

4th Mediterranean Shipping Conference

On the way to a Mediterranean Emission Control Area

20th November 2019, 10:00 - 18:00
Piraeus, Chamber of Commerce & Industry



10:00 Welcome

- George Sgouros, Ornithologiki
- Konstantinos Aravossis, Secretary General, Greek Ministry of Environment
- Evangelos Kiriakopoulos, Secretary General, Greek Ministry of Maritime Affairs

10:20 – 11:30 Session 1- Shipping and Air Pollution

- Air Pollution from Ships in the Mediterranean, Dr Axel Friedrich, International Consultant
- Ship Air Pollution and Health, Dr Johannes Passig, Helmholtz Zentrum München
- Ship Pollution and Cultural Heritage, Alessandra Bonazza, ISAC CNR
- POSEIDON II – Adamis Mitsotakis, Centre for Research & Technology Hellas

Q&A

BREAK

12:00 -13:15 Session 2 – Policy

- How to Decrease Air Pollution from Ships, Daniel Rieger, NABU
- Assessment for an Emission Control Area (ECAMED), Laurence Rouil, INERIS (tbc)
- Med ECA under Barcelona Convention, Tatjana Hema, UNEP Med Action Plan

Q&A

LUNCH BREAK

The conference will be simultaneously interpreted to Greek and English.

[For registration please click HERE](#)

14:15 – 15:15 Discussion „Benefits of the ECA and Challenges for the Introduction“

Chair: Malte Siegert, NABU

- Petros Kokkalis, MEP, GUE/NGL
- Panos Mitrou, Lloyd's Register
- George Sgouros, Ornithologiki
- Kriton Arsenis, Member Greek Parliament
- Daniel Rieger, NABU

BREAK

15:30 -16:15 Session 3 - Port City Relations

- Air Quality Monitoring & Evaluation, Chrysanthi Kontogiorgi, Piraeus Port Authority
- Air Quality Challenges and Benefits for Ports – Sotiris Raptis, ESPO
- Massive Cruise in the Mediterranean: Blessing or Curse?, Sotiris Alexopoulos, Piraeus local movement

Q&A

16:15 – 17:15 Session 4 – Monitoring & Solutions

- Short Sea Good Practice Solutions, Marc Bergstein, Scandlines
- Driving Electrification: Eledmed Project, Theodoros Koumpellis, Lloyds Register
- Particle Filter on Ships, Hanso-Jörg Rembar, HUG Engineering
- The SCIPPER project, Leonidas Ntaliachristos, Aristotle University of Thessaloniki

Q&A

17:15 Wrap up - Daniel Rieger, NABU

17:30 - 18:30 RECEPTION



How to Decrease Air Pollution from Ships in the Mediterranean Sea

Sönke Diesener, Transport Policy Officer at NABU,

4th Mediterranean Shipping Conference, 20th November, Piraeus

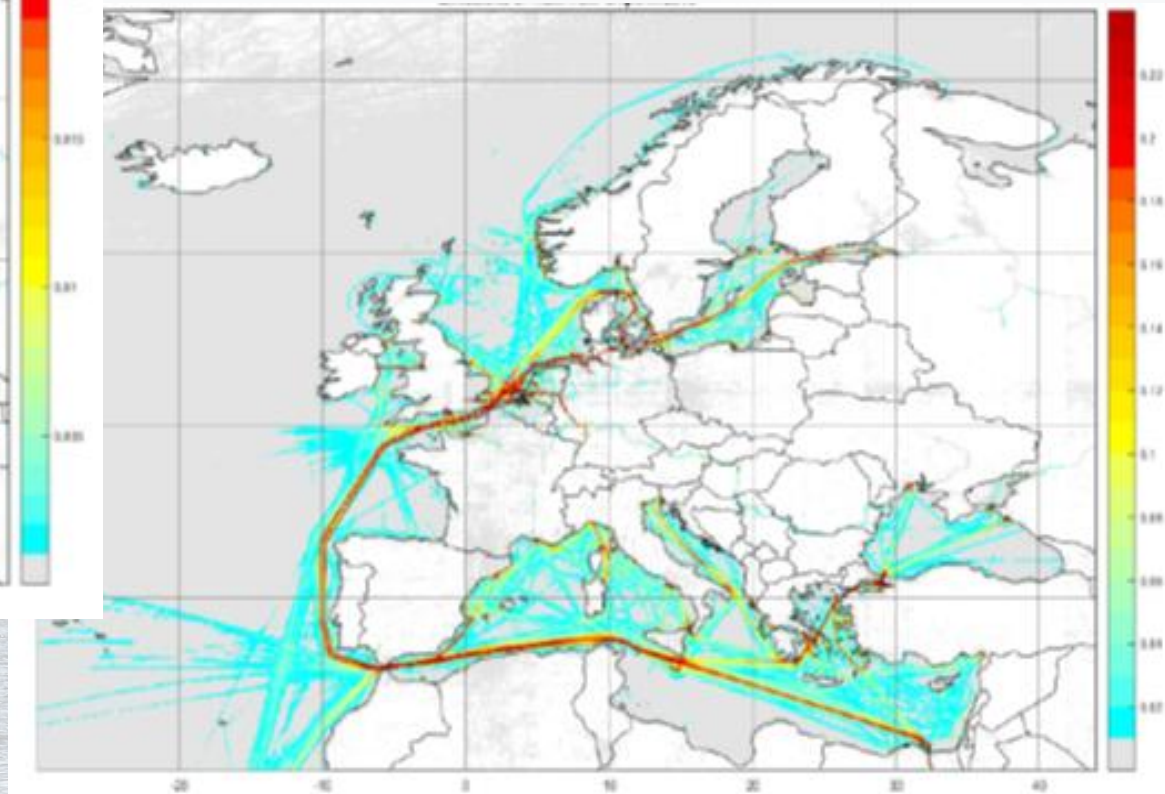
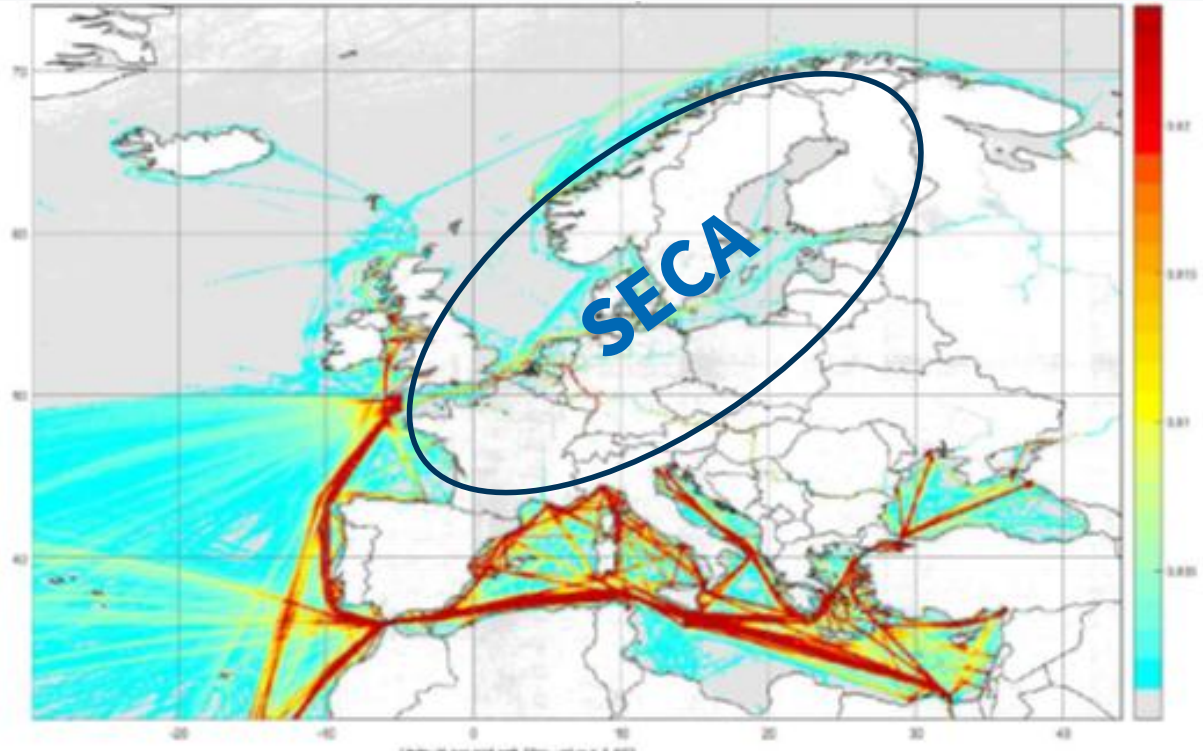


How to Decrease Air Pollution from Ships

- Fuel quality (Indicator: Sulphur Content)
- Alternative fuels (e.g. Methanol, LNG)
- Speed reduction
- Efficiency
- Exhaust aftertreatment
 - Catalyst (SCR)
 - Particulate filter
 - Scrubber
- Renewable fuels and drives
 - Wind
 - Synthetic fuels
 - Battery electric



SO_x and NO_x emissions from ships in Europe

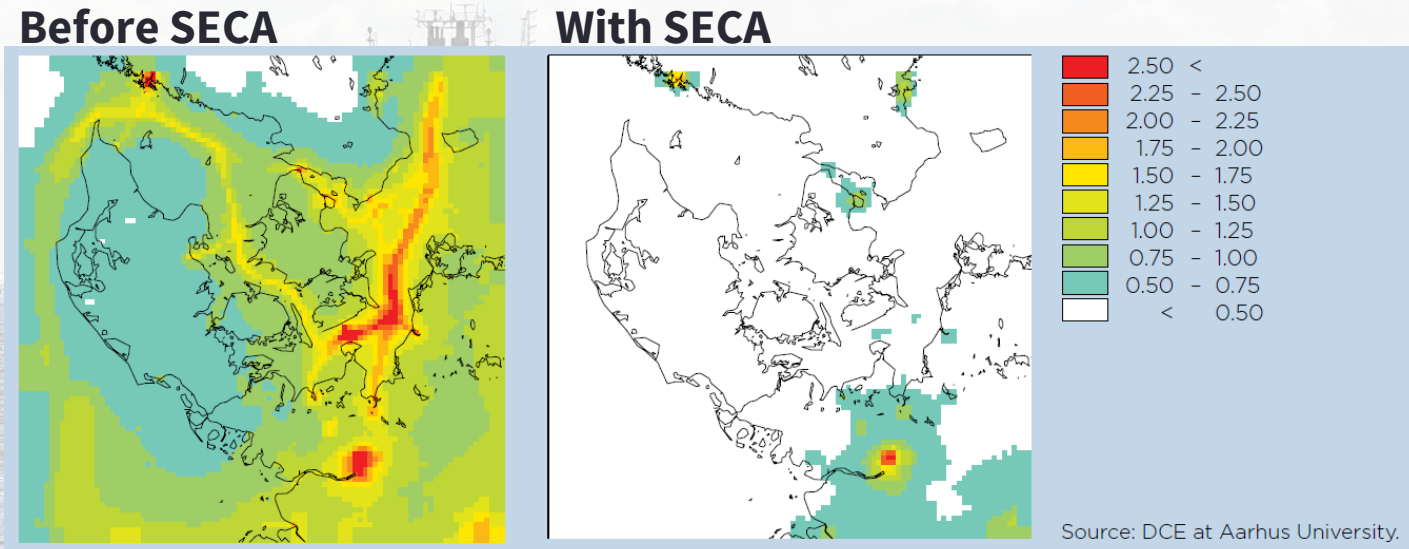


Source: IIASA (2018) The potential for cost-effective air emission reductions from international shipping through designation of further Emission Control Areas in EU waters with focus on the Mediterranean Sea

Regulation and Experience

- **SECA** requires ships to **switch to low Sulphur fuel** of < 0.1% Sulphur, or respective reduction in exhaust gas
- **NECA** requires new built ships to emit approx. **70% less NOx (TIERIII)**
- Huge air quality improvements in SECAs achieved, e.g. -60% SO₂

SO₂ from Shipping in Denmark



SECA Sulphur Emission Control Area

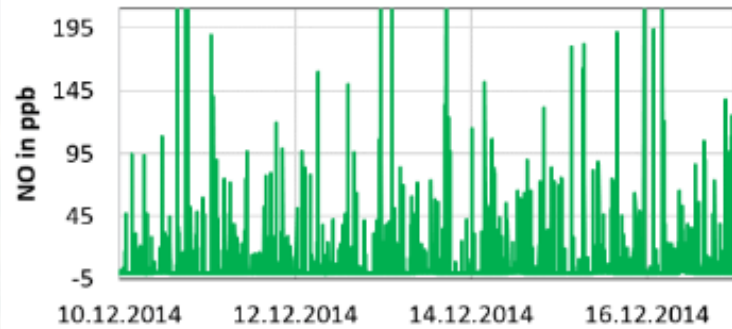


CE Delft: SECA Assessment

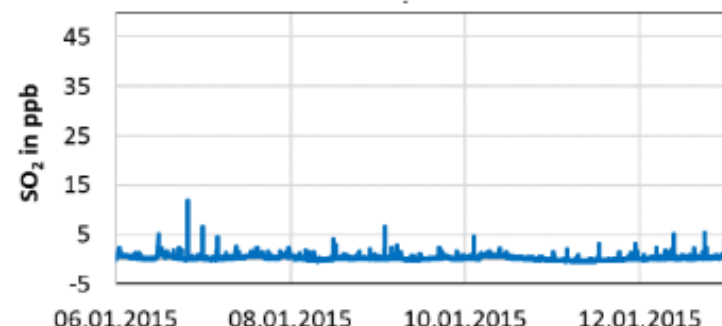
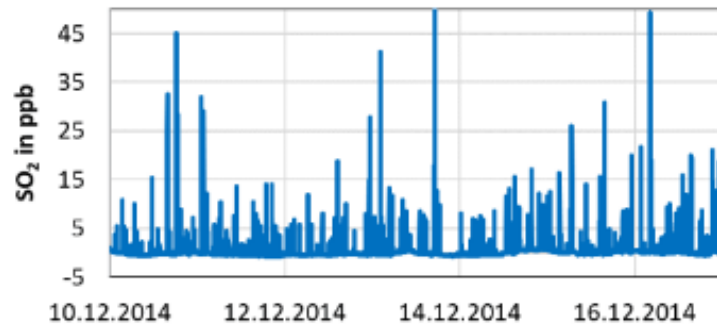
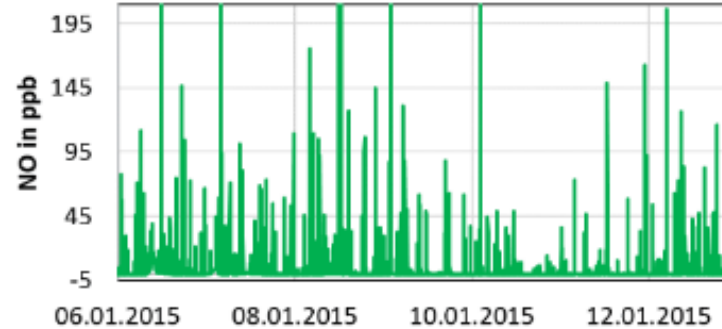
- -60% SO₂ background
- No shift to other transport
- 2015 best year for RoRo
- No fuel availability problems reported
- No loss of propulsion

SO₂ Monitoring at Port of Hamburg by German Federal Maritime Agency

December 2014

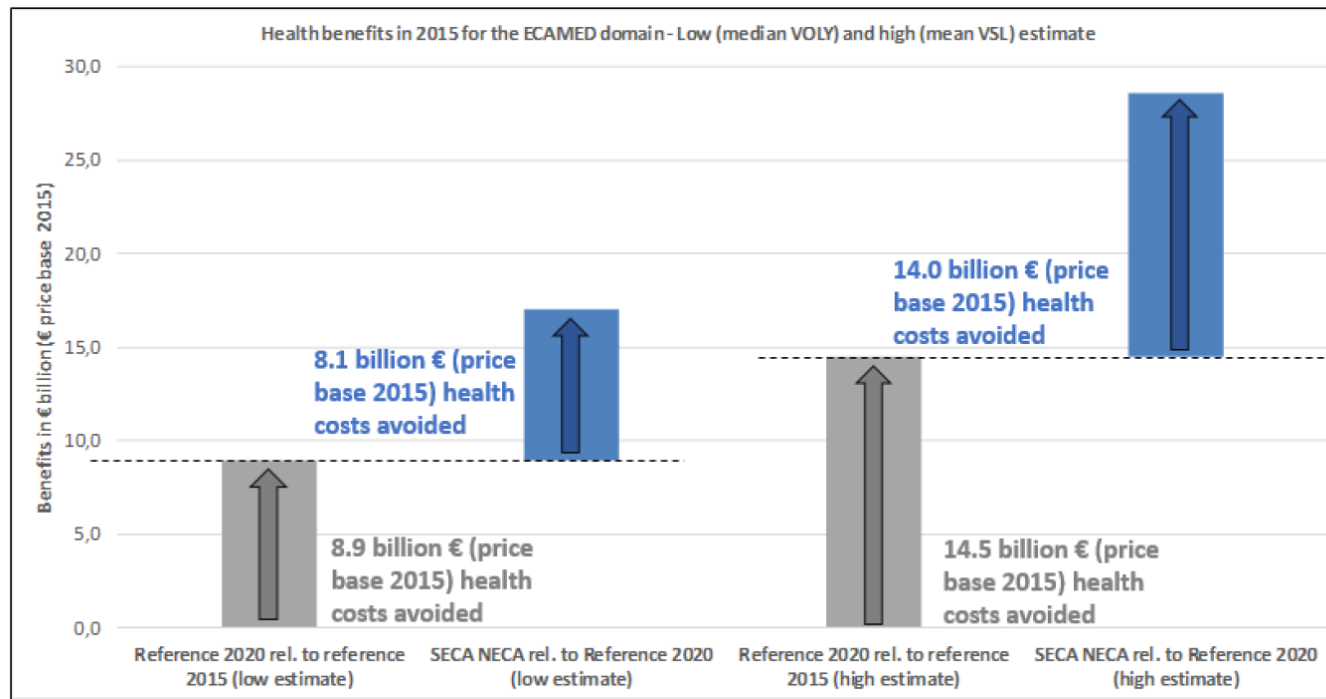


January 2015



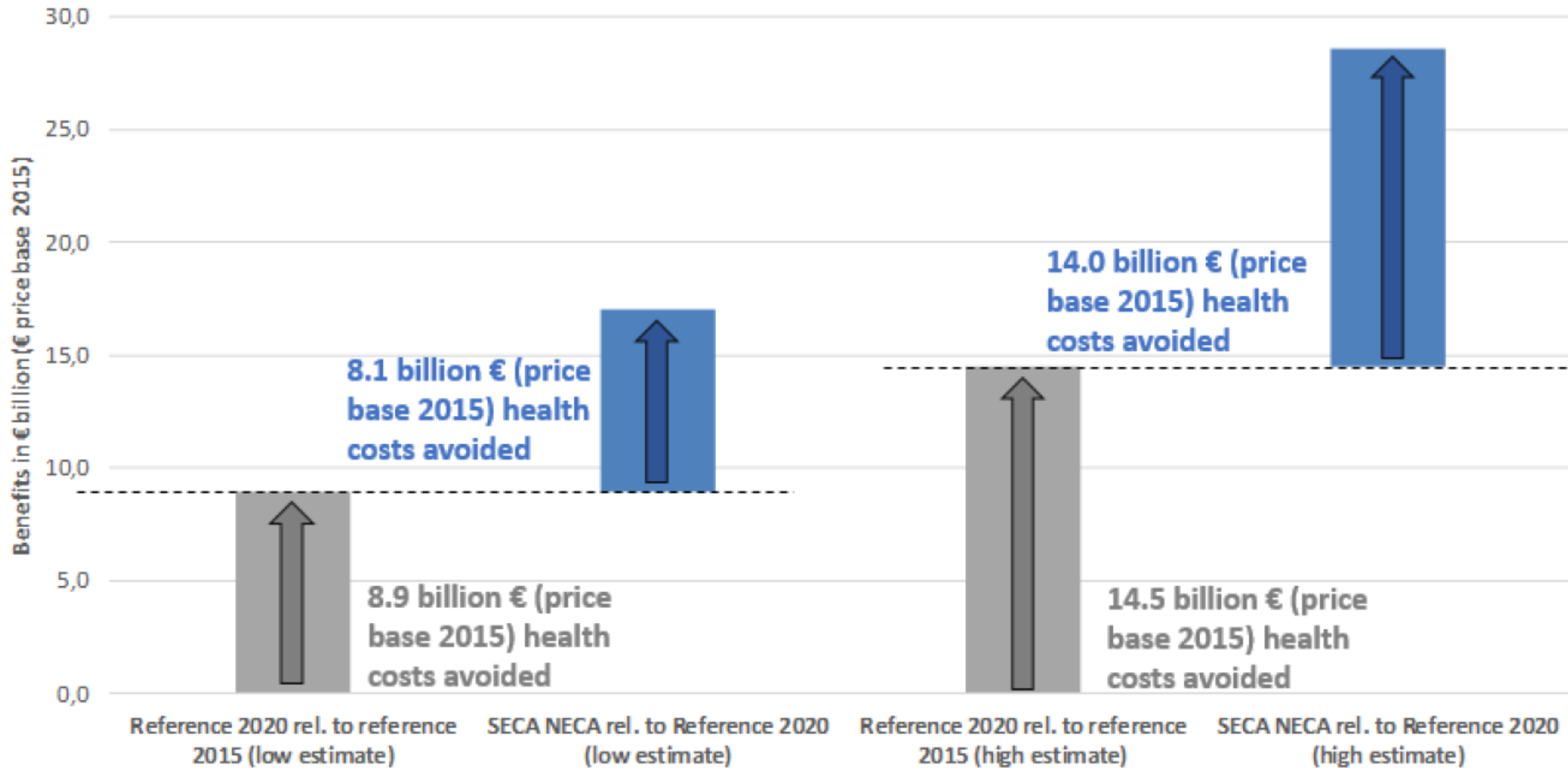
Benefits of the Mediterranean ECA

- monetarized health gain of 8.1 to 14 billion € annually, with benefits doubled compared to only 2020 sulphur cap;
- costs for higher quality fuel are estimated at between €1.4 and €2.7 billion



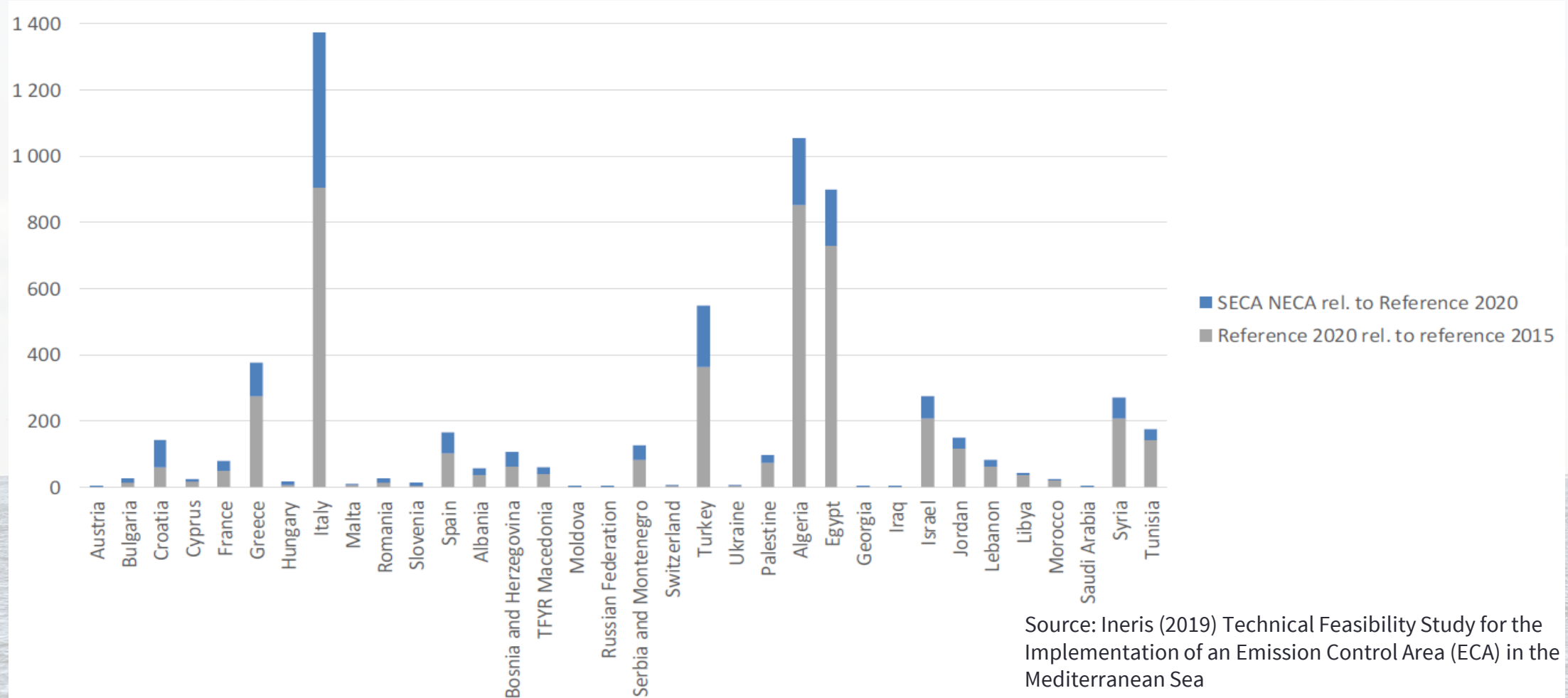
Source: Ineris (2019) Technical Feasibility Study for the Implementation of an Emission Control Area (ECA) in the Mediterranean Sea

Health benefits in 2015 for the ECAMED domain - Low (median VOLY) and high (mean VSL) estimate

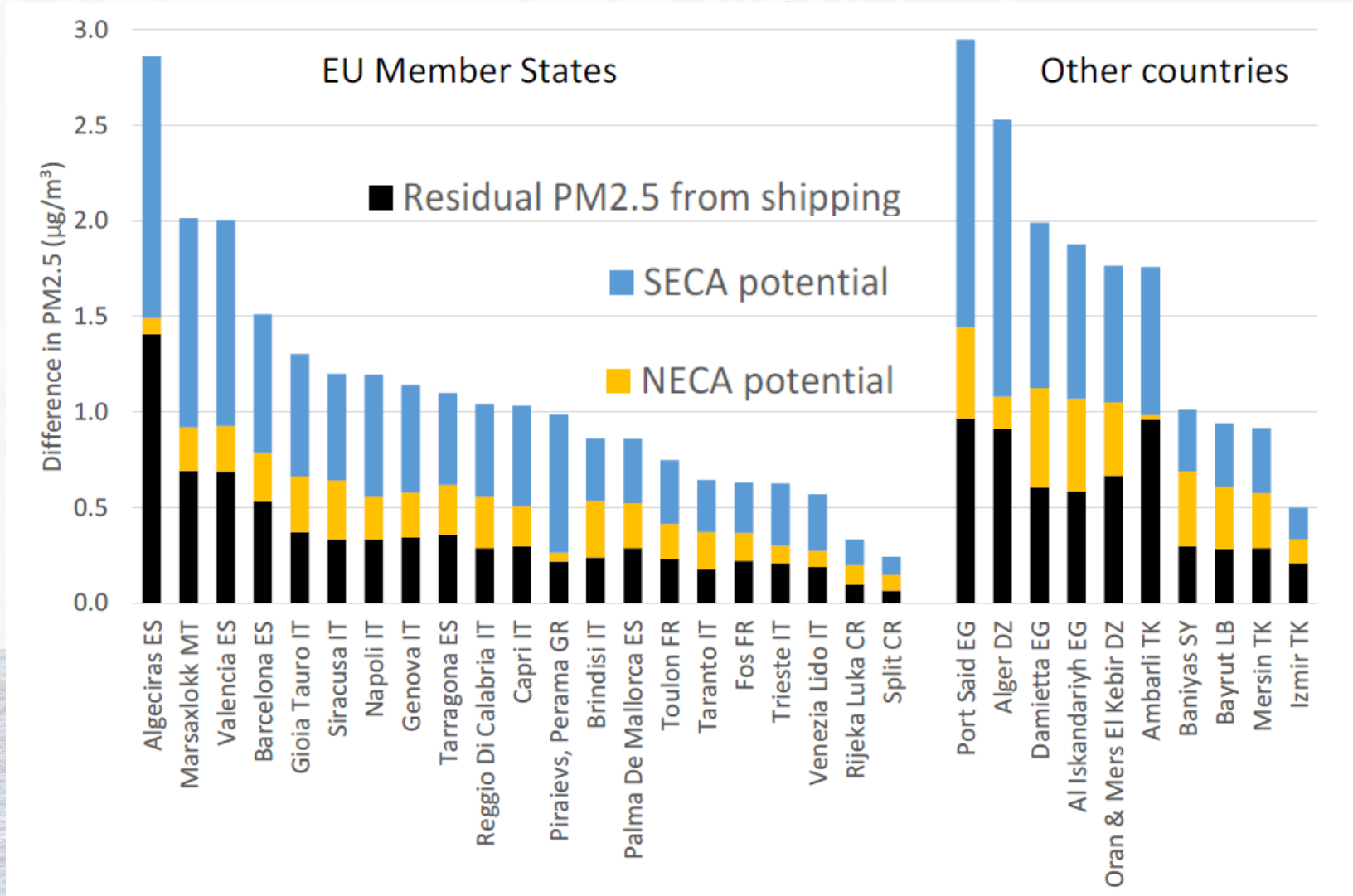


Benefits of the Mediterranean ECA

- 1730 premature deaths avoided each year



Sulphur and Nitrogen oxide regulation also brings down Particulate Matter



Source: IIASA (2018) The potential for cost-effective air emission reductions from international shipping through designation of further Emission Control Areas in EU waters with focus on the Mediterranean Sea

Conclusion

ECAs save life's and health and provide additional gains, e.g. prevent

- agriculture loss
- environmental damage
- heritage conservation costs
- oil spill catastrophes from heavy fuel oil

- ECA Regulation is cost effective, the benefits much higher than the costs
- ECA serves as level playing field for all ships sailing in the covered waters

Higher fuel quality also serves as an indirect CO2 tax

- ECA facilitates investments in ecological technologies and efficiency
- Higher prices for fuel will help alternatives because of smaller price difference



Thank you for your kind attention!

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NABU-
Bundesgeschäftsstelle
Sönke Diesener
Charitéstraße 3
10117 Berlin
Tel. +49 (0)30.28 49 84-1630
Daniel.Rieger@NABU.de
www.NABU.de