

## **Clipore Programme Progress Report**

**(July 2004 – December 2005)**

### **1. It takes an Integrated, Global Programme of Research to Address Climate Change**

#### **The Need for Global Research Collaboration**

Few would argue with the statement that the threat of climate change poses unprecedented scientific, economic and political challenges. On the natural-science side alone no nation or group of nations is so endowed with economic wealth and human capacity that it can meet the challenge of scientific understanding alone. Indeed, the nations of the world have come together formally (through institutions such as the IPCC) and informally to join forces and work collaboratively.

The need for multi-nation collaboration is perhaps more important with respect to social science than it is with natural science. Social scientists are concerned with the responses of individuals and governments to the climate threat, and it is well known that cultures, economies and particular circumstances of each country vary, often dramatically. Since it will take many nations of the world to act in a coordinated manner to address the threat, social-science research must embrace and understand this nation-to-nation diversity when formulating or analyzing policy options. The best way – perhaps the only way – to gain and employ this understanding is to develop social-science research collaborations among institutions in different nations recognizing that each institution already possesses the special knowledge of its home country's culture, economics, and politics.

Clipore is grounded on the above realization and from its inception has gathered a world-class set of international social-science research institutions working together and in collaboration with natural scientists. Phase 1 of the Programme includes: IVL Swedish Environmental Research Institute; Linköping, Gothenburg and Stockholm Universities (Sweden); the Swedish Meteorological and Hydrological Institute; the Chinese Academy of Meteorological Sciences; the Center for International Climate and Environmental Research Oslo (Norway); The Energy and Resources Institute (India); and Resources For the Future and the University of Colorado (USA). While not representative of the entire globe, these institutions capture much of the diversity existing within the nations of the world that is important to the development of climate policy.

#### **The Need for Integrated Collaboration**

Unfortunately, simply funding a group of stellar research institutions with special knowledge and expertise is no guarantee that knowledge will get shared across institutions. In fact, if the past is any guide, it is more often the case in practice that such

institutions continue to work in relative isolation of each other while on paper they are described as collaborators.

For Clipore to be effective it must foster and insist on true integration of intellectual effort across institutions. Since this integration must occur quickly, care must be taken in the selection of participating institutions. Successful integration is more likely when the institutions brought together complement one another and when they already speak the same intellectual language, that is, they share compatible intellectual paradigms. The successes of Clipore thus far are due in part to the consortium of institutes that were chosen to collaborate.

Once chosen, integration is fostered through personal contact. Naturally, we are talking about institutions scattered across the globe and time zones. Opportunities for face-to-face meetings are limited (but in our experience crucial), but telecommunications are excellent and most useful for the advancement of scientific activities. What is an absolute prerequisite to successful integration is a desire among individual researchers to overcome the long distance obstacles. These researchers will be so inspired if they are benefiting from the opportunity to collaborate with others outside their normal range of colleagues. Once again, picking the right institutions is vital, but then it is a matter of choosing specific research questions that quite literally demand cross-institution talents to tackle.

Clipore has gained a lot of hands-on experience with the challenges involved in fostering true collaboration, and has been extremely successful given the short period of time that has passed thus far. This is evidenced by the cross-institution list of authors on the papers Clipore has produced thus far.

### **The Need for Programmes Not Projects**

It is often said there is no “silver bullet” for the climate question, referring to the idea that no single policy or technological innovation will solve the problem. Rather, the general consensus suggests that a multiplicity of policies, actions and innovations will be required. That same reasoning can be applied to climate-policy research. While individual research projects, or even groups of complementary projects are useful, the most valuable answers are likely to come from well-thought-out programmes of research.

A programme is fundamentally different from a set of projects. A programme is formulated to address a broad set of issues recognizing the linkages that exist among the issues and choosing programmatic efforts that take advantage of the linkages. Implementing a programme requires a broad view of the problem, avoiding being caught up in individual project efforts, recognizing gaps in knowledge that need to be filled, and being ready to adjust resources to meet evolving needs.

Clipore takes the programme idea to its fullest realization. While many research efforts are now programme based and administered, Clipore views the challenge posed by climate change on a much larger stage. Clipore adds to an extensive research programme formal and informal interactions with policymakers and stakeholders (on an international

scale), and significant capacity-building activities within Sweden. Following the programme paradigm, Clipore recognizes the linkages that exist between research activities, the needs of policymakers and stakeholders, and the need to train and bring to the question more smart people. Exploiting these linkages within Clipore insures that the whole is greater than the sum of its parts.

## **2. Tangible Indicators of Progress: Programme Management and the Programme Components**

Clipore Phase 1 is devoted to the development and establishment of the Programme. Today we find ourselves 18 months – halfway – into that process. The relatively early timing of this Programme review has had a positive effect on Programme development. It has forced us to reflect and to scrutinize our thinking, our vision, our plans and the context in which we are working. In this respect, 2005 was a pivotal year for the Programme. Important strategic and policy decisions were made – none of them lightly and not all without discomfort. At the management and research levels, critical introspection with a view into the future (where are we going?) was a major accomplishment last year.

Three key management decisions in 2005 aimed to revise the Clipore portfolio to better reflect the Programme mission and to improve prospects of achieving Programme objectives. The most significant results of these decisions are: the finalization of the project Climate Science and Policy Beyond 2012 (CSP 2012+); the selection and launching of a new project; the placement of two Assistant Professor positions at Uppsala University, and; the inclusion of a new capacity-building component in the Programme proposal to Mistra for Phase 2 funding. All of these results were outcomes of the process of preparing for this Mistra review, which was a large undertaking and accomplishment in and of itself.

While all of this was happening, the ETIC research was off and running with the ball, not just planning and preparing for but actually implementing collaborative research in dialogue with project stakeholders and producing results. ETIC is the primary research component that will carry over from Clipore Phase 1 to Clipore Phase 2. Therefore, the bulk of the remainder of this document is devoted to reporting ETIC progress, following the Mistra focal areas for evaluating progress: scientific value, value to users, and prospects of achieving programme objectives.

Following the chapter on ETIC we provide brief reviews of progress made in establishing the Clipore Policy Forum and the Clipore Climate Policy Assistant Professors (Forskarassistenten). Finally, we close with a generalized discussion of how we view Clipore's prospects for achieving the Programme objective of stimulating policy-oriented research that contributes to moving forward global efforts to combat climate change.

### 3. ETIC

#### 1. Introduction

The project ETIC started on 1 July 2004 and its first phase will be concluded on 30 June 2007. This progress report covers the period from the project start on 1 July 2004 until 31 December 2005, i.e. the first 18 months.

In a letter to the scientific review panel of the Clipore programme, Mistra wrote, “In order to meet Mistra’s wishes, the ETIC project has agreed on being evaluated one year earlier than was initially stated in the Mistra board decision. This will change the conditions under which the ETIC project will be evaluated. The project is set to carry out its’ first phase activities during three years. The main part of the planned project deliverables in phase one will thus not be finalized when the evaluation is being carried out. The evaluations of the ETIC project should therefore focus on the efforts to develop and establish the project, and on the proposal for the second phase.”

The emphasis in this progress report is on the establishment of the project rather than on scientific results.

#### 2. Short description of ETIC

The overall objective of the ETIC project is to:

*Support the design and implementation of emission trading within the evolving climate regime of Sweden, the European Community, and the larger global community.*

As the ETIC project coincides with important implementation phases of emissions trading, the project aims in part to monitor the development of the EU ETS, understand this process, and analyze alternatives in the light of empirical data and models. This will be done with an eye toward a longer time scale, looking beyond the 2005 to 2007 time period for the first phase of the EU Emission Trading System, to the second phase coincident with implementation of the Kyoto Protocol from 2008 to 2012, and beyond 2012 as well. Results from these analyses will be delivered as support to policy makers in the further development of ET given a broader institutional and policy framework.

The project is divided into five work packages:

- Work package 1: Analyses of Critical Elements in Emission Trading
- Work package 2: Globalizing Emission Trading
- Work package 3: Industrial Costs and Response Strategies
- Work package 4: Case Studies and Consequence Analyses
- Work package 5: Synthesis, Workshops and Communication

Six organizations perform the proposed work in the project. These organizations and initial project participants are:

- IVL Swedish Environmental Research Institute (IVL), Sweden: Lars Zetterberg, Markus Åhman, Kristina Holmgren (earlier Nilsson)
- CICERO, Norway: Asbjørn Torvanger, Gunnar S. Eskeland, Steffen Kallbekken, Nathan Rive, Hege Westskog, Jon Hovi, Department of Political Science (CICERO and University of Oslo)
- Resources For the Future (RFF), USA: Dallas Burtraw, Richard Newell, Ray Kopp, Joe Kruger, Billy Pizer, Carolyn Fischer
- TERI, India: Preety Bhandari, Ulka Kelkar, Vivek Kumar, Ritu Mathur
- Gothenburg University, Sweden: Thomas Sterner
- Stockholm University, Sweden: Initially Peter Bohm.

After some time of illness, Professor Peter Bohm passed away in June 2005. The ETIC team deeply regrets the loss of Peter. The research that he had planned to perform under ETIC has been carried forward by his associates Björn Carlén and Svante Mandell. Björn Carlén at Stockholm University will finalize an article that he and Peter had been working on in the spring of 2005.

### **3. Scientific Value**

#### **3.1 Co-operation and integration - Establishment of a strong research group**

The first 18 months of the project has focused on the establishment of a strong research group and the initiation of research activities where the institutes are collaborating in common research tasks.

- The ETIC team has met three times with full representation from all six participating institutes in Stockholm June 2004, Gothenburg June 2005 and Stockholm Sept 2005. These meetings have been dedicated to initiation and follow-up of research tasks, preparation of project reports, meeting with the Clipore board and Programme Director, and communication with end users through two workshops.
- Site visits and collaboration involving two ETIC institutes have occurred while working on joint research tasks. These meetings include i) IVL-RFF in Washington March 2005; ii) IVL-Gothenburg University in Gothenburg April 2005; iii) IVL-CICERO in Oslo May 2005; iv) RFF-Gothenburg University in Gothenburg June 2005; v) RFF-IVL in Stockholm September 2005; vi) Gothenburg University-RFF in Washington October 2005; vii) IVL-TERI in New Delhi October 2005; viii) IVL-RFF in New York City in November 2005 and ix) IVL-RFF-TERI in Montreal December 2005.
- A number of bi-lateral research tasks have been initiated, including tasks 1.2, 1.7, 2.1, 2.4, 3.2, 3.3, 4.2, 4.3 and 5.1. There have been a number of co-operative outputs from the project including i) the Ten Year Rule paper, a joint IVL-RFF paper submitted for publication. ii) the June Gothenburg stakeholder workshop and its' report. At this workshop Markus Åhman IVL and Dallas Burtraw RFF jointly gave one of the presentations. iii) the September 2005 Climate Policy Forum in Stockholm. iv)

Fischer (RFF) and Sterner (Gothenburg) paper on Role of Technologies in Reducing Cost Uncertainty (in preparation). v) TERI and IVL have initiated work on a joint paper exploring the demand for CDM in the EU ETS. CICERO has also offered to train TERI team members on the use of the DEEP model in spring 2006 in Oslo.

- Several workshops and other public events are scheduled for 2006, including TERI-CICERO in March / April 2006, TERI-IVL in February 2006. A full team meeting is scheduled for 19-21 June 2006.
- The ETIC team has participated in eight of the nine Clipore Policy Fora. At the Policy Forum in Brussels Nov 2004, presentations were given by Åhman and Zetterberg, IVL. At the Policy forum in Gothenburg 17 June 2005 all institutes except Stockholm University participated, with presentations given by IVL, RFF and CICERO. At the Clipore Policy Forum seminar on 21 September 2005, all institutes were present, with presentations given by TERI, CICERO and RFF.
- It is clear that the Clipore programme is a high priority for all participants. It has always been easy for the project leader to gather the group for meetings and conference calls and to get response on requests from them. Emails are always answered promptly and requests for needed documents are always excellently satisfied. As new challenges come up, most recently in the form of the unforeseen process of a new programme proposal, the research group has taken on this challenge with full engagement and vigour. The ETIC project group has shown a high level of engagement within the Clipore programme and has been most positive to engage in programme activities and in other ways to assist in the development of Clipore.

### **3.2 Main scientific results – synthesised scientific results**

The Mistra format requires that the progress report describe main scientific results as well as synthesised results from the first phase. A wide range of research tasks has been initiated, but as the programme is young, main scientific results and synthesis reports will not be expected until later in the programme.

However, the following main ETIC deliverables have been produced to date:

- The creation of the ETIC team as a strong research group and a competent body in matters concerning emissions trading and climate policy is in our view one of the most important deliverables. The project team has shown to be a valuable resource for authorities and industry for consultation in matters concerning emissions trading and climate policy. A number of bilateral research activities were initiated and completed during 2005.
- Organization of Policy Forum/Stakeholder Workshop in Gothenburg with strong participation of stakeholder groups on the subject of allocation of emissions-trading allowances. This workshop established a dialogue between academics, policy makers and industry. The report from this workshop can be seen as a synthesis report covering the issue of allocation. This report summarizes in a comprehensive manner experiences on allocation analyzed from the perspectives of research community, targeted end users in industry and regulatory authorities. Although the forum was not intended to arrive at a consensus, one common viewpoint that emerged is that the

current approach to initially distributing emission allowances in the EU ETS provides incentives for firms to deviate from behavior that would lead to emission reductions at the least social cost.

- Organization of Policy Forum/Stakeholder Workshop in New York City and at COP11 in Montreal on “American and European business perspectives on emissions trading”.
- Through the ETIC workshops and the Clipore Policy fora (ETIC has been represented at all fora) we have established a dialogue between researchers and end users as well as presenting main scientific findings and discussing issues relevant to climate policy. We see these networking activities as an important deliverable per se.
- CEPS (Centre for European Policy Studies) task force “Allocation in the EU ETS – lessons learned”. This task force collected researchers, industry, EU authorities and member state authorities in preparation of a report with conclusions and recommendations on allocation that was presented to the EU parliament in July 2005. ETIC was represented by IVL.
- Workshops on “Lessons learned from allocation”, a project for the EU commission, organised by FEEM (Fondazione Eni Enrico Mattei). The purpose of the project is to present main experiences and to give recommendations on the allocation process, based on experiences from 10 EU Member states. This project has included two workshops with representatives from 10 EU Member states and other key individuals. ETIC was represented by IVL. The project will result in a report in early 2006.
- The Ten Year Rule paper is a main result from the project and formed one of the presentations in Gothenburg in June. This analysis illustrates the inconsistent treatment of new sources and retiring sources within the EU ETS. The rules for initially distributing emission allowances provide incentives in a way that affects investment strategies, violating the intention of the EU ETS. The paper offers a strategy to resolve these issues.
- The Indexed Quantities paper rigorously explores the use of intensity targets for reducing emissions in comparison to standard economic approaches of taxes or quantity targets. Intensity targets prove to be effective at smoothing the distribution of costs, but this approach creates its own sets of winners and losers.
- The Efficiency Consequences paper analyzes the role of market structure in the markets for products affected by climate policy. In many markets, including importantly the electricity sector, prices differ systematically from marginal costs. Economists associate this characteristic with sizable economic inefficiency. The approach to distributing tradable allowances can amplify this inefficiency thereby potentially eroding a large part of the efficiency gains attributed to emission trading.
- The paper on equity constraints and efficiency in the tradable permit market points to the fact that equity considerations in allocating emission permits can lead to dominant agents that use their market power in the permit market. However, the paper shows that it is possible to design permit allocation systems that counteract market power and thus combine equity considerations with cost-effectiveness.
- The analysis of national allocation plans within EU shows that countries tend to allocate more to their emission trading sectors than their historic emissions and less than their BAU emissions. However, allocations generally are more generous than

would be required if all sectors and all gases were to contribute equally in meeting a country's commitments under the Kyoto Protocol.

- For a detailed list of publications see the list below.

### 3.3 Scientific deliverables to date

Research tasks covering a wide range of issues have been initiated and a number of paper manuscripts have been produced or are under way. These papers are presented in the three lists below:

#### Manuscripts - complete or draft

Åhman, M., Burtraw, D., Kruger, J. & Zetterberg L. 2005. *The Ten-Year Rule: Allocation of Emission Allowances in the EU Emission Trading System*. Submitted to *J. of Energy Policy*, IVL B-report B1633, RFF Discussion Paper 05-30. (WP1)

Arvidsson, A. & Larsson, M., 2005. *Handel med utsläppsrätter. Hur företagsstrategier påverkas*. IVL B-report 1637 (Master thesis).

Fischer, C., Newell, R. G. 2005. *Environmental and Technology Policies for Climate Change and Renewable Energy*. Discussion Paper 04-05. (WP 3)

Hagem, C. & Westskog, H. 2005. *Dominant agent and intertemporal emissions trading*. (Partially financed by ETIC)

*Lessons learned from the EU Allocation Process*. Report from Särö Stakeholder Workshop, June 2005. (WP1 / WP5)

Kolshus H. H. & Torvanger A. 2005. *Analysis of EU member states' national allocation plans*. (Draft version). (Reported under 4.3)

Kruger, J., 2005. *From SO<sub>2</sub> to Greenhouse Gases: Trends and Events Shaping Future Emissions Trading Programs in the United States*. Discussion Paper 05-20. (WP1)

Kruger J., 2005. *Companies and Regulators in Emissions Trading Programs*. Discussion Paper 05-03. (WP1)

Kruger, J. & Egenhofer C., 2005. *Confidence in Compliance in Emission Trading Markets*. Workshop Background Paper for "Confidence through Compliance in Emissions Trading Market" held in November 2005, co-sponsored by RFF, U.S. EPA, CEPS and EU.

Newell, R. G. & Pizer W. A., 2005. *Indexed Quantities versus Prices versus Quantities*. Discussion Paper 05-\*\*. (Reported under task 1.9)

Serner T., Muller A. 2005. *Allocation in Permit Trade: Output and Abatement Effects of Allocation Readjustment in Permit Trade* (reported under task 1.7 & 1.4)

Särholm, E., 2005. *Åtgärdskostnader för minskning av koldioxidutsläpp vid svenska kraftvärme och värmeanläggningar*. IVL B1650

Kumar V. 2005. *Review of proposals for developing country participation in post-Kyoto period* (Reported under task 2.4)

Kumar V., Kelkar U., Dinesh Babu Y. & Bhandari P. 2005. *Barriers to developing country participation in CDM*. (Reported under task 2.1)

### **Manuscripts in preparation**

Bohm, P., Carlén, B. Stockholm University. 2005. *Auctions and Multiple GHG Emissions Trading Systems*. (WP1)

Burtraw, D., Palmer, K. RFF. *The distributional and efficiency consequences of alternative designs for carbon trading*. (WP1)

Eskeland, G. CICERO. *Questioning Tradability Under Rent Seeking*. (in prep). (Reported under 1.7)

Eskeland, G.S., Harstad, B., 2005 (in prep.). *Trading for the future: is the market for permits a theater for the planner?*

Fischer, C. and Sterner, T. 2005. *The Role of Technologies in Reducing Cost Uncertainty for Climate Policy*. (in prep.) (Reported under task 3.2)

Godal, O. CICERO. *International emission trading: Governments, firms and strategic behaviour in international permit markets*. (WP 1).

Hagem, C. & Westskog H. (CICERO). *Equity constraints and efficiency in the tradable permit market*. (Reported under task 1.7)

Kallbekken, S., Flottorp, L. S. & Rive, N. CICERO. *The role of CDM in carbon leakage*. (WP 4).

Kruger, J., Evans, D. RFF. 2005. *Trading VOCs in Illinois: Are There Lessons for Greenhouse Gas Trading?* (in prep.) (Reported under task 1.8.)

Persson, T. CICERO. *Linking the Northeast States of the US mitigation program to the EU Emission Trading Scheme - Factors driving, Implications and Costs*. (WP 4)

Persson, T. CICERO. *Greening the Name of Excess Allowances in the EU Emission Trading Scheme*. (WP 4)

Sterner, T., Fischer, C. *Technology innovation and emission trading*. (Reported under 3.2).

TERI & IVL. 2006. Exploring the demand for the Clean Development Mechanism in the EU Emissions Trading System (under Task 2.1)

Torvanger, A., Flottorp, L.S. & N. Rive, 2006: *The effect of geological storage of CO<sub>2</sub> on the emission trading market*. (WP3)

Westskog, H., Rypdal, K. & Kallbekken, S., 2006. *Adjustments to reported emissions - What are the effects for the market for emission permits?* (Task 4.2)

Westskog, H., Rypdal, K. & Kallbekken, S. 2006. *Correcting for scientific uncertainty - What could be the effects on the market for emission permits?* (Task 4.2)

Research papers on the subjects "*Product prices and compliance costs*", "*The existence of inexpensive abatement options*", and "*Level of cost-effectiveness attained*" will be prepared during 2006.

## **Other important outputs**

Contributions to Policy Forum Stockholm “*Climate Policy Beyond 2012*”. 21 September 2005.

Policy Forum New York “*European and American Business Perspectives on Emission Trading*”. 30 November 2005. A summary report was written from this event; *Panel II: U.S Perspectives on Emissions Trading and Climate Policy, Q & A*. Transcript. Available at [www.weathervane.rff.org](http://www.weathervane.rff.org)

## **4. Value to end users**

### **4.1 Dialogue and collaboration between the project and the intended end-users**

The project has quickly established a dialogue with the end-users including Swedish industry, EU industry, US industry, Swedish authorities, the EU Commission, the UNFCCC process, and with other international researchers. This dialogue has been partly achieved through the following activities:

- 1) Research papers and reports. For a list of deliverables from ETIC, please refer to the lists above.
- 2) Clipore Policy Forum and Stakeholder Workshops. In 2005, three workshops were organized by ETIC (Gothenburg, New York City and Montreal). These meetings have been important for establishing a dialogue between the program and our end-users and for communicating research results with them. The workshops have resulted in publicly available proceedings, where the main results from the project are summarized. ETIC has also participated in all other Clipore Policy Fora
- 3) Participation at significant conferences and meetings such as the conference of parties (COP) and EU commission workshops for review of the EU ETS. The ETIC team has participated at the COPs in 2004 and 2005. In 2005 Researchers from ETIC participated at the following two workshops:
  - CEPS task force “Allocation in the EU ETS – lessons learnt”
  - Workshops on “Lessons learned from allocation”, a project for the EU commission, organised by FEEM.

- 4) Important are also the bilateral dialogues between the ETIC researchers and individuals from authorities, industry and other researchers. These dialogues include meetings and exchanging scientific papers on an almost daily basis. In this dialogue, ETIC is deliberately seeking input and feedback from our end users.
- 5) The project has communicated through the Clipore home page, providing information on the project and its deliverables such as scientific publications, proceedings from Stakeholder workshops and other relevant material.
- 6) In addition to this, Billy Pizer, RFF, is part-time staff at the National Energy Commission in Washington so his whole year has been full with meetings with congressional staff and legislators to discuss climate policy. Richard Newell, also from RFF, has taken a one-year leave of absence from ETIC to work at the President's Council of Economic Advisors as its environmental specialist. Joe Kruger has been a technical advisor to the Northeast states Regional Greenhouse Gas Initiative on issues associated with the design and implementation of the program.
- 7) Media communications, inviting journalists to meetings in connection with workshops, press releases and making reports and proceedings readily available to the media. Press contacts in 2005 include:
  - Individuals from IVL has been on national television, in national radio, daily press and main Swedish environmental journals on several occasions and presented experiences from the EU ETS.
  - Individuals from RFF have spoken numerous times about climate change and policy issues to journalists, the trade press and national public radio.
  - Preety Bhandari, TERI, has had numerous press contacts including Swiss channel Télévision Suisse Romande (TSR); *Environment Finance* magazine on the "Kyoto Protocol and Post 2012 Framework"; News channel NDTV India in an interactive programme with audience on India's contribution to global warming; Press contacts on "G-8 summit at UK-Gleneagles, implications for India"; and *Science Direct* on "Negotiating Climate Change, the Indian way".

#### **4.2 Value to end users achieved to date**

Still at an early stage, the ETIC project through the end user dialogue and project outputs already is supporting Swedish and international authorities in developing Swedish climate policy. We further believe that the project is helping industry by helping companies to set priorities in their climate policies such as their investments and strategic decisions and the evolution of viewpoints with respect to public policy.

#### **5. Prospects of achieving programme objectives**

We believe the following three objectives are crucial in making the project successful (these elements are also reflected in the Mistra format of this progress report):

1. The establishment of a strong research group.
2. Assuring scientific value.
3. Assuring high end user value.

These objectives have been described in detail in the chapters 2, 3 and 4 above. We believe that we have addressed these objectives in the first 16 months of the project and

have therefore shown that we have high prospects of achieving fully these programme objectives.

In addition, there is other evidence that the ETIC project team has high prospects of reaching the Clipore programme objectives:

- The work is proceeding as planned. We have found routines for this work and for the collaborative research. We know each other well. We follow the time plan and deliver results as planned.
- The ETIC team has participated at all Programme activities and has closely collaborated with the Clipore board and the Programme Director.
- The project delivers timely and relevant material for direct application, whether it is for developing the Swedish climate policy or for helping industrial firms set their priorities in their company's climate policy.
- Swedish and international agencies are increasingly seeing the ETIC group as a competent body on climate policy issues. For example, the team members often have been invited to participate in seminars and workshops (The Swedish Energy Agency (STEM), CEPS, FEEM), and for bilateral discussions (Naturvårdsverket, STEM, Elforsk, Värmeforsk, Swedenergy, The Swedish Forest Industries federation, Swedish International Development Cooperation Agency (Sida)). The project team has hereby shown to be an available resource for authorities and industry for consultation in matters concerning emission trading and climate policy. This is one of the most important deliverables of the project.

#### **4. The Climate Policy Assistant Professors (Forskarassistenter)**

This component of the Programme provides a tremendous opportunity to produce a hothouse for budding social scientists interested in pursuing research careers in the field of climate-change policy, and is the backbone of Clipore's efforts to stimulate institutional capacity building in climate policy research in Sweden. The design of this component is one of the important accomplishments of Clipore thus far. The strategic decision on the part of the Clipore Board of Directors, to not only to provide an immediate opportunity for four individuals, but to plant seeds that can significantly improve and increase Swedish institutional capacity for performing research in this field in the long-term, required significant preparation, dialogue and a well thought-through plan. Similarly, selecting the host organizations for these positions required an extensive process of dialogue and reasoning. Considerable preparatory work went into ensuring that the positions would be attractive to high-quality applicants as well as accessible to applicants to strong researchers that have not necessarily focused on climate policy thus far in their careers.<sup>1</sup>

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<sup>1</sup> The logistical implications of the decision to place 2 of the Assistant Professors at Uppsala University, and the impact of this decision on the length of time required for this preparatory process, are discussed in greater detail in the Clipore Programme Plan for 2006.

This process and the preparatory work behind it has resulted in strong positive relationships between the Programme and the two host institutions and a solid foundation, and promising prospects, for creating two strong Swedish climate-policy research environments. More tangibly, two highly-qualified candidates have been hired for the positions at Gothenburg University. Final agreements have been reached with Uppsala University for the placement of the additional two positions and the recruiting process will soon be underway.

## **5. The Climate Policy Forum**

During the first 18 months of the Programme, a number of Policy Forum activities have been implemented at the local, European, international and global levels. This has been an experimental process aimed at determining what works best for the Programme. Activities have been organized solely by Clipore, in collaboration with institutes participating in Clipore, in collaboration with institutes external to Clipore, and collectively in a formalized network initiated by Clipore together with an external organization. Activities have highlighted work generated, and/or lead to, publications written solely by Clipore, by Clipore participants in collaboration with other researchers and organizations, solely by external authors, and by journalists hired by Clipore. Outputs from Policy Forum activities have taken diverse forms, including academic policy analyses, position papers, background reviews/syntheses summarizing the state-of-thinking on specific issues, summaries of stakeholder views framed for non-academic audiences, and web-based outputs including written summaries, photographic material and video coverage of Policy Forum events. The dialogues orchestrated through Policy Forum activities have engaged Swedish, European and global stakeholders representing academia, governments and public-sector agencies, the international diplomatic community, the private sector, and leading environmental NGOs. Clipore activities implemented to date, the stakeholder groups targeted, and outputs are summarized in the following table.

*Clipore Programme Progress Report*

<b>Events</b>	<b>Collaborating partners</b>	<b>Target audience</b>	<b>Publications</b>
<b>2004</b>			
<i>European Climate Policy Research Seminar</i> Clipore - CEPS exploratory seminar in preparation for developing the European Climate Platform (ECP), Brussels, November 25	Center for European Policy Studies (CEPS)	European researchers, Commission, and UNFCCC Party delegates	None
<i>Toward a relevant equity reference framework</i> COP10 Side-event, Buenos Aires, December 14	Tellus Institute	UNFCCC party delegates and observer organizations	Policy analysis: Kartha, Athanasio, Bear and Cornland, <i>Cutting the Gordian Knot: Adequacy, Realism and Equity</i>
<b>2005</b>			
<i>Towards a Global Climate Regime</i> CEPS Task Force, Brussels, Sept. 2004 - April 2005 (5 sessions)	CEPS	European industry, academia, Commission, and environmental NGOs	Position paper: Chairmen Kjellén, Nicholson, Hone; Rapporteurs: Egenhofer, van Schaik, <i>Towards a Global Climate Regime: Priority Areas for a Coherent EU Strategy</i>
<i>Allocation in the EU Emission Trading System</i> Stakeholder Workshop, Gothenburg, June 17	Internal (ETIC)	Clipore, Swedish industry, Swedish authorities and international academics	Popular science/policy report: Report from the Clipore Policy Forum Workshop, <i>Allocation in the EU Emission Trading System: Lessons Learned</i>
<i>Thinking Beyond Kyoto: Key Components of an Enabling Strategy for Broadening Participation in a Global Climate Regime</i> Seminar, Stockholm, September 21	None	Clipore, Swedish academia, industry, public sector, foreign diplomats posted in Stockholm	CEPS Task Force report and Gordian Knot paper distributed
<i>Designing a Strategy to Improve the Functioning of the CDM</i> ECP seminar, Brussels, October 4	CEPS	European researchers, Commission, and UNFCCC party delegates	Overview paper: van Schaik, Egenhofer, <i>The State of the CDM Debate</i> . Commissioned ECP paper: Saner, <i>Hype or Reality: Can the CDM Trigger FDI?</i>
<i>European and American Business Perspectives on Emission Trading</i> Seminar, New York, November 30	Resources For the Future (RFF)	American and European private sector	Web-based proceedings (video and photographic coverage, panel synopses, speech texts) and printed summary version
COP11/MOP1 Side-event, Montreal, December 6	RFF	UNFCCC Party delegates and observer organizations	Printed output from Nov 30th web-based materials.
<i>Improving the Functioning of the CDM</i> COP11/MOP1 Side-event, Montreal, December 6	CEPS	UNFCCC Party delegates and observer organizations	ECP report with recommendations from October 4 seminar: Kjellén, Egenhofer, van Schaik, Cornland, <i>Improving the Clean Development Mechanism</i>

Developing the European Climate Platform (ECP), collaboratively with the Center for European Policy Studies (CEPS) in Brussels, is one of the more important stakeholder dialogue initiatives undertaken through the Policy Forum thus far. The aim of the ECP is to facilitate interaction between the policy and research communities, mainly but not exclusively in Europe. The ECP actively seeks dialogue with policymakers and other stakeholders while being dedicated to academic excellence, unqualified independence, and policy relevance. The dialogue stimulated through the ECP focuses on two broad areas of policy and policy-oriented research that are central to both the international

climate-policy debate and the Clipore and CEPS work programmes. The first of these is frameworks for future international climate policy and the second is policy instruments in support of such frameworks.

The working method for the ECP is to bring together a select number of policymakers, negotiators and academic experts in seminars to vigorously debate key topics in the area of international climate change policy and to widely disseminate its conclusions. Debates are structured around background papers prepared in advance of the seminars. Following each seminar, the ECP chair and rapporteurs produce a policy paper including concrete recommendations based on discussion arising in the seminar. The first ECP seminar was held in October 2005 (see table above), which was followed-up with a side event at COP11/MOP1.

The ECP is governed by a steering group, drawn from government and academia. The current steering group members are (in alphabetical order):

1. **Michel Colombier**, Directeur IDDRI Foundation, Institut de développement durable et des relations internationales
2. **Frank Convery**, President of the European Association of Environmental and Resource Economists (EAERE), Heritage Trust Professor of Environmental Policy at University College Dublin (co-chair)
3. **Deborah Cornland**, Program Director, Clipore
4. **Christian Egenhofer**, Senior Research Fellow, CEPS
5. **Sarah Hendry**, Head of the UK Climate Delegation
6. **Mike Hulme**, Executive Director, Tyndall Centre for Climate Change Research
7. **Bo Kjellén**, Former Chief Climate Negotiator Sweden; Senior Research Fellow, Stockholm Environment Institute and Visiting Fellow Tyndall Centre for Climate Change Research (co-chair)
8. **Bert Metz**, Netherlands Environmental Assessment Agency, Global Sustainability and Climate Unit (MNP/RIVM), co-chairman of IPCC Working Group III
9. **Artur Runge-Metzger**, Head of the Climate Change Unit, DG Environment, European Commission

During 2006, the Steering Group intends to expand its membership to include representatives from climate delegations from one of the new member States and one Southern member State. Two ECP seminars are currently planned for 2006. The first, to be held in April, will concern a review of the EU ETS. The second, to be held in the fall, will address the role of adaptation in the future international climate regime. A two-day conference, entitled “Framing future commitments: Assessing the options” will be organized in the spring of 2007. The ECP is described in more detail in Appendix 5.

All of the Clipore Policy Forum events to date have been well attended, both in terms of the number of participants (which have on several occasions exceeded expectations) and the stakeholder groups that the participants represent. Clipore can honestly claim to fill the room with the right people and engage them in dialogue through Policy Forum

activities. The panelists and speakers from some of our past events are highlighted below.

Event	Panelists/Speakers
<i>Toward a relevant equity reference framework, COP10 side event</i>	<p>Panelists:</p> <ul style="list-style-type: none"> <li>• Sarah Hendry, head of climate delegation, UK (incoming Presidency for European Union)</li> <li>• Ambassador Chandrashekar Dasgupta, Center for Global Environmental Research, member and former head of climate delegation for India</li> <li>• Jennifer Morgan, head of climate division, WWF Europe</li> <li>• Agus Sari, Pelangi Institute, member of climate delegation for Indonesia</li> </ul>
<i>Allocation in the EU Emission Trading System, Clipore Stakeholder Workshop</i>	<p>Chaired by:</p> <ul style="list-style-type: none"> <li>• Lars Zetterberg, Clipore</li> </ul> <p>Speakers:</p> <ul style="list-style-type: none"> <li>• Anders Hedenstedt, CEO, Göteborg Energi</li> <li>• Maria Sunér Fleming, Senior Advisor Environmental and Climate Policies, Swedenergy</li> <li>• Mathias Ternell, Director of International Affairs, The Swedish Steel Producers' Association</li> <li>• Dallas Burtraw, Markus Åhman and Asbjørn Torvanger, Clipore</li> <li>• Daniel Radov, Senior Consultant, Energy and Environment Practices, NERA Economic Consulting</li> <li>• Felix Matthes, Coordinator, Öko Institute</li> <li>• Truls Borgström, Desk Officer, the Swedish Ministry of Sustainable Development</li> <li>• Ola Hansén, Environmental Consultant, Pricewaterhouse Coopers</li> </ul>
<i>European and American Business Perspectives on Emissions Trading and Climate Policy, Clipore Stakeholder seminar, New York</i>	<p>Keynote Address:</p> <ul style="list-style-type: none"> <li>• Senator Jeff Bingaman, Democrat, New Mexico</li> </ul> <p>Closing Address:</p> <ul style="list-style-type: none"> <li>• James E. Rogers, chairman and chief executive of the Cinergy Corp.</li> </ul> <p>Sessions moderated by:</p> <ul style="list-style-type: none"> <li>• Lars Zetterberg, Clipore</li> <li>• Joseph Kruger, Clipore</li> <li>• Inge Horkeby, Volvo AB, Clipore Board</li> </ul> <p>Panelists:</p> <ul style="list-style-type: none"> <li>• Peter Zapfel, EU ETS Coordinator, DG Environment, European Commission</li> <li>• Frank Convery, Heritage Trust Professor of Environmental Policy, University College, Dublin</li> <li>• Toby Campbell-Colquhoun, Trader, Environmental Products, Shell Trading</li> <li>• Magid Shenouda, Managing Director, Goldman Sachs</li> </ul>

	<ul style="list-style-type: none"> <li>• William A. Pizer, Fellow, Resources for the Future</li> <li>• James R. Hendricks Jr., Vice President, Environment, Health and Safety, Duke Energy</li> <li>• Kevin Fay, Executive Director, International Climate Change Partnership</li> <li>• Edwin L. Mongan, Global Manager, Energy and Environment, DuPont</li> <li>• Chris Mottershead, Distinguished Advisor, BP</li> <li>• Timothy J. Richards, Director, International Energy Policy, General Electric Company</li> <li>• Christopher T. Walker, Managing Director, Greenhouse Gas Risk Solutions, SwissRe</li> </ul>
<p><i>Improving the functioning of the CDM, COP11/MOP1 side event</i></p>	<p>Keynote Speakers:</p> <ul style="list-style-type: none"> <li>• Werner Wutscher, Secretary General, Ministry for Agriculture, Forestry, Environment and Water Management (incoming Presidency for the European Union)</li> <li>• Marthinus van Schalkwyk, Minister of Environmental Affairs &amp; Tourism, Republic of South Africa (incoming Chairmanship for the G77)</li> </ul> <p>Panelists:</p> <ul style="list-style-type: none"> <li>• Artur Runge-Metzger, Head of the Climate Change unit, European Commission</li> <li>• Rajesh Kumar Sethi, Director Climate Change, Ministry of Environment, India, CDM Executive Board member</li> <li>• Martin Hession, Defra, UK (Presidency of the European Union)</li> <li>• Dirk Forrister, Managing Director, Natsource</li> </ul>

Experience gained through and feedback from participants in the Policy Forum activities carried out to date have demonstrated, and lead to a number of new, insights that have shaped Programme thinking about how to move the Policy Forum forward and refine our approach. The most important of these are:

- Our diverse international team enables us to bring actors into a room and a dialogue that might not otherwise take place.
- Our stable source of funding from Mistra enables us to engage in fruitful and conflict-free collaborations that would be difficult to achieve were we constantly competing with other organizations for funding.
- Quality and timing are essential for grasping stakeholder attention: by addressing timely topics in a professional manner Clipore has succeeded in engaging and influencing top-level stakeholder representatives.
- A combined approach of the events themselves and outputs that bring the event dialogues to an even wider audience than those in attendance has significantly increased Clipore's impact.
- Engaging in dialogue that is not strictly results oriented is both demanding and extremely useful.

- A space for listening is every bit as important as a space for talking.

## **6. Thinking Beyond the Ivory Tower: Prospects for Achieving Programme Objectives**

At one level the research Clipore is seeking to stimulate can be quite theoretical while at another it is very applied. At all points along this spectrum successfully fulfilling the mission requires that the research find its way into the hands of policymakers and stakeholders and that feedback regarding the usefulness of the research and direction for fruitful future research finds its way back to the researchers.

This does not happen spontaneously. Indeed, for many researchers in academic environments this does not happen at all. Like fostering truly integrated collaboration among research institutions and individual researchers, purposeful actions must be taken. Clipore has successfully established an institutional structure to facilitate the formation of formal and informal information sharing networks involving Clipore researchers and institutions. Formal networking activities involve such things as the Policy Forum, participation in the activities of the UNFCCC at meetings of the Parties, as well as opportunistic Special Events organized to take advantage of particular circumstances.

Perhaps even more important, Clipore is establishing within all those who participate in the Programme a culture that places value on dialogue with stakeholders beyond the walls of the ivory tower. That culture is nurtured and reinforced by purposeful integration of public activities with the formal research agenda and an emphasis on researcher driven informal communications. While we have a short history to reflect upon, the stakeholder-dialogue culture has taken root and is growing quite vigorously. We believe that this is perhaps the most significant accomplishment in this first half of the start-up phase of the Clipore programme, and is an important indication that we will succeed in meeting the Programme objective of stimulating policy-oriented research that contributes to moving forward global efforts to combat climate change.