

Is domestic action enough? Policies and programs for the EU to reduce greenhouse gas emissions outside of its borders.

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Introduction

For achieving the ambitious targets of the Paris agreement **domestic action might not be enough**

Also, **some emission reductions may be more cost-effective** when achieved abroad

This Hot Energy Topic (HET) looks at **how EU countries can support decarbonisation outside their borders**

Structure

1. Review of **GHG emissions in the EU**
2. Review of **policies** to influence the EU's emissions outside of its borders
3. Policy gaps and **recommendations**

Carbon embodied in a product (and in trade)

Green house gases (GHG) emissions generated directly or indirectly during the **life cycle** of a product



A traded product has carbon emissions embedded in it

EU's GHG emissions inside and outside its borders

Up to 1/3 of the EU consumption based emissions are imported from countries with lower emission regulation

Goals to reduce EU emissions are pointless if this is done through pollution displacement ("**carbon leakage**") (Kornerup Bang et al., 2008)

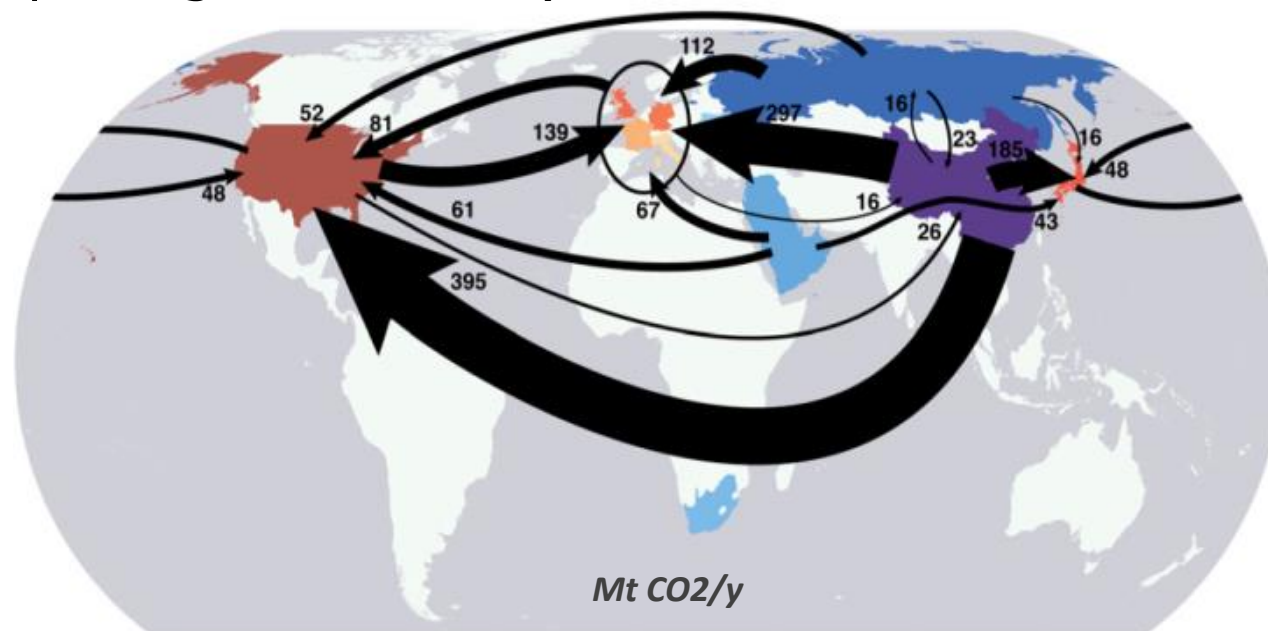


Figure 2: Largest interregional fluxes of emissions embodied in trade from net exporting countries (blue) to the importing countries (red) (Davis and Caldeira, 2010)

Policies to influence emissions abroad

MARKET BASED MECHANISMS

- EU Emission Trading System (**ETS**)
- Clean Development Mechanism (**CDM**)
- Joint Implementations (**JI**)
- Voluntary Emission Reductions (**VERs**)



PARIS:

Internationally
Transferable
Mitigation Outcomes
(**ITMO**)

OTHER MECHANISMS

- **Direct financing** - the EU is committed to contributing its 'fair share' towards the developed countries' goal of jointly making available USD **100 billion** per year by 2020
- **Climate change cooperation** with non-EU countries
- **Blending mechanisms**

Policies to influence emissions in trade

TRADE AGREEMENTS

- Key international labour and environmental standards
- **NO REFERENCE TO PRODUCTS' GHG EMISSIONS**

SECTOR SPECIFIC POLICIES (TRANSPORT OF GOODS)

- **AVIATION:** Carbon Offsetting and Reduction Scheme for International Aviation – CORSIA (**pilot**)
- **SHIPPING:** International Convention for the Prevention of Pollution from Ships & efficiency standards

Conclusions & policy recommendations

Only **scattered policies** are available for the EU to reduce GHG emissions outside of its borders

Market-based global trading mechanisms have fallen short of expectations:

- E.g. Existing CDM programs were found to be time, data and finance intensive (e.g. Freeman and Zerriffi, 2014).

Expectations on new schemes deriving from the **Paris agreement**

Conclusions & policy recommendations

The **EU is a net importer** of carbon emissions

Progress in curbing GHG emissions in international shipping and aviation

(however only 5.5% of the transport-related global emissions)

No other schemes to reduce emissions in trade

Conclusions & policy recommendations

Possibility to introduce new schemes that reward low-carbon products in trade?

- **E.g.** price mechanisms, or special systems of duties
- **Without diminishing the competitiveness** of developing exporting economies (reward low-carbon productivity **within** exporting countries)
- Would need standards and industry specific mechanisms to **evaluate carbon content of products**
- Require a **thorough analysis** in order to understand **trade flow and international competitiveness implications.**

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This HET reviews the current state of the EU's GHG emissions outside of its borders and highlights corresponding policy gaps where actions might be undertaken.

1) Introduction

The Paris agreement has set ambitious decarbonisation goals for keeping this century's global temperature rise below 2 degrees Celsius and to make further efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels. As a landmark agreement, it has been signed by 191 parties who, for the first time, supported their ambition by submitting Intended Nationally Determined Contributions (INDC), i.e. pledges to reduce emissions, which will be revised and increased on a five-year basis. Recent approval by the EU on 4 October 2016 (EU-PRD, 2016) has brought the number of ratifying parties to 84, representing 61% of global emissions (WRI, 2016) and bringing the agreement into force in early November 2016.

From a national perspective, Greenhouse Gas (GHG) emissions can be reduced both, domestically and abroad. Currently, most EU member states are setting ambitious domestic decarbonisation targets. In parallel, international mechanisms such as the Clean Development Mechanism (CDM), international cooperation and targeted trade agreements give EU countries the option of contributing to their Paris agreement targets outside of their borders.

Considering that the EU is a net importer of GHG emissions (see section 2) and that some emission reductions may be more cost-effective when achieved abroad rather than domestically, this Hot Energy Topic (HET) looks at how EU countries can achieve climate targets outside of the unions' borders both today and in the future. To this end, the HET

first describes the EU's current GHG emissions and then reviews existing policies which influence the EU's emissions outside of its borders. Finally, it evaluates the effectiveness of existing policies, identifies policy gaps and gives recommendations on how to achieve further GHG emission reductions abroad.

2) Overview of the EU's GHG emissions inside and outside its borders

Figure 1 shows that each citizen in the EU emits an annual average of 8.3 to 14 tons of CO₂ due to consumption, depending on the year and applied methodology. This includes emissions related to purchased goods and services, private emissions due to mobility and heating as well as emissions due to investments (Eurostat, 2011). One estimation is that in 2012, the EU's domestic and net imported carbon emissions amounted to 2.8 and 1.0 billion t CO₂ respectively (Figure 1; Eurostat, 2016). Domestic carbon emissions peaked in 2005 and dropped strongly in 2009 due to the economic crisis; net carbon imports have increased since 2000 and peaked in 2008 (Eurostat, 2016).

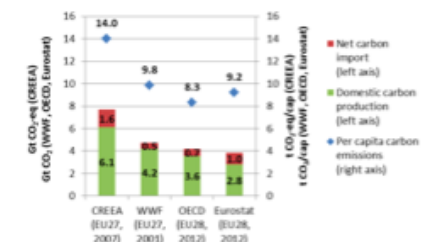


Figure 1: Total and per capita carbon emission estimates in four key studies. Own figure based on data from (Tukker et al. 2014; Eurostat, 2016; OECD, 2015; Kornerup Bang et al. 2008)

THANK YOU!