

# Carbon Markets: A Preliminary Assessment of General Operations and Opportunities for Crime

Jessica Fry, Carole Gibbs, Edmund McGarrell & Chris Oliver  
MSU School of Criminal Justice

## I. Introduction

### The Kyoto Protocol Requirements

The Kyoto Protocol contains legally binding commitments for industrialized countries to reduce greenhouse gas emissions during the first commitment period (2008 - 2012) by 5% as compared to 1990 levels. A subset of these countries have also agreed to pay for clean technology development in developing countries.

### The Kyoto Protocol Implementation

To meet emissions caps in the form of a set number of carbon credits, countries and companies regulated within the countries can participate in "carbon markets" by:

- Buy and sell carbon credits (AAUs)
- Earn credits through Joint Implementation Projects (JI)
- Earn credits through the Clean Development Mechanism (CDM)

## II. Research Motivation

The creation of markets theoretically provides a more flexible method for companies to achieve compliance than traditional environmental regulation. But, as in regular financial markets, loss of confidence due to instances of fraud is a relevant risk. Research associated with these risks in emerging carbon markets is critical to support the construction of resilient markets that have legitimacy and can support the goal of reducing carbon greenhouse emissions.

## III. Methods

To improve understanding of the operation of and criminal opportunities in carbon markets, we began by compiling existing information on general market issues and hypothetical and actual instances of crime in these and similar regulatory systems (e.g., financial markets, voluntary carbon markets). We constructed a description of these issues using the following sources of information:

- Academic literature
- News and other media accounts
- Data from the European Union Emission Trading System on 10,500 businesses reporting in 2008

## IV. A Preliminary Assessment

### General Operational Issues

#### Promising Features

- EU ETS 2008 data indicates that 95% of regulated entities were in compliance.
- Carbon markets create flexibility in methods to achieve compliance, including emission reductions, purchasing surplus credits from other companies or engaging in offset projects via the flexible mechanisms.

#### Problematic Features

- Country-level allocations were made based on 1990 emission levels, creating a cap that was higher than current emissions for countries that decreased emissions post 1990 (e.g., Australia).
- **Measurement, monitoring and verification**
  - Accuracy of offset/sink credits
  - **Additionality:** Determining that CDM projects deliver reductions in greenhouse gases that would not otherwise have happened (Wara, 2007; Murtha, 2009)
  - Calculating company caps
- Overuse of flexible mechanisms

### Opportunities for Crime

#### Measurement & Reporting of Emissions

- Deliberate falsification of baseline emissions or current emissions through falsification of fuel input data (New York Times, 2006).

- Emissions reduction technology fraud, in which new emission reduction technology is falsely promoted in order to manipulate carbon market mechanisms and pricing (Waste News, 2002)

#### Measurement & Reporting of Flexible Mechanism Credits

- Over-reporting of offset purchases or exaggeration of emission reductions associated with the flexible mechanisms (INECE, 2009).
- Fraudulent approval of offsets projects through third-party certifiers.

#### Trading

- Tax fraud
- Market manipulation and excessive speculation (INECE, 2009)

#### IT Security Issues

- Exploiting IT security weaknesses to steal credits (CarbonFinance, 2010).

### Monitoring & Verifying Offsets (BusinessGreen, Dec 1, 2008)

The United Nations announced on December 1, 2008, that it was planning to suspend the company that had been responsible for checking the validity of almost half the CER-credits generated under the Kyoto Protocol. Det Norske Veritas was to be suspended after flaws in its auditing processes had been discovered and an individual responsible for signing off on five separate CDM projects had not actually surveyed them.

An analyst from PointCarbon emphasized that the suspension did not necessarily mean that Det Norske Veritas was cutting corners in its verification process, since much of this work is carried out in a 'gray area' that is still very much under development.

Det Norske Veritas expressed the hope that they would regain their license within one to two months. Meanwhile, the company has affirmed that it would continue work on existing projects.

### Tax Fraud (The Guardian, Jan 11, 2010)

Three Britons and a Dutchman were recently charged with money laundering following an investigation into carousel fraud within the European Union Emissions Trading System. The three Britons, who were arrested in Belgium, have been charged with failing to pay €3m in VAT-tax.

This type of fraud occurs when carbon credits are imported tax-free from another country and then sold to domestic buyers, charging them a VAT-tax. UK law until recently allowed credits to be sold without adding VAT, while Belgians were required to pay VAT when buying credits. In this case, the brokers disappeared after completing the transaction in Belgium without paying the VAT to the British government.

Although European governments are working to close loopholes in their laws that make such VAT fraud possible, it is believed this has not come in time to prevent an estimated fraud of €5bn using this mechanism.

## V. Implications

Dire predictions have been made regarding the threat of fraud in carbon markets, but few actual cases have emerged to date. It is currently unclear whether this reflects the actual prevalence of fraud or inadequate detection and enforcement. However, the scale of current cases of fraud is such that they have a significant impact on overall system functioning.

Currently however, general operational issues represent more common threats to the market system.

### Company Caps & Flexible Mechanisms (EU ETS Data, 2008)

Company-level caps in the trial period of the EU ETS were based on projected emissions calculated by the regulated entities. In hindsight, projected emissions were based on unrealistic assumptions regarding economic growth that resulted in higher (overallocated) caps (GAO-09-151). Data from the current implementation period indicate the potential for such behavior to reoccur, as 65% of businesses in the EU emitted less than their allowed cap.

The flexible mechanisms are intended to act as supplements to emission reduction efforts. Data from the EU ETS indicates that companies may instead use the Clean Development Mechanism to increase profits. As of 2008, 19% of companies that were over their caps and 16% of companies that were under their caps engaged in Clean Development Projects to earn credits.

### Stolen Credits (Carbon Finance, 2010)

"Law firm Hunton & Williams is pursuing a number of companies that bought EU allowances (EUAs) stolen during the recent 'phishing' scam, and is looking for other victims to join a civil case. The law firm is acting for a German-based participant in the EU Emissions Trading Scheme, which holds one of at least six accounts from which 250,000 EUAs, worth more than €3 million (\$4.1 million), were stolen in January... Those beneficiaries are protesting their innocence, claiming that they bought the stolen EUAs in good faith. However, Hunton & Williams' lawyers believe they will be able to recover the value of the EUAs for the victims."

## VI. Next Steps

Collection of additional data from interviews with enforcement and regulatory personnel in these and related regulatory systems.

Preliminary assessment of monitoring and enforcement mechanisms that may reduce opportunities for fraud.

Compilation of a database using available European Union Emissions Trading System compliance data.