

Briefing

NOx emissions from shipping: Where are we? What are the perspectives?

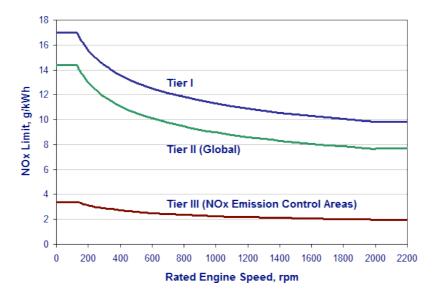
Context

At its 65th session, the Marine Environment Protection Committee (MEPC) of the International Maritime Organisation (IMO) reached an agreement in principle to postpone the international NOx emissions limits for new ships from 2016 to 2021. This IMO decision needs to be confirmed by vote of all Parties to MARPOL Annex VI at the next MEPC meeting in April 2014.

A confirmation of this decision in April 2014 would constitute a complete u-turn by the IMO on ship emission regulations and could seriously compromise the credibility of MARPOL Annex VI. The EU and its Members States, owning collectively the world's largest merchant fleet, need to shoulder their responsibilities and help reverse the tide at the IMO on this issue. In addition, serious consideration of the problem of shipping NOx emissions should be given in the context of the 2013 EU Year of Air.

The IMO regulatory framework on NOx emissions

Shipping NOx emissions are regulated as part of MARPOL Annex VI (regulation 13), which introduces engine standards for new ships. The standards apply gradually in a system of emission stages. The most stringent standard (IMO Tier III) will enter into force for ships built after 2016 when sailing in so-called NOx Emission Control Areas.



The Tier III standard represents a 75% reduction in NOx emissions compared to current engines (Tier II). Although it remains technology neutral, the IMO regulation assumes that the standards will be met through the application of abatement technologies, such as selective catalytic reduction (SCR), that can be switched on when entering NECAs.

How important are emissions from shipping?

Most of the emissions from international shipping occur close to shore and therefore have a significant impact on human health and the environment (see IMO GHG Study or EPRTR). The latest study carried out in Europe on the health impact of pollution from shipping concluded that international shipping was responsible for 50,000 premature deaths annually in Europe (more than 10% of all premature deaths related to air pollution in Europe!).

In addition, ecosystems remain exposed to high levels of pollution. Recent analysis indicates that two thirds of EU ecosystems are still over-exposed to nitrogen deposition and that the situation is not likely to change significantly by 2020.

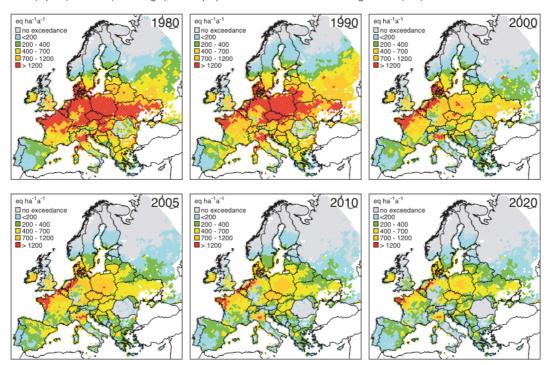


Figure 1.6 Areas where critical loads for eutrophication are exceeded by nutrient nitrogen depositions caused by emissions between 1980 (top left) and 2020 (bottom right), the last projected under the Revised Gothenburg Protocol (RGP).

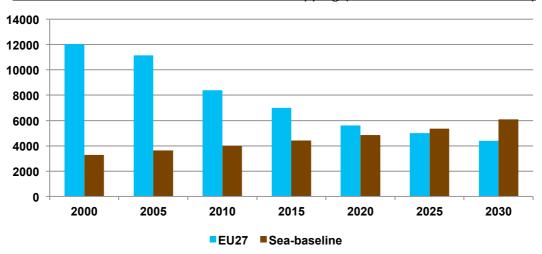
CEE (2012) Modelling and mapping of atmospherically induced ecosystem impacts in Europe

Significant additional reductions in emissions of ammonia, nitrogen oxides and sulphur dioxide are thus needed to correct the situation in Europe and ensure that the EAP objective of "level of air quality that do not give rise to significant negative impacts on, and risks to human health and environment" is achieved.

In 2002, it was estimated that in parts of Northern Europe ship emissions accounted for >90% of the exceedances of the eutrophication critical loads. 2010 data from EMEP suggest that ship emissions still constitute a high proportion of air pollutant fallout. Most of these remarks were covered in a technical report recently published by EEA (Technical Report No 4/2013 The impact of international shipping on European air quality and climate forcing).

The lack of regulation of ship emissions results in the high intensity of this emission source (high emissions factors, the current NOx emissions standards in the shipping sector are 20 times higher than the one applicable on trucks), which in turn partly explains the growth of the share of shipping in total emissions in Europe.

Volume of NOx emissions land-based vs. shipping (without revised MARPOL VI)



IIASA 2010

Left unregulated, NOx emissions from international shipping in European waters are expected to exceed emissions from all land-based sources by 2020-2025. International maritime transport should therefore be a high priority in the upcoming review of the EU air quality legislation (TSAP and relevant legislative documents).

What needs to be done in the EU?

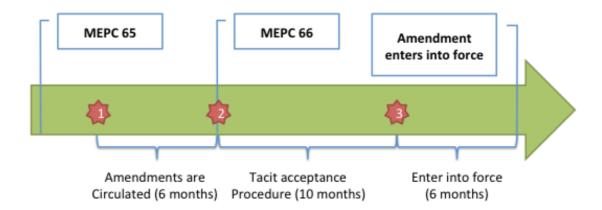
- 1. Reversing the IMO decision on the entry into force of the Tier III NOx standard should be a priority
- 2. Ensure that adequate regulation is adopted / planned in the context of the review of the Thematic Strategy on Air Pollution
 - a. Although the promotion of Emission Control Areas all around Europe is important, EU action should not be limited to this sole point
 - b. Explore possibilities of setting up EU-wide emissions standards or emission charges

The amendment procedure in MARPOL Annex VI

The MEPC 65 decision to postpone the entry into force date of the Tier III standard will now be the subject of a formal amendment to MARPOL Annex VI which will be considered / voted upon at MEPC 66 in the first week of April 2014. Amendments will need to be circulated at least 6 months before the meeting (i.e. deadline in September 2013). At the moment, we expect to have two 'competing' amendments presented, i.e. one proposing the full postponement of the standard until 2021, the second one probably proposed by the US on grandfathering the application of the rule to existing NECAs i.e. those in North America (still be circulated).

Consideration of the amendment is normally subject to a consensus decision but may also be subject to a vote if a party to MARPOL Annex VI requires it. A successful vote requires a 2/3 majority of Parties present and voting on the day. In practice, if all parties are present and vote, 25 opposing countries will be sufficient to defeat the amendment in which case the current entry into force date (2016) of the Tier III provision would remain unchanged.

If the amendment succeeds it will be further subject to a tacit acceptance procedure during which the amendment can still be overturned if at least 1/3 of the parties to MARPOL Annex VI representing at least 50% of the world tonnage write in and object.





End of Sept '13: Deadline for amendment: clear view on what will be discussed



Beginning Apr '14: Decision at MEPC 66 (consensus or 2/3 of MARPOL VI Parties present and voting



Jan '15: End of the tacit acceptance procedure (can be overruled by more than 1/3 of MARPOL VI Parties representing at least 50% of the world tonnage

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