

**Summary**

Shipping is the only sector without an EU cap on emissions. In 2009, the EU committed to include shipping in its climate policy but instead the Commission proposed last year only to monitor CO<sub>2</sub> emissions. While the Monitoring, Reporting and Verification (MRV) proposal is a step in the right direction, it lacks ambition and will have little impact if left unchanged. It can be strengthened to create a MRV system that may not only be used for CO<sub>2</sub>, but also for SOx and NOx – harmful air pollutants. To actually reduce emissions, unreliable monitoring methods should be removed, and data transparency should be ensured. Finally, there should be a path for transition of MRV requirements into real emissions-reduction measures.

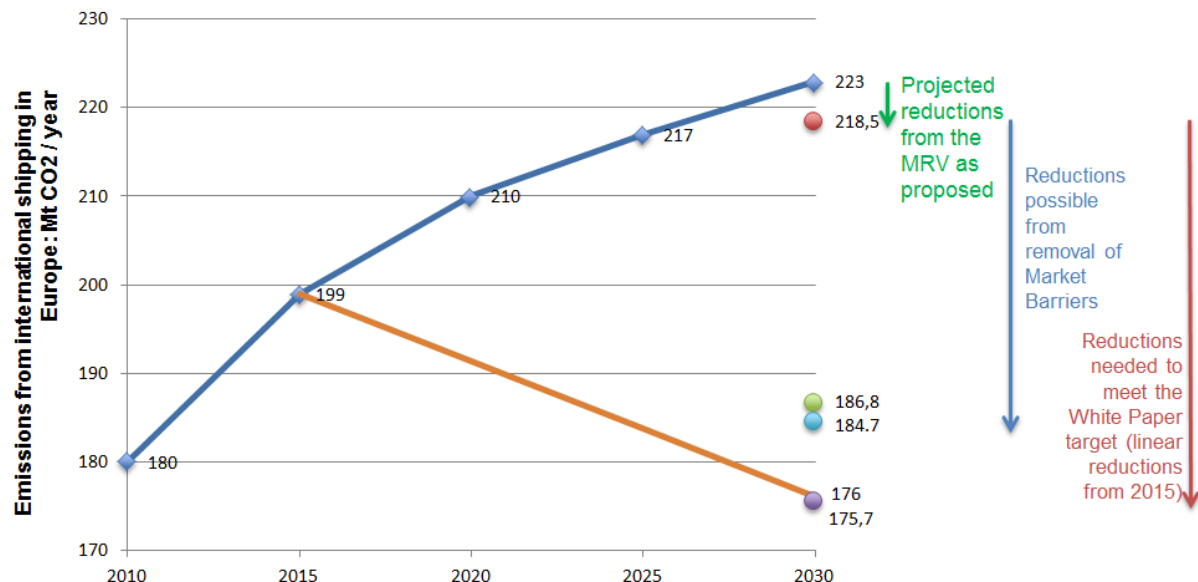
**The climate impact of shipping**

Notwithstanding claims of being the most carbon-efficient mode of transport, CO<sub>2</sub> emissions from international shipping are rapidly growing – up 90% since 1990. They now represent over 3% of global CO<sub>2</sub> emissions and unabated could grow to represent almost one fifth of the allowable 2°C carbon budget. In Europe, the Commission estimates that emissions from maritime transport in EU seas totaled around 180Mt of CO<sub>2</sub> in 2010; if these emissions were reported as a country, shipping would be the 8<sup>th</sup> largest emitter in Europe.

**The MRV proposal and the EU GHG shipping reduction target**

The Commission’s 2011 Transport White Paper called for “EU CO<sub>2</sub> emissions from maritime transport to be cut by 40% (if feasible 50%) by 2050 compared to 2005 levels.” But the MRV proposal does not require emissions cuts; merely the reporting of emissions to and from EU ports. The Commission claims the proposal will stimulate fuel savings of around 2% but the methods proposed make this questionable, and 2% falls far short of the EU’s target. The impact assessment shows an EU market-based measure (MBM) (for example, emissions trading) could achieve significant cuts cost effectively. The proposal should be amended to implement this and the MRV provisions strengthened to support such an objective. The following graph shows the projected contribution of MRV to achieving the EU 40% maritime emissions-reduction target and the large potential for emissions reductions through removing market barriers to better efficiency (for example, split incentives, lack of transparency, etc).

**Gap between MRV and EU emissions reduction goals**



## Two of the four proposed monitoring methods are not fit for purpose

Four reporting methods are specified in the proposal. A recent study (<http://transenv.eu/bunkerfuel>) confirmed that the first two are inaccurate and will add nothing new, while the last two are in fact capable of stimulating emissions reductions potentially beyond the 2%:

- ✗ Bunker Fuel Delivery Note (BDN) and periodic stocktaking of fuel tanks: relies on estimating fuel consumed and hence the emissions using fuel sales receipts (BDNs) which MARPOL requires be retained onboard. They are inaccurate and unreliable. Therefore, they are not considered to be a credible way to measure voyage fuel burnt.
- ✗ Ship fuel tank monitoring: Successive fuel level readings from tank soundings indicate the fuel consumed. The study suggests even higher uncertainty with this method than with BDNs due human error, variations in fuel, inaccurate tables, etc.
- ✓ Flow meters: Accurate and reliable method already used in cars and trucks; provides continuous readings of fuel flowing to the engines and thus fuel consumption. Low burden for ship's crew and verifiers (except for regular calibration).
- ✓ Direct emissions measurement: Continuously measures emissions in the funnel. Can measure emissions other than CO<sub>2</sub> (such as air pollutants). Low burden for ship's crew and verifiers (except for regular calibration). Requires new onboard equipment.

## Addressing all emissions from shipping in an integrated manner

CO<sub>2</sub> is by no means the only emission from ship smokestacks worthy of monitoring. Other pollutants are SO<sub>x</sub> and NO<sub>x</sub>. The EU recently implemented IMO's fuel sulphur content regulations designed to reduce shipping SO<sub>x</sub> by more than 80%<sup>1</sup>. However, at present only about 0.1% of ships are controlled for fuel sulphur content. At this rate, it is clear that enforcement will be next to impossible. In addition to this, NO<sub>x</sub> emissions from EU shipping are expected to exceed those from all other sources combined by 2020<sup>2</sup>.

Therefore, introducing a single MRV requirement for continuous reporting of all relevant emissions such as CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub> would be a major step forward. The MRV would then become a simple and powerful indicator of the overall air pollution performance of ships allowing accurate and cost-effective enforcement of the Sulphur in Marine Fuels Directive.

## Transparent route information is key to emissions savings

Data transparency is essential if the information barriers preventing improved ship fuel efficiency at little or no cost are to be properly addressed. The required data should enable a full estimate of ship efficiency (include cargo data, etc. and be made public to empower stakeholders such as charterers. They can then identify which ships operate in the most efficient manner. This would imply disclosure of more disaggregated data than the Commission proposal, most importantly allowing the publication of data *on a route basis*.

## Policy Recommendations

- Remove unreliable monitoring methods unlikely to bring actual emissions reductions.
- Require monitoring of CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub> emissions to create an integrated MRV.
- Mandate data transparency, key to removing market-barriers.
- Agree an MBM now to ensure the EU emissions target will be met cost effectively.

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<sup>1</sup> Directive 2012/33/EU

<sup>2</sup> <http://www.eea.europa.eu/publications/the-impact-of-international-shipping>