increase in the number and diversity of activities, and a fast-growing presence across developing countries. This was against the backdrop of notable shifts in global priorities concerning energy and the environment, crucially after WSSD. 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.

The shortcomings and improvement needs in the Centre relate mainly to its institutional arrangements and operational procedures. These are characteristic of problems associated with rapid growth where, due to the limits to staff and managerial capacity to keep up with the pace, some trade-offs have been unavoidable between fulfilling the central objectives of the project and devoting time to internal workings. It is necessary for the Centre to consolidate and regroup before entering the next round of a promising future.

Overall Assessment

Indicator	Rating
Attainment of objectives and planned results	1
Achievement of outputs and activities	1
Cost-effectiveness	2
Impact	2
Sustainability	3
Stakeholder participation	2
Country ownership	2
Implementation approach	1
Financial planning	2
Replicability	2
Monitoring and evaluation	3
Overall	**1.9**

Summary of Key Recommendations

While developing its future work programme, the Centre should consult with developing country governments and address imbalances that have developed among its various programme areas due to the concentration of funds and activities in a few programmes during the current phase.

- It should pay special 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.
- It should augment its staff capacity as required by its future work programme and diversify its staff specializations to be able to address questions of energy equity more adequately.
- Its linkages with UNEP's DTIE at the project/activity implementation level need to be more clearly defined so as to allow a better crossflow of mutual expertise and experience.
- The procedures for monitoring its work programme need to be strengthened by a better structuring of the agendas for meeting of the MPC and the SAP, and the use of comprehensive progress indicators.
- The Management and Policy Committee of the Centre should divest itself of tedious and routine responsibilities, concentrating instead on providing strategic guidance and policy direction.
- The SAP's function to assess the relevance, quality and impact of the Centre's ongoing and planned activities should be re-emphasized by expanding its membership and allowing more time for interaction among its members at its annual meetings.
- The Centre should strengthen its institutional image and visibility through a more extensive and better organized informational effort ahead of its next phase.

Lessons Learned

The increasing complexities of development-oriented energy research require co-ordinated partnership and networking arrangements, and professional capabilities to carry the outcomes of research into intensive capacity building efforts in order to bring about environmentally desirable changes in policies, strategies, plans and actions. A technology neutral and non-commercial institution, such as URC, can become a valuable instrument to bridge North-South perceptional gaps, and enhance mutually beneficial co-operation between developed and developing countries with sustained support from committed donors acting in concert with one another.

I. INTRODUCTION AND BACKGROUND

I.1 Introduction

This is the third evaluation of the UNEP Risø Centre on Energy, Climate and Sustainable Development (URC) since the Centre's inception in 1990. It covers URC's work programme and institutional arrangements for Phases V (2000-2001) and VI (2002-2005), the latter up till October 2004. The purpose of the evaluation is to determine the relevance, efficiency, effectiveness and impact of the Centre.

The evaluation was carried out from 21 October to 15 December 2004. The report follows the structure given in the Terms of Reference (ToR)[1]. Background information on the Centre (Section I.2) is based on the ToR and documents/descriptions provided by the Centre. The scope, objective and methodology of the evaluation exercise (Section II) are derived from the ToR. The findings and conclusions of the evaluation are contained in Section III, followed by problems/difficulties identified, recommendations and lessons learned in Section IV.

I.2 Background

I.2.1 Origins and evolution

URC was established in October 1990 under a tripartite agreement between UNEP, the Danish International Development Agency (DANIDA)[2] and the Risø National Laboratory[3], Denmark. It is located within the Risø National Laboratory at Roskilde, Denmark. Since its inception, URC has operated as a UNEP 'project', continuing its operations in two- to four-year phases (Table 1).

Table 1: URC Project Phases Since Inception

Phase	Duration
I	October 1990 - September 1992
II	October 1992 - December 1994
III	January 1995 - December 1997
IV	January 1998 - December 1999
V	January 2000 - December 2001
VI	August 2002 - December 2005

Called the UNEP Collaborating Centre for Energy and Environment (UCCEE) until 2003, URC was conceived as a research and technical support unit, based at a well-established scientific research centre and operating independently, to support UNEP in energy-environment matters. Over successive phases of work, the Centre has implemented a substantial and growing work programme with continued core financial support from its founding organizations. Its focus is on the environmental dimension of energy planning and policy, with special emphasis on developing countries. The Centre supports research and capacity-building by developing country institutions, co-ordinates projects, disseminates information and conducts in-house research in collaboration with institutions in Denmark and internationally.

In June 2003, the Centre's name was changed to the one at present in order to distinguish it from other UNEP collaborating centres established over the years — especially those with an energy focus like the Basel Agency for Sustainable Energy (BASE), Switzerland and the National Renewable Energy Laboratory (NREL), USA. It was also in recognition of the Centre's expanding work on climate

[1] Annex 1.
[2] Through the Danish Ministry of Foreign Affairs.
[3] A government research institution under the Danish Ministry of Science, Technology and Innovation.

change and the heightened importance assigned to the energy-sustainable development linkage following the World Summit on Sustainable Development (WSSD) in 2002.

I.2.2 Legal framework

The legal basis for URC is a Memorandum of Understanding (MoU) between the founding organizations. The initial MoU, signed in 1990 to create the Centre, was renewed in 1994 and 2002 following, respectively, the first and second evaluations. The MoU defines the roles, functions, legal status, governing bodies, and the broad framework for the management and activities of the Centre. The essence of these is that the Centre, while remaining based within the Risø National Laboratory, exists to support and promote UNEP's energy activities. The nature of these activities and their relative priorities are guided by the UNEP Governing Council's decisions and related UN resolutions. They are set out in a UNEP project document for each phase and constitute the 'core' work programme of URC. In addition, the Centre is encouraged under the MoU to expand its activities through projects contracted with other UN agencies, and bilateral and international organizations.

The legal status of the Centre is that of an administratively independent unit within the Systems Analysis Department of the Risø National Laboratory with all its staffing decisions and regulations corresponding to those of the latter. The MoU, however, provides the Centre with a distinct identity of its own by stipulating both the Risø National Laboratory and the Centre as a joint independent contractor to UNEP and other agencies. From the perspective of UNEP, the Centre is considered a time-delimited project under the work programme of UNEP's Division of Technology, Industry and Economics (DTIE).

I.2.3 Governing bodies

URC has a governing structure consisting of a Management and Policy Committee (MPC) and a Scientific Advisory Panel (SAP). The MPC comprises a representative from each of the three signatories to the MoU and the Head of the Centre. It has overall responsibility for policy and programme matters of the Centre within the mandate provided by the MoU, taking into consideration current and future decisions of the UNEP Governing Council and relevant UNEP management decisions and directives. The MPC meets twice a year and all its decisions are by consensus. Its responsibilities include the following:

a) approve the detailed budgets, work plans and status reports of the Centre;
b) review the results and performance of the Centre;
c) review and approve any formal collaboration agreements and the use of sub-contract funding from the project budget;
d) review travel plans and actual travel; and
e) review and monitor projects funded by other sponsoring organizations to ensure compliance with the general mandate of the Centre.

The SAP consists of nine international experts appointed by the MPC on a two-yearly basis, the Chairman of the MPC, and the Head of the Centre acting as Secretary to the Panel. It meets annually with a mandate to assist the MPC in exercising its overall responsibility by way of:

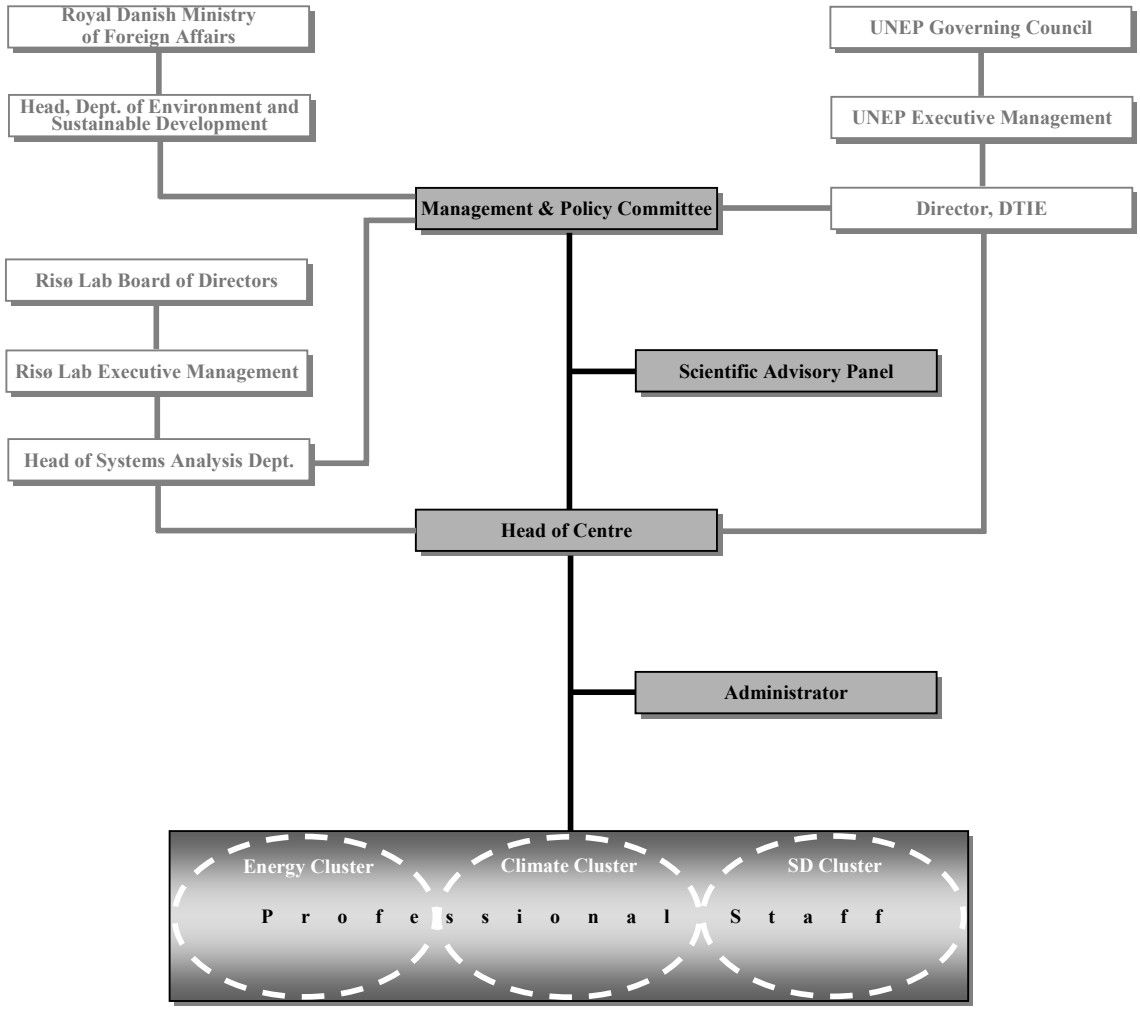
a) strategic advice on the directions for the Centre's activities in the future, reflecting existing and emerging regional priority issues in energy and environment with due consideration to the general mandate of the Centre;
b) scientific advice on existing programmes and projects; and
c) assessment of relevance, quality and impact of ongoing and planned activities.

The SAP is also expected to facilitate links with national, regional and international institutions that might benefit from or contribute to the work of the Centre.

I.2.4 Organization structure and staffing

URC's tripartite ownership and its 'embedding' into the internal structure of the Risø National Laboratory lead to three parallel, but not mutually exclusive, flows of accountability for the Centre (Figure 1). In the first, the Centre has a straightforward line of accountability flowing from its Head to the MPC. In the second, its accountability flows upward from the Head of the Centre to the Director of UNEP's DTIE and on to the UNEP Governing Council. In the third, the Centre's Head reports to the Board of Directors of the Risø National Laboratory via the Head of its Systems Analysis Department — with lateral relationships between the Centre and other related technical departments/programmes hosted by the Laboratory, and its administrative units.

Figure 1: URC Organization Structure



Internally, all professional and administrative staff of the Centre report to its Head without any intervening layer of formal hierarchy. However, following the second evaluation of the Centre, a 'matrix overlay' structure, as indicated in Figure 1, was put into place in 2002. Under this, each of the three main themes of the Centre's work programme — energy, climate and sustainable development — is led by a senior professional staff, with other staff coming together under thematic 'clusters' for the implementation of specific projects/activities as necessary. As most professional staff contribute to projects/activities under more than one thematic cluster, and since the number and size of

projects/activities tend to vary from time to time, the composition of a cluster is transient. A thematic cluster leader's role is that of a *primus inter pares*, with responsibility to provide intellectual guidance and strategic co-ordination, but without administrative or financial authority. As another outcome of the second evaluation, the Centre has created the position of an Administrator to assist its Head with all administrative matters, including financial matters.

The Centre's professional staff consist of longer term core staff, staff on secondment, doctoral students and short-term consultants. Currently, URC has 22 professional staff, including its Head and the Administrator (see Annex 2). The number of staff has not increased significantly since the previous evaluation in 2001, when it was 21. In addition to its whole-time staff, the Centre's administrative and financial matters, information services and physical facilities are managed by staff of common service units of the Risø National Laboratory on a part-time basis.

I.2.5 Functions and work programme

URC's main functions consist of research, capacity building and information dissemination in the following programme areas set out in the MoU:

- Climate change mitigation analysis and capacity building
- Environmental and development economics
- National and international policy instruments (including the Kyoto Protocol mechanisms)
- Energy sector reform
- Energy efficiency
- Renewable energy
- Transport.

In each area, the Centre works on analytical tools and approaches with collaborating institutions in developing counties, with capacity building as an integral part of all programmes. In addition to the programme areas, the Centre provides scientific programme support to UNEP, including project development, monitoring and implementation. The Centre is expected to perform these functions in close co-ordination with relevant UNEP staff and the full involvement of UNEP's regional offices.

The work programmes of the Centre correspond to the 'phases' of the Centre as a project of UNEP. They describe the focal thrusts of the programme areas and the nature of planned activities under each, but do not define specific projects/activities. The aim of this 'flexible framework' is to allow the Centre substantial leeway in identifying projects/activities to address emerging priorities during a cycle, and to mobilize additional resources from donors and organizations other than the signatories to the MoU.

I.2.6 Finances

The Centre derives its funding in two ways:

a) funds committed under the core work programme for each phase by UNEP, DANIDA and the Risø National Laboratory; and
b) funds provided by other donors and organizations for specific projects/activities, and additional core funds provided by the Risø National Laboratory over and above its in-kind support under a).

For Phases V and VI, core funding from signatories to the MoU amounted to US$ 8,643,500, with 69 per cent of the funds coming from DANIDA, 19 per cent from the Risø National Laboratory and 12 per cent from UNEP. Non-core funding from other donors and organizations was US$ 20,581,447. The total funds for Phases V and VI were about US$ 29.2 million, of which core funds accounted for 29.58 per cent.

The outflow of funds is divided roughly evenly between (a) URC's internal staff and establishment costs, and (b) sub-contracts to partner/collaborating institutions and local consultants, mostly in the developing countries. Of the former, approximately 60 per cent is towards staff salaries, 26 per cent is for short-term consultants, meetings, documentation and printing, and 14 per cent for staff travel.

II. SCOPE, OBJECTIVE AND METHODOLOGY

II.1 Scope

The scope of this evaluation is to assess the overall performance of the Centre during the period 2000 to 2003[4], that is, the four-year period since the last evaluation. The evaluation is intended to form a part of the basis for the design of the anticipated Phase VII project covering 2006-2009, and to guide activity priorities and possible improvements in URC's project implementation and administration.

II.2 Objective

The objective of the evaluation is to determine the relevance, efficiency, effectiveness and impact of URC by examining the implementation of planned project activities, outputs and outcomes against actual results. Specifically, the evaluation is required to:

- Determine the relevance of assumptions made in developing the project (the Centre).
- Determine the appropriateness of the Centre's work programme and activities.
- Assess the effectiveness and flexibility of the Centre's institutional arrangements.
- Determine its cost-effectiveness.
- Evaluate the quality, relevance and immediate impact of the activities undertaken.
- Assess the extent to which the Centre has forged effective partnerships and linkages.
- Assess the degree to which the Centre has contributed to the institutional sustainability of collaborating national and regional teams and institutions.
- Assess the financial feasibility of the core project.
- Review the monitoring and evaluation systems.
- Assess the appropriateness and effectiveness of publication and information channels.
- Identify and determine the impact of the project in terms of influencing the adoption and implementation of policies and strategies.
- Make recommendations for the Centre's future activities and structure.
- Identify problems encountered and present recommendations for the improvement of programme delivery in the future.

II.3 Methodology

The evaluation was conducted during 21 October-15 December 2004 through:

a. Desk review of the project documents, outputs, report of the previous evaluation, minutes of the meetings of the MPC and the SAP, and other relevant documents provided by the Centre[5].
b. Review of specific products, including publications, peer reviewed books, research results and web pages.
c. Personal interviews with the Head, Administrator and professional staff of the Centre at Roskilde, the Director and staff of UNEP's DTIE in Paris[6], the Head of the Systems Analysis Department of the Risø National Laboratory, and senior officials of the Danish Ministry of Foreign Affairs[7].

[4] It also takes into account activities up to October 2004, when the evaluation commenced.
[5] See Annex 3 for list of documents perused.
[6] Visits to Roskilde/Copenhagen and Paris were undertaken during 7-12 November 2004.
[7] See Annex 4 for list of individuals interviewed.

d. Consultations with members of the SAP and representatives of collaborating and sponsoring institutions through e-mail using a quick response questionnaire.

III. FINDINGS AND CONCLUSIONS

III.1 Findings

III.1.1 Relevance of assumptions in developing the project

The central assumptions underlying the most recent phase of the project are reflected in Section 3 (Needs and Results) of the project document for Phase VI. These are recapitulated as follows:

a) energy efficiency and clean energy alternatives, including renewable energy sources, are important to contribute to environmental benefits at the local, regional and global scales;

b) there are different motivations among different actors to pursue these options, so the challenge is to develop a consensus on desirable changes to energy systems; in particular, there is a need for greater emphasis on sustainable development from the developing countries' viewpoint;

c) the low institutional capacities of developing countries on energy-environment issues need to be addressed through support and advice to governments, industries, researchers, NGOs and energy consumers; and

d) the expected results of the project will be influenced by developments in international energy markets, technological changes, institutional developments at national and international levels, progress on UNFCCC negotiations, and agreements reached at WSSD; in particular,
   - energy market transformations in many developing countries and CEITs (Countries with Economies in Transition) towards greater competition will make energy efficiency options more attractive,
   - the likely ratification of the Kyoto Protocol on climate change will lead to new demands on energy planners, system operators, regulators and investors, and
   - negotiations on the second commitment period[8] will see more middle income developing countries assuming emission reduction targets and, therefore, requiring policy support.

In August 2002, when the project document was drawn up, the foregoing assumptions were largely valid. However, developments since then require a reconsideration and/or fine-tuning of some of these assumptions for future planning of the Centre's work programme and activities.

Firstly, the need for greater emphasis on sustainable development from the viewpoint of developing countries has heightened post-WSSD in the energy context. Without mincing words, resolving 'energy poverty' — the large-scale energy deprivation of more than 2 billion poor — is considered a more pressing priority by developing countries than protecting the environment. This calls for identifying and pursuing complementarities between environmental and equity goals, such as using renewable energy technologies and efficient devices, where these are the most cost-effective solutions *for the poor*, to provide electricity and modern fuels to them. If this is to be aligned to the MDGs, then energy initiatives must cross the line beyond providing small, subsistence level, quantities of energy that merely 'alleviate' poverty to supplying it on a larger scale so that livelihood opportunities are enhanced and poverty is 'reduced'. Pursuing renewable energy or efficiency options without such a clarity of focus will not address the poverty concerns of developing countries. Quite the contrary, there is now a growing chorus of criticism that these options — and the environmental agendas that usually drive them —pay scant attention to the poor's needs to escape poverty permanently. Since the Centre's work is directed mainly at developing countries, addressing sustainable development from their viewpoint means that its activities should *strike a credible*[9] *balance between the environmental and equity dimensions of energy*.

[8] After the first commitment period's end in 2012.

[9] There is a considerable obfuscation of the equity dimension of energy by couching it in broad phrases, such as 'energy for sustainable development', which can allude more to environmental goals, or 'rural energy

Secondly, while many developing countries are liberalizing their energy markets, the process is still in its early stages, and its promised benefits yet to be convincingly established. For instance, in the electricity sub-sector, which features prominently in most developing country market reforms, price regulations and subsidies continue in the majority of countries with competition occurring mainly in generation under single buyer monopsony models. Developing country enthusiasm for more widespread power market reforms encompassing transmission, distribution and downstream retailing has been dented by the California power crisis and the Enron scandal of 2000-2001. Thus, the expectation that market reforms in themselves will increase the attraction of energy efficiency by raising prices to match real costs of supply is better placed into a longer term perspective than in a short- to medium-term one. On the other hand, recent developments in global energy markets have induced many countries to consider energy efficiency more earnestly than in the past. After years of stability, oil prices have skyrocketed in the second half of 2004 to reach unprecedented heights due to a combination of geopolitical security concerns and the sagging value of the US Dollar. This has drawn developing country attention sharply to energy security concerns. The prospect of continued price volatility in international energy markets suggests that the Centre's efforts to pursue energy efficiency (and renewable energy) might find developing countries more responsive in the near term if its efforts are *also linked to market uncertainties rather than to market transformations alone*.

Thirdly, the imminent entry into force of the Kyoto Protocol in February 2005 following its ratification by Russia has been a landmark development in international efforts to mitigate climate change. As described in subsequent parts of the report, the Centre has carried out substantial work on Kyoto Mechanisms[10], in particular the Clean Development Mechanism (CDM), which should be an important basis for follow-up efforts to assist the implementation of the protocol in the coming years. However, the inconclusive outcomes of the recent COP 10[11] and the uncertainty it has generated over the Protocol's longer term future prompt a more cautious outlook towards second commitments beyond 2012. Concerted action at the global level against climate change impacts will very likely continue, but the assumption that Kyoto mechanisms will gain increasing acceptance remains to be tested in the light of how current differences in country perceptions get reconciled in course of time. Although the fundamental actions to mitigate climate change at national levels might not be very different, *it would be prudent to allow for the possibility that future actions by some countries can flow along alternative paths, and that the nature of their policies and the policy tools needed by them could be somewhat different from those devised within the Kyoto Protocol framework*[12].

The flexible framework of the Centre's work programme should allow it to make the necessary adjustments along the above lines as activities and events evolve.

III.1.2 Appropriateness of work programme and activities

Work programme

During the period under review, the Centre implemented 39 projects under its Phase V and Phase VI work programmes[13], with 15 of the projects currently ongoing. In terms of relative emphasis, the largest programme area of concentration was 'National and International Policy Instruments,

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development', which can end up catering for more affluent rural population segments (often the case with decentralized renewable energy), or 'energy for poverty alleviation', which can obscure the lack of scale in costly renewable energy technologies relative to the poor's purchasing power. These are viewed as attempts to circumvent the real concerns of developing countries to see energy being employed to reduce 'income poverty'.

[10] Joint Implementation, Clean Development Mechanism and Emissions Trading.

[11] Tenth Session of the Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCC), 6-17 December 2004, Buenos Aires.

[12] See, for instance, 'Beyond Kyoto: Ideas for the Future' IEA, at: http://www.iea.org/dbtw-wpd/Textbase/envissu/cop9/files/Summary.pdf

[13] See Annex 5 for list of projects.

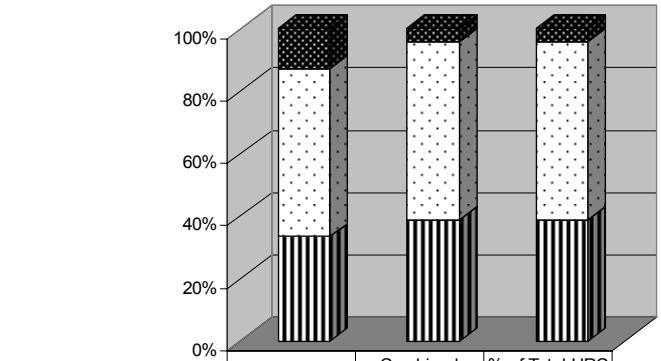
including Kyoto Mechanisms' under which 14 projects with a combined funding of US$ 11.1 million utilized 54 per cent of the Centre's total budget (Table 2). This was followed by the programme area on Renewable Energy, under which eight projects with a combined funding of US$ 7 million utilized 34 per cent of the Centre's total budget. The two programme areas accounted for over 88 per cent of the total financial resources available, with only a single project, using less than 2 per cent of total funds, implemented under the programme area on Transport. Regrouping the same 39 projects by thematic focus (Figure 2) shows 'Climate' to be the largest cluster of concentration (21 projects, 57% of total budget), followed by the 'Energy' cluster (13 projects, 39% of total budget) and the 'Sustainable Development' cluster (5 projects, 4% of total budget).

Table 2: URC Projects by Programme Area — 2000-2004*

Programme Area	No. of Projects	Combined Budget (US$)	% of Total URC Budget
Climate change mitigation analysis and capacity building	7	599,000	2.91
Environmental and development economics	4	840,000	4.08
National & international policy instruments, including Kyoto mechanisms	14	11,142,400	54.14
Energy sector reform	3	131,500	0.64
Energy efficiency	2	794,000	3.86
Renewable energy	8	7,036,547	34.19
Transport	1	38,000	0.18
Total	**39**	**20,581,447**	**100.00**

**Core funding under the UNEP work programme amounts to US$8,643,500 for Phases V and VI, as indicated in Annex 5. These funds are not included here, the assumption being they are assigned to URC staff costs to implement the projects listed in the table.*

Figure 2: URC Projects by Thematic Cluster — 2000-2004*



	No. of Projects	Combined Budget (US$)	% of Total URC Budget
Sustainable Development	5	878,000	4.26
Climate	21	11,741,400	57.05
Energy	13	7,962,047	38.69

**Core funding under the UNEP work programme amounts to US$8,643,500 for Phases V and VI, as indicated in Annex 5. These funds are not included here, the assumption being they are assigned to URC staff costs to implement the projects listed in the table.*

These numbers indicate an uneven distribution of focus and, by implication, staff and management time, among programme areas and thematic clusters. Resolving this might be easier said than done since the Centre is dependent mainly on donor funds. Its ability to leverage the support under the UNEP core project to mobilize substantial additional funds from other sources is, in fact, one of its key accomplishments. Besides, the funding concentration is occasioned by a few large projects supported by two donors — the Netherlands Government in the case of climate change/Kyoto mechanisms and the United Nations Foundation (UNF) in the case of renewable energy — which might not be a recurring phenomenon. In a market for donor funds where competition has intensified among research institutions after WSSD, it would be disingenuous to suggest that the Centre forego such major projects for the sake of balancing its areas of work.

Nonetheless, the Centre's mandate under the MoU requires it to address more than just a few programme areas, with a sense of proportion among them. Of the seven programme areas identified in the MoU, the one with the closest link to the thematic cluster on Sustainable Development is Environmental and Development Economics, which occupied around four per cent of the Centre's total funds. Within Energy thematic cluster, the combined resources allocated to the programmes on Energy Market Reforms and Energy Efficiency formed some 4.5 per cent of the total budget. These three programme areas, together with Transport, should deserve greater attention. All feature among the current funding priorities of leading donors, so the balancing issue has to do with more intense efforts on the part of the Centre to build up the resources available to these programme areas without necessarily curtailing the resources for others in future work programmes. This may call for an expansion of its staff capacity and greater diversity in their specializations/capabilities than at present.

Activities

The 39 projects and the various activities under them were generally consistent with emerging issues and trends in energy, climate and sustainable development at the start of Phase V, and they were closely linked to UNEP's Energy Sub-Programme plans and priorities. As such, they were appropriate within the approved structure of the work programmes. A large number of research and training activities were carried out by the Centre under Phases V and VI. A comparison of these against the expected near-term results from the work programme for Phase VI indicates the Centre met or exceeded the targets it was set (Table 3), subject to the programme balance issue described above.

Table 3: Expected Short-Term Project[a] Results and URC's Activities — 2000-2004

Expected Short-Term Result[b]	Relevant Activities[c]	Comment
Increased integration of environmental concerns in energy policies and strategies in collaborating countries	Several research studies, assistance to national and sectoral plans, support to advisory facilities, and information dissemination	Under all programme areas
Establish a network of regional partner institutions with UNEP	Assistance to UNEP for creation of Global Network on Energy for Sustainable Development (GNESD)	The Head of URC also heads the GNESD Secretariat and many URC partner institutions are members of GNESD
Capacity enhancement in regional and national partner institutions	104 workshops/seminars involving governments, industry, researchers and NGOs; organized in co-operation with partner institutions	Under all programme areas, but with concentration of 80 events in Climate Change and Kyoto Mechanisms
Establish and disseminate environmental data, planning methods and practical planning and policy analysis tools	Data bases, information packages, policy and planning tools	Under all programme areas except Transport
Identify and implement specific projects for UNEP in the areas of energy, environment and development	13 out of 39 projects	Under all programme areas except Energy Sector Reform and Transport
Support a successful UNEP contribution to WSSD 2002	Inputs to WSSD Plan of Implementation and establishment of GNESD	
Develop methodology and analytical approaches related to Kyoto mechanisms as inputs to climate change negotiation process through COP and Climate Change Secretariat	Baseline definitions, cost analysis, project screening and sustainable development indicators. Crucially, lead authorship contributions to IPCC climate change assessments and special reports.	

a. Refers to URC as a project under the UNEP project document.

b. Based on project document for Phase VI.

c. Based on projects/events listed in Annexes 5 and 9.

The Centre more than fulfills the MoU's requirement that capacity building should be an integral part of all programme areas. Most research projects incorporate an awareness- and capacity-building component by way of workshops, seminars and similar group events. Since participants at the events are usually a mix of representatives from governments, the private sector, research institutions, NGOs and other stakeholders (such as banks and financing institutions), the Centre's research work is frequently carried closer to decision-making processes at national and regional levels than might be the case were there a rigid delineation between research and its follow-through. In fact, most of the Centre's professional staff play an active role in not only conducting research, but also in disseminating the outcomes through such events.

There is a lingering question though if the appropriateness of the Centre's activities should be measured in future evaluations mainly against the specific plans and priorities of UNEP. The rationale for seeking such a linkage is self-evident given the Centre's origins and its expected role vis-à-vis UNEP. However, an increasingly larger part of the Centre's funding comes from other donors and organizations, with the ensuing projects/activities subject to the influence of the plans and priorities of those sources[14]. Furthermore, the perceptions of governments and other stakeholders along the energy- sustainable development interface might be broader in scope than those of UNEP, and the Centre is expected to be responsive to the former. For instance, a recent UNEP energy policy paper[15] acknowledges the importance of 'sustainable development' and 'poverty eradication' in the energy context, but limits its Energy Sub-Programme priorities to human health and, therefore, to clean energy actions. By contrast, Danish development policy places poverty reduction at the forefront of all its development co-operation. Future evaluations of the Centre should perhaps be more inclusive in their scope to allow for these diversities while retaining the UNEP linkage.

III.1.3 Effectiveness and flexibility of institutional arrangements

Organization

The organization structure of the Centre, presented earlier in Figure 1, reflects its tripartite ownership. The Centre maintains a close relationship with all its founding institutions — the Risø National Laboratory and DANIDA by virtue of its location, and UNEP via DTIE through both institutional and project-tied linkages. Recent internal changes, such as the matrix overlay of thematic clusters and the creation of an Administrator's position, have been in line with the Centre's expansion over the years, and they are effective and flexible.

There are, however, three areas in which further improvements could be made. These relate to the functioning and roles of the MPC and the SAP, and the Centre's evolving relationship with the Energy Sub-Programme of UNEP at DTIE.

First, as defined in the MoU, the MPC's role is to oversee the Centre's functioning at an overall policy and programme level. This calls for a 'bird's eye view' of the Centre's strategic directions without distraction by routine matters, such as approval of detailed budgets, project level implementation details, travel plans and actual travels. The minutes of recent MPC meetings suggest there is a considerable interspersion of such operational aspects with topics of strategic/policy concern in the business of the MPC. Since this owes to the way in which the MPC's functions are set out in the MoU, there is a need to devise alternative implementing mechanisms that allow greater emphasis on the MPC's role as the Centre's highest governing body.

[14] Although, at present, much of such additional funding is routed through UNEP or is linked to it in some way. UNEP has a fairly strong say in the design of resulting projects, and agreements with other donors are subject to approval by UNEP's senior management.

[15] 'UNEP's Energy Policy and Programme', revised version of a document presented at the UNEP Senior Energy Management Group Retreat, 12 May 2004.

Second, the SAP, on the other hand, appears to be afflicted with a syndrome of 'too much of the forest and too little of the trees'. Minutes of its meetings indicate that while the body fulfills its strategic and scientific advisory roles at a broad level, its role in assessing the relevance, quality and impact of the Centre's ongoing and planned activities is muted. This is attributed to the short (one-day) duration of its annual meetings and the way in which they are organized. Much of the available time at SAP meetings seems to get taken up with seminar-type presentations by the Centre's staff, allowing only a very limited time for interaction among the SAP members themselves. Such interaction as does take place leaves little room for a systematic assessment of the Centre's ongoing and planned activities. There is a need to better utilize the SAP's potential by extending the duration of its annual meetings, and following a more structured agenda that reflects a better balance among its three main functions as defined by the MoU. Furthermore, SAP meetings should ideally be chaired by one of its invited members elected by the rest, and who should present the outcomes to the MPC.

Third, the relationship between the Centre and DTIE is acknowledged to be close and smooth at the institutional level by both parties. However, the number of professional staff at the latter has grown over the years to about 10 professionals, as has the number of projects managed by them. Although there is a stated delineation between the Centre's work and that of DTIE — the former emphasizing research and capacity-building, and the latter focusing on financing and commercialization — the distinctions are rather blurred in practice with both entities carrying out similar activities at times. The involvement of the Centre's staff in projects directly managed by DTIE, and vice versa, does not appear to follow any discernible rules of engagement. A number of projects managed by DTIE do not take advantage of the substantial research capacity the Centre has built up over the years. Conversely, there are no established guidelines for the DTIE staff to bring their market-based lessons into the Centre's work. Bridging this gap will benefit both the Centre and DTIE. Institutional mechanisms for the purpose could include joint staff retreats, staff exchange programmes and the pursuit of the research-action-research loop on a more systematic basis.

Subject to the foregoing observations, the organization structure and functioning of the Centre as a whole correspond to the MoU, which states that the Centre's main function is "to support and promote UNEP's programme in the area of energy in accordance with the future UNEP Governing Council approved energy activities…". While the Centre has a good deal of operational flexibility in carrying out its activities, its overall direction and the thrust of its efforts are consistent with UNEP's priorities. The MPC periodically reviews the Centre's operations to verify that it is indeed 'on course'. Furthermore, UNEP projects executed through the Centre (including that under the core Centre project) are described in project documents approved by UNEP's Project Approval Group (PAG). The PAG, which is chaired by UNEP's Deputy Executive Director, reviews all project documents to ensure that they are consistent with UNEP's approved biennial work programme, and that they are generally well-designed and well-conceived endeavours.

Staff

The Centre has a competent and dedicated team of professional staff, drawn from both developing and developed countries, including in particular Denmark. Their academic qualifications and career experience are on par with international standards. The thematic cluster arrangement has been especially useful to bring together staff with varying specializations into project-specific collective efforts without 'pigeonholing' individuals into one programme area or another. While stimulating innovation and facilitating cohesion of effort, the arrangement offers the advantage of an informal, non-hierarchical relationship between senior staff acting as cluster leaders and the rest of the professional staff. In the process, it also reduces the burden on the Head of the Centre at a time of rapid growth in the Centre's projects and activities. On his part, the Head of the Centre provides capable leadership of a high quality, both intellectually and administratively, to the staff team with a sufficient degree of flexibility in management style. Indeed, much of the institution-building that has taken place since the Centre's inception owes to his vision and sense of mission.

The terms and conditions of staff employment in the Centre are guided by Danish Government regulations. The salary scales under these are lower than those of the UN system, so the Centre has been experiencing growing difficulties in recruiting senior professionals from outside of Denmark, although the Danish system does offset to some extent the salary differential with its relatively high social security benefits. Since there is no ready solution to this dilemma, the Centre has to reconcile itself to a changing staff team periodically. There are unavoidable trade-offs between the retention of experience and the infusion of new blood in any institution but, in the balance, the Centre will probably be no worse or no better for it under the existing arrangement provided staff turnover takes place in small doses without disruption to ongoing work programmes. The main risk to guard against is the potential dilution of the foreign staff component (particularly from the developing countries) over time, so that the Centre's international character and its diversity of expertise/experience are preserved.

The previous evaluation suggested a ceiling of 20 on the number of professional staff. But subsequent developments, in particular the heavy concentration of staff resources in two programme areas[16], at the cost of others, challenge the notion of any such ceiling. The Centre's staff requirements should be guided by its work load, as signified by the volume and variety of projects/activities it has to effectively implement under a work programme. A ceiling on the number of staff will impose a commensurate ceiling on work load, which is not easy to determine, nor in the interests of the Centre to assume. An institution should be allowed to grow according to the demand for its services, not the other way around. While growth by itself is not a measure of success, its absence runs the risk of stagnation and possible contraction. There are today national research institutions and private consulting firms in the development field that employ hundreds of professionals without compromising their financial or managerial viability. An institution like URC, with its mandate for global coverage, should be allowed the freedom to augment its staff capacity as required without any arbitrary ceilings. The previous evaluation, however, rightly cautioned against potential uncertainty among the staff due to recruitments under short-term projects. The answer to this may lie in the terms and conditions of employment rather than in curbing recruitment. The Centre can, for instance, consider project-tied coterminus appointments, secondments and fellowships, with continuity provided by its senior staff on longer term appointments. It can also emulate institutions in the UN system or the World Bank in their short-term staffing practices, such as yearly contracts and staff consultancies to meet specific project-related needs.

A related but separate issue concerns staff 'capabilities'. Without taking away from the present staff team of the Centre which, as stated, is highly competent and motivated, there is a need to bring in additional professionals with qualifications and experience other than those present among the existing staff. This particularly applies to the Sustainable Development theme — but by no means confined to it — which not only requires additional staff, but can also benefit from new capabilities in the social dimensions of energy. The present staff team is almost entirely composed of scientists, engineers and economists. This should be complemented by individuals with backgrounds in sociology, rural development, financing (including microfinancing), enterprise development, business management, community participation and gender analysis. Ultimately, the paths to environmental sustainability in energy systems are as people-intensive as they are technology-intensive. For an institution that seeks to induce profound changes in energy production and consumption patterns as its primary mission, the Centre would be wise to reflect this reality in its future staffing plans.

Support Facilities

The Centre's physical infrastructure and administrative facilities are provided by the Risø National Laboratory. These are well-maintained and adequate for the Centre's immediate needs and potential expansion in the near future. Within the Systems Analysis Department and the rest of the Laboratory, the Centre enjoys sufficient administrative independence as intended.

[16] Especially against the CDM Capacity Development project.

III.1.4 Cost-effectiveness

There is an established system of cost and time monitoring of projects within the Risø National Laboratory which is adequate to ensure the necessary discipline in project implementation. The Head of the Centre, its thematic cluster leaders and individual task managers for projects exercise due diligence while keeping track of time and budget limits as these are common requirements in project proposals and contracts.

However, within the limited duration of this evaluation, it is not possible to determine with any degree of certainty the 'cost-effectiveness' of individual projects and activities of the Centre. Cost-effectiveness is more than getting projects concluded within approved time and budget limits. If the approved limits have an in-built slack, a project may extend over a longer duration than what was strictly necessary, or it may spend more money to get results that could have done with less. Budgeting for research is just as susceptible to Parkinson's Law as bureaucracies are and it is the generosity or otherwise of individual donors that often really determines how cost-effective a project or activity turns out to be. There are few standards to measure this, except broad, and subjective, judgements based on the quality of outputs relative to resources expended. By this token, the Centre is cost-effective in general terms.

III.1.5 Quality, relevance, and immediate impact of activities and outputs

The main activities of the Centre are research projects and capacity building events, such as seminars, workshops and training courses. The outputs of research are in the form of books, reports, case studies, articles, working papers and other published/unpublished material, including data bases. The outputs of capacity building events are reflected by improved awareness, skills and capabilities.

Quality and relevance of research outputs

The quality of the Centre's published research outputs is of a high standard and comparable to that of similar outputs from other international institutions. Its books and reports are well-written/-edited and well-received by its partner institutions as stated by them in their feedback under the evaluation. A number of publications have been translated into languages other than English[17] in order to reach their local audience more effectively. The staff, including the Head of the Centre, have produced a large number of intellectually stimulating and well-argued analytical papers, many in the form of inputs to capacity development events. The publication of several books by reputed international publishing houses is evidence of both their quality and saleability. The Centre has carried out extensive work on policy guidelines and methodological tools which are well-argued and presented in a coherent manner, and they are clearly useful to national decision-makers and analysts. Responses from the Centre's partner institutions, especially at the national level, indicate that that Centre's research outputs are highly relevant to their own research programmes and activities.

Quality and relevance of capacity building activities

The Centre has been prolific in organizing seminars, workshops and training courses as an integral part of its research projects, especially since 2002 under the project on CDM Capacity Development. Feedback from the Centre's partner institutions suggests that most events were well-designed and focused, with participants being selected with care and an eye to balanced representation from governments, industry, research institutions, NGOs and other stakeholders. In terms of inputs to capacity building, the Centre's contributions have, thus, been of a high quality and relevant to those taking part in events.

[17] However, the reverse is not the case with several publications from activities in Latin America and the Mediterranean regions. The Spanish and French originals of at least the key publications should be translated into English for the benefit of other regions.

However, there is no practical means within the time available to assess the output quality of the Centre's capacity building efforts. This is intrinsic to capacity building events at large where output is not so much a measurement of input quality or attendance, but rather the ensuing increment in awareness, knowledge and specific skills among the participants. Assessing the latter is time-consuming and potentially inconclusive due to difficulties with establishing clear causality. It might be possible to assess the quality and output of capacity building events where they are followed immediately by activities that utilize new awareness, knowledge or skills. But this lies outside the boundaries of the present evaluation.

Appropriateness of institutional arrangements for project organization and implementation

A project cycle in the Centre typically begins with research ideas and proposals from the staff each year. These are based on prior dialogue/consultation with partner institutions and lead to formal requests for funding from prospective donors. Following funding approval, sub-contracts are entered into with partner institutions, mostly with national institutions as implementing agencies and regional institutions as technical support agencies to the national institutions. Project progress is monitored by professional staff designated as task managers who, along with other professional staff, provide technical/analytical tools, and specialized knowledge and insights to project implementation as appropriate. Upon completion, research outputs are published and disseminated, crucially through capacity building events in the majority of instances.

By and large, these arrangements are appropriate to the Centre's work. A distinguishing feature is that, unlike many international institutions that rely quite extensively on consulting firms, the Centre has made a conscious effort to forge linkages with research institutions and, thereby, laid a foundation for sustained collaboration on the basis of shared professional interests rather than commercial motivation. Its partner institutions are distributed fairly evenly across the developing regions and there is a sufficient representation of the developed countries among them to facilitate a North-South sharing of knowledge and skills (Table 4)[18].

Table 4: Regional Distribution of URC's Major Partner Institutions

Region	National Institutions	Regional/International Institutions
Africa	7	2
Asia	8	1
Latin America and Caribbean	5	1
Europe and North America	10	9
Total	30	13

Partner institutions consulted under the evaluation have contributed to the Centre's collaborative projects and activities with them in the following ways:

a) development of proposals for joint activities,
b) inputs to approach and methodology,
c) design of specific studies,
d) identifying local contacts and institutions for project implementation,
e) provision of professional staff for research and capacity building activities,
f) provision of case study inputs,
g) regional networking, and
h) regional/global co-ordination of activities jointly developed.

[18] See Annex 6 for a listing of partner institutions.

There are some issues raised by partner institutions to which the Centre should pay closer attention in the future. First, many national institutions are capable of providing a higher degree of intellectual inputs to joint research activities than has perhaps been sought from them so far. However sound and elegant the Centre's own concepts and ideas might be, there is always room for improvement in them when they are set in a national or regional context. The Centre should be more conscious of this aspect and actively seek ideas and innovation at the local levels, to the point of reverting to its drawing board if necessary. Second, it should make greater use of professionals from its partner institutions as trainers/resource persons in capacity building events. In particular, it should avoid the trap that many international institutions often fall into — of underutilizing local talent in the mistaken belief that the outcomes of international research are best disseminated by international professionals. The message from national partner institutions is that they would feel more committed if they were treated as intellectual equals rather than just local facilitators.

Appropriateness of technical assistance and support provided to partner institutions

URC's partner institutions rate financial support from the Centre as its most useful contribution, followed by facilitation of contacts/networking relations (Table 5). This is not surprising since the respondents to the evaluation were mainly from the developing countries where lack of financial resources is often a serious impediment to the pursuit of research activities, especially research that requires a cross-country pooling of knowledge and experiences. The Centre should feel encouraged by the fact that its professional contributions to joint projects, both research and capacity building, are rated 'good' to 'very good'. Equally, the lower rating for its organizational and managerial contributions may not be so much a reflection of shortcomings, but more rather of the capacity among local institutions to assume much of these responsibilities themselves, which is a central aim of collaboration.

Table 5: Usefulness of URC Contributions to Partner Institutions

URC Contribution	Partners' Rating
Financial support	1.5
Facilitation of contacts/networking relations with others institutions/individuals	2.0
Professional contributions by URC staff	2.3
Technical/Analytical tools or specialized knowledge	2.6
Organizational/Managerial contributions	3.4

Scale: 1 = Excellent (90% - 100% achievement); 2 = Very Good (75% - 89%); 3 = Good (60% - 74%); 4= Satisfactory (50% - 59%); 5 = Unsatisfactory (49% and below)

Contribution to national/regional analytical capacities

Perceptions of the Centre's contribution to national and regional analytical capacity vary depending on to whom the question was addressed. Developing country partners, both national and regional, indicate a high degree of benefit. Among the examples cited by them, the following are noteworthy:

a) methodological knowledge,
b) knowledge of new analytical tools,
c) opportunities to challenge entrenched approaches to energy policy and planning from an environmental viewpoint, and
d) greater professional exposure for local staff.

On the other hand, partner institutions from developed countries demur at suggestions that the Centre may have contributed significantly to their capacities. Their view is that instances of collaboration with the Centre benefit both as equal partners.

Immediate impacts

In sheer numbers, the Centre's research activities generated a total of 181 published and 134 unpublished outputs during 2000-2004 (Table 6). In the same period, the Centre organized 104 capacity building activities involving 7,534 participants in 31 countries, mostly the developing countries (Table 7). This is a remarkable achievement by any standard. Taken together with the high quality of its research and capacity building activities, the immediate impact of the Centre's work has been to build a substantial body of knowledge, analytical tools and skills, and to convey it in face-to-face settings to a varied audience comprising decision makers from governments, industry, research institutions, NGOs and other stakeholders in a large number of countries.

Table 6: URC Research Outputs — 2000-2004*

Programme Area	Published		Unpublished
	Books, Reports, PhD Theses	Research Papers, Articles	Workshop/ Seminar Papers, Staff Working Papers
Climate change mitigation analysis and capacity building	13	44	30
Environmental and development economics	5	21	32
National & international policy instruments, including Kyoto mechanisms	3	33	52
Energy sector reform	4	21	13
Energy efficiency	0	0	2
Renewable energy	4	28	13
Transport	1	4	2
Total	**30**	**151**	**134**

**See Annexes 7 and 8 for lists of published and unpublished research.*

Table 7: URC Capacity Building Events — 2000-2004*

Programme Area	Policy/ Strategy Workshops, Seminars		Training Workshops, Courses		Consultative/ Project Meetings	
	No. of Events	No. of Participants	No. of Events	No. of Participants	No. of Events	No. of Participants
Climate change mitigation analysis and capacity building	1	106	3	70	3	53
Environmental and development economics	4	510	1	87		
National & international policy instruments, including Kyoto mechanisms	4	278	67	5,044	3	48
Energy sector reform	4	584	3	35		
Energy efficiency	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Renewable energy	4	342	6	332		
Transport	1	45				
Total	**18**	**1,865**	**80**	**5,568**	**6**	**101**

**See Annex 9 for list of capacity building events. Participant numbers in the table are estimated from a partial breakdown provided by URC. While they are not accurate, they are indicative of the proportion under each category.*

Without detracting from this impressive record, some notes of caution may be sounded, mainly to assist the Centre to better distribute its effort, and potential impacts, more evenly across its thematic clusters/programme areas in the future:

- Due to the high concentration of resources in the thematic cluster on Climate, the impacts made by the centre tend to be much greater under the two programmes dealing with Climate Change Mitigation Analysis and Kyoto Mechanisms.
- In spite of the relatively modest level of resources made available to it, the number of research outputs and capacity building activities under the Sustainable Development thematic cluster (captured under the programme on Environmental and Development Economics) makes it a key contributor to the Centre's overall effort. Further attention can build this thematic cluster rapidly.
- Within the Energy cluster, the programme on Energy Efficiency has not been prominent, as indicated by its low level of outputs. But a project to promote financing of energy efficiency investments has been initiated recently in partnership with the Word Bank and UNEP[19]. This should offer a basis to significantly scale up the Centre's activities in this programme given the close links between energy efficiency and emissions reduction.
- The programme on Transport plays a minor role in the totality of the Centre's effort. Either it should be expanded in the future or its continued presence as a priority area reconsidered.

III.1.6 Effectiveness of partnerships and linkages

Two-thirds of the Centre's formal (contractual) partners are research institutions, both national and international (Table 8). Several of them are either government-owned or recommended by governments, so they are capable of exerting an influence on government policy. Within their own research perspectives, those that responded to the evaluation consider the Centre's contributions towards sustained collaboration effective. But this is accompanied by the caveat that (a) the Centre's work programmes should have a longer term perspective to enable forward planning and (b) there should be a better distribution of available project funds between the costs of (national) partner institutions and the Centre's overhead.

As of now, the Centre's work programme cycles have been for a maximum of four years which is attributed to the Danish Parliament's approval cycle for development assistance. While the Centre has no control over this, it is not prevented from engaging its partners in longer term strategic planning exercises without committing itself financially. The question of project fund allocation is ticklish as 60 per cent of the Centre's overhead goes towards its staff salaries, so it may lack the necessary room in projects with limited budgets. It can be more generous in projects that are better funded and make an effort to establish a clearer understanding with its partners on funding issues through open dialogue.

Table 8: URC's Formal Partners by Type of Institution

Institution Type	Africa	Asia	Latin America and Caribbean	Europe and North America	Total
Government	1		1	3	**5**
Private Sector				1	**1**
Research Institutions	3	9	4	11	**27**
UN Bodies	1		1	4	**6**
NGOs	4				**4**
Total	**9**	**9**	**6**	**19**	**43**

The Centre's formal partnership with governments is limited, with more of them in Europe (all playing a donor role) than in the developing countries. This is compensated for to a considerable extent in two ways:

a. In several instances, the formal partners might be research institutions or NGOs, but the relevant government ministries/agencies are fully involved in project activities. This applies especially to

[19] 3 Country Energy Efficiency Project in Brazil, China and India.

the CDM Capacity Building Project and activities under the Environmental and Development Economics programme.

b. A large number of government officials have taken part in the Centre's capacity building activities during the period under evaluation. While an accurate breakdown of participants by category is not readily available, about 40 per cent of them (approximately 3,000 individuals) were from governments, followed by some 23 per cent (1,700) from the private sector, nine per cent (680) from research institutions and five per cent (375) from NGOs and community based organizations, with resource persons and representatives of international organizations forming the rest.

Whether the linkages established with this large body of government institutions and representatives can be sustained over the longer term depends on the Centre's future work programme initiatives and a more focused networking effort at the institutional level, for example, the establishment of an URC associates group.

In terms of its partnerships with NGOs and the private sector, the Centre needs to do more by way increasing their numbers and improving their regional distribution. All the present NGO partners are located in Africa and the only private sector partner is an American enterprise, though with a regional presence. Subject to this limitation, the Centre's existing partnerships have been quite effective. The Centre's partners within the UN system are UNEP, UNDP and the World Bank, and its linkages with them are close and mutually beneficial.

III.1.7 Contribution to sustainability of collaborating institutions

There is no ready yardstick to measure the Centre's contribution to the institutional sustainability of its collaborating institutions. Indeed, it would be presumptuous of the Centre, which engages them mostly in a project-/activity-specific context, to expect to make such a contribution, either technically or financially. Perhaps, a more appropriate question should be whether the Centre can preserve and sustain partnerships and linkages established through continuity of association. This is taking place, but it can be strengthened further through a number of other measures suggested earlier.

III.1.8 Financial feasibility

For Phases V and VI, the Centre mobilized total funds of US$ 29.2 million, of which core support from UNEP, DANIDA and the Risø National Laboratory was US$ 8.6 million (30%) and non-core support from 17 other donors (including additional activity-specific support from the three founding institutions) amounted to US$ 20.6 million (70%) (Table 9). Other highlights of its financial performance are as follows:

a. Excluding additional activity-specific funds totaling US$ 1.6 million provided UNEP, DANIDA and the Risø National Laboratory, non-core support from 17 other donors came to US$ 19 million, nearly twice the core support.

b. Support from the Netherlands Ministry of Foreign Affairs alone exceeded the total core support, but it was confined to a single large project.

c. The UN Foundation was the third largest donor overall after the Netherlands Ministry of Foreign Affairs and DANIDA, with greater diversity in its funding which was spread across six projects.

These figures speak for themselves in attesting the Centre's exceptional degree of success with leveraging the core support provided by its founding institutions to generate additional resources for its work programme. On this criterion, the Centre has clearly demonstrated its financial viability over the period 2000-2004.

Table 9: Sources of Funds for Phases V and VI*

Source	No. of Projects	Amount (US$)	% of Core Funds	% of Total Funds
DANIDA	2	5,892,000	68.17	20.16
Risø National Laboratory (in kind)	2	1,686,500	19.51	5.77
UNEP Environment Fund	2	1,065,000	12.32	3.64
Core Funds	*2*	*8,643,500*	*100.00*	*29.58*
The Netherlands Ministry of Foreign Affairs	1	8,785,000	101.64	30.06
United Nations Foundation	6	5,937,047	68.69	20.31
DANIDA	8	1,486,500	17.20	5.09
United Nations Foundation & Shell Foundation	1	1,291,000	14.94	4.42
Global Environment Facility	2	643,000	7.44	2.20
UNDP	1	522,000	6.04	1.79
Italian Ministry of Environment and Technology	1	365,000	4.22	1.25
Danish Energy Authority	2	337,000	3.90	1.15
European Commission	6	334,700	3.87	1.15
United Nations Foundation & VROM	1	254,000	2.94	0.87
DANCED	1	225,000	2.60	0.77
Nordic Council of Ministers	1	100,000	1.16	0.34
UNEP	1	85,000	0.98	0.29
ASEAN Centre for Energy	3	83,000	0.96	0.28
World Bank	1	49,200	0.57	0.17
GTZ	1	42,000	0.49	0.14
Danish Environment Protection Agency	1	35,000	0.40	0.12
Risø National Laboratory	1	7,000	0.08	0.02
Non-Core Funds	*39*	*20,581,447*	*238.11*	*70.42*
Total Funds	**41**	**29,224,947**	**338.11**	**100.00**

**Includes some spillover funds from Phase IV.*

However, there is a need to view these numbers in a more sober light if the longer term financial sustainability of the Centre is considered:

- First, much of the non-core support is concentrated among two donors and four projects. The largest of these, the CDM Capacity Development project, alone accounts for nearly 43 per cent of all non-core support. If support for the other three projects[20] is added, it comes to 73 per cent of the total. Project support by nature is time-bound with no assurance of renewal or extension. This is especially so for the CDM Capacity Development Project which, in spite of its considerable success, may face an uncertain future now given the new anxiety surrounding the future of the Kyoto Protocol itself.
- Second, judging by its past record, the Centre is capable of coping with such uncertainties by diversifying its project portfolio and non-core donor base further. The Head of the Centre and its professional staff have demonstrated their ability to mobilize additional resources and deliver results to the satisfaction of donors. But much depends on the continuity of core support from its founding institutions, especially DANIDA and UNEP. It is their contributions to the core budget that makes it possible for the Centre to approach other donors on a cost-sharing basis, so it is vital to ensure these are sustained.
- Third, unlike most international institutions, the Centre's continuation depends on project-based renewal cycles. It has a maximum time horizon of four years in terms of assured core support which is not sufficient to offer any institution a sense of long-term financial or existential security. In effect, the Centre is 'born again' with the signing of each new project document by its founding institutions. Any extended delays in this process or, worse, a decision by any of the founding institutions to discontinue its support will prove catastrophic for the Centre and its staff. Its lack

[20] The African and Brazilian Rural Energy Enterprise Development Projects, and the Project on Consumer Financing for Solar Home Lighting in Southern India, all funded by UNF.

of independent legal identity and its inability to build up financial reserves[21] of its own mean that the Centre has no exit plan if the worst happens. It is up to the founding institutions to ponder the deeper implications of such a prospect and come up with an appropriate 'safety net' consistent with their internal policies and priorities.

III.1.9 Effectiveness of monitoring and evaluation systems

The administrative and financial monitoring of the Centre is performed by the Risø National Laboratory according to its established policies and procedures. These are satisfactory and need no change. However, there is a need to strengthen and formalize reporting procedures to the MPC and the SAP.

The progress of the Centre's projects/activities is reported to the MPC at its biannual meetings, but this is on a descriptive, and possibly selective, basis. Documentation presented to the MPC highlights key activities and events against specific projects, but this does not follow any uniform format and, in particular, it lacks a set of progress indicators against pre-determined output milestones, time-frames and budgets. Presentations to the SAP deal with substantive issues and offer even less information on these aspects. In general, the Centre's reporting to both bodies seems to follow a somewhat informal format which might have served it well — and even facilitated decision-making — in its initial years. But it is necessary to recognize that the volume and diversity of its activities have multiplied severalfold in recent years, and its reporting procedures should match current requirements, especially of the MPC to fulfill its oversight functions effectively. At the same time, any revised reporting system should not be unduly complex to avoid distracting the Centre from its main purpose.

Since its inception, the Centre has undergone one internal and two external evaluations, including the present one. On average, it has been evaluated once every 4-5 years. Ideally, the Centre should undergo an internal evaluation every two years and an external evaluation every four years, coinciding with the mid-point and conclusion of each work programme, respectively. However, the internal evaluation may not be necessary if the SAP's role is revised to allow it greater oversight of the work programme and activities at its annual meetings.

III.1.10 Appropriateness of publication and information channels

The Centre's main vehicles for communicating its results to a larger audience are its books and publications, its newsletter and its web site. Based on the recommendation of the previous evaluation, a journalist has been recruited to improve its publication and communication channels.

The frequency of the newsletter, which the Centre publishes jointly with UNEP, has been increased from two to four issues a year since the beginning of 2003. The newsletter is available in print as well as posted on the Centre's web site. Its layout and editorial quality are up to international standards, but it is rather basic in its content and insular in its outlook. Most information items and articles are authored by the Centre's staff, and these tend to be largely project-/activity-related. The appeal of the newsletter can be greatly enhanced if the Centre were to expand its scope to include external contributions, especially from its partner institutions and participants of its numerous capacity building activities. A number of international institutions publish newsletters that contain articles of topical interest beyond just their internal activities and thereby strengthen their linkages with their circle of partners and clientele[22]. Such an expanded newsletter will require the Centre to put in a higher level of editorial inputs and assume a certain advocacy role, which is quite relevant to the energy-environment interface.

The Centre's web site is one of its important assets. It is informative, well laid out without the excessive clutter that often slows down viewing, and its contents are well-organized and easy to

[21] Any surplus is absorbed by the Risø National Laboratory at the end of each year.
[22] See, for example, the ENERGIA newsletter at http://www.energia.org/resources/newsletter/enarchive.html

follow. Some major projects of the Centre have their own web sites, which are equally efficient and informative. Most publications of the Centre are available online for downloading, the exceptions being those brought out by external publishing houses. Some further refinements can make the web site even more effective, for instance, use of the Centre's logo and a certain amount of graphics to take away its present blandness; a better organized listing of all the Centre's capacity building events in one place, together with links to papers/presentations at such events; and the inclusion of unpublished staff working papers in the online library.

Missing in the Centre's information kit is an institutional brochure setting out its mission, functions, ownership, organization and similar details of a generic nature. The Centre had such a brochure/folder in the past but a revision became necessary following the change in institutional name. This is currently in progress and should be completed quickly.

Overall, the publication and information channels employed by the Centre are appropriate to its purpose, and they are adequate within limits. But the Centre needs to make a more conscious attempt to build up its image and market itself more effectively, especially among its developing country audience. It has many accomplishments to its credit, including in particular a huge repertoire of high quality outputs from its work till date, so the lack of products is not a constraint. However, the products of policy research are among the most difficult to sell due to their impersonal character and the 'fuzziness' of their benefits. They rarely sell themselves without a deliberate outreach effort.

III.1.11 Impact on influencing change

The project document for Phase VI sets out the expected long-term results of the Centre as:

a) reduced pollution from energy activities (while allowing developing countries to meet their growing needs for energy services); and
b) enhancement of national institutional capacities to develop policy, undertake planning, and research on integrated energy, environment and development problems.

Measuring the Centre's impact in terms of changes brought about along these objectives is a complex task to which this evaluation cannot hope to do justice. Given its extensive work and the considerable country spread of its activities, in particular of its capacity building efforts, the Centre has clearly contributed towards positive changes in policy outlooks, planning approaches and implementation strategies at the level of both governments and institutions. But isolating these impacts from other influences — such as the parallel efforts of other international agencies working towards similar ends — requires a more rigorous exercise featuring direct interaction with an adequate sample of decision makers within governments, collaborating agencies, financial institutions and others who played an active part under the Centre's work programme. The time and resources available to the evaluation fall short of this requirement.

Nonetheless, a review of the Centre's project/activity reports under various programmes and anecdotal feedback from its partner institutions indicates there have been several instances of change due, at least in part, to the Centre's interventions. Of these, the following are noteworthy:

- The Centre's professional staff have directly contributed to the IPCC process as chief lead authors/lead authors and review editors of IPCC's climate change assessments and special reports. Under the first phase of the Development and Climate Change project, key personnel from the Centre's partner institutions have been a part of national delegations to climate change policy forums, such as IPCC, where they have been able to influence policy perceptions.
- Numerous instances of influence on governments, industry and other stakeholders have been recorded under the CDM Capacity Development project, such as:
  - the design and development of an institutional strategy by Peru to promote clean development mechanisms under a 'national project cycle';
  - the establishment or consolidation of Designated National Agencies (DNAs) for CDM projects in Philippines, Vietnam, Cambodia, Cote d'Ivoire, Mozambique, Uganda, Bolivia,

Ecuador, Guatemala, Morocco, Jordan and Egypt; the formalization of national CDM project approval procedures; and the identification of several investment projects in collaboration with the private sector; and

- the establishment of an advisory body comprising key UN agencies, such as UNIDO, UNDP, UNFCCC Secretariat, and international financing institutions like the World Bank and ADB to co-ordinate their activities with those of the project.

- Direct support has been provided to the new Energy Agency of Burkina Faso to develop a comprehensive national electrification plan covering a wide range of options (diesel, solar, small grid, large grid, auto producers and cross-border connection).
- The African Rural Energy Enterprise Development (AREED) project, in which the Centre has partnered with UNEP's DTIE, has had a significant influence on the Government's draft National Renewable Energy Strategy in Ghana. Most recommendations of the project report have been reflected in the strategy, including the setting of targets for renewable energy.
- The AREED and BREED (Brazilian Rural Energy Enterprise Development) projects have so far led to the development of 19 privately operated enterprises in Brazil, Ghana, Mali, Senegal, Tanzania and Zambia.
- Under the project on Consumer Financing of Solar Home Lighting in Southern India, two national commercial banks — Canara Bank and Syndicate Bank — have adopted new policies to launch special lending programmes against which some 10,000 loans for solar home systems have been extended to rural users so far.

This selective list of evidence very likely understates the influence the Centre has been able to exert in bringing about desirable change among its partners, governments and other stakeholders. It is the evaluator's view that many more such instances exist across the Centre's activities, but they can be brought out in a more systematic manner only through a comprehensive *impact evaluation* exercise.

III.2 Conclusions

The overall conclusion of the evaluation is that URC has pursued its mission with considerable vigour and success over the years. The period covered by the evaluation has especially been one of rapid growth for the Centre in terms of a considerably enlarged work programme compared to the past, an ensuing increase in the number and the diversity of activities, and a fast-growing presence across developing countries that are the Centre's primary focus. This has taken place against the backdrop of some notable shifts in global priorities concerning energy and the environment, crucially after the World Summit on Sustainable Development in 2002. The Centre has generally risen above the challenges it was set and emerged with a convincing demonstration of its capabilities and potential.

Table 10: Success of Project Implementation

Indicator	Rating
Attainment of objectives and planned results	1
Achievement of outputs and activities	1
Cost-effectiveness	2
Impact	2
Sustainability	3
Stakeholder participation	2
Country ownership	2
Implementation approach	1
Financial planning	2
Replicability	2
Monitoring and evaluation	3
Overall	**1.9**

Scale: 1 = Excellent (90% - 100% achievement); 2 = Very Good (75% - 89%); 3 = Good (60% - 74%); 4= Satisfactory (50% - 59%); 5 = Unsatisfactory (49% and below)

The shortcomings and improvement needs in the Centre's institutional arrangements and operational procedures, as pointed out in earlier parts of this report, are characteristic of problems that come with success, at a rather heady pace in this instance. In implementing a much enlarged work programme within a relatively short span of time, the Centre has found itself stretching the limits of its staff and managerial capacity to keep up with a gathering momentum. It is obvious that it has had to make some difficult choices between fulfilling its professional mission and devoting time to streamlining its internal workings. This is matter of consolidation and regrouping, akin to 'taking a deep breath', before the Centre enters the next round of a promising future.

The extent of success of the Centre as a project of UNEP is summarized in Table 10 following the criteria provided in the terms of reference for the evaluation. In addition to this, it may be useful for the three founding institutions to know how their sustained investments in the Centre across the years have benefitted them.

III.2.1 Benefits to UNEP

Prior to the establishment of the Centre, UNEP's work on the energy-environment interface was mostly dependent on *ad hoc* consultancies. The Centre has been instrumental in developing a steadily growing body of knowledge that should be viewed as an invaluable asset to UNEP. Its growing outreach via its capacity building activities, and the impacts that it has made so far on influencing desirable change at the national and regional levels could not have been possible without a sustained institutionalized effort. UNEP's financial returns from its investment in the core fund of the Centre are extraordinary by the norms applicable to international institutions. For Phases V and VI, UNEP's contribution of a little over US$ 1 million has been multiplied to over US$ 29 million through co-financing from other donors and organizations, much of it routed through UNEP. Equally important have been the institutional returns to UNEP. Most of the Centre's work, irrespective of its source of funds, is accredited to UNEP which has served to place the latter firmly on the global map of energy development work.

III.2.2 Benefits to the Danish Government

The Danish Government has supported the Centre since its inception and its financial support has formed the backbone of the Centre's core funding. Unlike many international institutions, the bulk of whose funding responsibility often falls upon the host country, the Danish contribution of slightly under US$ 6 million for Phases V and VI has been well-utilized by the Centre to mobilize three times as much from other donors, both bilateral and multilateral. This in itself is a creditable achievement.

However, the ultimate emphasis of Danish development co-operation may lie not so much on the financial returns on investment, but more rather on its developmental returns. The conclusion of the evaluation is that these have been considerable. The Centre's work and growing outreach to developing country governments, research institutions and other stakeholders have made it an effective vehicle to carry the environmental and equity objectives of Danish development co-operation into developing country contexts. Judging from the large number of institutions and individuals who have taken active part in the Centre's projects, developing country response to the Centre and, by implication, to Danish assistance, has been very positive. The Centre's strong linkages with developed country institutions and international initiatives have also made it possible for Danish technical assistance to be synchronized with that of other donor countries.

Within the internal context of Denmark, the Centre has been a valuable forum for the exchange of information and ideas with Danish government agencies and research institutions. Other government agencies, such as DANCED, the Danish Environment Protection Agency and the Danish Energy Authority, have utilized the Centre for some of their developing country-related work. Aside from the Risø National Laboratory, the Centre has partnered with national research institutions like the Danish Meteorological Institute, University of Copenhagen and Roskilde University.

III.2.3 Benefits to the Risø National Laboratory

The Risø National Laboratory has provided the physical and administrative infrastructure of the Centre from the outset, and it has expended a considerable amount of its management resources on the Centre's smooth functioning. In turn, the Laboratory has benefitted both directly and indirectly from the Centre's presence. Since nearly half of the work of the Laboratory is on energy, linkages between the Centre and other departments of the Laboratory, in particular the Systems Analysis and Wind Energy Departments, have been of mutual benefit professionally. Partly as a result of the Centre's role in the creation of the Global Network on Energy for Sustainable Development (GNESD), many of whose members are the Centre's partner institutions, the Secretariat of this UNEP international initiative has been located within the Laboratory. At a broader level, hosting the Centre has benefitted the Laboratory by broadening its international outreach and participation in international research on energy-environment issues.

IV. PROBLEMS ENCOUNTERED, RECOMMENDATIONS AND LESSONS LEARNED

IV.1 Problems Encountered

A number of problems/difficulties have been identified in the preceding parts of the report concerning the Centre's work programme development, implementation, monitoring and evaluation, and institutional arrangements. These, along with some additional issues, are summarized here to provide the context for the subsequent recommendations:

IV.1.1 Work programme development

a. The present work programme development process follows two stages:
   - a broad identification of priorities by UNEP consistent with its own policies and priorities against the background of emerging global issues and trends; and
   - within this framework, the identification of specific projects/activities by the Centre's staff in consultation with its partner institutions.

   Missing in this process is some form of organized consultation with developing country governments to ascertain their needs and priorities. Although many of the Centre's partners are national research institutions recommended by their governments, their inputs to the work programme cannot be a substitute for direct government consultations to ascertain policy priorities. This is especially so since its research partners from developing countries rate financial support from the Centre as their topmost benefit. Such a gap exposes the Centre to the potential criticism of being 'donor driven' in its work programme. While this has not occurred yet, the increasing number of donors coming into a work programme lacking in governmental inputs can adversely affect the Centre's credibility in the future if it is perceived as a vehicle to push their priorities and agendas.

b. Largely due to the availability of substantial funds for certain programmes, imbalances have developed among the Centre's programme areas and thematic clusters. The ones most adversely affected by lack of resources are the Environmental and Development Economics, Energy Sector Reform, Energy Efficiency, and Transport programmes, and the Sustainable Development thematic cluster.

IV.1.2 Project/Activity implementation

c. The Centre's staff capacity has remained more or less stagnant since 2001 in spite of the considerable expansion of its work programme. While it has coped with the added work load, any further expansion of its work in the next work programme will require additional staff. Also, the specializations of the staff may need to be diversified as the Centre engages in more varied work.

d. Staff from developing countries currently form a minority of about 35 per cent in the Centre's team. Increasing their proportion will help enhance the Centre's acceptance to developing countries, and facilitate in-house exchange of knowledge and experience.

e. Linkages between the Centre and UNEP's DTIE at the project/activity level need to be better defined to allow for more systematic interaction. At present, there are overlaps as well as missed opportunities for co-operation among them.

f. Much of the work programme funds are routed through UNEP headquarters and delays have occurred in disbursing them to the Centre. While these may not be serious yet, they should be attended to before the size and complexity of the Centre's work programme increase further.

IV.1.3 Monitoring and evaluation

g. Due to the increased volume of activities under Phases V and VI, the MPC's effectiveness in monitoring the Centre's work programme has been eroded, with policy and strategy issues being mixed with administrative matters of a more routine nature. There is a need to separate the two and to streamline reporting procedures to the MPC using key indicators of work programme progress.

h. Although the SAP has the function of assessing the Centre's ongoing and future work programme, it has not been able to perform this very well due to the lack of appropriate reporting procedures and the loose format of its meetings.

IV.1.4 Institutional issues

i. Interaction between the MPC and the SAP has not been very effective due to the inability of the SAP to coalesce into a distinct body with a well-defined work programme oversight responsibility, and the lack of direct contact between the SAP members and the MPC.

j. The matrix overlay structure introduced in 2002 has proven effective so far. Depending on future increases in the work load of the Centre, there may be a need to consider a more formal decentralized project management arrangement, possibly by thematic cluster, to relieve potential pressure on the Head of the Centre.

k. The Centre's partnership arrangements have generally proven adequate, but imbalances in the representation of governments and the private sector should be rectified. Also, there is a need for more NGO representation from Asia, and Latin America and the Caribbean.

IV.2 Recommendations

IV.2.1 Work programme development

i. UNEP, together with the Centre, should initiate a consultative process to ascertain the needs and priorities of developing country governments while determining the Centre's future work programmes. At a minimum, in each country, the ministries in charge of energy, environment and sustainable development/poverty reduction should be included in the process.

ii. In designing its future work programme, the Centre should seek to:
- establish a better balance among its seven programme areas and its three thematic clusters, where necessary through the mobilization of additional financial resources;
- assign priority to a specific, and demonstrable, poverty 'reduction' component in projects under the Sustainable Development theme focusing on reducing *income poverty* through energy interventions;
- pay greater attention to fuel issues (substitution, intermediate fuels, appliance efficiency) in the context of rural users, especially in relation to women's health and time savings;
- examine the energy security question in the context of global energy price uncertainties as a potential rationale to promote environmentally desirable energy actions, such as energy efficiency and renewable energy;

- explore the emerging issue of trade liberalization in energy services under WTO's General Agreement on Trade in Services (GATS) in terms of its potential environmental implications and impacts on access to electricity and fuels; and
- identify alternatives to the Kyoto mechanisms for emissions reduction, as well opportunities for the adaptation of Kyoto mechanisms outside the framework of the Kyoto Protocol.

IV.2.2 Project/Activity implementation

iii. A cost-sharing arrangement with developing country governments and private sector should be introduced gradually into the Centre's projects as a means of promoting country ownership and replicability. This need not be along any rigidly defined proportions but be flexible enough to allow for the diversity in individual country capacities, including the lack of capacity among least developed countries[23].

iv. The Centre's links with industry, including the Danish industry[24], should be strengthened by having more private sector entities among its partner institutions, and disseminating relevant products (e.g., corporate environmental governance tools and techniques) to industry audience in both developing and developed countries.

v. The Centre should be allowed sufficient flexibility to expand and diversify its staff capacity and capabilities consistent with the changing requirements of its future work programmes. In exercising such flexibility, the Centre may consider the following options:
   - project-tied coterminus appointments,
   - staff secondments from developed country institutions and international organizations on a cost-sharing basis,
   - staff exchange programmes with DTIE and other divisions of UNEP, and
   - short-term fellowships (3-12 months) targetted at reputed national/regional institutions from both developed and developing countries.

vi. The specializations of the Centre's staff should be enlarged by engaging in future recruitments individuals with backgrounds in the social and managerial dimensions of energy, such as, sociology, rural development, community participation, gender analysis, financing (including microfinancing), enterprise development and small business management, among others.

vii. The Centre should gradually increase the proportion of developing country professionals in its staff team from the present 35 per cent to, perhaps, 50 per cent. In any case, it should avoid diluting their current proportion in order to preserve and enhance its acceptability to developing countries.

viii. The Centre should make greater use of the intellectual resources of its developing country partner institutions in its research projects and capacity building activities, including under decentralized project management arrangements with regional institutions as a means of minimizing its staff requirements. Such arrangements should, however, be subject to quality assurance and technical backstopping by the Centre's staff.

IV.2.3 Monitoring and evaluation

ix. Meetings of the MPC and the SAP should employ a more structured agenda, and be supported by a more comprehensive set of progress indicators for the Centre's work programme, including in particular the time and cost aspects of individual projects on a uniform comparable format.

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[23] To a certain extent, this is already taking place in the form of in-kind contributions from governments against specific projects/activities. The intent of the recommendation is to strengthen this element over time to ensure 'country ownership'.

[24] The Centre has generally kept itself at a distance from the Danish industry to avoid being viewed as advancing the latter's interests under Danish development co-operation. While this element should be preserved by not promoting specific products or services, there is no reason to not involve the Danish industry in the Centre's projects and partnership arrangements, provided there is no preferential treatment vis-à-vis industry from other countries.

x. The Centre should undergo an external evaluation once every four years and an internal evaluation once every two years coinciding, respectively, with the conclusion and mid-point of a four-year work programme. The internal evaluation can be optional if the SAP is able to perform its work programme oversight function effectively.

xi. The scope of external evaluations should be broadened to accommodate the priorities of other donor agencies supporting the work programme, and the priorities of developing countries.

IV.2.4 Institutional issues

xii. The policy making and strategic guidance role of the MPC should be sharpened by adopting one of the following options:
- transferring much of the responsibility for work programme monitoring by individual project/activity to the SAP; and delegating the responsibility for administrative decisions, such as the approval of travels and travel costs, to the Head of the Systems Analysis Department of the Risø National Laboratory who is a member of the MPC; or
- assigning both responsibilities to an operations sub-committee or working group of the MPC that can function on a more continuing 'as-needed' basis distinct from the body's formal biannual meetings, while reporting to such meetings.

xiii. The SAP's function to assess the relevance, quality and impact of the Centre's ongoing and planned activities should be re-emphasized. Its annual meetings should be organized along a more structured agenda, supported by progress indicators on projects/activities, and allow for greater interaction among the SAP members. In order to facilitate this:
- meetings of the SAP should be extended to a two-day duration;
- they should be chaired by one of its external members appointed by the MPC and he/she should be elected by its members on a simple majority;
- they should be so timed as to be followed immediately by an MPC meeting at which the Chairman of the SAP will present its report and recommendations to the MPC; and
- the number of SAP members should be expanded to 12, with the three additional positions to be reserved for representatives of one developing country government each from Africa, Asia, and Latin America and the Caribbean.

xiv. In order to ensure the continuity of its linkages with governments, the private sector, NGOs, research institutions and other stakeholders, established in the course of its projects and activities, the Centre should explore the feasibility of creating an Associates Group or other similar arrangement. This should be viewed as its 'larger network' beyond the limited number of formal partner institutions it will have, and its main purpose should be to assist the Centre in its country level work in areas of shared interest.

xv. The Centre should improve its visibility and image among its clientele in order to market its products better. The following measures should be considered in this context:
- organization of a biennial conference preceding an annual meeting of the SAP and including SAP members and members of the MPC;
- publication of an annual 'Energy, Climate and Sustainable Development Outlook' report written by the Centre's staff on emerging issues and trends, drawing upon the Centre's work programme outcomes;
- early completion and large-scale distribution of the institutional brochure/folder currently under preparation;
- development of policy briefs (not more than two pages) at the end of each research project and its distribution both online and in hard copies to key decision makers;
- expansion of the scope of the Centre's newsletter, if necessary by reducing the number of issues per year from four to three, to allow a higher degree of intellectually stimulating contributions on key issues from both the Centre's staff and external contributors; and
- enhancement of the Centre's web site to increase its viewing appeal and content.

xvi. The Centre should make a special effort to inform the Danish public, industry and parliamentarians of the outcomes of its work. In particular, its linkages with the Danish media should be strengthened so as to enhance its visibility within the country.

IV.2.5 Other issues

xvii. Currently, there is no provision in the MoU for the Centre's continuity or planned closure over a suitable period of time should one or more signatories to the MoU decide to terminate it by giving the requisite three-month notice. This is a deeper issue for the MPC to reflect upon.

IV.3 Lessons Learned

The main lessons that can be drawn from URC's experience are the following:

- The priorities for energy research have shifted over the years to encompass energy security, environmental, market liberalization and equity concerns. The resultant complexities require researchers to assume a variety of roles over and above the conduct of research itself, including as trainers, project managers, business facilitators and initiators of community endeavour to bring about desirable changes in perceptions, policies, strategies and actions on the ground.
- Such a multifaceted role is beyond the in-house capacity of any single research institution, however capable its staff and however well-endowed its resource base. Effective partnerships and networking linkages established and nurtured by an institution are a key criterion for success.
- Partnerships and networks nonetheless require the nucleus of an intellectual leadership and an institutional effort as their driving force. Along with this, substantial financial resources are needed to mobilize their enormous potential which are best managed by a committed organization that is technology neutral, free of commercial motivation, and able to bridge perceptional gaps between the developed and developing countries by virtue of its acceptability to both.
- Capacity building as an integral component of research projects can make the difference between the real life utilization of research outcomes and their incarceration among a peer group of fellow researchers. The prospects of research finding its way into real life decisions are greatly enhanced by an outreach programme employing the range of informational tools and technology.

Annex 1
Terms of Reference

TERMS OF REFERENCE FOR EVALUATION OF THE UNEP Risø Centre On Energy, Climate and Sustainable Development

1. Background

The UNEP Risø Centre (URC) on Energy, Climate and Sustainable Development (formerly called the UNEP Collaborating Centre on Energy and Environment) was established in October 1990 based on a tripartite agreement between UNEP, the Danish Ministry of Foreign Affairs, and the Risø National Laboratory, Denmark.

Since it was created URC has operated as a series of UNEP 'projects' (phases) that have provided both the core funding and the organizational legitimacy for the Centre within UNEP. The inception phase project (UNEP project FP/2103-90-01) covered the period from the start of the Centre to September 1992 and the second phase UNEP project (FP/CP/2103-92-01) commenced in October 1992 and was completed at the end of 1994. As part of the second phase an international evaluation was undertaken. Based on the positive outcome of this evaluation and a set of recommendations for strengthening the Centre, a new Memorandum of Understanding (MoU) was signed between the Danish Ministry of Foreign Affairs (Danida), the Risø National Laboratory (RNL) and UNEP on 2 December 1994. Two year projects governing the third and fourth phases followed, and another evaluation of the URC was conducted in 2001 (report of July 2001). As a result of this evaluation, the governing Memorandum of Understanding was updated in April 2002.

The MoU provides general guidelines concerning the management and activities of the Centre, and continues the established tripartite Management and Policy Committee (MPC) that oversees the Centre. The MPC meets semi-annually to discuss implementation of the Centre work programme, future activities, sub-contracted projects etc.. One of the recommendations of the 1994 evaluation was that a Scientific Advisory Panel (SAP) for the Centre be formed, a recommendation that was implemented in 1995. The SAP meets annually with the main objective of discussing and recommending strategic priorities for the Centre work programme.

The Centre Project is seen as a flexible framework for the core activities at the Centre and provides the basis for support to the UNEP energy programme on specific priority activities. In addition it provides the foundation for the large number of other projects implemented by the Centre either for UNEP or other institutions.

For Phase VI the total budget for the four year period is : UNEP 765,000 USD, Danida 4,251,000USD and Risø (in kind) 1,197,500 USD. In addition the Centre annually implements other projects with a turnover of approx. 6 to 8 million USD.

Long-term results of the project include:

- reduced pollution from energy activities (while allowing developing countries to meet growing needs for energy services)
- enhancement of national institutional capacities to develop policy, undertake planning and research on integrated energy, environment and development problems.

Short-term results are:

- increased integration of environmental concerns in energy policies and strategies in collaborating countries
- establishment of a network of regional partner institutions with UNEP
- capacity enhancement in regional and national partner institutions

- establishment and dissemination of environmental data, planning methods and practical planning and policy analysis tools
- identification and implementation of specific projects for UNEP in the area of energy, environment and development
- support a successful UNEP contribution to World Summit on Sustainable Development (WSSD) 2002
- internationally recognised methodology development and analytical approaches related to the Kyoto Mechanisms provided as input to the climate change negotiation process through Conference of Parties (COP) to the UN Framework Convention on Climate Change (UNCCC) and the Climate Change secretariat.

2. Legislative Mandate

The mandate for the objects and activities of the projects flow from Governing Council decisions and related UN resolutions. UNEP GC 22/7 (promotion of sustainable production and consumption patterns) provides the most recent mandate. Other relevant guidance comes from:

- WSSD Plan of Implementation, primarily paragraphs 19, 133, 137, and 138(b).
- UNEP GC 21/9 (The Climate Agenda and the World Climate Impact Assessment and Response Strategies Programme)
- UNEP GC 20/6 (Policy and Advisory Services Related to Institution Building)
- UNEP GC 20/29 (policy and advisory services in the key area of economics, trade, and financial services)

The project is an integral part of the DTIE work programme in the sub-program area of Energy. In addition there is cooperation with all other Divisions in the area of climate change which is a cross cutting issue in UNEP. Similarly there are informal working relations with relevant programmes on economic and sustainable development issues.

3. Scope of the Evaluation

The scope of this evaluation is to assess the overall performance of the Centre during the period 1999 to 2003; that is the four year period since the last evaluation. The core Centre activities in this period have been supported through two UNEP projects – Centre Phase V (2000-2001) and Centre Phase VI (2002-present). As encouraged in the MoU the Centre has significantly expanded its work programme and funding base through additional projects; the evaluation shall therefore cover the full Centre work programme. It is important to emphasize the framework nature of the Centre projects and flexibility that is built in so that activities can be developed to address priority areas as they emerge.

The evaluation will form part of the basis for the design of the Phase VII project covering 2006 – 2009, and will guide activity priorities and possible improvements in project implementation and administration.

4. Objective of the Evaluation

This in-depth evaluation will determine the relevance, efficiency, effectiveness and impact of the UNEP Risø Centre by examining implementation of planned project activities, outputs, and outcomes against actual results. Specifically the evaluator shall:

- Determine the relevance of assumptions made in developing the project, particularly those related to: international energy markets, technological changes, institutional developments at national, and regional levels; whether changes on the foregoing assumptions, if any, call for review of the mission, approach or strategy of the UNEP Risø Centre.

- Determine the appropriateness of the Centre work programme and activities in relation broadly to emerging energy, environment and development issues and specifically to the priorities and plans of UNEP, particularly concerning the organisation's sub-programme on Energy.

- Assess the effectiveness and flexibility of the institutional arrangements (organisation, staffing, support structure, and relationship with the three founding institutions, including the functioning and role of the Management and Policy Committee and Scientific Advisory Panel in achieving the established objectives of the Centre (as stated in the MoU).

- Determine the cost-effectiveness of the project, i.e. whether the project achieved its goals and objectives within planned and/or reasonable time and budget.

- Evaluate the quality, relevance and immediate impact of the activities undertaken both in relation to the direct target groups and the relevant UNEP programmes by analyzing outputs such as:
  - Published books, technical reports, methodological guidelines, planning tools and environment data in a database format, national plans and strategies.
  - National and regional studies, including workshops and seminars at both national and regional level, through desk reviews and comparison with similar studies conducted under other programmes.
  - Appropriateness of the institutional arrangements in terms of both overall project implementation and organisation of the studies at the national level, including level of stakeholder participation in the design and implementation of projects and other activities.
  - The appropriateness of technical assistance and support provided to the collaborating national and regional teams and institutions.
  - The contribution the Centre activities have made to building or enhancing capacity at the national and regional levels to undertake energy environment and climate change mitigation analysis.

- Assess the extent to which the project has forged effective partnership and linkages with governments, the private sector, UN bodies and NGOs and other stakeholders in order to enhance the appropriateness and sustainability of its activities and outputs.

- Assess the degree to which the URC has contributed to institutional sustainability in collaborating with national and regional teams and institutions through the development and implementation of joint efforts.

- Assess the financial feasibility of the core project in terms of leveraging funding from other donors including through UNEP.

- Review the monitoring and evaluation systems developed to implement internal and external activities and determine the effectiveness of the system in ensuring quality backstopping, quality assurance and control of deliverables.

- Assess the appropriateness and effectiveness of publication and information channels used in communicating the URC results to a larger target group.

- Make recommendations for the future Centre activities and structure taking into consideration UNEP's role and mandate in relation to energy and environment, including climate change mitigation and adaptation and economics.

- In the context of the catalytic function of UNEP, identify and determine the impact of the project in terms of influencing governments including country ownership, co-operating agencies,

international and regional development banks and other partners to adopt and enhance their capacities to implement appropriate policies and strategies in the area of developing and implementing sustainable energy.

- Identify problems encountered in the process of sub-programme/project development, implementation and monitoring and evaluation; and present practical recommendations for the improvement of programme delivery in the future.

5. Methodology

The evaluation will be conducted by using a participatory approach whereby the task manager and other relevant staff is kept informed and regularly consulted throughout the evaluation. The following are the main approaches for collecting and analyzing data:

e. Desk review of the project documents, outputs, monitoring reports, previous evaluations and relevant correspondence.

f. Review of specific products, including publications in international journals, peer reviewed books, research results, web-pages.

g. Interviews with project management in Copenhagen and Paris including MPC members and other relevant staff of all founding organisations. Members of the SAP and representatives from collaborating and sponsoring institutions shall be consulted as appropriate through email or phone.

The success of project implementation will be rated on a scale of 1 to 5 with 1 being the highest rating and 5 being the lowest and covering the following aspects:

- Attainment of objectives and planned results
- Achievement of outputs and activities
- Cost-effectiveness
- Impact
- Sustainability
- Stakeholder participation
- Country ownership
- Implementation approach
- Financial planning
- Replicability
- Monitoring and evaluation

Each of the items should be rated separately and then an overall rating given. The following rating system is to be applied:

1 = Excellent (90% - 100% achievement)
2 = Very Good (75% - 89%)
3 = Good (60% - 74%)
4= Satisfactory (50% - 59%)
5 = Unsatisfactory (49% and below)

6. Report Structure

The evaluation report shall be a detailed report, written in English, of no more than 25 pages and include:

i) Executive summary (no more than 3 pages)

ii) Introduction/Background
iii) Scope, objective and methodology
iv) Findings and conclusion
v) Recommendations (realistic recommendations for changes and improvements in the scope, organisation or quality of the Centre workprogramme and outputs)and lessons learned

All annexes should be typed (annexes are not included in the 25 page requirement).

The final report shall be written in English and submitted in electronic form in MS word Format by 30 December 2004 and should be addressed as follows:

Mr. Segbedzi Norgbey, Chief, Evaluation and Oversight Unit
UNEP, P.O. Box 30552
Nairobi, Kenya
Tel.: (254) 623387
Email segbedzi.norgbey@unep.org

With copies to

Ms. Monique Barbut, Director
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Paris, France
Tel: 33 1 44 37 14 50
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Mr. Mark Radka
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DTIE
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Mr. John Christensen
Head of Centre
UNEP Risoe Centre on Energy, Climate and Sustainable Development (URC)
Tel: + 45 46 77 51 30
Fax: + 45 46 32 19 99
Email: john.christensen@risoe.dk

7. Timing and Resources

The evaluation shall be conducted during the period of October 21st to December 30th, 2004: the consultant will submit a first draft to EOU on December 6, 2004. A draft version will be forwarded to the Director of DTIE, the Head of UNEP Risoe Centre on Energy and the Senior Programme Officer, Energy and OzonAction Unit for comment. Comments on the draft report will be sent to the consultant after a maximum of 2 weeks.

The evaluator will be contracted for a total of 1 month spread over 10 weeks and will be provided with a roundtrip ticket to Paris and Copenhagen plus DSA according on UN rules. Comments to the final draft report will be sent to the consultant after a maximum of 2 weeks. After incorporating the comments, the consultant will submit the final report by December 30th, 2004.

The evaluator will receive an initial payment of 30% of the total amount due upon signature of the contract. An intermediate payment of 30% of the total amount will be made upon assessment of satisfactory progress. Final payment will be made upon satisfactory completion of work. The fee is payable under the individual SSAs of the evaluator and is not inclusive of expenses such as travel, accommodation and incidental expenses.

8. Qualifications of evaluator

The evaluation shall be undertaken by an independent evaluator contracted by EOU, and not associated with the implementation of the project. The evaluator should have the following qualifications: (i) have an advanced university degree in relevant disciplines and should have demonstrated expertise in the area of energy with special reference to environmental issues, (ii) The candidate should have at least 10 years of experience in the above-mentioned field or in related fields. Previous experience in the evaluation of UN programmes will be an advantage.

In case, the evaluator can not provide the products in accordance with the TORs, the timeframe agreed, or his products are substandard, the payment to the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

September 29th, 2004

Annex 2
URC Professional Staff as of December 2004

1.	John M. Christensen	Head of Centre
2.	Stine Skipper	Administrator
3.	Maria Andreasen	Secretary
4.	Mac Callaway	Senior Economist
5.	Joergen Fenhann	Senior Scientist
6.	Amit Garg	Senior Scientist
7.	Kirsten Halsnaes	Senior Research Specialist
8.	Nicoline Haslev-Hansen	Research Assistant, Economist
9.	Molly Hellmuth	Scientist
10.	Miriam Hinostroza	Researcher
11.	Sami Kamel	Energy Economist
12.	Jesper J. Kühl	Economist, Ph.D. student (left on 1 Dec. 2004)
13.	Myung-Kyoon Lee	Senior Economist
14.	Gordon A. Mackenzie	Senior Energy Planner
15.	Anne Olhoff	Researcher
16.	Karen Olsen	Ph.D. student
17.	Romeo Pacudan	Senior Economist
18.	Jyoti P. Painuly	Senior Energy Planner
19.	Stéphanie Robert	Ph.D. student
20.	Jorge Rogat	Senior Economist
21.	Wilson S. K. Wasike	Senior Economist
22.	Juan Zak	Senior Energy Scientist

Annex 3
Documents Perused

1. 'Minutes of the 6th Meeting', Scientific Advisory Panel, UCCEE, 8 December 2000, Risø.
2. 'SAP Members 2001' UCCEE, Risø.
3. 'Evaluation Report of the United Nations Environment Programme Collaborating Centre on Energy and Environment (UCCEE): Phases III and IV', Emilio Lèbre la Rovere, July 2001, Nairobi.
4. 'Minutes of the 7th Meeting', Scientific Advisory Panel, UCCEE, 13 December 2001, Risø.
5. 'SAP Members 2002', UCCEE, Risø.
6. 'Minutes of the 27th Meeting of the Management and Policy Committee, 19 June 2002, UCCEE, Copenhagen.
7. Documentation for 27th Meeting of the Management and Policy Committee, 19 June 2002, UCCEE, Copenhagen.
8. 'UNEP Collaborating Centre on Energy and Environment (UCCEE): Project Summary for Phase VI', August 2002, UNEP, Nairobi.
9. 'Minutes of the 28th Meeting of the Management and Policy Committee, 15 November 2002, UCCEE, Risø.
10. Documentation for 28th Meeting of the Management and Policy Committee, 15 November 2002, UCCEE, Risø.
11. Documentation for 8th Meeting of Scientific Advisory Panel, UCCEE, 16 December 2002, Risø.
12. 'Quarterly Project Expenditure Accounts for UCCEE: 2002', Risø National Laboratory, Risø.
13. 'Implementation of Evaluation Recommendations', 23 January 2003, UCCEE, Risø.
14. *Energy + Sustainable Development*, Newsletter of URC and UNEP, various issues, 2003-2004, URC-UNEP, Risø.
15. 'Minutes of the 29th Meeting of the Management and Policy Committee, 17 June 2003, UCCEE, Copenhagen.
16. Documentation for 29th Meeting of the Management and Policy Committee, 17 June 2003, UCCEE, Copenhagen.
17. 'Minutes of the 30th Meeting of the Management and Policy Committee, 30 October 2003, 'UNEP URC, Risø.
18. Documentation for 30th Meeting of the Management and Policy Committee, 30 October 2003, URC, Risø.
19. 'Minutes of the 9th Meeting', Scientific Advisory Panel, UCCEE, 3 December 2003, Risø.
20. Documentation for 9th Meeting of Scientific Advisory Panel, UCCEE, 3 December 2003, Risø.
21. 'Quarterly Project Expenditure Accounts for UCCEE: 2003', Risø National Laboratory, Risø.
22. *Systems Analysis Department: Annual Report 2003*, April 2004, Risø National Laboratory, Risø.
23. 'Lake Baringo Community-Based Land and Water Management Project: Evaluation Report on Project GF/3010-00-03', Asenath Omwega and Segbedzi Norgbey, March 2004, UNEP, Nairobi.
24. *Risø Annual Report 2003*, April 2004, Risø National Laboratory, Risø.
25. Risø Centre: Status of Ongoing Projects end April 2004', URC, Risø.
26. 'Minutes of the 31st Meeting of the Management and Policy Committee, 3 May 2004, URC, Paris.
27. Documentation for 31st Meeting of the Management and Policy Committee, 3 May 2004, URC, Paris.
28. 'UNEP's Energy Policy and Programme', revised version of a document presented at the UNEP Senior Management Retreat, 12 May 2004.
29. 'Quarterly Project Expenditure Accounts for UCCEE: 2004', Risø National Laboratory, Risø.

Annex 4
Individuals Interviewed

1. Agbemabiese, Lawrence, Energy Programme Officer, Energy & OzonAction Branch, Division of Technology, Industry and Economics, UNEP, Paris.
2. Barbut, Monique, Director, Division of Technology, Industry and Economics, UNEP, Paris.
3. Christensen, John M., Head of Centre, URC, Risø.
4. Frederiksen, Dan E., Head of Department, Department for Environment and Sustainable Development, Royal Danish Ministry of Foreign Affairs, Copenhagen.
5. Hai, Amr M. Abdel, Technical Coordinator, Cleaner Production-Energy Efficiency Project, Division of Technology, Industry and Economics, UNEP, Paris.
6. Halsnæs, Kirsten, Sustainable Development Coordinator/Senior Research Specialist, URC, Risø.
7. Hellmuth, Molly, Scientist, URC, Risø.
8. Jespersen, Lisbeth, Head of Section, Department for Environment and Sustainable Development, Royal Danish Ministry of Foreign Affairs, Copenhagen.
9. Kamel, Sami, Energy Economist, URC, Risø.
10. Larsen, Hans, Head of Department, Systems Analysis Department, Risø National Laboratory, Risø.
11. Lee, Myung-Kyoon, Climate Coordinator/Senior Economist, URC, Risø.
12. Mackenzie, Gordon A., Energy Coordinator/Senior Energy Planner, URC, Risø.
13. Neergaard, Frode, Chief Adviser, Department for Environment and Sustainable Development, Royal Danish Ministry of Foreign Affairs, Copenhagen.
14. Olhoff, Anne, Economist, URC, Risø.
15. Pacudan, Romeo, Senior Economist, URC, Risø.
16. Painuly, Jyoti Prasad, Senior Energy Planner, URC, Risø.
17. Palgova, Natalia, Project Manager, Energy & OzonAction Branch, Division of Technology, Industry and Economics, UNEP, Paris.
18. Radka, Mark, Energy Programme Coordinator, Energy & OzonAction Branch, Division of Technology, Industry and Economics, UNEP, Paris.
19. Skipper, Stine, Project Administrator, URC, Risø.
20. Touhami, Myriem, Programme Officer, Energy & OzonAction Branch, Division of Technology, Industry and Economics, UNEP, Paris.
21. Usher, Eric, Energy Programme Officer, Energy & OzonAction Unit, Division of Technology, Industry and Economics, UNEP, Paris.

Annex 5
Projects by Donor Contribution: 2000-2004*

URC Project No.	Name of Project	Project Budget USD	Risø budget (staff, travel, meetings etc.)	Sub-contracts	Donor	Status	Region
1215124	Information on the Commercialization of Renewables in ASEAN - ICRA	57,000	57,000	0	ACE	Ongoing	Asia
1215122	Climate Policy Frameworks beyond 2012	100,000	45,000	55,000	Nordic Council of Ministers	Ongoing	Global
1215121	ASEAN Regional Network to Facilitate Sustainable Energy Investment through Clean Development Mechanism	13,500	13,500	0	ACE	Ongoing	Asia
1215118	Stipulating EU-Indochina New and Renewable Energy Projects through Private Sector participation in Economic Cooperation and Foreign Direct Investment initiatives.	12,500	12,500	0	ACE	Completed	Asia
1215115	Network for Environmentally Sustainable Transport in Latin America and the Caribbean	38,000	38,000	0	GEF through UNEP	Completed	Latin America
1215114	Packaging and Promotion of Community Climate Change	24,000	24,000	0	EC	Completed	Asia
1214113	National Adaptation Programme of Action	85,000	40,000	45,000	UNEP	Completed	Africa
1215112	Financing for Renewable Energy in the Mediterranean Region	365,000	165,000	200,000	Italiens through UNEP	Ongoing	North Africa
1215110	Establishing a Consumer Financing Programme for Solar Photovoltaic Systems in Southern India	1,291,000	301,000	990,000	UNF & Shell Foundation through UNEP	Ongoing	Asia
1215108	Bridging the Gap between national Development Policies and Dealing with Climate Change	254,000	17,500	236,500	UNF & VROM	Completed	Global
1215107	Electrification Planning in Burkina Faso	63,000	63,000	0	Danish Energy Authority	Ongoing	Africa
1215106	GHG Estimates 2012	35,000	35,000	0	Danish EPA	Completed	Global
1215105	National Energy Plan - Ghana	11,500	11,500	0	Danita	Completed	Africa
1215104	Prototype Carbon fund and the Ministry of Environment and Natural Resources, El Salvador	49,200	34,200	15,000	World Bank	Completed	Latin America
1215103	Capacity Development for Clean Development Mechanism	8,785,000	2,255,000	6,530,000	Dutch MFA through UNEP	Ongoing	Global
1215102	Developing Financial Intermediation Mechanism for Energy Efficiency Projects in Brazil, China and India - Phase I	699,000	249,000	450,000	UNF through UNEP	Ongoing	Global
1215101	UNEP Collaborating Centre on Energy and Environment, Risø National laboratory - Phase VI	6,213,500	5,793,500	420,000	DANIDA, UNEP & Risø	Ongoing	Global
1215099	Climate Change Action Programme - Tanzania	42,000	42,000	0	GTZ	Completed	Africa
1215096	Study on the legal policy-framework needed for linking project based mechanisms to a community-wide emissions trading regime	10,700	10,700	0	EC	Completed	Global
1215095	Planning and strategies for the implementation of CDM of the Kyoto protocol in Latin America	38,000	38,000	0	EC	Completed	Latin America
1215093	UNF Workshops	110,000	110,000	0	UNF through UNEP	Completed	Global
1215092	EU Climate Change Impacts (PRUDENCE)	176,000	160,000	16,000	EC	Completed	Global

1215091	Establishing a Consumer Financing Programme for Solar Photovoltaic Systems in Southern India	82,000	42,000	40,000	UNF through UNEP	Completed	Asia
1215090	Brazil Rural Energy Enterprise Development	1,892,000	150,000	1,742,000	UNF through UNEP	Ongoing	Latin America
1215089	Developing Financial Intermediation Mechanism for Energy Efficiency Projects in Brazil, China and India - Phase I	95,000	15,000	80,000	UNF through UNEP	Completed	Global
1215088	Concerted Actions/Thematic Networks: Description of activities	12,000	12,000	0	EC	Completed	Global
1215082	Baseline workshop	110,000	110,000	0	DANIDA	Completed	Global
1215081	Capacity Development in Government and related Agencies - Malaysia	225,000	225,000	0	DANCED	Completed	Asia
1215080	DANIDA Workshops	35,000	5,000	30,000	DANIDA	Completed	Asia
1215079	EU CDMED	7,000	7,000	0	Risø	Completed	North Africa
1215078	EU-South Africa	74,000	74,000	0		Completed	Africa
1215076	Sustainable Energy Advisory Facility	310,000	183,000	127,000	DANIDA through UNEP	Completed	Global
1215075	Capacity Building on Technological and Economic Integration of Wind Energy and other relevant Renewable Energy technologies into the Electricity System of Pacific Islands Countries.	278,000	108,000	170,000	DANIDA through UNEP	Ongoing	Pacific
1215074	African Rural Energy Enterprise Development	3,059,047	340,000	2,719,047	UNF through UNEP	Ongoing	Africa
1215072	UNEP Collaborating Centre on Energy and Environment, Risø National laboratory - Phase V	2,430,000	2,230,000	200,000	DANIDA, UNEP & Risø	Ongoing	Global
1215067	Investment Advisory Facility - Redirecting commercial Investment Decisions to Cleaner Technologies.	605,000	205,000	400,000	GEF through UNEP	Completed	Global
1215063	Sustainable Development and Climate Change Finance.	385,000	310,000	75,000	DANIDA through UNEP	Completed	Africa
1215061	Ghana II	57,000	57,000	0		Completed	Africa
1215060	Management tools for the international climate policy - costs, technologies and implementation	274,000	264,000	10,000	Danish Energy Authority	Completed	Africa
1215057	National Communication Support Programme	522,000	299,000	223,000	UNDP	Completed	Global
1215054	Joint Implementation of Climate Change projects	300,000	125,000	175,000	DANIDA through UNEP	Completed	Africa
		29,224,947	**14,276,400**	**14,948,547**			

*Some projects were under implementation before 2000. Hence, the figures do not reflect the URC budget for the period 2000-2004.

Annex 6
Major Partner Institutions of URC

Africa

Gambia
1. Department of State for Water Affairs

Ghana
2. Kumasi Institute of Technology and Environment (KITE)

Kenya
3. African Energy Policy Research Network (AFREPREN)
4. United Nations Environment Programme

Mali
5. Mali Folkecenter

Sénégal
6. Environnement et Developpement du Tiers Monde (ENDA)

South Africa
7. Energy Research Institute (ERC), University of Cape Town

Tunisia
8. APEX

Zambia
9. Centre For Energy, Environment and Engineering Zambia Ltd. (CEEEZ)
Box E 721 Lusaka

Asia

Bangladesh
10. Bangladesh Centre for Advanced Studies (BCAS)

China
11. Energy Research Institute

India
12. Indian Institute of Management Ahmedabad (IIMA IIM/IIT)
13. Indira Gandhi Institute of Development Research, India
14. The Energy and Resources Institute (TERI)

Japan
15. Institute of Global Environmental Strategies (IGES)

Korea (RoK)
16. Korea Environment Institute (KEI)

Malaysia
17. Pusat Tenaga Malaysia (National Energy Centre)

Thailand
18. Asian Institute of Technology (AIT), School of Environment, Resources and Development

Latin America and Caribbean

Argentina
19. Instituto de Economía Energética (IDEE) / Fundación Bariloche, Argentina

Brazil
20. Fundacao COPPETEC, Centro de Technologia, University of Rio de Janeiro
21. Instituto Eco Engenho
22. Instituto de Desenvolvimento Sustentável e Energias Renováveis) IDER

Chile
23. Economic Commission for Latin America and the Caribbean (ECLAC)

Peru
24. Consejo Nacional del Ambiente (CONAM)

Europe and North America

Denmark
25. Institute of Economics, University of Copenhagen
26. International Development Studies, Roskilde Universitets Center
27. Danish Meteorological Institute

France
28. International Energy Agency (IEA)
29. Société de mathématiques appliquées et de sciences humaines, Centre International de Recherche sur l'Environnement et le Développement, CIRED
30. United Nations Environment Programme, Department of Technology, Industry and Economics

Germany
31. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH

Netherlands
32. Directoraat-Generaal Internationale Samenwerking
33. Energieonderzoek Centrum Nederland (ECN)
34. Netherlands Institute of Public Health and the Environment (RIVM), Wageningen University

Norway
35. Center for International Climate and Environmental Research - Oslo (CICERO)

United Kingdom
36. International Institute for Environment and Development (IIED)
37. University of Bath

USA
38. United Nations Development Programme (UNDP)
39. United Nations Foundation
40. The World Bank
41. E+Co
42. Stanford University
43. Lawrence Berkeley National Laboratory

Bird, G., "An emerging market for the environment": A Guide to Emissions Trading, PDF file (United Nations, 2002) EarthPrint

Brooke, C., "Climate change, vulnerability and conservation in Costa Rica: An investigation of impacts, adaptive environmental management and national adaptation networks". (Risø National Laboratory, UNEP Collaborating Centre on Energy and Environment; Oxford University, School of Geography and the Environment, 2002) 253p (Ph.D. thesis)

Callaway, J.M., "Assessing the costs and market impacts of carbon sequestration, climate change, and acid rain". (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2000) vp. (ph.d. thesis)

Callaway, J.M., "Adaptation benefits and costs - measurement and policy issues" (PDF file). Report prepared for an OECD Workshop on the Benefits of Climate Policy: Improving Information for Policy Makers, held 12-13 December 2002. (2003) 44 p.

Callaway, J.M., *Adaptation benefits and costs: Are they important in the global policy picture and how can we estimate them?*. Global Environ. Change - Human Policy Dimens. (2004) 14 , 273-282

Callaway, J.M., *The benefits and costs of adapting to climate variability and climate change. In: The benefits of climate change policies*. (OECD, Washington, 2004) p. 123-169

Callaway, J.M.; Hurd, B.H.; Smith, J.; Kirshen, P., *Climatic change and US water resources: From modeled watershed impacts to national estimates*. J. Am. Water Resour. Assoc. (2004) 40 , 129-148

Callaway, J.M.; Hellmuth, M.E.; Nkomo, J.C.; Sparks, D.A.; Louw, D.B., *Estimating and comparing the benefits and costs of avoiding climate change damages*. AIACC Notes (2003) 2 (no.2) , 3-4

Callaway, J.M., "Adaptation benefits and costs - measurement and policy issues". Report prepared for an OECD Workshop on the Benefits of Climate Policy: Improving Information for Policy Makers, held 12-13 December 2002.. (2003) 44 p.

Callaway, J.M.; Hurd, B.; Smith, J.B.; Kirshen, P., *Economic effects of climate change on US water resources*. In: Water resources and climate change. Frederick, K. (ed.), (Edward Elgar Publishing, London, 2002) (Management of Water Resources Series, 2) Chapter 17

Christensen, J.M.; Banuri, T.; Barker, T.; Bashmakov, I.; Blok, K.; Davidson, O.; Grubb, M.; Halsnæs, K.; Jepma, C.; Jochem, E.; Kauppi, P.; Krankina, O.; Krupnick, A.; Kuijpers, L.; Kverndokk, S.; Markandya, A.; Metz, B.; Moomaw, W.; Moreira, J.R.; Morita, T.; Pan, J.; Price, L.; Richels, R.; Robinson, J.; Sathaye, J.; Swart, R.; Tanaka, K.; Taniguchi, T.; Toth, F.; Taylor, T.; Weyant, J., *Technical summary.* In: Climate change 2001: Synthesis report. Contribution of Working Group I, II and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Watson, R.T. (ed.), (Cambridge University Press, Cambridge, 2001) p. 305-354

Christensen, J.M.; Toth, F.L.; Mwandosya, M.; Carraro, C.; Edmonds, J.; Flannery, B.; Gay-Garcia, C.; Lee, H.; Meyer-Abich, K.M.; Nikitina, E.; Rahman, A.; Richels, R.; Ruqiu, Y.; Villavicencio, A.; Wake, Y.; Weyant, J., *Decision-making frameworks*. In: Climate change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Metz, B.; Davidson, O.; Swart, R.; Pan, J. (eds.), (Cambridge University Press, Cambridge, 2001) p. 601-688

Christensen, J.M.; Banuri, T.; Barker, T.; Bashmakov, I.; Blok, K.; Davidson, O.; Grubb, M.; Halsnæs, K.; Jepma, C.; Jochem, E.; Kauppi, P.; Krankina, O.; Krupnick, A.; Kuijpers, L.; Kverndokk, S.; Markandya, A.; Metz, B.; Moomaw, W.; Moreira, J.R.; Morita, T.; Pan, J.; Price, L.; Richels, R.; Robinson, J.; Sathaye, J.; Swart, R.; Tanaka, K.; Taniguchi, T.; Toth, F.; Taylor, T.; Weyant, J., *Technical summary*. In: Climate change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Metz, B.; Davidson, O.; Swart, R.; Pan, J. (eds.), (Cambridge University Press, Cambridge, 2001) p. 15-71

Christensen, J.M., *Power sector reform in Ghana. Informal background paper*. (2000) 5 p.

Christensen, J.M., *International environmental policy issues in relation to energy services provision*. Informal background paper. (2000) 6 p.

Christensen, J.M., *Capacity development, education and training. Integrated and sustained action is the key*. International conference for renewable energies, Bonn (DE), 1-4 Jun 2004. (Secretariat of the International Conference for Renewable Energies, Bonn, 2004) (Thematic Background Paper, 8) 18 p.

Christensen, J.M.; Dannemand Andersen, P, Kossmann, J.; Koukios, E., *Emerging and future bioenergy technologies*. In: Larsen, H.; Kossmann, J.; Sønderberg Petersen, L. (eds.), Risø National Laboratory (DK). Systems Analysis Department; Risø National Laboratory (DK). Plant Research Department. Risø energy report 2. New and emerging bioenergy technologies. Risø-R-1430(EN) (2003) p. 18-22

Christensen, J.M.; Best, G., *Role of biomass in global energy supply*. In: Larsen, H.; Kossmann, J.; Sønderberg Petersen, L. (eds.), Risø National Laboratory (DK). Systems Analysis Department; Risø National Laboratory (DK). Plant Research Department. Risø energy report 2. New and emerging bioenergy technologies. Risø-R-1430(EN) (2003) p. 8-12

Christensen, J.M.; Halsnæs, K., *Development and climate change - exploring the linkages between integrated policy options* (invited paper) (paper available on request). In: Abstracts. World climate change conference (WCCC 2003), Moscow (RU), 29 Sep - 3 Oct 2003. (Institute of Global Climate and Ecology, Moscow, 2003) p. 114-115

Christensen, J.M.; Halsnæs, K. *Future energy perspectives*. In: Larsen, H.; Sønderberg Petersen, L. (eds.), Risø National Laboratory (DK). Systems Analysis Department. Risø energy report 1. New and emerging technologies - options for the future. Risø-R-1351(EN) (2002) p. 6-10

Christensen, J.M.; Banuri, T.; Barker, T.; Bashmakov, I.; Blok, K.; Davidson, O.; Grubb, M.; Halsnæs, K.; Jepma, C.; Jochem, E.; Kauppi, P.; Krankina, O.; Krupnick, A.; Kuijpers, L.; Kverndokk, S.; Markandya, A.; Metz, B.; Moomaw, W.; Moreira, J.R.; Morita, T.; Pan, J.; Price, L.; Richels, R.; Robinson, J.; Sathaye, J.; Swart, R.; Tanaka, K.; Taniguchi, T.; Toth, F.; Taylor, T.; Weyant, J., *Technical summary*. In: Climate change 2001: Synthesis report. Contribution of Working Group I, II and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Watson, R.T. (ed.), (Cambridge University Press, Cambridge, 2001) p. 305-354

Fenhann, J., *The Marrakesh Accord - the promt start of the Clean Development Mechanish (CDM) for small scale projects in developing countries*. In: Proceedings. Internal workshop, Copenhagen (DK), Dec 2001. (University of Copenhagen; Institute of Geography, Copenhagen, 2002) (SEREIN Working Paper, 41) p. 1-7

Fenhann, J., "Denmark's greenhouse gas projections until 2012". (Energistyrelsen, København, 2001) 64 p.

Fenhann, J., Morthorst, P.E.; *Regulation perspectives for Danish greenhouse gas emissions. In: Climate change research*. Danish contributions. Jørgensen, A.M.K.; Fenger, J.; Halsnæs, K. (eds.), (Danish Meteorological Institute/Gads Forlag, Copenhagen, 2001) p. 377-399

Fenhann, J., *Global emissions of greenhouse gases and aerosols. In: Climate change research. Danish contributions*. Jørgensen, A.M.K.; Fenger, J.; Halsnæs, K. (eds.), (Danish Meteorological Institute/Gads Forlag, Copenhagen, 2001) p. 119-134

Fenhann, J., Olesen, J.E.; Jørgensen, U.; Hvelplund, T.; Dalgaard, T.; Andersen, J.M.; Schou, J.S.; Jacobsen, B.H.; Graversen, J.; "Kvantificering af tre tiltag til reduktion af landbrugets emission af drivhusgasser". (Danmarks JordbrugsForskning, Forskningscenter Foulum, Tjele, 2001) (DJF rapport Markbrug, 48) 81 p.

Fenhann, J.; Olesen, J.E.; Petersen, S.O.; Andersen, J.M.; Jacobsen, B.H., "Emission af drivhusgasser fra dansk landbrug". (Danmarks JordbrugsForskning, Forskningscenter Foulum, Tjele, 2001) (DJF rapport Markbrug, 47) 45 p.

Fenhann, J., *Industrial non-energy, non-CO_2 greenhouse gas emissions*. Technol. Forecast. Soc. Change (2000) 63 , 313-334

Fenhann, J.; Nakicenovic, N.; Alcamo, J.; Davis, G.; Vries, B. de; Gaffin, S.; Gregory, K.; Grübler, A.; Tae Yong Jung; Kram, T.; Rovere, E.L. La; Michaelis, L.; Mori, S.; Morita, T.; Pepper, W.; Pitcher, H.; Price, L.; Riahi, K.; Roehrl, A.; Rogner, H.-H.; Sankovski, A.; Schlesinger, M.; Shukla, P.; Smith, S.; Swart, R.; Rooijen, S. van; Victor, N.; Dadi, Z., "Special report on emissions scenarios. Special report of Working Group III of the Intergovernmental Panel on Climate Change". (Cambridge University Press, Cambridge, 2000) 599 p.

Fenhann, J., "Denmark's greenhouse gas projections until 2012, an update including a preliminary projection until 2017". (Danish Environmental Protection Agency, Copenhagen, 2003) (Environmental Project, 764) vp.

Fenhann, J; Illerup, J.B.; Birr-Pedersen, K.; Mikkelsen, M.H.; Winther, M.; Gyldenkærne, S.; Bruun, H.G, "Projection models 2010. Danish emissions of SO_2, NO_x, NMVOC and NH_3". (National Environmental Research Institute, Roskilde, 2002) (NERI Technical Report, 414) 192 p.

Fenhann, J.; Ørum, T. (ed.); "Manuel d'utilisation du modèle Burkinabè d'électrification", (French, PDF file), Contents, (Danida, Direction Générale de l'Energie - Burkina Faso, July 2002) 40. p

Fenhann, J.; Painuly, J.P.; "Implementation of Renewable Energy Technologies: Project Opportunities and Barriers, Summary of Country Studies", (PDF file), Contents, (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2002) 43 p. EarthPrint

Fenhann, J.; Grübler, A.; Nakicenovic, N.; Alcamo, J.; Davis, G.; Hare, B.; Mori, S.; Pepper, B.; Pitcher, H.; Riahi, K.; Rogner, H.-H.; Rovere, E.L. La; Sankovski, A.; Schlesinger, M.; Shukla, R.P.; Swart, R.; Victor, N.; Jung, T.Y., *Emissions scenarios: A final response*. Energy Environ. (2004) 15 , 11-24

Fenhann, J., *Status for Clean Development Mechanism (CDM) og Joint Implementation (JI)*. Nyt fra WEC Danmark (2003) (no.21) , 3

Fenhann, J; Lee, M.-K. (ed.); Halsnæs, K.; Pacudan, R.; Olhoff, A., "CDM information and guidebook" developed for the UNEP project 'CD4CDM'. (UNEP Risø Centre, Roskilde, 2003) 102 p.

Fenhann, J., Meena, H. E.; Maingu, M.; Msyani, C.; Massawa, E.; Njihia, J.; Agatsiva, J.L.; Apuuli, B.; Kahuma, T.; Mubiru, P.; Magezi, S.A.; *Greenhouse gas mitigation and other benefits from integrated east African power development*. Final report. (Centre for Energy, Environment, Science and Technology, Tanzania, 2003) 58 p.

Fenhann, J., "Denmark's greenhouse gas projections until 2012, an update including a preliminary projection until 2017". (Danish Environmental Proteciton Agency, Copenhagen, 2003) (Environmental Project, 764) vp.

Fenhann, J.; Petersen, S.O.; Adolfsson, R.; Halsdottir, B.; Hoem, B.; Regina, K.; Rypdal, K.; Staaf, H.; Olesen, J.E., *Comparison of national and IPCC default methodologies to estimate methane and nitrous oxide emissions from agriculture. In: Greenhouse gas inventories for agriculture in the Nordic countries*. International workshop, Helsingør (DK), 24-25 Jan 2002. Petersen, S.O.; Olesen, J.E. (eds.), (Danish Institute of Agricultural Sciences, Tjele, 2002) (DIAS Report, Plant Production, no. 81) p. 21-36

Fenhann, J., Illerup, J.B.; Birr-Pedersen, K.; Mikkelsen, M.H.; Winther, M.; Bruun, H.G.; Gyldenkærne, S.; *Fremskrivningsmodeller for luftemissioner*. In: Resumé af foredrag og posters. Natur- og miljøforskningskonference, København (DK), 22-23 Aug 2002. (Danmarks Miljøundersøgelser, Roskilde, 2002) p. 153-154

Fenhann, J., "Manuel d'utilisation du modèle Burkinabé d'électrification". (Direction Générale de l'Energie, Burkina Faso, 2002) 40 p.

Fenhann, J., *The Marrakesh Accord - the promt start of the Clean Development Mechanish (CDM) for small scale projects in developing countries*. In: Proceedings. Internal workshop, Copenhagen (DK), Dec 2001. (University of Copenhagen; Institute of Geography, Copenhagen, 2002) (SEREIN Working Paper, 41) p. 1-7

Fenhann, J., Painuly, J.P.; UNEP Collaborating Centre on Energy and Environment, "Implementation of renewable energy technologies - opportunities and barriers. Summary of country studies". (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2002) 37 p.

Halsnæs, K., "Regional climate change impacts in the EU-socio-economic issues and policy implications". In: PRUDENCE kick-off meeting. PRUDENCE kick-off meeting, Snekkersten (DK), 3-5 Dec 2001. Christensen, J.H. (ed.), Canish Climate Centre Report no. 01-8 (2001) p. 55

Halsnæs, K.; Banuri, T.; Barker, T.; Bashmakov, I.; Blok, K.; Bouille, D.; Christ, R.; Davidson, O.; Edmonds, J.; Gregory, K.; Grubb, M.; Heller, T.; Hourcade, J.-C.; Jepma, C.; Kauppi, P.; Markandya, A.; Metz, B.; Moomaw, W.; Moreira, J.R.; Morita, T.; Nakicenovic, N.; Price, L.; Richels, R.; Robinson, J.; Rogner, H.H.; Sathaye, J.; Sedjo, R.; Shukla, P.; Srivastava, L.; Swart, R.; Toth, F.; Weyant, J., *Summary for policymakers*. In: Climate change 2001: Synthesis report. Contribution of Working Groups I, II and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Watson, R.T. (ed.), (Cambridge University Press, Cambridge, 2001) p. 293-304

Halsnæs, K.; Watson, R.T.; Albritton, D.L.; Barker, T.; Bashmakov, I.A.; Canziani, O.; Christ, R.; Cubasch, U.; Davidson, O.; Gitay, H.; Griggs, D.; houghton, J.; House, J.; Kundzewicz, Z.; Lal, M.; Leary, N.; Magadza, C.; McCarthy, J.J.; Mitchell, J.F.B.; Moreira, J.R.; Munasinghe, M.; Noble, I.; Pachauri, R.; Pittock, B.; Prather, M.; Richels, R.G.; Robinson, J.B.; Sathaye, J.; Schneider, S.; Scholes, R.; Stocker, T.; Sundararaman, N.; Swart, R.;

TaT.; Zhou, D., “An assessment of the Intergovernmental Panel on Climate Change”. In: Climate change 2001: Synthesis report. Contribution of Working Groups I, II, and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Watson, R.T. (ed.), (Cambridge University Press, Cambridge, 2001) p. 35-145

Halsnæs, K., *Market potential for Kyoto mechanisms - estimation of global market potential for co-operative greenhouse gas emission reduction policies*. Energy Policy (2002) 30 , 13-32

Halsnæs, K., Jørgensen, A.M.K.; Fenger, J.; *The scope of human induced climate change. In: Climate change research. Danish contributions*. Jørgensen, A.M.K.; Fenger, J.; Halsnæs, K. (eds.), (Danish Meteorological Institute/Gads Forlag, Copenhagen, 2001) p. 1-22

Halsnæs, K.; Markandya, A.; Sathaye, J.; Boyd, R.; Hunt, A.; Taylor, T., “Transport and the global environment: Accounting for GHG reductions in policy analysis mechanisms under the Kyoto protocol”. (UNEP, Roskilde, 2001) 187 p.

Halsnæs, K.; Hourcade, J.-C.; Shukla, P.; Cifuentes, L.; Davis, D.; Edmonds, J.; Fisher, B.; Fortin, E.; Golub, A.; Hohmeyer, O.; Krupnick, A.; Kverndokk, S.; Loulou, R.; Richels, R.; Segenovic, H.; Yamaji, K.; Boehringer, C.; Rosendahl, K.E.; Reilly, J.; Toth, F.; Zhang, Z., *Global, regional, and national costs and ancillary benefits of mitigation*. In: Climate change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Metz, B.; Davidson, O.; Swart, R.; Pan, J. (eds.), (Cambridge University Press, Cambridge, 2001) p. 499-559

Halsnæs, K.; Markandya, A.; Lanza, A.; Matsuoka, Y.; Maya, S.; Pan, J.; Shogren, J.; Motta, R.S. de; Zhang, Z., *Costing methodologies*. In: Climate change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Metz, B.; Davidson, O.; Swart, R.; Pan, J. (eds.), (Cambridge University Press, Cambridge, 2001) p. 451-498

Halsnæs, K.; Banuri, T.; Barker, T.; Bashmakov, I.; Blok, K.; Bouille, D.; Christ, R.; Davidson, O.; Edmonds, J.; Gregory, K.; Grubb, M.; Heller, T.; Hourcade, J.-C.; Jepma, C.; Kauppi, P.; Markandya, A.; Metz, B.; Moomaw, W.; Moreira, J.R.; Morita, T.; Nakicenovic, N.; Price, L.; Richels, R.; Robinson, J.; Rogner, H.H.; Sathaye, J.; Sedjo, R.; Shukla, P.; Srivastava, L.; Swart, R.; Toth, F.; Weyant, J., *Summary for policymakers*. In: Climate change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Metz, B.; Davidson, O.; Swart, R.; Pan, J. (eds.), (Cambridge University Press, Cambridge, 2001) p. 1-13

Halsnæs, K. (eds.), Jørgensen, A.M.K.; Fenger, J.; “Climate change research. Danish contributions”. (Danish Meteorological Institute/Gads Forlag, Copenhagen, 2001) 408 p.

Halsnæs, K., *Greenhouse gas emission reduction policies in developing countries*. In: Climate change research. Danish contributions. Jørgensen, A.M.K.; Fenger, J.; Halsnæs, K. (eds.), (Danish Meteorological Institute/Gads Forlag, Copenhagen, 2001) p. 353-375

Halsnæs, K., *Estimation of the global market potential for cooperative implementation mechanisms under the Kyoto Protocol*. In: Implementation of the Kyoto Protocol. Opportunities and pitfalls for developing countries. Ghosh, P. (ed.), (Asian Development Bank, Manila, 2000) p. 25-44

Halsnæs, K., *Internationalt samarbejde om drivhusgasreduktion mellem lande med reduktionsforpligtigelsen i Kyoto Protokollen og lande uden sådanne forpligtigelser - et dansk perspektiv*. In: Metoder mødes: Geofysik og emner af samfundsmæssig interesse. Dansk Klimaforums workshop, København (DK), 15-16 May 2000. Hesselbjerg Christensen, J. (ed.), (2000) (Dansk Klimacenter, rapport 00-4) p. 49-51

Halsnæs, K., *Estimation of the global market potential for the flexibility mechanisms under the Kyoto Protocol*. In: UNFCCC and its Kyoto Protocol, with special reference to the cooperative implementation mechanisms. National workshop, Seoul (KR), 28-29 Aug 2000. (Korea Environment Institute, Seoul, 2000) p. 142-171

Halsnæs, K.; Lee, M.-K., *Estimation of the global market potential for the flexibility mechanisms under the Kyoto Protocol*. In: UNFCCC and its Kyoto Protocol, with special reference to the cooperative implementation mechanisms. National workshop, Seoul (KR), 28-29 Aug 2000. (Korea Environment Institute, Seoul, 2000) p. 115-141

Halsnæs, K., Markandya, A.; *Costing methodologies*. In: Guidance papers on the cross cutting issues of the third assessment report of the IPCC. IPCC supporting material. Pachauri, R.; Taniguchi, T.; Tanaka, K. (eds.), (Intergovernmental Panel on Climate Change (IPCC), Geneva, 2000) p. 15-31

Halsnæs, K., *Økonomisk effektivitet i reduktion af drivhusgasser*. Klimanyt (2000) (no.8) , 3-4

Halsnæs, K.; Swart, R.; Nakicenovic, N.; Edmonds, J.; Hulme, M., *Summary report*. IPCC expert meeting on stabilisation and mitigation scenarios, Copenhagen (DK), 2-4 Jun 1999. (2000) 28 p.

Halsnæs, K., *Comment on Climate change, the rights of future generations and intergenerational equity: An in-expert exploration of a dark and cloudy path by Irving Mintzer and David Michel*. In: Proceedings. IPCC expert meeting on climate change and its linkages with development, equity and sustainability, Colombo (LK), 27-29 Apr 1999. Munasinghe, M.; Swart, R. (eds.), (World Meteorological Organisation, Geneva, 2000) p. 292-293

Halsnæs, K.; Olhoff, A., "Proceedings. Sustainable development and climate change workshop", Paris (FR), 24-25 Oct 2001. (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2002) 30 p.

Halsnæs, K.; Verhagen, J.; Rovere, E. La; Klein, R.; Huq, S., "Linkages between development and climate change". (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2003) 31 p.

Halsnæs, K., Markandya, A.; *Developing countries and climate change. In: The economics of climate change*. Owen, A.D.; Hanley, N. (eds.), (Routledge, London, 2004) (Routledge explorations in environmental economics, 3) p. 239-258

Halsnæs, K., *Issues in the assessment of welfare implications of climate change impacts*. In: Report and scientific papers. Conference on sea-level rise and coastal defence in the Southern North Sea, Norfolk (GB), 18 Mar 2004. Viner, D.; Sayer, M. (eds.), (Country Land and Business Association and Climatic Research Unit, London, 2004) p. 22-28

Halsnæs, K.; Davidson, O.; Huq, S.; Kok, M.; Metz, B.; Sokona, Y.; Verhagen, J., *The development and climate nexus: the case of sub-Saharan Africa. Climate Policy* (2003) 3 (no.Suppl. 1) , S97-S113

Halsnæs, K.; Verhagen, J.; Rovere, E. La; Klein, R.; Huq, S., "Linkages between development and climate change". (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2003) 31 p.

Halsnæs, K., "Generic assessment of the costs of response strategies. In: Encyclopedia of life support systems (EOLSS) online". (Eolss Publishers Co. Ltd., Oxford, 2003) vp.

Halsnæs, K., *The development and climate change project - methodological approach and case study results* (paper and presentation). In: Workshop presentations and papers (CD-ROM). Workshop on development and climate, New Delhi (IN), 11 Nov 2003. (Indian Institute of Management, Ahmedabad, 2003) 14 p.

Halsnæs, K., *Ekspertindlæg om sammenligning af midler med samme miljøeffekt*. In: Pris på miljøet? Slutdokument og ekspertindlæg. Konsensuskonference, København (DK), 9-12 May 2003. (Teknologirådet, København, 2003) (Teknologirådets rapporter 2003/2) p. 59-71

Halsnæs, K., *Climate change and sustainable development - case studies from developing countries*. In: Abstracts. ESF exploratory workshop in life and environmental sciences: Atmospheric pollution effects on local, regional and global scales - an integrated approach, Oslo (NO), 26-28 Sep 2002. (Det Norske Videnskaps-Akademi, Oslo, 2002) 2 p.

Halsnæs, K., *Natur- og teknisk videnskabelig forskeruddannelse i tal*. Risønyt (2002) (no.4) , 10

Halsnæs, K.; Jørgensen, A.M.K Fenger, J., "Den globale opvarmning. Bekæmpelse og tilpasning". (Gads Forlag, København, 2002) 181 p.

Halsnæs, K.; Markandya, A.; Taylor, T., *Case studies for Zimbabwe, Botswana, Mauritius and Thailand*. In: Climate change and sustainable development. Prospects for developing countries. Markandya, A.; Halsnæs, K. (eds.), (Earthscan Publications Ltd., London, 2002) p. 202-246

Halsnæs, K.; Markandya, A., *Analytical approaches for decision-making, sustainable development and greenhouse gas emission-reduction policies*. In: Climate change and sustainable development. Prospects for developing countries. Markandya, A.; Halsnæs, K. (eds.), (Earthscan Publications Ltd., London, 2002) p. 129-162

Halsnæs, K., *A review of the literature on climate change and sustainable development*. In: Climate change and sustainable development. Prospects for developing countries. Markandya, A.; Halsnæs, K. (eds.), (Earthscan Publications Ltd., London, 2002) p. 49-72

Halsnæs, K., Markandya, A.; *Climate change and sustainable development: An overview*. In: Climate change and sustainable development. Prospects for developing countries. Markandya, A.; Halsnæs, K. (eds.), (Earthscan Publications Ltd., London, 2002) p. 1-14

Halsnæs, K. (eds.), Markandya, "A Climate change and sustainable development. Prospects for developing countries". (Earthscan Publications Ltd., London, 2002) 291 p.

Halsnæs, K., *Regional climate change impacts in the EU-socio-economic issues and policy implications*. In: PRUDENCE kick-off meeting. PRUDENCE kick-off meeting, Snekkersten (DK), 3-5 Dec 2001. Christensen, J.H. (ed.), Canish Climate Centre Report no. 01-8 (2001) p. 55

Halsnæs, K.; Banuri, T.; Barker, T.; Bashmakov, I.; Blok, K.; Bouille, D.; Christ, R.; Davidson, O.; Edmonds, J.; Gregory, K.; Grubb, M.; Heller, T.; Hourcade, J.-C.; Jepma, C.; Kauppi, P.; Markandya, A.; Metz, B.; Moomaw, W.; Moreira, J.R.; Morita, T.; Nakicenovic, N.; Price, L.; Richels, R.; Robinson, J.; Rogner, H.H.; Sathaye, J.; Sedjo, R.; Shukla, P.; Srivastava, L.; Swart, R.; Toth, F.; Weyant, J., *Summary for policymakers*. In: Climate change 2001: Synthesis report. Contribution of Working Groups I, II and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Watson, R.T. (ed.), (Cambridge University Press, Cambridge, 2001) p. 293-304

Halsnæs, K.; Watson, R.T.; Albritton, D.L.; Barker, T.; Bashmakov, I.A.; Canziani, O.; Christ, R.; Cubasch, U.; Davidson, O.; Gitay, H.; Griggs, D.; houghton, J.; House, J.; Kundzewicz, Z.; Lal, M.; Leary, N.; Magadza, C.; McCarthy, J.J.; Mitchell, J.F.B.; Moreira, J.R.; Munasinghe, M.; Noble, I.; Pachauri, R.; Pittock, B.; Prather, M.; Richels, R.G.; Robinson, J.B.; Sathaye, J.; Schneider, S.; Scholes, R.; Stocker, T.; Sundararaman, N.; Swart, R.; TaT.; Zhou, D., *An assessment of the Intergovernmental Panel on Climate Change.* In: Climate change 2001: Synthesis report. Contribution of Working Groups I, II, and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Watson, R.T. (ed.), (Cambridge University Press, Cambridge, 2001) p. 35-145

Halsnæs, K., *Market potential for Kyoto mechanisms - estimation of global market potential for co-operative greenhouse gas emission reduction policies*. Energy Policy (2002) 30 , 13-32

Halsnæs, K.; Jørgensen, A.M.K.; Fenger, J., "Den globale opvarmning. Bekæmpelse og tilpasning." (Gads Forlag, København, 2002) 181 p.

Hellmuth, M.E.; Kabat, P., *Assessing vulnerability*. In: Climate changes the water rules. How water managers can cope with today's climate variability and tomorrow's climate change. Appleton, B. (ed.), (Dialogue on water and climate, Delft, 2003) p. 44-59

Hellmuth, M.E.; Kabat, P., *Impacts*. In: Climate changes the water rules. How water managers can cope with today's climate variability and tomorrow's climate change. Appleton, B. (ed.), (Dialogue on water and climate, Delft, 2003) p. 26-43

Hellmuth, M.E.; Spanger-Siegfried, E.; Dougherty, B.; Downing, T.; Klaey, A.; Hoeggel, U., "The Adaptation Policy Framework user's guidebook". Final draft. (UNDP-GEF, New York, 2003) p.

Kamel, S.M., Radka, M.; *Considerations in promoting markets for sustainable energy technologies in developing countries*. In: Energy technologies for Post Kyoto targets in the medium term. Proceedings. Risø international energy conference, Risø (DK), 19-21 May 2003. Sønderberg Petersen, L. ; Larsen, H. (eds.), Risø National Laboratory (DK). Systems Analysis Department; Risø National Laboratory (DK). Information Service Department. Risø-R-1405(EN) (2003) p. 356-363

Lee, M.-K., *South Korea*. In: Rethinking energy security in East Asia. Stares, P.B. (ed.), (Japan Center for International Exchange, Tokyo, 2000) p. 79-100

Lee, M.-K.; Zou, Z.; Kim, H.S.; Lim, J.S.; Akita, J.; Imai, H.; Niizawa, H., *On CDM principles, modalities and rules: Perspective from China, Korea and Japan*. (2000) (Working Paper, 53) 13 p.

Lee, M.-K., *Energy subsidies in Korea*. In: Energy subsidies. Lessons learned in assessing their impact and designing policy reforms. Moltke, A. von; McKee, C.; Morgan, T. (eds.), (Greenleaf Publishing, Sheffield, 2004) p. 97-100

Lee, M.-K., Pacudan, R.; *Overview of the CDM market and CER prices*. In: Responding to climate change 2003. (2003) 4 p.

Lee, M.-K.; Painuly, J.P.; Park, H.; Noh, J., *Promoting energy efficiency financing and ESCOs in developing countries: mechanisms and barriers*. J. Clean. Prod. (2003) 11 , 659-665

Lee, M.-K.; Park, H.; Noh, J.; Painuly, J.P., *Promoting energy efficiency financing and ESCOs in developing countries: experiences from Korean ESCO business*. J. Clean. Prod. (2003) 11 , 651-657

Meena, H.E. (Ed.); "Options for Greenhouse Gas Mitigation in an Integrated East African Power Development", (PDF file), Contents, (The Centre for Energy, Environment, Science and Technology, 2003) 83 p.

Meena, H. E.; Maingu, M.; Msyani, C.; Massawa, E.; Njihia, J.; Agatsiva, J.L.; Apuuli, B.; Kahuma, T.; Mubiru, P.; Magezi, S.A.; Fenhann, J., "Greenhouse gas mitigation and other benefits from integrated east African power development". Final report. (Centre for Energy, Environment, Science and Technology, Tanzania, 2003) 58 p.

Missfeldt, F., Hauff, J.; "Emissions trading in Poland. ENER forum 1: Integrating the Kyoto mechanisms into the national framework", Krakow (PL), 8-9 Feb 2001. ENER Bull. (2001) (no.23) , 59-62

Missfeldt, F., Hauff, J.; *Should Poland implement domestic emissions trading?*. RECIEL (2000) 9 (no.3) , 252-263

Missfeldt, F.; Haites, E., *The potential contribution of sinks to meeting Kyoto Protocol commitments.* Environ. Sci. Policy (2001) 4 , 269-292

Missfeldt, F.; Requate, T., *From national emissions taxes to international emissions trading . The cases of Scandinavia and the UK*. (University of Heidelberg, Heidelberg, 2001) (Universität Heidelberg. Department of Economics. Discussion paper series, no. 342) 23 p.

Missfeldt, F.; Ellis, J.; Bosi, M.; Painuly, J., *Possibilities for standardised baselines for JI and the CDM*. Background paper. UNEP/OECD/IEA workshop on baseline methodologies, Risø (DK), 7-9 May 2001. (2001) 29 p.

Missfeldt, F., *Policy review: From Kyoto to Buenos Aires - The new climate regime produces a lot of hot air*. Eur. Environ. (2000) 10 , 55-58

Missfeldt, F., Haites, E.; *Liability rules for international trading of greenhouse gas emissions quotas*. Clim. Policy (2001) 1 , 85-108

Missfeldt, F. (ed.); Hauff, J., "The feasibility of domestic CO_2 emissions trading in Poland". Risø-R-1203(EN) (2000) 114 p.

Missfeldt, F., Wohlgemuth, N.; *The Kyoto mechanisms and the prospects for renewable energy technologies*. Solar Energy (2000) 69, 305-314

Missfeldt, F., *Políticas internacionales sobre cambio climático - cómo puede beneficiarse el Perú*. Inf. Mens. Soc. Nac. Min. Pétrol. Energia (2000) 9 (no.8) , 60-61

Missfeldt, F.; Villavicencio, A., *The economies in transition as part of the climate regime: recent developments*. Environ. Plan. B (2000) 27 , 379-392

Missfeldt, F., Haites, E.; "Limiting overselling in international emissions trading 2: Analysis of a commitment period reserve at national and global levels". (Riso National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2002) (UNEP Collaborating Centre on Energy and Environment. Working Paper no. 11) vp.

Missfeldt, F., Haites, E.; "Limiting overselling in international emissions trading 1: Costs and environmental impacts of alternative proposals". (Riso National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2002) (UNEP Collaborating Centre on Energy and Environment. Working Paper no. 10) 89 p.

Missfeldt, F.; Villavicenco, A., "How can economies in transition pursue emissions trading or joint implementation?". (Fondazione Eni Enrico Mattei, Milano, 2002) (Nota di Lavoro, 59, 2002) 18 p.

Missfeldt, F.; Haites, E., *Analysis of a commitment period reserve at national and global levels*. Clim. Policy (2002) 2 , 51-70

Nygaard, I.; Marcussen, H.S.; Reenberg, A. (eds.), *Implementing the United Nations convention to combat desertification (CCD). Past experience and future challenges*. Proceedings. CCD workshop, Skjoldenæsholm (DK), 26-27 Feb 2002. (SEREIN 2000, Copenhagen, 2002) (SEREIN - Occational Paper, 14) 118 p.

Nygaard, I., *Institutions, social processes and power relations at village level - two options for case studies of rural electrification?*. In: Proceedings. Internal workshop, Copenhagen (DK), Dec 2001. (University of Copenhagen; Institute of Geography, Copenhagen, 2002) (SEREIN Working Paper, 41) p. 8-41

Nygaard, I.; Marcussen, H.S.; Reenberg, A. (eds.), *Implementing the United Nations convention to combat desertification (CCD). Past experience and future challenges*. Proceedings. CCD workshop, Skjoldenæsholm (DK), 26-27 Feb 2002. (SEREIN 2000, Copenhagen, 2002) (SEREIN - Occational Paper, 14) 118 p.

Olhoff, A., Halsnæs, K.; Proceedings. *Sustainable development and climate change workshop*, Paris (FR), 24-25 Oct 2001. (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2002) 30 p.

Olhoff, A., "Leaving the world of first best: Environmental policy options in developing countries". (Institut for Samfundsvidenskab og Erhvervsøkonomi, Roskilde, 2002) (FS and Ph.D. Thesis no. 31/2002) 186 (ph.d. thesis)

Olhoff, A., *Assessing social capital aspects of climate change projects. In: Climate change and sustainable development. Prospects for developing countries*. Markandya, A.; Halsnæs, K. (eds.), (Earthscan Publications Ltd., London, 2002) p. 73-128

Olhoff, A., Markandya, A.; Halsnæs, K.; Mason, P.; *A conceptual framework for analysing climate change in the context of sustainable development*. In: Climate change and sustainable development. Prospects for developing countries. Markandya, A.; Halsnæs, K. (eds.), (Earthscan Publications Ltd., London, 2002) p. 15-48

Pacudan, R., *The challenge of renewable energies integration in energy distribution systems*. In: Networked knowledge for renewable energies. Research, development and education - basis for wide-spread deployment of renewable energies. Science forum of the renewables 2004, Bonn (DE), 1 Jun 2004. Wienges, S.; Stadermann, G.; Szczepanski, P. (eds.), (ForschungsVerbund Sonnenenergie, Berlin, 2004) p. 51-54

Pacudan, R., *The electricity supply industry in East Asia and the implications of increasing world energy prices*. In: Asian energy markets. Dynamics and trends. (The Emirates Center for Strategic Studies and Research, Abu Dhabi (AE), 2004) p. 241-271

Pacudan, R., Clark, A.; *Power sector reforms and residential energy efficiency programs*. In: Proceedings (on CD-ROM). International conference on electric supply industry in transition: Issues and prospects for Asia, Bangkok (TH), 14-16 Jan 2004. (Asian Institute of Technology, Bangkok, 2004) p. 10.74-10.94

Pacudan, R., Myung-Kyoon, L.; *Capacity building for CDM.* Asia Pacific Tech. Monitor (2003) (no.Mar-Apr) , 29-32

Painuly, J.P., *Climate change and clean development mechanism*. Bio Energy News (2001) (no.December) , 7-10

Painuly, J.P., *The Kyoto Protocol, emissions trading and the CDM: An analysis from developing countries perspective*. Energy J. (2001) 22 , 147-169

Painuly, J., Ellis, J.; Missfeldt, F.; Bosi, M.; *Possibilities for standardised baselines for JI and the CDM.* Background paper. UNEP/OECD/IEA workshop on baseline methodologies, Risø (DK), 7-9 May 2001. (2001) 29 p.

Painuly, J.P., *Barriers to renewable energy penetration. A framework for analysis.* Renewable Energy (2001) 24 , 73-89

Painuly, J., *Kyoto Protocol and voluntary commitments: What are the risks to developing countries?*. In: Invited papers. International symposium on development policies for the new millennium in honour of professor Kirit S. Parikh, Mumbai (IN), 12-14 Jul 2000. (Indira Gandhi Institute of Development Research, Mumbai, 2000) 15 p.

Painuly, J.P., Reddy, S.; *Diffusion of renewable energy technologies - barriers and stakeholders' perspectives*. Renewable Energy (2004) 29 , 1431-1447

Painuly, J.P., *Barriers to RE diffusion*. Repsovision. Quarterly magazine of Winrock International India (2002) 19 , vp.

Painuly, J.P.; Wohlgemuth, N., *Impact of CDM on potential renewable energy development*. In: Responding to climate change 2003. (2003) 3 p.

Painuly, J.P., *Baselines for clean development mechanism projects. the Marrakesh accords and beyond. Int. Environ. Agreements: Politics*, Law Econ. (2003) 3 , 323-348

Painuly, J.P., *Renewable energy barriers and opportunities: A stakeholders' perspective*. In: Energy technologies for Post Kyoto targets in the medium term. Proceedings. Risø international energy conference, Risø (DK), 19-21 May 2003. Sønderberg Petersen, L. ; Larsen, H. (eds.), Risø National Laboratory (DK). Systems Analysis Department; Risø National Laboratory (DK). Information Service Department. Risø-R-1405(EN) (2003) p. 66-75

Painuly, J.P., Wohlgemuth, N.; *Promoting private sector financing of commercial investments in renewable energy technologies*. In: Proceedings. Testing new policy approaches. 5. Expert group meeting on finance for sustainable development, Nairobi (KE), 1-4 Dec 1999. (United Nations, New York, 2002) p. 319-334

Painuly, J.P.; Clausen, N.-E.; Fenhann, J.; Georgy, L., *A possible CDM project in Egypt: 60 MW wind farm in the Gulf of Suez.* In: Proceedings CD-ROM. CD 2. European wind energy conference and exhibition 2003 (EWEC 2003), Madrid (ES), 16-19 Jun 2003. (European Wind Energy Association, Brussels, 2003) 8 p.

Painuly, J.P.; Wohlgemuth, N., *Renewable energy financing: What can we learn from experiences?*. In: Proceedings (on CD-ROM). 26. Annual IAEE international conference. New challenges for energy decision makers, Prague (CZ), 4-7 Jun 2003. (IAEE, Prague, 2003) 10 p.

Painuly, J.P., *Climate change and clean development mechanism.* Bio Energy News (2001) (no.December) , 7-10

Painuly, J.P., *The clean development mechanism: Potential, promise and limitations*. In: Instruments for climate policy: Limited versus unlimited flexibility. Albrecht, J (ed.), (Edward Elgar Publishing, Cheltenham (GB), 2002) (New Horizons in Environmental Economics Series) p. 192-214

Painuly, J.P., Olsen, K.R.; *The clean development mechanism: A bane or a boon for developing countries?*. Int. Environ. Agreements: Politics, Law Econ. (2002) 2 , 237-260

Painuly, J.P., Wohlgemuth, N.; *Design issues of the clean development mechanism and the attractiveness of renewable energy*. In: Proceedings on CD-ROM. World Renewable Energy Congress 7 (WREC VII), Cologne (DE), 29 Jun - 5 Jul 2002. (Elsevier Science, New York, NY, 2002) 5 p. in the Policy Issues and Related Topics session

Painuly, J.P.; Clausen, N.-E.; Nielsen, L.H.; Petersen, E.L.; Allal, H.; Nogaret, E.; Georgy, L.; Casale, C.; Russ, P., *Baseline analysis in relation to CDM projects based on wind energy (poster).* In: Proceedings CD-ROM. 2002 global windpower conference and exhibition, Paris (FR), 2-5 Apr 2002. (European Wind Energy Association, Brussels, 2002) 5 p.

Ringius, L., *Public ideas, transnational policy entrepreneurs and environmental regimes*. WGES Newslett. (2001) (no.22) , 11-13

Ringius, L., *Equity and social considerations of anthropogenic climate change*. In: Encyclopedia fo life support systems (EOLSS)(online edition). (Eolss Publishers Co. Ltd., Oxford, 2001) 14 p.

Ringius, L., *What prospects for soil C sequestration in the CDM? COP-6 and beyond*. In: Proceeedings. Section 3. IEA Bioenergy Task 25/38 workshop: Carbon accounting and emissions trading related to bioenergy, wood products and carbon sequestration, Canberra (AU), 26-30 Mar 2001., (IEA Bioenergy, 2001) p. 149-159

Ringius, L.; Jansen, J.C.; Battjes, J.J.; Ormel, F.T.; Sijm, J.P.M.; Volkers, C.; Ybema, J.R.; Torvanger, A.; Underdal, A., "Sharing the burden of greenhouse gas mitigation". Report 410 200 099 (2001) 84 p.

Ringius, L.; Jansen, J.C.; Battjes, J.J.; Ormel, F.T.; Sijm, J.P.M.; Volkers, C.; Ybema, J.R.; Torvanger, A.; Underdal, A., "Sharing the burden of greenhouse gas mitigation. Final report of the joint CICERO-ECN project on the global differentiation of emission mitigation targets among countries". ECN-C-01-009 (2001) (CICERO WP 2001:5) 58 p.

Ringius, L., *What prospects for soil carbon sequestration in the CDM? COP-6 and beyond*. Energy Environ. (2001) 12 , 275-285

Ringius, L., Gupta, J.; *The EU's climate leadership: Reconciling ambition and reality*. Int. Environ. Agreements: Politics, Law Econ. (2001) 1 , 281-299

Ringius, L., "Radioactive waste disposal at sea. Public ideas, transnational policy entrepreneurs, and environmental regimes". (MIT Press, Cambridge, MA (US), 2000) (Global Environmental Accord: Strategies for Sustainability and Institutional Innovation Series) 337 p.

Ringius, L.; Grohnheit, P.E.; Nielsen, L.H.; Olivier, A.-L.; Painuly, J.P.; Villavicencio, A., "Wind power projects in the CDM: Methodologies and tools for baselines, carbon financing and substainability analysis". Risø-R-1380(EN) (2002) 111 p.

Ringius, L., *Soil carbon sequestration and the CDM: Opportunities and challenges for Africa*. Clim. Change (2002) 54 , 471-495

Ringius, L.; Torvanger, A.; Underdal, A., *Burden sharing and fairness principles in international climate policy*. Int. Environ. Agreements: Politics, Law Econ. (2002) 2 , 1-22

Rogat, J., *The electric trolleybus system of Quito, Ecuador. Asia-Pacific Environmental Innovation Strategies (APEIS). Research on Innovative and Strategic Policy Options (RISPO).* Good practices inventory. (2003) 5 p.

Rogat, J., Altomonte, H.; "Políticas de precios de combustibles en América des Sur y México: Implicancias económicas y ambientales". (2004) (Serie Manuales, 35) 198 p.

Rogat, J.; O'Ryan, R.; Miller, S.; Miguel, C. de, *The impact of removing energy subsidies in Chile*. In: Energy subsidies. Lessons learned in assessing their impact and designing policy reforms. Moltke, A. von; McKee, C.; Morgan, T. (eds.), (Greenleaf Publishing, Sheffield, 2004) p. 122-132

Rogat, J., Altomonte, H.; "Fuel Pricing Policies in South America and Mexico", PDF file (Risø National Laboratory. UNEP Risoe Centre on Energy, Climate and Sustainable Development, Roskilde, 2004) 216p

Rogat, J.; Bell, M.L.; Davis, D.; Cifuentes, L.; Cohen, A.; Gouveia, N.; Grant, L.; Green, C.; Johnson, T.; Spengler, J.; Thurston, G., *International expert workshop on the analysis of the economic and public health impacts of air pollution*: Workshop summary. Environ. Health Perspect. (2002) 110 , 1163-1168

Turkson, J.K.; Wohlgemuth, N., *Power sector reform and distributed generation in sub-Saharan Africa.* Energy Policy (2001) 29 , 135-145

Turkson, J.K.; Mansley, M.; Martinot, E.; Ahjua, D.; Chantanakome, W.; DeCanio, S.; Grubb, M.; Gupta, J.; Junfeng, L.; Hedger, M.M.; Natarajan, B.; Wallace, D., *Financing and partnerships for technology transfer*. In: Methodological and technological issues in technology transfer. A special report of IPCC Working Group III. Metz, B.; Davidson, O.R.; Martens, J.-W.; Rooijen, S.N.M. van; Wie McGrory, L. Van (eds.), (Cambridge University Press, Cambridge, 2000) p. 143-174

Turkson, J.K.; Hedger, M.M.; Martinot, E.; Onchan, T.; Ahuja, D.; Chantanakome, W.; Grubb, M.; Gupta, J.; Heller, T.C.; Junfeng, L.; Mansley, M.; Mehl, C.; Natarajan, B.; Panayotou, T.; Wallace, D., *Enabling environments for technology transfer. In: Methodological and technological issues in technology transfer.* A special report of IPCC Working Group III. Metz, B.; Davidson, O.R.; Martens, J.-W.; Rooijen, S.N.M. van; Wie McGrory, L. Van (eds.), (Cambridge University Press, Cambridge, 2000) p. 105-141

Turkson, J.K., *Conclusions and policy summary. In: Power sector reform in SubSaharan Africa*. International workshop on power sector reform in SubSaharan Africa, Accra (GH), 17-19 Nov 1997. Turkson, J.K. (ed.), (Macmillan Press Ltd., London, 2000) p. 204-216

Turkson, J.K.; Redlinger, R.Y., *Cross-country comparisons. In: Power sector reform in SubSaharan Africa*. International workshop on power sector reform in SubSaharan Africa, Accra (GH), 17-19 Nov 1997. Turkson, J.K. (ed.), (Macmillan Press Ltd., London, 2000) p. 186-203

Turkson, J.K., Opam, M.A.; *Power sector restructuring in Ghana: Reforms to promote competition and private sector participation*. In: Power sector reform in SubSaharan Africa. International workshop on power sector reform in SubSaharan Africa, Accra (GH), 17-19 Nov 1997. Turkson, J.K. (ed.), (Macmillan Press Ltd., London, 2000) p. 50-82

Turkson, J.K., *Power sector reform: Conceptual issues*. In: Power sector reform in SubSaharan Africa. International workshop on power sector reform in SubSaharan Africa, Accra (GH), 17-19 Nov 1997. Turkson, J.K. (ed.), (Macmillan Press Ltd., London, 2000) p. 6-25

Turkson, J.K., *Introduction*. In: Power sector reform in SubSaharan Africa. International workshop on power sector reform in SubSaharan Africa, Accra (GH), 17-19 Nov 1997. Turkson, J.K. (ed.), (Macmillan Press Ltd., London, 2000) p. 1-5

Turkson, J.K. (ed.), "Power sector reform in SubSaharan Africa". International workshop on power sector reform in SubSaharan Africa, Accra (GH), 17-19 Nov 1997. (Macmillan Press Ltd., London, 2000) 222 p.

UNEP Collaborating Centre on Energy and Environment, "Clean Development Mechanism" (PDF file) Contents (UNEP Collaborating Centre on Energy and Environment, Risø National Laboratory, Denmark. August 2002) 32 p. EarthPrint

Villavicencio, A., Borges, P.C.; *Avoiding academic and decorative planning in GHG emissions abatement studies with MCDA*: The Peruvian case. Eur. J. Oper. Res. (2004) 152 , 641-654

Wamukonya, N.; Rukato, H., "Climate change implications for Southern Africa: A gendered perspective". (Minerals and Energy Policy Centre, Johannesburg, 2001) 36

Wamukonya, N., *Meeting Africa's energy demand: Can CDM offer any relief*?. Impact (2001) (no.Special ed., Oct) , 14-15, 25, 27

Wamukonya, N., *Is foreign direct investment (FDI) threatened by CDM in Africa?*. Bull. Afr. Biores. Energie (2001) (no.14) , 1-2

Wamukonya, N.; Olsen, K.R., *Suggestions for improving African climate change negotiations strategy*. Innovation (2001) 8 (no.1) , 28-32

Wamukonya, N., *Any hopes for Africa in LULUCF and sinks?*. Innovation (2001) 8 (no.1) , 9-11

Wamukonya, N., Lithole, C.; *Integration of non-grid electricity into the National Electrification Programme in a developing country - the case of South Africa*. In: Energy markets: The challenges of the new millennium. Technical papers. (CD-ROM). World energy congress 2001, Buenos Aires (AR), 21-25 Oct 2001. (World Energy Council, Buenos Aires, 2001) vp.

Wamukonya, N., *The uneven road for the non-grid programme in South Africa*. Energy Sustainable Dev. (2001) 5 (no.3) , 41-46

Wamukonya, N.; Davis, M., *Socio-economic impacts of rural electrification in Namibia: Comparisons between grid, solar and unelectrified households*. Energy Sustainable Dev. (2001) 5 (no.3) , 5-13

Wamukonya, N., Muller, H.; *The transition from pilot projects to large-scale programmes: The case of Namibia*. In: Experience with PV systems in Africa. Summaries of selected cases. Wamukonya, N. (ed.), (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2001) p. 36-39

Wamukonya, N. (ed.), "Experience with PV systems in Africa. Summaries of selected cases". (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2001) 77 p.

Wamukonya, N., *Renewable energy technologies in Africa: An overview of challenges and opportunities*. In: Proceeedings. African high-level regional meeting on energy and sustainable development for the ninth session of the Commission on Sustainable Development, Nairobi (KE), 10-13 Jan 2001. Wamukonya, N. (ed.), (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2001) p. 20-30

Wamukonya, N. (ed.), "Proceeedings". African high-level regional meeting on energy and sustainable development for the ninth session of the Commission on Sustainable Development, Nairobi (KE), 10-13 Jan 2001. (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2001) 189 p.

Wamukonya, N.; Skutsch, M., *CoP6: The gender issue forgotten?*. Energia News (2001) 4 (no.1) , 14

Wamukonya, N.; Lithole, C., *The South African non-grid programme process*. In: Proceedings. African high-level regional meeting on energy and sustainable development for the ninth session of the Commission on Sustainable Development, Nairobi (KE), 10-13 Jan 2001. Wamukonya, N. (ed.), (Risø National Laboratory. UNEP Collaborating Centre on Energy and Environment, Roskilde, 2001) p. 47-54

Wamukonya, N. (ed.), "Electricity reform: social and environmental challenges", (PDF file), Contents, (United Nations Environment Programme, UNEP Risoe Centre, Roskilde, June 2003) 256p.

Wamukonya, N., *Women and energy: Issues in developing nations*. In: Encyclopedia of energy. Vol. 6. Cleveland, C.J. (ed.), (Elsevier, Amsterdam, 2004) p. 481-498

Wamukonya, N., Martinot, E.; Chaurey, A.; Lew, D.; Moreira, J.R.; *Renewable energy markets in developing countries*. In: Energy technologies for Post Kyoto targets in the medium term. Proceedings. Risø international energy conference, Risø (DK), 19-21 May 2003. Sønderberg Petersen, L. ; Larsen, H. (eds.), Risø National Laboratory (DK). Systems Analysis Department; Risø National Laboratory (DK). Information Service Department. Risø-R-1405(EN) (2003) p. 42-54

Wamukonya, N., *African power sector reforms: Some emerging lessons*. Energy Sustain. Develop. (2003) 7 (no.1) , 7-15

Wamukonya, N., Spalding-Fecher, R.; Thorne, S.; *Residential solar water heating as a potential Clean Development Mechanism project*: A South African case study. Mitig. Adapt. Strat. Global Change (2003) 7 , 135-153

Wamukonya, N., *Some emerging lessons in the reform of the African power sector*. In: Electricity reform: Social and environmental challenges. Wamukonya, N. (ed.), (UNEP Riso Centre, Roskilde, 2003) p. 116-134

Wamukonya, N., *Power sector reform in developing countries: Mismatched agendas*. In: Electricity reform: Social and environmental challenges. Wamukonya, N. (ed.), (UNEP Riso Centre, Roskilde, 2003) p. 7-47

Wamukonya, N. (ed.), “Electricity reform: Social and environmental challenges”. (UNEP Riso Centre, Roskilde, 2003) 241 p.

Wamukonya, N., *Power sector reform in developing countries: mismatched agendas* (Corrigendum: Energy Policy 2004, v. 32 p. 941). Energy Policy (2003) 31 , 1273-1289

Wamukonya, N., Martinot, E.; Chaurey, A.; Lew, D.; Moreira, J.; *Renewable energy markets in developing countries*. Ann. Rev. Energy Environ. (2002) 27 , 309-348

Wamukonya, N.; Rukato, H., *Climate change implications for Southern Africa: A gendered perspective.* (Minerals and Energy Policy Centre, Johannesburg, 2001) 36

Wamukonya, N.; Skutsch, M., *Gender angle to the climate change negotiations*. Energy Environ. (2002) 13 , 115-124

Wasike, W., Pacudan, R.; Rogat, J.; *The clean development mechanism and power sector reforms in developing countries*. In: Energy technologies for Post Kyoto targets in the medium term. Proceedings. Risø international energy conference, Risø (DK), 19-21 May 2003. Sønderberg Petersen, L. ; Larsen, H. (eds.), Risø National Laboratory (DK). Systems Analysis Department; Risø National Laboratory (DK). Information Service Department. Risø-R-1405(EN) (2003) p. 386-397

Wohlgemuth, N.; Haas, R.; Huber, C., *Financial incentives to promote renewable energy systems in European electricity markets: A survey*. Int. J. Global Energy Iss. (2001) 15 , 5-24

Wohlgemuth, N., *Editorial: The future of renewable energy: From market failure to market penetration*. Int. J. Global Energy Iss. (2001) 15 , 1-4

Wohlgemuth, N., *Directing investment to cleaner energy technologies. The role of financial institutions*. In: Sustainable banking. The greening of finance. Bouma, J.J.; Jeucken, M.; Klinkers, L. (eds.), (Greenleaf Publishing, Sheffield, 2001) p. 401-411

Wohlgemuth, N.; Madlener, R., *Prospects for distributed renewable electricity generation in competition-based power markets*. In: Renewables: The energy for the 21. Century. Proceedings. World renewable energy congress 6 (WREC 2000), Brighton (GB), 1-7 Jul 2000. Sayigh, A.A.M. (ed.), (Elsevier, Amsterdam, 2000) p. 1776-1779

Wohlgemuth, N., *The relevance of renewable energy technologies for climate change mitigation.* In: Renewables: The energy for the 21. Century. Proceedings. World renewable energy congress 6 (WREC 2000), Brighton (GB), 1-7 Jul 2000. Sayigh, A.A.M. (ed.), (Elsevier, Amsterdam, 2000) p. 162-165

Wohlgemuth, N., *Innovative financing mechanisms for renewable energy systems in developing countries*. In: Sustainable development international. Strategies and technologies for local-global agenda 21 implementation. (ICG Publishing Ltd., London, 2000) p. 37-42

Wohlgemuth, N., *Renewable energy and energy efficiency in liberalized European electricity markets*. Eur. Environ. (2000) 10 , 1-11

Zak, J., Martens, J.W.; Lange, T. de; Cloin, J.; Szewczuk, S.; Morris, R.; “Accelerating the market penetration of renewable energy technologies in South Africa. Action plan summary”. (2001) 30 p.

Zak, J., Martens, J.W.; Lange, T. de; Cloin, J.; Szewczuk, S.; Morris, R.; “Accelerating the market penetration of renewable energy technologies in South Africa”. (2001) 119 p.

Zak, J., *Renewable integration*. In: AESIEAP goldbook 2002. Griffin, J. (ed.), (ICOM Publications Ltd., Sutton, 2001) p. 113-117

Zak, J. (ed.); Henriques, M. S., A.; Masseli, S.: “Alternative energy sources and decentralized entrepreneurship: opportunities and obstacles to their expansion in Brazil”. (UNEP Risoe Centre on Energy, Climate and Sustainable Development, 2003) 11 p.

Annex 8
URC Working Papers and Other Unpublished Research: 2000-2004

Callaway, J.M., Economic evaluation in sector assessments. AIACC project kick-off workshop, Nairobi (KE), 11-15 Feb 2002. Unpublished.

Callaway, J.M., A framework for conducting benefit cost assessment of adaptation options in the agricultural sector. South Asia workshop on adaptation to climate change for agricultural productivity, Delhi (IN), 1-4 May 2002. Unpublished.

Callaway, J.M., Adaptation benefits and costs - measurement and policy issues. OECD workshop on the benefits of climate policy improving information for policy makers, Paris (FR), 12-13 Dec 2002. Unpublished.

Christensen, J.M., Den virkelige verden - klimakonventionen og u-landene. Møde i IDA Miljø, København (DK), 3 Feb 2000. Unpublished.

Christensen, J.M., U-landenes særlige forhold. Teknologioverførsel og bæredygtig udvikling i udviklingslande. IPCC-temadag, København (DK), 8 Jun 2001. Unpublished.

Christensen, J.M., Global environment outlook. Møde i Ulandsfagligt Selskab, København (DK), 3 Apr 2000. Unpublished.

Christensen, J.M., COP 6 - Developing country issues. Møde i Dansk Energiøkonomisk Selskab, København (DK), 5 Dec 2000. Unpublished.

Christensen, J.M., Energy and sustainable development opportunities in bio-energy. 2. World conference and technology exhibition on biomass for energy, industry and climate protection. Workshop 3: FORUM on international cooperation, Rome (IT), 10-14 May 2004. Unpublished. Presentation available

Christensen, J.M., Emission reductions. Why, how and how much. National workshop on 2. national communication, Buenos Aires (AR), 12-13 Apr 2004. Unpublished. PowerPoint presentation available

Christensen, J.M., Research activities in response to IPCC TAR. Event on research in response to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Bonn (DE), 21 Jun 2004. Unpublished. PowerPoint presentation available

Christensen, J.M., Introduction to the overall project and the methodological activities. Joint UCC/Regional centre meeting on methodological issues, Risø (DK), 17-18 Oct 2002. Unpublished.

Christensen, J.M., Introduktion med optegning af perspektiver for og resultater af topmødet. Bæredygtighed og energi efter Johannesburg. Temadag i Brændsels- og Energiteknisk Selskab, København (DK), 23 Oct 2002. Unpublished.

Christensen, J.M., International perspectives on climate aspects of the Danish energy policy. Medlemsmøde i Dansk Energi Klub, København (DK), 29 Apr 2002. Unpublished.

Fenhann, J., SEREINs strategiske samarbejde: UNEP-centrets erfaringer med kapacitetsopbygning og institutionel forankring af CDM-initiativer. SEREIN-2000 seminar, København (DK), 28 Feb 2003. Unpublished.

Fenhann, J., Hvor sikre er scenarierne for udslip af drivhusgasser, og hvordan bliver de til? Forskellige fremskrivninger og deres betydning for resultaterne. IPCC-temadag, København (DK), 8 Jun 2001. Unpublished.

Fenhann, J., Overblik over fremtidige globale og danske kilder til drivhusgasudslip. Klimadag 2001, København (DK), 26 Apr 2001. Unpublished.

Fenhann, J., Other GHGs. IPCC expert meeting on stabilisation and mitigation scenarios, Copenhagen (DK), 2-4 Jun 1999. Unpublished.

Fenhann, J., Lignes de base pour les projets à petite echelle. Atelier sur les lignes de base pour les projets MDP, Casablanca (MA), 28-29 Jan 2003. Unpublished.

Fenhann, J., Calcul des lignes de base: de la théorie à la pratique. Atelier sur les lignes de base pour les projets MDP, Casablanca (MA), 28-29 Jan 2003. Unpublished.

Fenhann, J., Latest Executive Board developments in Bonn about pipeline of projects. 3. Regional workshop of the project: Capacity development for the clean development mechanism, Santa Cruz de la Sierra (BO), 19-20 Aug 2004. Unpublished.

Fenhann, J., The CDM project cycle. Stimulating CDM investment in ASEAN. Stakeholders' perspectives of a regional network for CDM, Singapore (SG), 1-2 Nov 2004. Unpublished.

Fenhann, J., Small scale CDM projects: Easier to handle. Stimulating CDM investment in ASEAN. Stakeholders' perspectives of a regional network for CDM, Singapore (SG), 1-2 Nov 2004. Unpublished.

Fenhann, J., The CDM project design document. Stimulating CDM investment in ASEAN. Stakeholders' perspectives of a regional network for CDM, Singapore (SG), 1-2 Nov 2004. Unpublished.

Fenhann, J., Existing guidance material for CDM. Stimulating CDM investment in ASEAN. Stakeholders' perspectives of a regional network for CDM, Singapore (SG), 1-2 Nov 2004. Unpublished.

Fenhann, J., The CDM process and project cycle - time frame and roles and responsibilities. 1. Regional workshop and training on "Capacity development for the Clean Development Mechanism", Halong Bay (VN), 17-19 Nov 2003. Unpublished.

Fenhann, J., Rules for small-scale CDM projects. Capacity development for the clean development mechanism in North-Africa and Middle-East. Phase. 1. First regional workshop, Tunis, 25-26 Jan 2003. Unpublished.

Fenhann, J., Latest developments in CDM procedures and modalities. Capacity development for the clean development mechanism in North-Africa and Middle-East. Phase. 1. First regional workshop, Tunis, 25-26 Jan 2003. Unpublished.

Fenhann, J., Case examples of methodological issues that arrive at different steps of teh CDM project cycle. Joint UCC/Regional centre meeting on methodological issues, Risø (DK), 17-18 Oct 2002. Unpublished.

Fenhann, J., National communication support activities by the UNEP Collaborating Centre on Energy and Environment, Risø. International workshop of the Consultative Group of Experts on national communications from non-Annex 1 parties, Nassau (BS), 8-10 Aug 2002. Unpublished.

Fenhann, J., Benefits of regional cooperation. Workshop on integrated East African power development as a regional greenhouse gas mitigation option, Dar es Salaam (TZ), 28-29 Jun 2002. Unpublished.

Fenhann, J., Examples of promising climate changes. Policies and measures. International workshop on climate policy dialogue with Thailand, Bangkok (TH), 27-28 May 2002. Unpublished.

McKenzie, G.A., Radka, M.; Kamel, S.M.; An overview of technology and policy options promoting sustainable energy technologies. Risø international energy conference: Energy technologies for Post Kyoto targets in the medium term, Risø (DK), 19-21 May 2003. Unpublished.

Mackenzie, G., Cross-cutting issues to be studied during the project. Capacity development for the clean development mechanism in North-Africa and Middle-East. Phase. 1. First regional workshop, Tunis, 25-26 Jan 2003. Unpublished.

Mackenzie, G., CD4CDM - Progress of the project at global level. Capacity development for the clean development mechanism in North-Africa and Middle-East. Phase. 1. First regional workshop, Tunis, 25-26 Jan 2003. Unpublished.

Halsnæs, K., Linking climate, physical impact and economic sector models. PRUDENCE kickoff meeting, Snekkersten (DK), 3-5 Dec 2001. Unpublished.

Halsnæs, K., Konsekvenser av ökeande internationaliseringen og behov for international sammenlignelige statistikker. 22. Nordiska statistikermötet, Kalmar (SE), 2-3 Aug 2001. Unpublished.

Halsnæs, K., Sustainable development and climate change - how to build an international policy regime with multiple sharing of benefits from cooperative emission reduction policies. Discussion of economic efficiency and equity consequences of the Kyoto flexibility mechanisms, Copenhagen (DK), 12 Dec 2001. Unpublished.

Halsnæs, K., Sustainable development (SD) and climate change (CC). Workshop on sustainable development and climate change, Paris (FR), 24-25 Oct 2001. Unpublished.

Halsnæs, K., Økonomiske og samfundsmæssige perspektiver på globalt samarbejde om drivhusgasreduktioner. Klimadag 2001, København (DK), 26 Apr 2001. Unpublished.

Halsnæs, K., Vurderinger af tekniske sider og forslag i rapporterne. Hvad er fremtidsudsigterne?. Møde i Selskabet for Teknologianalyse og -Vurdering (STAV), Ingeniørforeningen i Danmark, København (DK), 31 May 2001. Unpublished.

Halsnæs, K., Konsekvenser for energisektoren af IPCCs konklusioner. Møde i Dansk Energiøkonomisk Selskab, København (DK), 21 May 2001. Unpublished.

Halsnæs, K., Climate change: Findings and conclusions from IPCC third assessment on mitigation and socio-economic aspects. 5. Nordic environmental research conference, Aarhus (DK), 14-16 Jun 2001. Unpublished.

Halsnæs, K., Hvad koster klimapolitik?. IPCC-temadag, København (DK), 8 Jun 2001. Unpublished.

Halsnæs, K., Sustainable development impacts of implementing GHG emission reduction options in the energy sector. Consultancy meeting on identification and categorisation of indicators for sustainable energy development (ISED), Vienna (AT), 4-6 Dec 2000. Unpublished.

Halsnæs, K., Linkages between development policies and climate change - lessons from case studies in developing countries. ReNED seminar 2004, Copenhagen (DK), 26-27 Aug 2004. Unpublished.

Halsnæs, K., Climate change information and economic assessments. ESF LESC exploratory workshop: Regional climatic change in Europe: Processes and impacts, Wengen (CH), 29 Sep - 3 Oct 2003. Unpublished.

Halsnæs, K., Development first project. Workshop on development and climate, New Delhi (IN), 11 Nov 2003. Unpublished.

Halsnæs, K., Overview of phase I results based on country studies (Bangladesh, Brazil, China, India, Senegal and South Africa). Workshop on development and climate, Milano (IT), 7 Dec 2003. Unpublished.

Halsnæs, K., Linkages between sustainable development policies and climate change - case studies from developing countries. Workshop: Climate changes with focus on natural resources: The biological dimensions and the economic consequences, Copenhagen (DK), 2-4 Jun 2003. Unpublished.

Halsnæs, K., National decision making framework for selecting and preparing CDM projects. Joint UCC/Regional centre meeting on methodological issues, Risø (DK), 17-18 Oct 2002. Unpublished.

Halsnæs, K., Introduction to identification of major methodological issues that will be relevant to address in relation to CDM project. Joint UCC/Regional centre meeting on methodological issues, Risø (DK), 17-18 Oct 2002. Unpublished.

Halsnæs, K., Climate change and sustainable development - case studies from developing countries. ESF exploratory workshop in life and environmental sciences: Atmospheric pollution effects on local, regional and global scales - an integrated approach, Oslo (NO), 26-28 Sep 2002. Unpublished. Abstract available

Halsnæs, K., De store organisationers rolle. Bæredygtighed og energi efter Johannesburg. Temadag i Brændsels- og Energiteknisk Selskab, København (DK), 23 Oct 2002. Unpublished.

Halsnæs, K., Huq, S.; Presentation of the literature review: Practical links between development, sustainability and climate change. Development and climate change 2. project meeting, Paris (FR), 28-29 Jun 2002. Unpublished.

Halsnæs, K., Hourcade, J.C.; Assessment of current and alternative development paths. Development and climate change 2. project meeting, Paris (FR), 28-29 Jun 2002. Unpublished.

Hellmuth, M.E., An integrated demographic, economic and water resource systems model of Botswana: A socio-economic analysis of the impacts of investments in water supply and sanitation and HIV/AIDS prevention. EMF workshop on climate change impacts and integrated assessment (Workshop IX), Snowmass, CO (US), Aug 2003. Unpublished.

Hellmuth, M.E., Capacity building in analytical tools for estimating and comparing costs and benefits of adaptation projects in Africa - An AIACC project. EMF workshop on climate change impacts and integrated assessment (Workshop IX), Snowmass, CO (US), Aug 2003. Unpublished.

Hinostroza, M.L.; Fenhann, J., Implementation of the UNFCCC, the Kyoto Protocol and the CDM in Latin American and the Caribbean countries. Latin American seminar on the development of capacities for CDM: A contribution to sustainability, Buenos Aires (AR), 9-10 Sep 2003. Unpublished. Paper available

Kamel, S.M., Update on CDM executive board decisions. 2. regional workshop on legal and regulatory issues in CDM, Tunis (TN), 26-27 Dec 2003. Unpublished.

Kamel, S.M., Hybrid power systems: Technology characteristics and economics. Mediterranean energy policy executive course, Frankfurt (DE), 11-16 Sep 2003. Unpublished.

Kamel, S.M., Renewable energy financing in the Mediterranean region. Mediterranean clean development mechanism conference, Tunis (TN), 23-24 Sep 2003. Unpublished.

Kamel, S.M.; Dahl, C., The economics of hybrid power systems for sustainable desert agriculture in Egypt. 2. Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik (HR), 2-7 Jun 2002. Unpublished.

Kühl, J.J., Household poverty and vulnerability - a bootstrap approach. Northeast universities development consortium conference, New Haven, CT (US), 17-19 Oct 2003. Unpublished.

Kühl, J.J., Household poverty and vulnerability - a bootstrap approach. Nordic conference in development economics 2, Copenhagen (DK), 23-24 Jun 2003. Unpublished.

Kühl, J.J., Variability in poverty and vulnerability - a bootstrap approach. CSAE research workshop, Oxford (GB), 3 May 2003. Unpublished.

Kühl, J.J., Risk-coping strategies without markets - how do agricultural households in developing countries cope with risk in the absence of risk and capital markets. Nordic conference in development economics, Bergen (NO), 27-28 May 2002. Unpublished.

Kühl, J.J., Uncertainty and mitigation strategies. Ph.D. Seminar at Copenhagen University, Copenhagen (DK), 21 Mar 2002. Unpublished.

Lee, M.-K., The Marrakech deal and ways ahead. International workshop on climate policy in Asia, Tokyo (JP), 17-18 Dec 2001. Unpublished.

Lee, M.-K.; Olsen K.R., Foreign direct investment, economic development, and the environment. Workshop on socio-economic assessment for the CDM and other mechanisms, Beijing (CN), 15-16 Mar 2001. Unpublished. Paper available

Lee, M.-K., Overview of the issues of the Kyoto mechanisms: Focusing on the CDM. 3. Annual BeSeTo conference, Seoul (KR), 24-25 Mar 2001. Unpublished. Paper available

Lee, M.-K., Overview of energy subsidies and a reform plan of energy tax system in South Korea. Regional workshop on energy subsidy reform and sustainable development: Challenges for policy makers, Bangkok (TH), 16-17 Jan 2001. Unpublished. Paper available

Lee, M.-K., South Korea's energy outlook and related environmental issues. Seminar for 3E (energy, environment, and energy), Keio University, Keio (JP), 6 Dec 2000. Unpublished.

Lee, M.-K., Capacity development for the CDM. Side event at Climate Change Convention (COP9), Milan (IT), 8 Dec 2003. Unpublished.

Lee, M.-K., The CER markets. International workshop 'Dialogue on future international actions to address global climate change, Jeju (KR), 20-21 Oct 2003. Unpublished.

Lee, M.-K., A legal framework for the CDM in developing countries. National workshop for DC4CDM project, Hanoi (VN), 11 Sep 2003. Unpublished.

Lee, M.-K., Capacity development for the CDM. National workshop for DC4CDM project, Hanoi (VN), 11 Sep 2003. Unpublished.

Lee, M.-K., Capacity development for the CDM. National workshop for DC4CDM project, Phnom Penh (KH), 26-27 Mar 2003. Unpublished.

Lee, M.-K., Legal issues in CDM. 1. Regional workshop and training on "Capacity development for the Clean Development Mechanism", Halong Bay (VN), 17-19 Nov 2003. Unpublished.

Lee, M.-K., Capacity building and technology transfer. International workshop on climate change energy modelling, Yokohama (JP), 9-10 Dec 2002. Unpublished.

Lee, M.-K., Capacity building for the clean development mechanism. Training workshop on climate change issues in Indo-China region, Phnom Penh, Cambodia. Phnom Penh, Cambodia. Phnom Penh (KH), 5-6 Dec 2002. Unpublished.

Lee, M.-K., Global participation and sustainable development. Experts meeting on climate change and sustainable development, Seoul (KR), 19-20 Nov 2002. Unpublished.

Lee, M.-K., Capacity building for the clean development mechanism. NSS workshop on Kyoto protocol capacity building, Sigriswil (CH), 23-25 Sep 2002. Unpublished.

Lee, M.-K., To be efficient or to be equitable: How to bridge the gulf. International symposium on climate policy and sustainable development: Measures for global participation, Seoul (KR), 20 Mar 2002. Unpublished.

Lee, M.-K., Capacity building for the clean development mechanism. Asia-Pacific workshop on clean development mechanism (CDM) and national strategy studies on climate change, Bangkok (TH), 29-30 Apr 2002. Unpublished.

Lee, M.-K., The Marrakech deal and ways ahead. International workshop on climate policy dialogue in Asia, Bangkok (TH) and Ho Chi Min (VN), 27-28, 30-31 May 2002. Unpublished.

Meyer, H.J., CDM market development. Seminar on international environmental policies - Design of international agreements and economic instruments, Dragerup (DK), 4-5 May 2000. Unpublished.

Missfeldt, F., Should economies in transition do emissions trading or joint implementation?. 1. CFEWE workshop, Milan (IT), 5-6 Jul 2001. Unpublished.

Missfeldt, F.; Haites, E., The potential contribution of sinks to meeting Kyoto Protocol commitments. EAERE annual conference 2001, Southampton (GB), 28-30 Jun 2001. Unpublished.

Missfeldt, F., Haites, E.; Compliance for international trading of greenhouse gas emissions quota. EAERE annual conference 2001, Southampton (GB), 28-30 Jun 2001. Unpublished.

Missfeldt, F., The feasibility of domestic CO_2 emissions trading in Poland. ENER Forum 1: Kyoto mechanisms: Integrating the results of COP 6 into the national framework, Krakow (PL), 8-9 Feb 2001. Unpublished.

Missfeldt, F., Haites, E.; Liquidity implications of a commitment period reserve at national and global levels. CATEP workshop: Global trading, Kiel (DE), 30 Sep - 1 Oct 2002. Unpublished.

Missfeldt, F., Haites, E.; Kemfert, C.; Can Kyoto Protocol parties induce the United States to adopt a more stringent greenhouse gas emissions target?. CATEP workshop: Global trading, Kiel (DE), 30 Sep - 1 Oct 2002. Unpublished.

Olhoff, A., Social capital aspect of climate change mitigation policies. Ph.d. seminar on development and environmental economics, Roskilde (DK), 31 May 2001. Unpublished.

Olhoff, A., Methods to link sustainable development and climate change - The identification of useful indicators. Development and climate change 2. project meeting, Paris (FR), 28-29 Jun 2002. Unpublished.

Olhoff, A., Climate change and sustainable development - case studies from developing countries. Nordic conference in development economics, Bergen (NO), 27-28 May 2002. Unpublished.

Olhoff, A., Private and social costs of household energy in Ghana. Ph.D. Seminar at Copenhagen University, Copenhagen (DK), 21 Mar 2002. Unpublished.

Olhoff, A., Introduction of the sustainable development and climate change proceedings. Development and climate change project meeting, Paris (FR), 28 Feb 2002. Unpublished.

Olsen, K.H., Conflicting national and global priorities over climate change policy - a historical perspective on the implementation of climate policy and the emergence of the Clean Development Mechanism in Uganda (poster). ReNED seminar 2004, Copenhagen (DK), 26-27 Aug 2004. Unpublished.

Pacudan, R., Clausen, N.-E.; Energy for development network, Risoe National Laboratory. ASEAN energy business forum 2004: The rapidly growing market for energy, Manila (PH), 8-10 Jun 2004. Unpublished.

Pacudan, R., CDM market intelligence and opportunities for ASEAN. ASEAN energy business forum 2004: The rapidly growing market for energy, Manila (PH), 8-10 Jun 2004. Unpublished.

Pacudan, R., Clausen, N.-E.; Policy options and economics of wind energy development. ASEAN energy business forum 2004: The rapidly growing market for energy, Manila (PH), 8-10 Jun 2004. Unpublished.

Pacudan, R., Climate change in the ASEAN and initiatives in the energy sector. 4. ASEAN energy business forum, Bangkok (TH), 21-22 Oct 2002. Unpublished.

Pacudan, R., Public interest energy efficiency and power sector reforms. Ad Hoc expert group meeting on end-use energy efficiency towards promotion of a sustainable energy future, Bangkok (TH), 18-20 Nov 2002. Unpublished.

Pacudan, R., The clean development mechanism and financing institutions. Training course on banking for sustainable development for senior executives from the Industrial and Commercial Bank of China, Lund (SE), 6-17 Oct 2003. Unpublished.

Pacudan, R., International market for certified emissions reduction. Conference on accessing markets and commercializing sustainable energy in Asia, Singapore (SG), 18-20 Nov 2003. Unpublished.

Pacudan, R., Power sector reforms, trade in services and implications on human development: Case of the Philippines. Ad Hoc expert meeting on energy services, Geneva (CH), 6 Jun 2003. Unpublished.

Pacudan, R., Grid-based renewable energy promotion in Southeast Asia: Case of the Philippines and Thailand. International renewable energy conference, Sønderborg (DK), 17-19 Sep 2003. Unpublished.

Painuly, J., North-South dialogue on climate policy: The way forward. TERI/IGES workshop on climate policy dialogue, New Delhi (IN), 26-27 Nov 2001. Unpublished.

Painuly, J., The clean development mechanism after COP-7. TERI/IGES workshop on climate policy dialogue, New Delhi (IN), 26-27 Nov 2001. Unpublished.

Painuly, J., Financing energy efficiency: What mechanisms for ESCOs in developing countries?. 7. European roundtable on cleaner production, Lund (SE), 2-4 May 2001. Unpublished.

Painuly, J., Energy subsidies in India: Issues, impacts and options. IEA/UNEP regional workshop on energy subsidy reform and sustainable development: Challenges for policy makers, Bangkok (TH), 16-17 Jan 2001. Unpublished.

Painuly, J., Energy subsidies: A case study of India. IEA/UNEP workshop on energy subsidy reform and sustainable development: Challenges for policy makers, Paris (FR), 6-7 Nov 2000. Unpublished.

Painuly, J., Objectives and methodological framework for the RETs project. Final workshop on Ghana renewable energy technologies (RETs) project, Elmina (GH), 30 Jun 2000. Unpublished.

Painuly, J., RETs projects; Methodological framework. Final workshop on implementation of renewable energy technologies (RETs) projects, opportunities and barriers, Cairo (EG), 13 Jun 2000. Unpublished.

Painuly, J., Elements and market size of Kyoto CDM under Kyoto. National workshop: UNFCCC and its Kyoto Protocol, with special reference to the cooperative implementation mechanisms, Dhaka (BD), 29-30 Aug 2000. Unpublished.

Painuly, J., Estimation of potential market size of Kyoto target for GHG mitigation. Preliminary national workshop: UNFCCC and its Kyoto Protocol, with special reference to the cooperative implementation mechanisms, Kathmandu (NP), 11 Aug 2000. Unpublished.

Painuly, J., Estimating the GHG abatement demand under Kyoto Protocol targets. National workshop: UNFCCC and its Kyoto Protocol, with special reference to the cooperative implementation mechanisms, Colombo (LK), 3-4 Aug 2000. Unpublished.

Painuly, J., Main concepts in abatement assessment. Thematic workshop on abatement of greenhouse gas emissions, Nairobi (KE), 27-28 Mar 2000. Unpublished.

Painuly, J., The clean development mechanism: Potential, promise and limitations. International conference on instruments for climate policy: Limited versus unlimited flexibility, Ghent (BE), 19-20 Oct 2000. Unpublished.

Painuly, J.P., Renewable energy potential for business. Launch of the PV solar financing project by Syndicate Bank, Karnataka (IN), 4 Mar 2003. Unpublished.

Painuly, J.P., Renewable energy potential for business. Launch of the PV solar financing project by Canara Bank, Bangalore (IN), 23 Jan 2003. Unpublished.

Painuly, J.P., Energy and sustainable development. 26. Annual IAEE international conference. New challenges for energy decision makers. Panel session on sustainable development in energy context, Prague (CZ), 4-7 Jun 2003. Unpublished.

Ringius, L., Science for the sustainability transition. Meeting at Potsdam Institute for Climate Impact Research: European Climate Forum, Potsdam (DE), 4 Oct 2001. Unpublished.

Ringius, L., Status of Kyoto mechanisms. UNEP-sponsored training workshop for the Moroccan delegation to COP-7, Rabat (MA), 19 Oct 2001. Unpublished.

Ringius, L., What prospects for soil C sequestration in the CDM? COP-6 and beyond. Copenhagen Global Change Initiative (COGCI) PhD School. Summer course on ecosystem processes, Brorfelde (DK), 28 May - 2 Jun 2001. Unpublished.

Ringius, L., Reducing CO_2 emissions from fuelwood consumption through large-scale introduction of LPG in the Gambia. National workshop on climate change, Banjul (GM), 6 Dec 2001. Unpublished.

Ringius, L., Fairness and climate change: Which principles matter?. OECD and World Resources Institute seminar on climate change and sustainable development strategies: An agenda for long term action, Paris (FR), 29-31 Man 2001. Unpublished.

Ringius, L.; Selrod, R.; Aune, J.; Yager, A., Climate and development options for Sub-Saharan Africa. (2000) Publikationen ikke tilgængelig - aldrig udgivet

Ringius, L., Increasing carbon sequestration in soils, forests and grasslands. World Bank rural week 1999, Chantilly, VA (US), 24-26 Mar 1999. Unpublished.

Ringius, L.; Torvanger, A.; Underdal, A., Burden sharing in international climate policy: Principles of fairness in theory and practice. COP-6 side-event on: Differentiation of future commitments. Principles and approaches, The Haag (NL), 18 Nov 2000. Unpublished.

Rogat, J., UNEP and UCCEE programme and activities (oral presentation). International expert workshop on the analysis of the economic and public health impacts of air pollution, Garmish-Partenkirchen (DE), 6 Sep 2001. Unpublished.

Rogat, J., The determinants of gasoline demand in some Latin American countries (oral presentation). Training module on energy demand modelling, Kuala Lumpur (MY), 23-27 Apr 2001. Unpublished.

Rogat, J., The economic and environmental effects of reforming fuel and coal subsidies in Latin America: Case study for Chile (oral presentation). International workshop on energy subsidy reform and sustainable development: Challenges for policy makers, Santiago (CL), 26-27 Mar 2001. Unpublished.

Rogat, J., The economic and environmental effects of reforming fuel and coal subsidies in Latin America: Case study for Chile (oral presentation). International workshop on climate change policy study, Beijing (CN), 15-16 Mar 2001. Unpublished.

Rogat, J.; O'Ryan, R.; Miller, S., The economic and environmental effects of increasing fuel taxes in Latin America: Case study for Chile. IEA workshop: Energy subsidy reform and sustainable development: Challenges for policy makers, Paris (FR), 6-7 Nov 2000. Unpublished.

Rogat, J., Principios y criterios para la fijación de precios. Seminario internacional: Politicas de precios de combustibles en America Latina, Santiago (CL), 3-4 Dec 2002. Unpublished.

Rogat, J., UNEP and sustainable energy finance. International seminar on environmentally sound technologies (ESTs) for energy and land-based transportation, Osaka (JP), 5-6 Mar 2002. Unpublished.

Wamukonya, N., PV: A viable technology option for Africa's development?. EAPIC conference, Addis Ababa (ET), 29-30 Oct 2001. Unpublished.

Wamukonya, N., UNEP activities in renewable energy technologies and implications for women. United Nations Environment Programme seminar for women leaders on uptake of renewable enegy technologies, Perth (AU), 27 Jun - 4 Jul 2001. Unpublished.

Wamukonya, N., Policy: Involvement of women in decision making processes in the energy sector. Women and energy workshop, Durban (ZA), 11-12 Dec 2000. Unpublished.

Wamukonya, N.; Olsen, K.R., Subsidy reform in the South African electricity sector - implementation and distributional aspects. Workshop energy subsidy reform and sustainable development: Challenges for policy makers, Durban (ZA), 15-16 Dec 2000. Unpublished.

Wamukonya, N., Challenges for sustainable development under electricity sector reform. World forum on energy regulation conference, Rome (IT), 5-9 Oct 2003. Unpublished. Paper available

Wamukonya, N., WSSD, politics of energy and policy implications. Workshop on energy demand, CDM, NEPAD and the millennium development goals in East Africa, Nairobi (KE), 22-23 Nov 2003. Unpublished. Paper available

Wamukonya, N., Power sector reform in developing countries: Mismatched agendas (with reference to Chile). International seminar: Environment and power sector expansion, Santiago (CL), 9-11 Dec 2002. Unpublished. Paper available

Zak, J., Desenvolvimento de empresas de energia rural do Brasil (in Spanish). Policy workshop, Brazil Rural Energy Enterprise Development, Itajuba (BR), 16 Sep 2003. Unpublished.

Zak, J., Off-grid electrification in South Africa. Market-opening workshop, Brazil Rural Energy Enterprise Development, Salvador (BR) and Maceio (BR), 7 and 13 May 2002. Unpublished. PowerPoint presentation available

Annex 9
URC Capacity Building Events: 2000-2004

Workshop/Seminar	Timing	Location	No. of Participants	Stakeholders	Government	Private sector	NGO, CBO	Int. Inst.	Experts	Academia
1215126 EU Energy Initiative (EUEI) Capacity building on access to energy in Africa, Danish support for two sub-regional capacity building programmes Facilitation Workshop and Policy Dialogue on Energy Access for the Rural Poor, West Africa	25-29 Oct 2004	Burkina Faso	80	Government, NGOs, private sector, external partners within energy, agriculture, rural development and finance	53	6	5	23	13	
1215124 Information on the Commercialization of Renewables in ASEAN - ICRA Workshop on the Commercialization of Renewables in the ASEAN	Aug 2004	Malaysia	25	Malaysian Energy Center, Innovation Energy and Development, ASEAN Renewable Energy Sub-sector Network						
1215122 - Climate Policy Frameworks beyond 2012 Future Climate Policy Collaboration	7-8 Oct 2004	Denmark	60	Private, government, international institutions, experts	51	9	2	11	27	
1215121 ASEAN Regional Network to Facilitate Sustainable Energy Investment through Clean Development Mechanism Small preparation meeting	11-12 May 2004	Germany	5	Research institutions		40			60	
CDM network meeting	30 Oct - 6 Nov 2004	Singapore	60	Ministries, DOEs, DNAs, consultants, private sector, banks, ASEAN Secretariat	50	20			20	10
1215118 Stipulating EU-Indochina New and Renewable Energy Projects though Private Sector participation in Economic Cooperation and Foreign Direct Investment initiatives Technology Partnership for New and Renewable Energy	4-5 Mar 2004	Vietnam	40	Regional Institute for Environmental Technology, European technology suppliers, project developers in Indo-China and RE stakeholders in Indo-China						
1215116 Macedonia Mitigation plan for national communication	27 Sep - 3 Oct 2003	Macedonia	12	Ministries/Research Institutes	20		20			60

1215115 Network for Environmentally Sustainable Transport in Latin America and the Caribbean (NESTLAC) Regional Consultation meeting for the establishment of NESTLAC	3-4 Nov 2003	Panama	26	Government representatives from: Panama, Guatemala, Colombia, Ecuador, El Salvador, Chile and France	70	10	10		10	
1215108 Bridging the Gap between national Development Policies and Dealing with Climate Change COP 8 side event	29 Aug 2002	India	60	40: Governments, experts, private sector.						
Workshop on Development and Climate	7 Oct 2003	India	100	80: Government, private sector, international organisations, private sector, experts	23	8	14	15	7	33
1215107 Electrification Planning in Burkina Faso Electrification plan and capacity building	2003	Burkina Faso	5	Energy Agency	80				20	
Electrification plan and capacity building	2003	Burkina Faso	5	Energy Agency	70	10			20	
Capacity building on CDM	11-26 Feb 2004	Burkina Faso	50	Ministries/Agencies/Private sector	40	10	10		10	20
Electrification plan and capacity building	16-27 May 2004	Burkina Faso	5	Energy Agency	80				20	
1215106 Green House Gases Estimates 2012 Danish Inventory of GHG, meeting 1	2000	Denmark	10	Ministries & Research Institutions	100					
Danish Inventory of GHG, meeting 2	2000	Denmark	10	Ministries & Research Institutions	100					
Danish Inventory of GHG, meeting 3	2001	Denmark	10	Ministries & Research Institutions	100					
1215103 Capacity Development for Clean Development Mechanism <u>Asia</u>: First National Workshop	27-28 Nov 2002	Vietnam	90	Government, national counterparts	61	13	6	4	3	12
First National Workshop	9-11 Dec 2002	Philippines	35	NGOs, private sector, development banks, energy companies	26	43	9	6		17
First Regional Workshop (phase I)	16-18 Jan 2003	Thailand	16	Governments, research institutions, banks, regional institutions, national counterparts	38			13	6	44
First National Workshop	26-27 Mar 2003	Cambodia	67	Government, energy institutions, private sector, national counterparts	79	6		12		3
Second National Workshop	4 Nov 2003	Cambodia	34	Government, energy institutions, private sector, national counterparts, universities	76	18				6
First Regional Workshop (phase II)	17-19 Nov 2003	Vietnam	32	Government, public institutions, research institutions, national counterparts	59	3		9	9	19

Second Regional Workshop (phase II)	23 Mar 2004	Cambodia	32	Governments, international organizations, financial institutions, private sector, research institutions, national counterparts	63			9	3	25
First Extended Regional Workshop	24-26 Mar 2004	Cambodia	63	Governments, international organizations, financial institutions, private sector, research institutions, national counterparts	56	10	3	8	10	14
Local training in Visayas	27-28 May 2004	Philippines								
Meeting with local stakeholders	22 Jun 2004	Vietnam	100	Government, national counterparts, universities, utilities, private sector						
Training for waste management	23 Jun 2004	Philippines	60	Government, energy institutions, private sector, national counterparts, universities						
Local training in Mindanao	15-16 Jul 2004	Philippines	60	Government, energy institutions, private sector, national counterparts, universities						
Training session	16-20 Aug 2004	Cambodia	50	Government, energy institutions, private sector, national counterparts, universities						
Training for sink projects	25 Aug 2004	Philippines	60	Government, energy institutions, private sector, national counterparts, universities						
Third National Workshop and meeting with stakeholders	26-27 Aug 2004	Vietnam	50	Government, energy institutions, private sector, national counterparts, universities						
Local training in Luzon	16-17 Sep 2004	Philippines	60	Government, energy institutions, private sector, national counterparts, universities						
Second Extended Regional Workshop	29 Sep - 1 Oct 2004	Thailand	59	Governments, international organizations, financial institutions, private sector, research institutions, national counterparts	42	19	2	10	5	22
CDM Investor Forum	27-29 Oct 2004	Philippines	102	Governments, international organizations, financial institutions, private sector, research institutions, national counterparts	23	42		20	3	13
National Workshop	29 Oct 2004	Philippines	60	Government, energy institutions, private sector, national counterparts, universities						

Latin America:										
First National Workshop	21 Nov 2002	Bolivia	60	Government, NGOs, national counterparts						
First Regional Workshop	2-3 Dec 2002	Ecuador	30	Governments, research institutions, national counterparts						
CDM in Central America	27-28 Mar 2003	El Salvador	60	Governments, research institutions, private sector, banks, national counterparts						
Latin American Seminar	9-10 Sep 2003	Argentina	163	Governments, legislators, research institutions, public institutions, private sector, international organizations, universities, national counterparts						
Second Regional Workshop	11-12 Sep 2003	Argentina	30	Governments, research institutions, national counterparts						
Third National Workshop	11 Nov 2003	Bolivia	60	Government, NGOs, national counterparts						
International Course on CDM	Nov 2003	Bolivia	60	Governments, public institutions, research institutions, private sector, national counterparts						
First National Workshop	29 Nov 2002	Ecuador	50	Government, national counterparts						
Second National Workshop (Carbon Market)	10-12 Feb 2004	Ecuador	50	Government, national counterparts, financial institutions						
Training Workshop - Reforestation and Bioenergy	1-5 Mar 2004	Ecuador	50	Government, national counterparts						
National Consulting Workshop on Legal Framework for CDM	May/Jun 2004	Bolivia	50	Government, national counterparts						
Third Regional Workshop	19-20 Aug 2004	Bolivia	28	Governments, national counterparts, private sector						
Workshop on national CDM strategy	Sep 2004	Bolivia	50	Government, national counterparts						
Middle East & North Africa:										
First National Workshop	17-18 Dec 2002	Egypt	60	Government, national counterparts	50	20	5		20	5
First National Workshop	7-8 Jan 2003	Morocco	60	Government, national counterparts	50	20			30	
First Regional Workshop	25-26 Jan 2003	Tunisia	18	Governments, research institutions	50	20			30	
First National Workshop	24 Feb 2003	Jordan	80	Government, national counterparts	50	10	10		20	10
Second Regional Workshop (Regulatory and legal issues)	20-21 Dec 2003	Tunisia	20	Governments, research institutions	20	20			50	10
Second National Workshop (Baselines)	28-29 Jan 2004	Morocco	34	Government, municipalities, national counterparts, private sector	30	10	10		50	
Training Workshop (Financial and investment community)	25 Feb 2004	Morocco	30	Government, private sector, research institutions, international organizations, national counterparts	10	40	10		40	

Third Regional Workshop (Baselines)	18-19 Mar 2004	Tunisia	15	Governments, research institutions						
Third National Workshop (Baselines)	31 Mar . 1 Apr 2004	Egypt	40	Government, national counterparts	20	20	10		40	10
CDM Investment Forum	21 Apr 2004	Morocco	110	Governments, international organizations/banks, private sector, research institutions, national counterparts	30	40		5	20	5
Regional DNA Meeting	23-24 Apr 2004	Morocco	12	Governments, national counterparts	90				10	
National Workshop on PDD	14-16 Jun 2004	Egypt	40	Government, national counterparts, financial institutions, private sector	30	30			30	10
Fourth Regional Workshop on Additionality, Project Cycle and Sustainable Development	27-29 Aug 2004	Tunisia	20	Governments, research institutions	50				50	
National Workshop on Additionality	7-8 Sep 2004	Egypt	30	Government, national counterparts	30	30			40	
CDM Investment Forum	22-24 Sep 2004	Tunisia	100	Governments, international organizations, financial institutions, private sector, research institutions, national counterparts	40	40			20	
Sub-Saharan Africa:										
First National Awareness Workshop	7-9 Oct 2002	Côte d'Ivoire	57	Public officials, national institutions, private sector, NGOs, UN, International organisations						
First National Workshop	9 Jan 2003	Uganda	43	Government, national counterparts						
First National Workshop	16 Jan 2003	Mozambique	30	Government, public institutions and NGOs						
First Regional Workshop	3-4 Mar 2003	Kenya	25	Government, national counterparts						
Workshop for potential DNA members	18 May 2003	Côte d'Ivoire	15	Government, national counterparts						
Second Regional Workshop	16-18 Sep 2003	South Africa	30	Governments, research institutions, national counterparts						
2nd National Workshop Capacity Development for the DNA	13-14 Oct 2003	Côte d'Ivoire	14	Government, national counterparts						
3rd National Workshop (Baselines Training)	15-16 Oct 2003	Côte d'Ivoire	25	Government, national counterparts						
African CDM Training Workshop	20-21 Oct 2003	Ethiopia	49	FCCC negotiators, national counterparts						
Awareness Workshop	30-31 Oct 2003	Mozambique	21	Government, university and private sector						
Third National Training of Trainers	7 Nov 2003	Mozambique	20	Government, university and private sector						
Training of CDM Project Facilitators	18-19 Dec 2003	Mozambique	10	Government, university and private sector						
Training of CDM Project Facilitators	5-6 Feb 04	Mozambique	10	Government, university and private sector						

CDM Seminar for Project Developers	24 Mar 2004	Uganda	42	Government, national counterparts						
Annual meeting for review and plan	May 2004	Mozambique	10	URC Staff, ENDA, ERC, national teams						
CDM Seminar for Civil Society, NGOs and CBOs	13 May 2004	Uganda	63	Government, national counterparts, CBOs, NGOs						
CDM Project Development Workshop	2-6 Aug 2004	Uganda	25	Government, national counterparts						
3rd Regional Workshop	16-18 Aug 2004	Mozambique	54	Governments, research institutions, national counterparts						
National training workshop	15 Sep 2004	Côte d'Ivoire	33	Government, national counterparts						
1215099 Climate Change Action Programme – Tanzania										
Integrated East African Power Development, mission 1	2001	Tanzania	5	Research Institutions	20				80	
Integrated East African Power Development, mission 2	2002	Tanzania	5	Research Institutions	20				80	
Integrated East African Power Development, final workshop	28-29 Jun. 2002	Tanzania	30	Ministries & Research Inst from Uganda, Kenya, Tanzania						
1215097 Health Impact										
International Symposium on Socio-Economic Factors and Air Pollution Health Effects	Sep. 2003	Australia	81	US EPA, World Bank, WHO, NREL, and representatives from universities from developed and developing countries	2		8		40	50
1215093 UNF workshops										
Workshop on Development and Climate	7 Dec 2003	Italy	30	Government, international organisation	29	10		23	38	
1215090 Brazil Rural Energy Enterprise Development (BREED)										
Market Opening – Bahia	May 2002	Brazil	96	Entrepreneurs, financial institutions, NGOs, universities, government	9	70	5	2	4	9
Market Opening – Alagoas	May 2002	Brazil	66	Entrepreneurs, financial institutions, NGOs, universities, government	18	50	18	3	6	5
Market Opening – Ceara	Nov. 2002	Brazil	111	Entrepreneurs, cooperatives, financial institutions, NGOs, universities, government	7	47	10	1	3	32
Entrepreneur training – Rio Preto	Jan. 2003	Brazil	24	NGOs, small farmers		79			21	
Micro Finance and Alternative Energy Technologies – Moreno	Mar. 2003	Brazil	51	NGOs, microfinance institutions and government	10	43	39	2	6	
Entrepreneur training – Pindorama	Aug. 2003	Brazil	20	Cooperative's members		90		10		
Entrepreneur training – Luz do Sol	Sep. 2003	Brazil	50	Entrepreneurs		94		6		
Entrepreneur training – Ceara	Sep. 2003	Brazil	24	Entrepreneurs		92		8		
Integration of small rural enterprises in implementation of Law 10.438	Sep. 2003	Brazil	25	Government, associations, utilities, manufacturers, universities, research centres	12	36	20	8	4	20

Power Futures	Apr. 2004	Brazil	49	NGOs, entrepreneurs, universities and architects/builders		42	31		6	21
1215084 Burkina Faso (old)										
Capacity building energy agency, mission 1	2000	Burkina Faso	5	Energy Agency	80			20		
Capacity building energy agency, mission 2	2000	Burkina Faso	10	Energy Agency & Private sector	60	20		20		
Capacity building energy agency, mission 3	2001	Burkina Faso	5	Energy Agency	80			20		
ASEAN Energy Business Forum										
ASEAN Energy Business Forum 2004	8-10 Jun. 2004	Philippines	70	ASEAN Center for Energy, Philippine Department of Energy, ASEAN energy sector, project developers, technology suppliers and energy sector stakeholders						
URC Central Fund										
World Energy Prices and Renewable Energy Development in Southeast Asia	2-3 Dec. 2004	Thailand	60	UNEP, EC-ASEAN Cogen Programme, Malaysian Energy Center, ASEAN Centre for Energy, ASEAN Renewable Energy Sub-sector Network						
Other										
Energy Pricing Policies in Latin America and their Economic and Environmental Implications	3-4 Dec. 2002	Chile	27	Government and Oil Industry representatives from: Chile, Mexico, Argentina, Bolivia, Brazil, Colombia, Ecuador, Uruguay, Paraguay, Venezuela and France						