

**ENTWINED**  
**2010 Annual Report**

*Bridging research and practice*

## Director's view

The trade and environment debate is vigorous, highly relevant and cuts across the megatrends that are shaping our time. Closer international economic integration, an ever increasing demand for natural resources, and a rising concern for our environment put ENTWINED's research at the core of the challenges our society faces and will continue to face over the coming years. Many of the issues that fall within ENTWINED's scope will require solutions that build on efforts taking place not only at the multilateral, national and regional levels but also at the individual firm and household levels.

The state and nature of the trade and environment debate demands that ENTWINED contribute critical and scientifically based insight. In this way our research programme seeks to bridge research and practice by bringing together academicians and policy experts to collaborate on finding solutions to some of the pressing challenges we face. On the academic side, ENTWINED is making its mark with several reports being published in leading peer reviewed journals. This gives us a solid scientific footing from which we can engage in debate. At the same time we have reached out to thousands of trade and environment practitioners at workshops and conferences, via the dissemination of our publications and through the web. Indeed, there is a healthy demand for the research that we are undertaking which underscores the relevance of the issues that we are studying and our success underscores the contribution science can make to issues that are considered by some to be highly political.

On behalf of the entire team, I'm very pleased to submit our Annual Report that will provide you with an account of our accomplishments through 2010.

Sincerely,



Mark Sanctuary

Programme Director – ENTWINED

IVL Swedish Environmental Research Institute

31<sup>st</sup> March 2011

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## Introducing ENTWINED

This report sets forth the activities undertaken by the programme and provides a picture of our accomplishments over the last year. ENTWINED – *Environment and Trade in a World of Interdependence* – was initiated January 2007 in response to a Mistra call for research on “policy alternatives for managing the trade and environment interface” which reflected the need to investigate how to better integrate environmental aspects into international trade negotiations in our increasingly entwined global economy. Mistra has awarded funding for ENTWINED for a seven year period through to the end of 2013.

Our objective is “*to provide scientific knowledge, and to provide tools to support Swedish and other European negotiators and stakeholders in integrating environmental aspects into the international trade regime*”. At a more practical level, our objective is to on the one hand study issues at the intersection of international economics, environmental economics and trade law, and on the other hand to engage on issues with stakeholders who have a role to initiate change such as decision makers in government agencies at the national, European and multilateral levels. Taking both a positive and a normative point of view, ENTWINED aims first to identify when trade and environment act in concert or at cross purposes and second to suggest alternatives to allow for simultaneous achievement of trade and environmental objectives.

## Our research

ENTWINEDs research builds on the programme’s objective “to provide scientific knowledge, and to provide tools to support Swedish and other European negotiators and stakeholders in integrating environmental aspects into the international trade regime”. All our research is of significant policy relevance, whether they are written for an academic readership or for the policy debate. Our research deliverables include (but are not limited to) three distinct types of publications; academic working papers, policy reports and an ENTWINED Issue Brief Series. Each of these outputs serve a different purpose: academic working paper’s ultimate aim is publication. Policy reports and Issue Briefs on the other hand target and are distributed to specific groups of stakeholders – which we identify and discuss in the Outreach Section below.

ENTWINED realises the benefits of bridging the divide between research and practice. From the beginning of the programme, the research team worked to identify issues that not only make good research but are also important for policymaking. The programme has therefore been designed to produce both academic research of high international quality, and studies that are accessible to practitioners. We see the balance of the mix in the deliverables from the year. ENTWINED’s work has generated and will continue to generate high impact after it has been delivered to the programme or as a direct consequence of the capacity that is being developed within the programme. In the rest of this section, we provide an update on the progress on our research outputs for the year.

## Subproject outputs

The subprojects initiated in 2010 fall within the scope of ENTWINEDs Programme Plan for the year. The research sits at the intersection of International Economics, Environmental Economics and Trade Law and seeks to support ENTWINED in reaching its object by supporting key stakeholders and practitioners who work with trade and environment issues. Moreover, the research conducted: falls within the domain of the programme—the regulation of environmental problems in an international context—as outlined in the original Mistra call; and maintains or surpasses the standards for academic quality and policy relevance that have been manifested in ENTWINED outputs to date.

The research conducted within ENTWINED includes issues that are continuing to gain interest in international research and policy communities. For example, the academic interest in the intersection between International Economics, Environmental Economics, and Trade Law is rapidly increasing. This emerging literature employs, as does ENTWINED, a variety of methods, including formal economic theory, informal policy discussions and econometric analysis. Parallel to this, a body of research in environmental economics is rapidly expanding. These distinguishing features are reflected in the

penetration of ENTWINEDs outputs across our target groups, the impact the programme has had to date, and the strength of our brand.

## **MEAs and the WTO**

The role of multilateral environmental agreements (MEAs) in the WTO Agreement has been discussed by WTO law makers, judges and academics alike. A central issue is the extent to which WTO judges could and should use MEAs to interpret the WTO Agreement. The study “MEAs in the WTO: Silence Speaks Volumes” by Henrik Horn and Petros C. Mavroidis is a contribution to this debate. In contrast to earlier literature, it is based on the premise, that in order to determine whether the current role of MEAs in the WTO ought to be changed, and if so how, it is necessary to understand the reason why the parties have chosen to have separate agreements. That is, the analysis should be built on a theory that plausibly explains why countries end up with separate international agreements on trade and on the environment. The purpose of the paper is to sketch on such an approach, and to draw some preliminary conclusions concerning the appropriate role of MEAs in the WTO based on this approach. Drawing on the economic literature on bargaining and on incomplete contracts, the paper identifies two broad sets of reasons for separation: strategic benefits for certain countries and the costs associated with negotiating and administrating complex agreements. It is argued that with either explanation for the separation of agreements, WTO judges should be very reluctant to do what WTO Members themselves have not done, which is to bring MEAs into WTO law.

## **The WTO’s treatment of transparency obligations**

In the paper “Did the protectionist dog bark? Transparency, accountability, and the WTO during the global financial crisis” by Robert Wolfe and Mark Halle discuss the role of *transparency* in global governance. They suggest that while transparency can illuminate the actions of states, *accountability* can close the gap between commitment and action. G20 Members of the WTO faced a double requirement in the crisis: to act consistently with their general regime obligations; and to fulfill their specific crisis-related commitments. Put differently, did the actions of WTO Members meet G20 commitments; and were their actions protectionist? The case allows consideration of two novel accountability mechanisms, one run by international organizations and one run by civil society. The crisis monitoring exercise run by the WTO with support from the OECD and UNCTAD ought to have been a source of high quality information. Discussion among officials in the WTO, and among Leaders in the G20, ought to have ensured accountability. The independent monitoring of Global Trade Alert (GTA) ought to allow a check on the rigor of the official story.

## The economics of border carbon adjustments

In “The Global Effects of Subglobal Climate Policies” published in *B.E Journal of Economic Analysis and Policy*. 10(2) (Symposium): Article 13 (2010) Christoph Böhringer, Carolyn Fischer and Knut Einar Rosendahl examine how the prospect of rising carbon prices raises concerns across nations about the effects on the competitiveness of their own energy-intensive industries and the potential for carbon leakage, particularly leakage to emerging economies that lack comparable regulation. In response, certain developed countries are proposing controversial trade-related measures and allowance allocation designs to complement their climate policies. The authors point out that an element missing from much of the debate on trade-related measures is a broader understanding of how climate policies implemented unilaterally (or sub globally) affect all countries in the global trading system. Arguably, the largest impacts are from targeted carbon pricing itself, which generates macroeconomic effects, terms-of-trade changes, and shifts in global energy demand and prices; it also changes the relative prices of certain energy-intensive goods. This paper studies how climate policies implemented in certain major economies (the European Union and the United States) affect the global distribution of economic and environmental outcomes, and how these outcomes may be altered by complementary policies aimed at addressing carbon leakage.

The paper “On Hotelling, Emissions Leakage, and Climate Policy Alternatives” by Carolyn Fischer and Stephen Salant studies how efforts to reduce GHG emissions may be undone in part or in whole by emissions leakage, not only across countries but over time, given that the major sources of GHGs are exhaustible resources. Furthermore, a faster transition to clean energy may accelerate emissions. The authors contribute to the “green paradox” literature by considering multiple resource pools with different extraction costs and four policy options: accelerating cost reductions in the clean backstop, emissions taxes, energy efficiency improvements, and carbon capture and sequestration (CCS) mandates. In a two-pool model they identify four regimes that may be reached with increasingly stringent policies: full exhaustion, partial exhaustion of the high cost resource, full exhaustion of the low-cost pool with the high-cost pool untouched, and incomplete exhaustion of the low-cost pool. The study reinforces earlier findings that accelerating cost reductions in a clean backstop technology tends also to accelerate extraction of non-renewable resources; however, earlier transition to a backstop can reduce cumulative emissions when exhaustion will not be complete. An emissions tax, on the other hand, slows emissions; however, it also may either slow or accelerate arrival of the backstop, depending on whether cumulative extraction is unaffected or reduced. Meanwhile, energy efficiency improvements, as we have represented them here, delay emissions and the adoption of the backstop technology (at least, they never accelerate that adoption). While all policies considered can reduce cumulative emissions under the right circumstances, only the CCS mandate does it in all circumstances.

The paper “When Revenue Recycling Isn’t Enough (or Isn’t Possible): On the Scope for Output-Based Rebating in Climate Policy?” by Carolyn Fischer and Alan Fox examine the efficiency and distributional effects of different allocations of tradable emissions permits in the presence of preexisting market distortions. Three such distortions are noteworthy for the “downstream” implementation of a domestic emissions trading program for greenhouse gases: 1) distorting labor taxes in the economy, 2) emissions “leakage” due to the lack of comparable emissions pricing abroad, and 3) incomplete coverage of the trading program, which allows domestic leakage. Because regulations that raise the price of covered sector goods exacerbate these problems, a potential response is to combine the emissions price with a rebate to production, such as by output-based allocations (OBA) of emissions permits. The authors employ a multi-sector computable general equilibrium model based on the Global Trade Analysis Project framework to compare different rules for allocating carbon allowances among the major emissions-intensive sectors within a trading program in the U.S. economy. They find that OBA for energy intensive, trade-exposed sectors can dominate auctioning with revenue recycling. Granting similar rebates to the electricity sector reduces welfare when those revenues would otherwise be recycled, but it enhances welfare if the allowance values would otherwise be grandfathered.

## **Renewable energy policies and trade in biofuels**

The report “Policies for Second Generation Biofuels; Current Status and Future Challenges” by Håkan Eggert, Mads Greker and Emily Potter surveys the area of second generation biofuels with respect to its potential to replace fossil fuel. In order to limit the scope, the authors focus on bioethanol primarily made from cellulose and largely disregard the area of second generation biodiesel. Further, they discuss potential policies to facilitate a commercial breakthrough of second generation biofuels. In particular, the authors ask whether trade policy could play a role. Technological advances have already led to significant cost reduction in recent years, and further innovations will require a combined effort of research and development (R&D) and technology learning. However, import of “cheap” first generation biofuels from Non-Annex 1 countries could halt the market introduction of second generation biofuels. The report suggests that promotion of second generation biofuels requires a targeted policy. Using trade policy also encourages production of first generation biofuels in the Annex 1 countries. These are among the worst performing biofuels, and hence, policies need to be tailor-made to support second generation biofuels. The U.S. already have started to follow this approach: It is making large funds available for R&D of second generation biofuels. Moreover, from 2010 the U.S. updated the Energy Independence and Security Act, and included separate volume requirements for cellulosic biofuels in particular. The EU has not to the same extent tailor-made its support policies to second generation biofuels. The report stresses that supporting policies should be temporary and note that it is by no means certain that second generation biofuels will play a central role in the decarbonizing of the transport market.

The paper “On blending mandates, border tax adjustment and import standards for biofuels” by Håkan Eggert and Mads Greker, studies trade policies for biofuels. Also biofuel production entails carbon dioxide emissions, which leads to a potential carbon leakage problem when carbon constrained countries trade with countries that lack comparable regulation. Under such conditions the authors find that the government in the regulated country can ensure cost efficient production of biofuels, from a global point of view, only by combining an import standard with border tax adjustment (BTA). The paper also considers a blending mandate and shows that it is equivalent with an additional tax on conventional fuels and a general subsidy to all biofuels. Hence, if the only purpose of introducing biofuels is to reduce GHG emissions, a blending mandate will always reduce global welfare. More generally, a blending mandate fundamentally alters the way the market works and the optimal BTA may be negative. For instance, considering EU’s current subsidies of domestic biofuels production and its blending mandate objective, not only should EU abandon its current tariff but also subsidize import of Brazilian sugar cane ethanol.

## **Trade and the impacts of voluntary environmental standards**

The report “The state of Sustainability Initiatives Review 2010: Sustainability and Transparency” led by Jason Potts and co-authored with Jessica van der Meer and Jaclyn Daichmann represents the most up-to-date and comprehensive overview of the market trends and system characteristics of major voluntary sustainability standards and initiatives in the forestry, coffee, cocoa, tea and banana sectors. The review provides information on the market performance, governance, criteria coverage and implementation practices of key initiatives (such as Fairtrade Labelling Organizations International, Forest Stewardship Council, Program for the Endorsement of Forest Certification, Rainforest Alliance, UTZ Certified, International Federation of Organic Agriculture Movements, GLOBALGAP, Sustainable Forestry Initiative, Social Accountability 8000, and 4C Association). The SSI Review seeks to be an important tool for the strategic planning of businesses, policy makers and other stakeholders seeking to build more sustainable supply chains.

The paper “Does stated purchasing behavior predict actual behavior?” by Mark Sanctuary and Richard Friberg studies the extent to which the stated behavior of a household predicts the same household’s actual shopping choices with respect to products that carry Environmental and Ethical (EE) labels. The analysis uses three years of household panel data on retail coffee purchases in Sweden. A central feature of the data is that households submit a questionnaire annually, indicating whether they try as much as possible to buy EE-labeled products. Consumers are indeed more likely to buy EE-labeled products if they say they do, and less likely to if they say they don’t. However, even the strongest self-declared EE-label consumers primarily purchase conventional coffee. Based on shopping choices in the field, these same consumers would be willing to pay premiums for EE-label coffee that are significantly higher than

the implicit price for these labels. The results indicate that the narrow range of organic and Fairtrade coffee is an important explanation for the divergence between stated and actual behavior.

## Outreach

Our communications activities have sought to connect applied academic research and policymaking and an essential aspect in our work is communication. At the beginning of 2010, in order to further support on our communication efforts, ENTWINED engaged a dedicated communications professional. Her role is to:

- Identify and maintain channels of communications and access networks. In particular to help support the identification of target groups and to maintain contact with these groups;
- Provide logistical support for ENTWINED events;
- Monitor and evaluate the quality of our events and activities;
- Editing, publishing and dissemination support for the researchers.

In what follows we provide an account of our communications activities.

## The target groups

ENTWINED works with a range of stakeholders both nationally and internationally and over the course of the year ENTWINED has further expanded its network of contacts. For example, through our 2010 activities alone we have expanded our database with 250 trade and environment practitioners across 110 organizations primarily in Sweden including: Ministry of Finance, Ministry of Foreign Affairs, Ministry of Enterprise, Swedish Environmental Protection Agency, Swedish Energy Agency, Swedish National Board of Trade, Swedish Trade Council, Swedish Parliament, European Commission, and the Swedish Society for Nature Conservation. One of ENTWINED's key partners is Sweden's National Board of Trade (Kommerskollegium) with whom ENTWINED has worked closely with in the past, and we hope to continue working with. Indeed, the National Board of Trade participates directly in ENTWINED as a member of Mistra's appointed board to our programme. Our contacts also include practitioners at international and multilateral organisations such as the; International Chamber of Commerce, UNEP, WTO, OECD Round Table on Sustainable Development, WWF, Fair Trade, KRAV. And we also have representatives from the private sector and academia at universities in Sweden, Europe and the US. Furthermore, our international reach is broadened with the networks ENTWINED's partners have access to.

ENTWINED communicates with its target groups primarily by disseminating publications, hosting and participating in seminars, workshops and conferences, and via our website. We have also seen an

additional channel that we had not planned for through student lectures given by our researchers. In this section we describe how we have made use of these channels to reach our target audience.

## Dissemination

The approach taken to disseminate ENTWINED's publications is tailored to the type of publication. ENTWINED's Issue Briefs are disseminated through the post and email, at our events, and on our website. 500 copies of our Issue Briefs were printed in September 2010 and 250 of these copies were posted to trade and environment practitioners in Sweden and in Belgium (e.g. EU Commission) primarily. IISD distributed the Issue Briefs to over 4000 practitioner contacts and 1500 media contacts. The Issue Briefs are also distributed at events ENTWINED hosts or participates in.

For the year, ENTWINED's website [www.entwined.se](http://www.entwined.se) had over 30 000 hits and over 3000 downloads of our publications.

Dissemination of our policy reports also rely on our networks of contacts. For example, the report "State of Sustainability Initiatives Review 2010" was launched by Jason Potts IISD at the OECD Global Forum on Environment, Magdalen, U.K, November 2010. The report was also presented at the Trade Standards Practitioners Network: Voluntary Standards and Climate Change Conference, State of Sustainability Initiatives-Review 2010, Bern, Switzerland, in November 2010. Academic outputs follow the usual procedure starting off as academic working papers before being disseminated through discussion papers series and presented at seminars and conferences and finally being submitting to academic journals for publication – we discuss this process at the end of this section. Of course, the line between academic output and policy report is not black and white and some outputs are able to fulfil both roles.

## Publications

### 2010 Reports and papers

- Carolyn Fischer and Alan Fox, When Revenue Recycling Isn't Enough (or Isn't Possible): On the Scope for Output-Based Rebating in Climate Policy?
- Carolyn Fischer and Stephen Salant, On Hotelling, Emissions Leakage, and Climate Policy Alternatives
- Henrik Horn and Petros C. Mavroidis, MEAs in the WTO: Silence Speaks Volumes
- Håkan Eggert and Mads Greaker, On blending mandates, border tax adjustment and import standards for biofuels

- Håkan Eggert, Mads Greker and Emily Potter, Policies for Second Generation Biofuels; Current Status and Future Challenges
- Jason Potts , Jessica van der Meer and Jaclyn Daitchmann, The state of Sustainability Initiatives Review 2010: Sustainability and Transparency
- Robert Wolfe and Mark Halle, Did the protectionist dog bark? Transparency, accountability, and the WTO during the global financial crisis
- Mark Sanctuary and Richard Friberg, Does stated purchasing behavior predict actual behavior?

## 2010 Issue Brief Series

ENTWINED has also produced a series of Issue Briefs that target policymakers and practitioners.

- “Border Carbon Adjustments from a Trade Policy Perspective” by Carolyn Fischer and Henrik Horn.
- “A New Approach to Transparency and Accountability in the WTO” by Mark Halle and Robert Wolfe.
- “The Law and Economics of Trade in Biofuels” by Håkan Eggert, Carolyn Fischer and Petros Mavroidis.
- “Sustainable Markets are Growing - Is Sustainability Keeping Pace?” Jason Potts and Mark Sanctuary.
- “Building a Sustainable Cocoa Economy: The Role of Private Sector Sustainability Initiatives” by Jason Potts.

## Published articles

“The permissible Reach of National Environmental Policies”, *Journal of World Trade* 42(6), 2008, 1107-1178 by Henrik Horn and Petros C. Mavroidis.

“The Burden of Proof in Environmental Disputes in the WTO: Legal Aspects”, *European Energy and Environmental Law Review* 18(2), 2009 by Henrik Horn and Petros C. Mavroidis.

“Does trade help or hinder the conservation of natural resource?”, *Review of Environmental Economics and Policy* (2010) 4(1): 103-121 by Carolyn Fischer.

“**The Global Effects of Subglobal Climate Policies**”, *B.E Journal of Economic Analysis & Policy* 10 (2) (Symposium): Article 13 (2010) by Christoph Boehringer, Carolyn Fischer and Knut Einar Rosendahl.

“**Trade, GMOs and Environmental Risk: Are Current Policies Likely to Improve Welfare?**”, *Environmental and Resource Economics* Volume 48, Number 4, 587-608 by Håkan Eggert and Mads Greaker.

“**Climate Change and the WTO: Legal Issues Concerning Border Tax Adjustments**”, *Japanese Yearbook of International Law* 53, 2010 by Henrik Horn and Petros Mavroidis.

“**The Burden of Proof in Trade Disputes and the Environment**”, forthcoming in *Journal of Environmental Economics and Management*, 2011 by Henrik Horn.

## Book reviews

Carolyn Fischer and Petros C. Mavroidis on “Global Warming and the World Trading System” by Charnovitz et al. published in the *Journal of Economic Literature* Vol. 48, No. 3 September 2010.

## Seminars, workshops and other activities

An important complement to our dissemination activities are the seminars, workshops and conferences ENTWINED has engaged in over the course of 2010. These activities serve not only as further support for the dissemination of our results, but also provide forums where the research team gather feedback from our end-users. ENTWINED continued to organize public policy conferences and workshops with a strong academic and scientific base. In the interest of leveraging our existing platform and make the best use of our resources, ENTWINED has both co-organized events and workshops and also participated in a range of policy and academic forums. Through these channels ENTWINED has reached over 1 200 individuals. In Table 1 below, we present an account of these activities.

**Table 1 – ENTWINED’s seminars, workshops and conferences for 2010**

Title	Event name and Location	Date	Approximate Participation
State of Sustainability Initiatives - Reveiw 2010	State of Sustainability Initiatives Informational Session, Amsterdam, Holland	January 10	15
State of Sustainability Initiatives - Reveiw 2010	State of Sustainability Initiatives Advisory Panel Meeting, Amsterdam, Holland	January 10	25
The Global Effects of Subglobal Climate Policies	U. of Illinois Energy Institute and RFF Energy Policy Symposium: Distributional Aspects of Energy and Climate Policy, Washington, DC	January 21	80

Better Together? The Costs and Benefits of an Integrated North American Cap-and-Trade Policy	C.D. Howe Institute and Peterson Institute, Washington, DC	February 3, 2010	50
When Revenue Recycling Isn't Enough (or Isn't Possible): On the Scope for Output-Based Rebating in Climate Policy	U.S. EPA, RFF, and Sophia University Workshop "Carbon Policies, Competitiveness, and Emissions Leakage: An International Perspective", Washington, DC	February 22-23, 2010	60
The Global Effects of Subglobal Climate Policies"	World Bank seminar, Washington, DC	February 25	
On Hotelling, Emissions Leakage, and Climate Policy Alternatives	Statistics Norway workshop, Oslo, Norway	April 1	20
State of Sustainability Initiatives - Reviw 2010	Specialty Coffee Association of America, Anaheim, US	April 10	12
On Hotelling, Emissions Leakage, and Climate Policy Alternatives	CIREQ-U of Montreal seminar series, Montreal, Canada	April 16	30
The Role of Border Carbon Adjustments in U.S. Climate Legislation	Tyndall Center/ University of Sussex workshop "Climate Change and Trade: An Agenda for Cancun", Sussex, UK	May 27	20
The Global Effects of Subglobal Climate Policies	WCERE meetings, special session on EU climate policy, Montreal, Canada	June 30	35
State of Sustainability Initiatives-Reviw 2010	International Trade Center Voluntary Standards and Sustainable Development Conference, Geneva, Switzerland	July 10	150
Welfare Effects of Fisheries Boom in Lake Victoria"	International Institute of Fisheries Economics & Trade 2010, "Economics of Fish Resources and Aquatic Ecosystems, Montpellier, France	July 13-16	50
Multilateral Environmental Agreements (MEAs) and the WTO	WTO Public Forum, Geneva, Switzerland	September 15-17	100
Transparency and the WTO	WTO Public Forum, Geneva, Switzerland	September 15-17	100
Alternative domestic finance and support mechanisms in the United States	14th Annual Chatham House Conference on Climate Change: "The Way Forward in a Post-Copenhagen world", London, UK	September 24	80
State of Sustainability Initiatives - Reviw 2010	EcoPartners Meeting, New York, US	October 10	25
The Global Effects of	Environment for Development	October 29-31,	30

Subglobal Climate Policies	annual meeting, Addis Ababa, Ethiopia	2010	
State of Sustainability Initiatives-Review 2010	OECD Global Forum on Environment, Magdelen, UK	November 10	150
State of Sustainability Initiatives-Review 2010	Trade Standards Practitioners Network: Voluntary Standards and Climate Change Conference, Berne, Switzerland	November 10	100
BTAs in the WTO; Positive Realities and Normative Thinking	Columbia University's Earth Institute Climate Change Policy Seminar, New York, US	November 10	50
The Legal Status of MEAs in WTO Law of Today	University of Michigan Legal Theory Workshop, Ann Arbor, Michigan, US	November 17	
The Global Effects of Subglobal Climate Policies	RFF Side Event to the Cancun UNFCCC COP "Trade and Competitiveness: Domestic and International Effects of Climate Policy Choices", Cancun, Mexico	December 7	35
The Global Effects of Subglobal Climate Policies	RFF Side Event to the Cancun UNFCCC COP "Border carbon adjustments: the debate continues", Cancun, Mexico	December 7	40
Arbitrating Environmental Disputes	Geneva Annual Arbitration Forum, Geneva, Switzerland	December 9	
Reference group member	Dags att tänka om! En rapport om EU:s vägval i den internationella klimatpolitiken"	Fall	

## Supporting Collaboration

In addition to our external communication, ENTWINED has provided support for its researchers to collaborate and share ideas for research. This has been done not only via bilateral communication between the research partners, supported with ENTWINED resources, but also via an ENTWINED workshop that was hosted in Brussels in November 2010. The objective of this workshop was to provide a opportunity for both ENTWINED's researcher and board members to share and exchange ideas and comments on their research.

## Teaching and graduate supervision

Trade and environment teaching and supervision have gained momentum partly through the participation of these institutes in this programme. Over 70 students followed this course in the fall of 2010. In the Spring of 2010, Henrik Horn taught part of a Master Level Microeconomic Analysis course at the Stockholm School Economics with applications to climate agreements.

ENTWINED is also supporting Alex Schmitt, a PhD Student in Economics at the Institute for International Economic Studies (IIES) at Stockholm University. Alex joined the IIES in September 2010 and has been a doctoral student at Stockholm University since 2008. He holds a M.A. from Simon Fraser University in Canada and a "Diplom" from the University of Regensburg in Germany. His main fields of interest are computational macroeconomics, natural resource economics and the economics of climate change, with a focus on climate-economy modeling.

# Financial Report

## Entwined program budget and expenses KSEK

Research Effort Category	Budgeted					Expenses incurred				Balance
	2010	2 011	2 012	2 013	Total	2010	2 011	2 012	2 013	
Fees excl OH	3 750	3 750	3 750	3 750	15 000	3 107	0	0	0	11 893
OH	1 350	1 350	1 350	1 350	5 400	1 000	0	0	0	4 400
Publication and Website	0	0	0	0	0	0	0	0	0	0
Travel	0	0	0	0	0	0	0	0	0	0
Events	0	0	0	0	0	0	0	0	0	0
VAT	0	0	0	0	0	223	0	0	0	-223
Unallocated	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>5 100</b>	<b>5 100</b>	<b>5 100</b>	<b>5 100</b>	<b>20 400</b>	<b>4 329</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16 071</b>

Communications Category	Budgeted					Expenses incurred				Balance
	2010	2 011	2 012	2 013	Total	2010	2 011	2 012	2 013	
Fees excl OH	350	350	350	350	1 400	235	0	0	0	1 165
OH	350	350	350	350	1 400	235	0	0	0	1 165
Publication and Website	300	300	300	300	1 200	224	0	0	0	976
Travel	400	400	400	400	1 600	153	0	0	0	1 447
Events	500	500	500	500	2 000	141	0	0	0	1 859
VAT	0	0	0	0	0	42	0	0	0	-42
Unallocated	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1 900</b>	<b>1 900</b>	<b>1 900</b>	<b>1 900</b>	<b>7 600</b>	<b>1 029</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6 571</b>

Program Management Category	Budgeted					Expenses incurred				Balance
	2010	2 011	2 012	2 013	Total	2010	2 011	2 012	2 013	
Fees excl OH	325	325	325	325	1 300	407	0	0	0	893
OH	325	325	325	325	1 300	355	0	0	0	945
Publication and Website	0	0	0	0	0	0	0	0	0	0
Travel	0	0	0	0	0	30	0	0	0	-30
Other	0	0	0	0	0	25	0	0	0	-25
VAT	0	0	0	0	0	0	0	0	0	0
Unallocated	850	850	850	850	3 400	0	0	0	0	3 400
<b>Total</b>	<b>1 500</b>	<b>1 500</b>	<b>1 500</b>	<b>1 500</b>	<b>6 000</b>	<b>816</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5 184</b>

PhD Support Category	Budgeted					Expenses incurred				Balance
	2010	2 011	2 012	2 013	Total	2010	2 011	2 012	2 013	
Fees excl OH	335	350	350	350	1 385	335	0	0	0	1 050
OH	185	200	200	200	785	185	0	0	0	600
Publication and Website	0	0	0	0	0	0	0	0	0	0
Travel	0	0	0	0	0	0	0	0	0	0
Events	0	0	0	0	0	0	0	0	0	0
VAT	0	0	0	0	0	0	0	0	0	0
Unallocated	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>520</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>2 170</b>	<b>520</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1 650</b>

Total Category	Budgeted					Expenses incurred				Balance
	2010	2 011	2 012	2 013	Total	2010	2 011	2 012	2 013	
Fees excl OH	4 760	4 775	4 775	4 775	19 085	4 083	0	0	0	15 002
OH	2 210	2 225	2 225	2 225	8 885	1 774	0	0	0	7 111
Publication and Website	300	300	300	300	1 200	224	0	0	0	976
Travel	400	400	400	400	1 600	183	0	0	0	1 417
Events and Other	500	500	500	500	2 000	165	0	0	0	1 835
VAT	0	0	0	0	0	264	0	0	0	-264
Unallocated	850	850	850	850	3 400	0	0	0	0	3 400
<b>Total</b>	<b>9 020</b>	<b>9 050</b>	<b>9 050</b>	<b>9 050</b>	<b>36 170</b>	<b>6 694</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29 476</b>

## The ENTWINED Team

The research consortium brings together researchers from different disciplinary backgrounds, including international law, economics, policy, and natural science. They are an international group comprised of leading trade and environmental policy researchers based mainly in Sweden, but also from Switzerland, Canada, and the United States. The following people, listed in alphabetical order, form the research team:

*Håkan Eggert* is Researcher in Economics at Göteborg University, Sweden. He earned his Ph.D. in Economics in 2001 with a thesis on problems related to commercial fisheries. The thesis work was part of the Mistra-funded program Sustainable Coastal Zone Management. Håkan Eggert has been actively involved in developing an Environmental Social Science Masters Program at Göteborg University and has served as Director of Studies and Chairman for this Program. He has published papers on bioeconomics, risk, production, compliance and valuation, usually with a link to marine resources. He has also served as an advisor to the Swedish Environmental Protection Agency, for the Commission on the Marine Environment appointed by the Swedish government and the public report *Fishy Fishing: Decision-Making and Economic Performance in Swedish Fishery Policy*, appointed by the Ministry of Finance.

*Carolyn Fischer* is a tenured Fellow at Resources for the Future (RFF) in Washington, DC. She holds a Ph.D. in Economics from the University of Michigan, Ann Arbor, and a B.A. in International Relations with honours from the University of Pennsylvania in Philadelphia, USA. Her research interests cover a variety of issues, both domestic and international, from resource use and decision making over time, to environmental and tax policy design, to behavioral economics. Specific to this project, she has written on the implications of multilateral trade agreements for the design and implementation of domestic environmental policies. She has also studied voluntary environmental policy mechanisms like ecolabels, the relationship between trade and invasive species management, and the role of trade in protecting endangered species. She has published widely in peer-reviewed journals and has also conducted policy analysis for the World Bank Group, the Asian Development Bank, and the Canadian National Round Table on the Environment and the Economy. Prior to RFF, she served as a Staff Economist at the Council of Economic Advisors to the President during the Clinton Administration. She spent the fall of 2005 as a Fellow at the Norwegian Centre for Advanced Study, conducting research on climate and technology policies with Thomas Sterner. She frequently travels to Göteborg to collaborate on research and advise students.

*Mads Greaker* is affiliated with the Department of Economics, Göteborg University, in a part-time capacity. Among other responsibilities, he coordinates together with Håkan Eggert the Master Course “Environmental Economics—International Issues,” in which trade and the environment constitutes a major part. Mads Greaker earned his Ph.D. in Economics from the University of Oslo in 2002. His thesis

was on the relationship between industrial organisation, international competitiveness, and environmental regulations. He has published several papers on various aspects of the Porter-hypothesis, on ecolabelling and protectionism, as well as on the economics of climate change. He is head of the research group for Petroleum and Environmental Economics at Statistics Norway in Oslo.

*Mark Halle* is the director of the Institute for Sustainable Development's (IISD's) office in Europe, and also of its global programme on Trade and Investment. A joint citizen of the United States and Italy, he spent the bulk of his career in international environmental affairs. He began as a Programme Officer in the Policy Planning Unit of the United Nations Environment Programme, moving to the World Wildlife Fund International, responsible for its programme in China. He then helped to establish the Conservation for Development Centre in IUCN—the World Conservation Union, moving on to become, successively, the Director of Field Operations, the Director of Development, and finally the Director for Global Policy and Partnerships in IUCN. He left IUCN in 1997 to set up the IISD Office in Europe. He is also the founder and first Chairman of the International Centre for Trade and Sustainable Development, and sits on a wide range of boards and advisory committees for trade-related organisations in Europe, Asia, Latin America and Australia. He frequently lectures and publishes on trade, investment and environmental issues.

*Henrik Horn*, Professor of International Economics, joined the Institute for International Economic Studies (IIES), Stockholm University in 1978. He became Doctor of Economics at Stockholm School of Economics 1983, Associate Professor at the IIES 1986, and was Full Professor at the IIES from 1994 until his resignation 2007. He was Deputy Director at the IIES between 2000 and 2004. Since 2006 his main affiliation with the Research Institute of Industrial Economics (IFN, formerly IUI) in Stockholm, where he is Senior Research Fellow. Horn is also Non-Resident Senior Fellow at Bruegel, a Brussels-based think tank, Chief Reporter (jointly with Petros C. Mavroidis) for the American Law Institute project Principles of World Trade Law: The World Trade Organization. Horn is Research Fellow in the International Trade and Industrial Organization Programmes of the Centre for Economic Policy Research, London, and an Editorial Board member of the World Trade Review. Horn has done research in a variety of areas, including International Economics, Industrial Organization, Labor Economics and Economics of Sports. Since approximately 10 years, Horn research mainly focuses on issues at the intersection between Economics and Law, and in particular economic and legal aspects of international integration agreements, such as the WTO and the EU, and competition and regulation issues. He is also participating with Petros C. Mavroidis in a long-term project on the relation between nationally and multilaterally defined environmental policies and the WTO Agreement. Horn has taught from introductory courses to advanced graduate courses at e.g. Stockholm University, Stockholm School of Economics, the University of Michigan, Princeton University, the World Trade Institute (Bern), and the Graduate Institute of International Studies (Geneva). He has served as a Judge in the Swedish Supreme

Court for antitrust cases, and worked for four years in the Economic Research and Analysis Division of the WTO.

*Petros C. Mavroidis* is Edwin B. Parker Professor of Law at Columbia Law School, New York, and Professor of Law at the University of Neuchâtel, Switzerland, as well as a Research Fellow at CEPR. He studied in Brussels and Berkeley before completing his Ph.D. thesis in Heidelberg, Germany. He teaches Trade Law and has been visiting various institutions, including European University Institute (Florence) and Princeton University. Mavroidis was with the Legal Service of the GATT/WTO 1992–1996, and has also worked for the OECD Trade and Competition Directorate. He has consulted for the European Commission, and the World Bank. His core interests are in the study of international trade, and he has published extensively in the area. He is, along with Henrik Horn, Chief Reporter for the American Law Institute (ALI) for the same long-term project described above. His current research has in particular focused on dispute settlement in the WTO. He recently prepared with Horn a comprehensive data set on the WTO dispute settlement system available at [www.worldbank.org/trade/wtodisputes](http://www.worldbank.org/trade/wtodisputes). He has been recently appointed full professor at EUI, Florence and will be on leave from Columbia Law School for the next five years (2011-2015).

*Jason Potts* is the coordinator of the Sustainable Commodity Initiative- a joint initiative of the United Nations Conference on Trade and Development (UNCTAD) and IISD. He is a lawyer by training with expertise in international trade law, sustainable development law and corporate social responsibility. Prior to coming to IISD, Mr. Potts worked at the International Development Research Centre, Canada where he conducted research on sustainability in the coffee sector. He has also worked with the Commission for Environmental Cooperation, the environmental side-body to the North American Free Trade Agreement, on the analysis and development of markets for sustainable coffee in the North American context.

*Mark Sanctuary*, is a Senior Researcher and Project Manager at IVL Swedish Environmental Research Institute. His work currently includes research on international economics and the management and execution of projects in Asia and Eastern Europe. Apart from his activities with ENTWINED, Mark managed and led a major EU project on the Clean Development Mechanism in China in cooperation with key Chinese authorities and is also pursuing a PhD at Stockholm University's Department of Economics. Prior to beginning at IVL Swedish Environmental Research Institute in 2005, he worked at the United Nations Environment Programme's Economics and Trade Branch in Geneva. In this capacity, he managed, co-ordinated and facilitated a range of international environmental projects in co-operation with multilateral organisations such as the OECD and the World Bank.

*Erika Svensson* currently works with IVL Swedish Environmental Research Institute as a producer and project manager at the department for Communication and Knowledge also known as "IVL Kunskap" (IVL Knowledge). IVL Kunskap designs and delivers a comprehensive range of education and training programs in sustainable development for the private and public sectors. Erika's former experiences

includes the role as communication specialist within a Swedish media network, to consulting at Kairos Future, a company that works with future analysis and scenario planning, and as senior consultant at an environmental consulting company with a focus on social responsibility. Erika's educational background includes information science from the University of Örebro, advanced project and process management from the Kaospilot University and a Master's degree in Management with a specialty in Social Responsibility & Business Practice from the University of Bath.

*Robert Wolfe* is Professor in the School of Policy Studies at Queen's University in Kingston, Canada, and an IISD Associate in the Trade and Investment Program. He was a foreign service officer for many years, serving abroad Dhaka, Bangladesh and in the Canadian Delegation to the Organisation for Economic Co-operation and Development in Paris. In Ottawa he worked in the National Security Section; the U.S. Trade and Economic Relations Division; as Executive Assistant to the Ambassador for Multilateral Trade Negotiations and Prime Minister's Personal Representative, Economic Summit; and in the International Economic Relations Division. Since joining Queen's in 1995, where he teaches policy analysis and trade policy, Dr Wolfe has published widely in scholarly journals on trade policy and institutions, and on public opinion about trade. In the policy world, he is the coordinator of Canadian participation in the Canada-UK Colloquium, and a member of the Canadian Agricultural Trade Policy and Competitiveness Research Network. For the Department of Foreign Affairs and International Trade he is a Director of the Queen's Annual Institute on Trade Policy, which offers training for mid-career professionals, and convener of the periodic Queen's Workshop on Trade Policy, which builds networks among Canadian academics.

## ***Programme Board***

One of the important features of all Mistra research programmes is the appointment of a Programme Board, by Mistra and IVL Swedish Environmental Research Institute. Through regular meetings with the research team, the Programme Board helps manage ENTWINED. This body is entrusted with responsibility for the direction of the programme. ENTWINED's board members are:

*Lars Anell* (Chair) was born in 1941 in the town of Katrineholm, Sweden, and graduated in 1966 from Stockholm School of Economics and the University of Stockholm. He spent four years with the Ministry of Finance before he joined the Ministry for Foreign Affairs in 1970. From 1986 to 1992 he served as Ambassador in Geneva, during which period he chaired GATT's Council and Contracting Parties. In 1992 he was appointed Ambassador to the European Union when Sweden started its accession negotiations. In 1994 he left public service and joined the executive team to AB Volvo, from which company he retired in 2001. Lars Anell serves as chairman of several organizations, including the Stockholm Environment Institute and ICC's Commission on Trade and Investment Policy. He has published several books and articles in the field of economics and political science.

*Lena Johansson* is Director General at the National Board of Trade, since 2005. Her earlier positions have mainly been in ministries and governmental authorities, working on policies on agriculture, budget and EU matters. She has held positions as Director General at the Swedish Institute for Food and Agricultural Economics as well as Head of Unit at the Ministry of Finance and the Ministry of Agriculture. She serves on several boards including The Swedish International Development Cooperation Agency, The Swedish National Dept Office and The Swedish Industrial Design Foundation.

*Anders Rune* Chief economist at the Association of Swedish Engineering Industries Managing Director Teknikföretagens Förlag AB (The Associations publishing Company) Rune has a LicEng, Institute of Technology at Linköping University and previously held positions as Managing Director at Finanstidningen and university lecturer in economics at the Institute of Technology at Linköping University. Rune is currently head of the Department of Economic analysis. The Department publishes on a regular basis a Business Activity survey covering different sectors of the industry as well as groups of subcontractors and an Engineering Economic Outlook report. The Department also covers more than 800 individual member companies profitability and economic performance on yearly basis. It may also be of interest to mention the publishing of a series of reports covering the different Engineering industry sectors in India and how production in Sweden is affected. Similar reports have been filed on China and Eastern Europe. Anders Rune is a well known analyst of the Swedish industry, often to be quoted in Swedish newspapers, radio and television.

*Catarina Hedlund* is Deputy Director, International Trade Policy Affairs, Ministry of Foreign Affairs, Sweden. (bio to come)

*Bengt Kriström* is Professor of Resource Economics and Research Director, CERE, SLU-Umeå and Umeå University, Sweden. His main research interest is applied welfare economics, in which pricing of non-market goods, green accounting and welfare analysis in equilibrium models is of primary interest. He was among the world's 1000 most cited economists in September 2002 (and 100 most cited energy economist and top five in Sweden). He has been expert to the government at numerous occasions, including 5 major Commissions on environmental policy. He was a member of the Council of Economic Advisors 1998-2001 and Member, Commission on Sustainable Development, The Prime Minister's office. As of 2007-, he is Chair of the "Expertgruppen för Miljöstudier ("Expert Group on Environmental Studies") at the Ministry of Finance. He has been a consultant to several international organizations, including several missions for OECD. He has organized the Ulvön international Conference on Environmental Economics since 1993.

*Göran Nilsson*, Vice President Special Projects, SCA Forest Products AB, Sweden (bio to come)