An Emission Control Area (ECA) for the Mediterranean Sea

A highly effective measure to tackle air pollution from ships to benefit health, environment, agriculture, heritage conservation and climate.

The undersigning coalition of NGOs

calls the contracting parties of the Barcelona Convention Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey, and the European Union to decide at COP22 in December2021 to agree on a submission to the IMO MEPC 78 to designate the Mediterranean Sea an emission control area for sulphur (SECA) with full entry into force by March 2024.

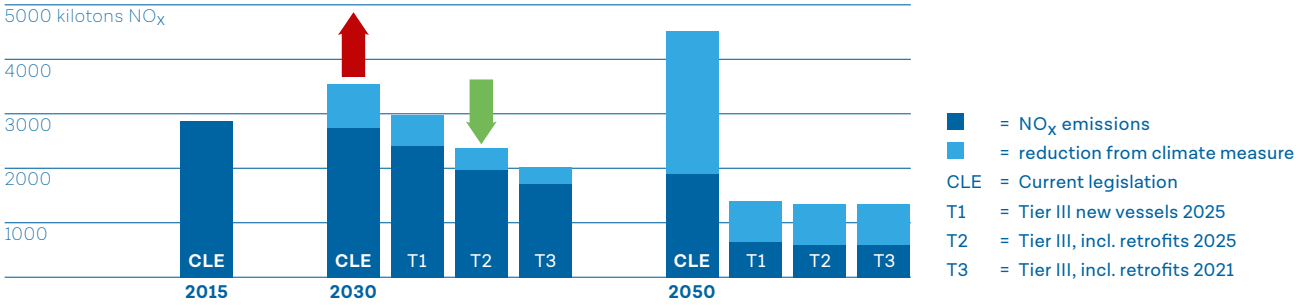
urges the contracting parties to also agree on the submission to IMO to declare the Mediterranean Sea an emission control area for nitrogen oxide emissions (NECA) with full entry into force by 2025, to maximise achievable health benefits.

Sulphur oxide (SO_X), nitrogene oxide (NO_X) and (ultra) fine particle (PM) emissions from shipping are a significant threat to human health, the environment and climate. In the Mediterranean region emissions from ships contribute substantially to ambient emission levels in a region with around 250 million residents. The World Health Organisation (WHO) warns that annual mean levels in the region are often exceeding its air quality guidelines by more than five times. Furthermore, around 70 per cent of the cities in the Mediterranean littoral states are way above WHO recommendation for PM2,5 pollution levels.[1,2] High ambient concentrations of PM2.5 due to ship emissions are perfectly corresponding with major shipping routes and affect coastal areas, where many of the most densely populated cities of the Mediterranean region are located. Globally 60,000 premature deaths are associated with air pollution from ships and in the EU alone pollution from ships cause around 60 billion EUR in health costs per year.[3]

The IMO2020 sulphur cap and the EU sulphur regulation cut SO_X emissions from international shipping. A SECA will reduce these emissions substantially while harmful NO_X emissions from ships are expected to exceed those from all land-based sources in the EU by 2030.

With present legislation on NO_X and the currently agreed climate roadmap of the IMO NO_X emissions are likely to keep increasing. Therefore, NO_X should not be neglected. Cities along the coast already face exceedances of NO_X-regulation levels and are e.g. confronted with EU infringement procedures. Only if a regulation on NO_X emissions will ask for TIER III for new vessels and includes retrofit requirements for the existing fleet we will see the significant reductions necessary to save lives and prohibit environmental damage (see table next page by IIASA, 2018[4]).

NO_X emissions from international shipping in the European Seas, measures applied in all Sea regions



Simulations in the ECAMED[5] study show that the implementation of a combined SECA and NECA) will bring significant reductions of the annual average of nitrogen dioxide (NO_2) by up to 15 µg/m3 (70%) compared to current legislation. We will also see PM2.5 reductions by up to 1µg/m3 (11%) of annual average compared to the current legislation. This will result in additional benefits with about 40% additional avoided premature deaths compared to only IMO2020 Sulphur cap. Algeria, Egypt, Italy, Greece and Turkey would benefit the most.

A combined SECA and NECA in the Mediterranean Sea could avoid 3,100 to 4,100 premature deaths in 2030, of which about one third occur in the EU Member States and more than half in North Africa and the Middle East. By 2050, the ECA could save more than 10,000 lives in the region annually, especially in North Africa.

For the emission controls in the Mediterranean, the estimates of monetized benefits reach up to 10 billion €/year in 2030 and increase to almost 30 billion €/year in 2050. For the emission controls for the Mediterranean Seas, monetized benefits exceed costs on average by a factor of 6.5 in 2030 and a factor of 12 in 2050.

The findings highlight the essential need to develop a combined SECA and NECA to maximise achievable benefits! Governments and parliaments should back their Barcelona Convention, REMPEC and IMO delegations to support the designation of an Emission Control Area in the Mediterranean Sea for sulphur and nitrogen!

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1 World Health Organization releases new global air pollution data (link to ccacoalition.org)
2 Global Urban Ambient Air Pollution Database (link to who.int)
3 Corbett, 2007: Mortality from Ship Emissions: A Global Assessment
4 Final Report: The potential for cost-effective air emission reductions from international shipping (pdf on iiasa.ac.at)
5 Technical Feasibility Study for the Implementation of an ECA in the Mediterranean Sea (pdf on ineris.fr)