

## **P 4.1 CITEL**

### **Climate change and international trade from an economic and legal perspective**

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#### **1. The three research questions of the project**

- What does the law of the World Trade Organization (WTO law) say about border tax adjustment measures (BTA measures) for regulations, technical standards and taxes on climate-related process and production methods (climate-related PPM)?
- Is there a potential conflict of proposed BTA measures for carbon tax or emissions trading systems with WTO law and how can WTO law be used to justify various BTA measures in climate change mitigation systems?
- How and to what extent does international trade and trade policy measures affect the economic costs of combating global climate change?

#### **2. Research Summary**

This project connects economic and legal research and aims at analyzing the interaction between international trade, trade regulation and climate policies from a theoretical and applied perspective. The project is limited to issues of mitigation of greenhouse gas emissions. It does not address adaptation to climate change, which entails issues of food security and human rights. These matters are planned to be considered in the 2<sup>nd</sup> Phase of **NCCR Trade Regulation**, in collaboration with researchers of NCCR Climate WP2, WP3 and WP4.

##### ***Task1: International Trade and Global Climate Policy***

Global climate change affects national economies in at least two different ways: (1) directly through market and non-market damages climate change, and (2), indirectly through costs and benefits of policy interventions as well as through damages from economic spillovers. The last type of potential indirect effects is an outcome of the increasing globalization and the resulting close international interdependence of national economies.

Based on the work of Manne and Stephan (1999), Schenker (2008) showed within the framework of an almost consistent Integrated Assessment Analysis that a country, which is strongly exposed to climate change, might react to climate change induced damages by changing the terms of trade. That means that climate damages can be reallocated across countries through international trade. In fact, countries, which are directly affected by climate change, can export market damages up to a certain level. Thus, mitigation and adaptation are not the only policy options for reacting to climate change. A country always has the option to reduce the economic impact of global climate change through adjusting its trade policy. In doing so, it is bound by international agreements and commitments limiting the scope of action. Therefore, analysis of the interplay between trade and climate policies is an important issue when dealing with the economic implications of global climate change. We focus on the interaction of trade policies on the one hand side and mitigation on the other, while neglecting the issue of adaptation.

##### ***Task2: Interaction of International Trade Regulation and Climate Policy***

The relationship between the evolving international environmental law on climate and international trade regulation is increasingly attracting attention (*inter alia* Pauwelyn, 2007; Sindico, 2006; Charnovitz, 2004). Regardless of how the post-Kyoto regime will be shaped, there is intrinsic demand for research focusing on this relationship. Within the framework of our project we propose, as a priority issue, to analyze the conformity of climate policy-related Border Tax Adjustment (BTA) measures with WTO law. BTA allows off-setting domestically imposed taxes on imports at borders irrespective of commitments taken to reduce import tariffs.

BTA measures are among the central issues of climate mitigation policy. Instead of serving their traditional fiscal function, BTA measures for climate purposes are rather designed to prevent so-called “carbon leakage”: reallocation of production from countries with carbon reduction commitments to countries with no emissions restrictions. Such leakage might considerably decrease the effectiveness of global climate change mitigation efforts. Furthermore, BTA measures could help solve the problem of integrating developing countries into the Kyoto and post-Kyoto international climate policy system.

Recently, a number of proposals to introduce BTA measures in various national and regional carbon taxation and emissions trading systems were put on the table on governmental level (Hennig, 2008). These proposals include a carbon tax on imports, emissions standards and a requirement to the importers to surrender emission allowances at the time or point of importation. However, the introduction of climate policy-related BTA measures is deemed quite problematic both from economic, legal and political perspectives (Cosbey, 2008; Ismer and Neuhoff, 2007). The proposed research will mainly focus on the legal issues of BTA measures, particularly their justification under WTO law. In doing so, it is expected that a number of other closely related, but still unsolved BTA measures' issues will have to be dealt with. These issues might include, among others, the clarification of the concept of BTA measures under WTO law and the specification of WTO law provisions on BTA measures for regulations and taxes on climate-related Process and Production Methods (PPMs). The research is scheduled for three years and will result in a PhD thesis in law.

The task assigned to P4.1 (the CITELE project) is in line with the subject and research goals of WP4 (Integrated assessment analysis of global change, economy and society), and contributes to the fulfilment of WP4 tasks by analyzing the efficiency and consistency of trade-related climate change mitigation measures from the legal perspective. With its focus on mitigation (adaptation is dealt with by the NCCR Trade Regulations) the CITELE project contributes to the core of the NCCR Climate Phase 3 and strengthens the capabilities to advise national and international policy makers.

### **3. Data and methods**

#### ***Task 1: International Trade and Global Climate Policy***

Task 1 bases on the multi regional, multi sector dynamic trade model, which was developed in WP4.2 during Phase 2 (see Schenker 2008). However, since the approach developed by Schenker focuses on a cost-effectiveness analysis for given climate scenarios, for studying the interaction between mitigation and trade policies and thus, to accomplish Task 1, the model must be expanded into a full Integrated Assessment model. This in particular implies including a carbon cycle representation in order to analyse the effects of mitigation. The data for the international trade model are based on the GTAP dataset.

#### ***Task 2: Interaction of International Trade regulations and Climate Policy***

Empirical data on BTA measures in climate change mitigation systems will be collected and hypotheses of WTO compliance of BTA measures will be tested. In testing the compliance hypotheses the researcher will use scientific methods of comparison and generalization, will interpret public international trade law and will conduct case-law analysis.

### **4. Milestones and deliverables**

#### ***After 12 months:***

- Stocktaking: BTA measures in climate change mitigation systems (Working paper 1)

#### ***After 24 months:***

##### ***Task 1:***

- Development of a multi regional integrated assessment model with international trade,

##### ***Task 2:***

- Analysis of the treatment of taxes on climate-related PPMs under the WTO law and peculiarities of BTA measures in climate change mitigation systems (Working paper 2).

- Assessment of consistency of climate-related existing and proposed BTA measures (i.e. carbon tax, technical standards, emissions allowances purchase requirements) with WTO law (Working paper 3).

**After 36 months:**

**Task 1:**

- A detailed analysis of the relation between climate policies and trade policies.

**Task 2:**

- Proposals for justification of existing and proposed climate-related BTA measures under WTO law (Working paper 4).

**5. Contribution to WP4 and collaboration with other NCCR projects and 3<sup>rd</sup> parties**

Synergies are expected both within the work package (WP) as well as between different WPs. In particular, co-operation with P4.2 will take place when dealing with peculiarities and efficiency issues of taxation on emissions for climate change mitigation purposes. Outcomes of P4.3 work on designing and testing different architectures of international climate agreements and emissions trading schemes might be needed to analyze BTA measures' proposals with respect to their conformity with WTO law. Collaboration with WP2 (P 2.1 and P 2.3, specifically) is fundamental to analyze effects of international trade on climate change and for guidance on the development of future climate change, where this information is used for defining mitigation targets, which are to be analyzed.

There is a large potential for research through co-operation between two NCCRs. The co-operation includes the mutual concertation of economic and legal research in these areas.

Furthermore, an exchange of ideas is expected with academics from other academic institutions working on climate change issues, such as A. Cosby (IISD), J. Pauwelyn (HEI) and others, as well as representatives of national administrations dealing with climate policy.

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