

FIRST YEAR OF IMPLEMENTATION OF THE NEW GLOBAL SULPHUR CAP FOR MARINE FUELS

16 September 2020 – 12th Oil Forum Day 2

Peter Vajda

Senior Environmental Expert

Energy Community Secretariat

Agenda



- 1. Problem definition***
- 2. The Sulphur in Fuels Directive***
- 3. Work under the IMO***
- 4. New landscape from 2020***

Agenda



- 1. *Problem definition***
- 2. The Sulphur in Fuels Directive*
- 3. Work under the IMO*
- 4. New landscape from 2020*

Environmental impacts and the oil sector

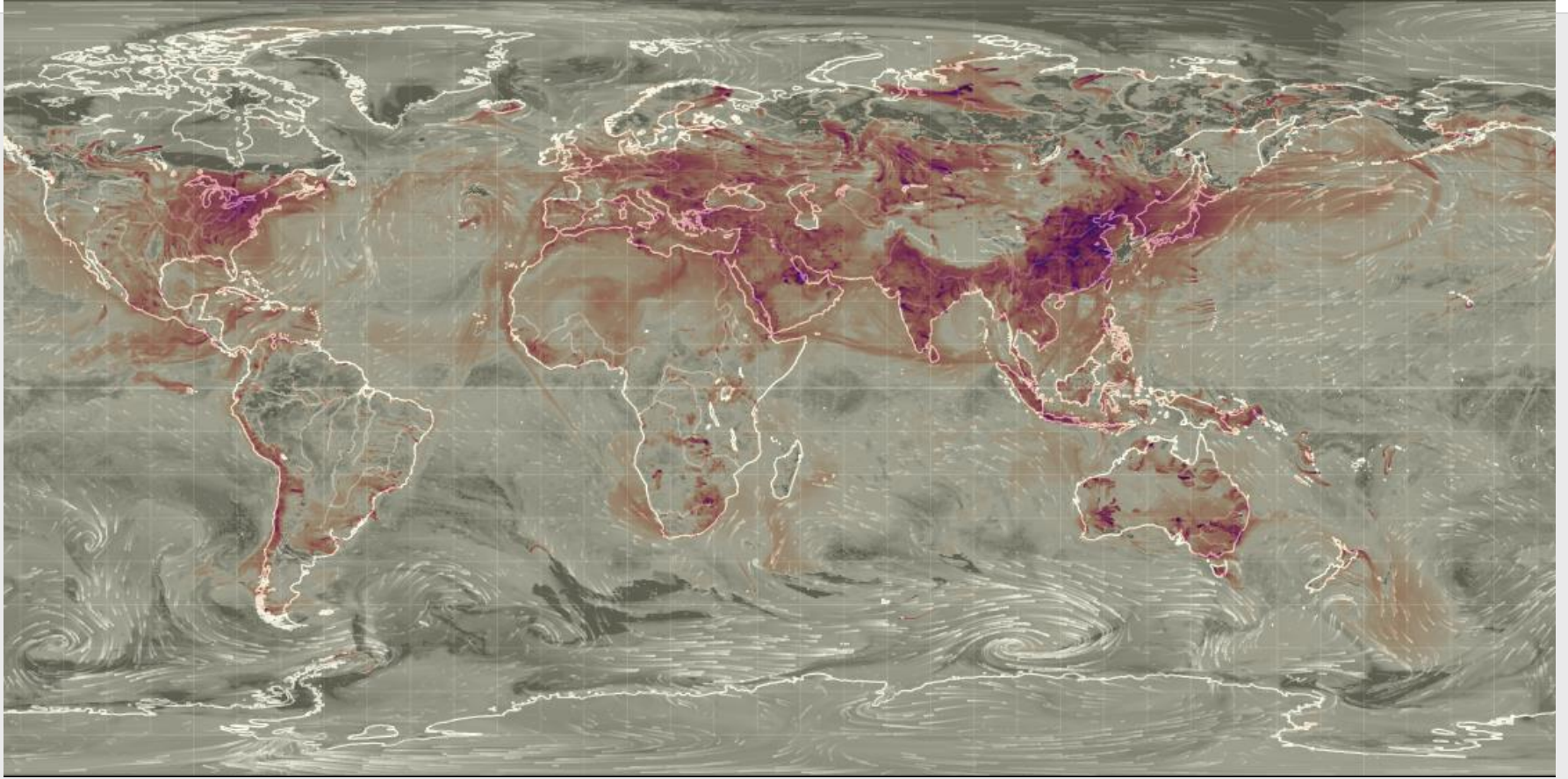


- *Emission related to the mining*
- *transport*
- *conversion / transmission / use*
- *of energy (upstream / downstream)*
- *Polluting emissions into*
- *air*
- *water*
- *soil (waste)*
- *Climate change (greenhouse gas emissions)*



- SO_2 is a precursor of sulphuric acid (\rightarrow “acid rain”, acidification, deposition)
- Short-term exposures \rightarrow breathing difficulties, in high concentration \rightarrow formation of other sulfur oxides (SO_x)
- SO_x can react with other compounds in the atmosphere \rightarrow particulate matter (PM)
- Small PM may penetrate deeply into the lungs
- NO_x \rightarrow precursor of PM and ground-level ozone, eutrophication of waters, excess nutrients

SO₂ dispersion



Source: *Wikimedia commons*

Bunker fuel



© NABU/Wattenrat/E. Voss

Source: dw.com

Agenda



1. *Problem definition*
2. ***The Sulphur in Fuels Directive***
3. *Work under the IMO*
4. *New landscape from 2020*

The Sulphur in Fuels Directive



- **Legal requirements for the sulphur content of heavy fuel oil (1%) and gas oil (0.1%)**
- **Marine fuels (2005/2012 amendments) → since June 2018**
- **Provisions on sampling and analysis → reference to ISO standards**
- **Implementation deadline in the Energy Community → 31 December 2011 (31 December 2012 for Ukraine, 31 December 2014 for Moldova)**
- **A number of Contracting Parties faced challenges with the implementation of the Directive / meeting the deadline (dispute settlement cases)**
- **Some refineries in need of modernization**
- **In certain Contracting Parties, testing and sampling (standards) was / is an issue**

Agenda



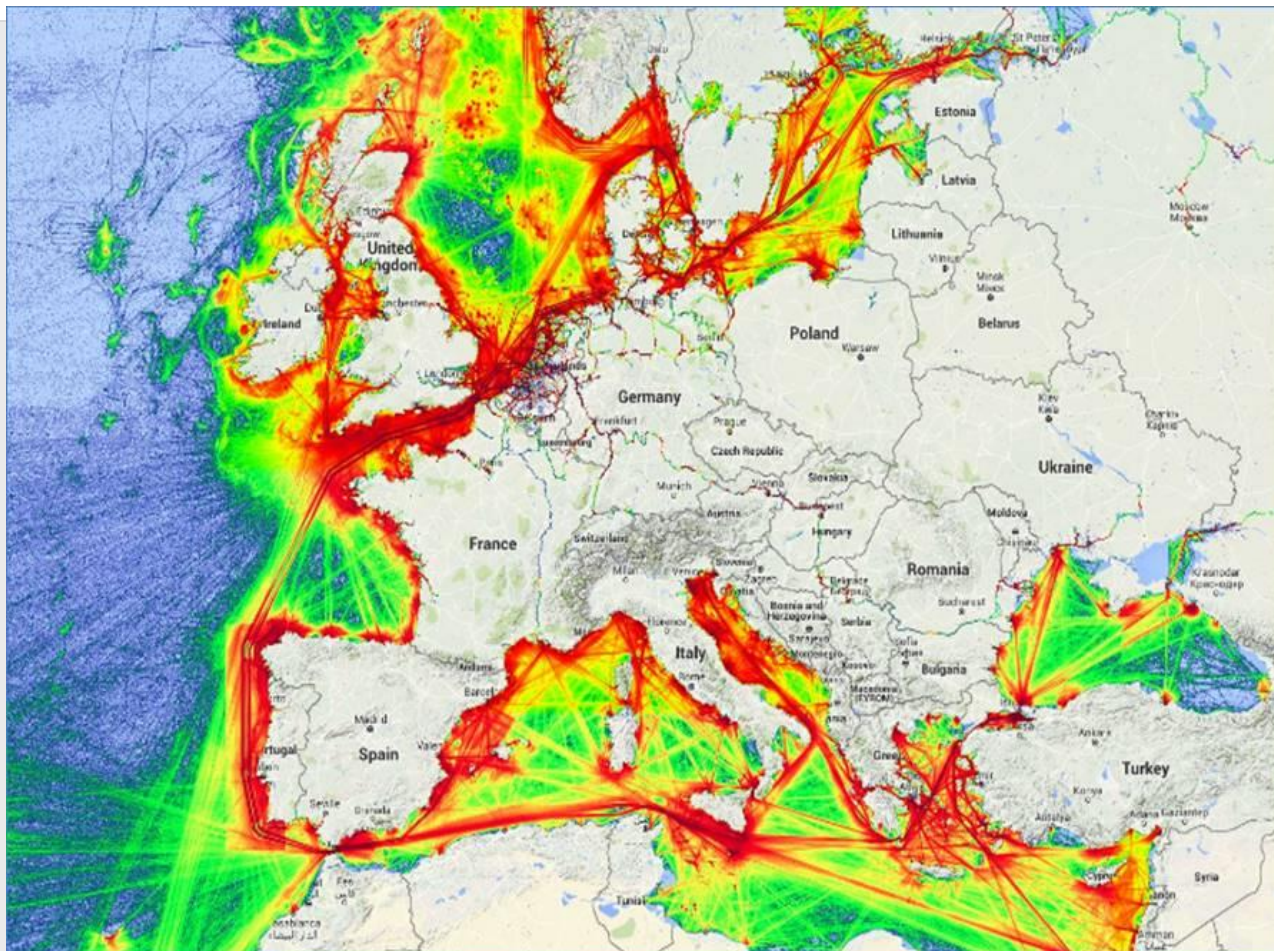
1. *Problem definition*
2. *The Sulphur in Fuels Directive*
3. **Work under the IMO**
4. *New landscape from 2020*

Brief history

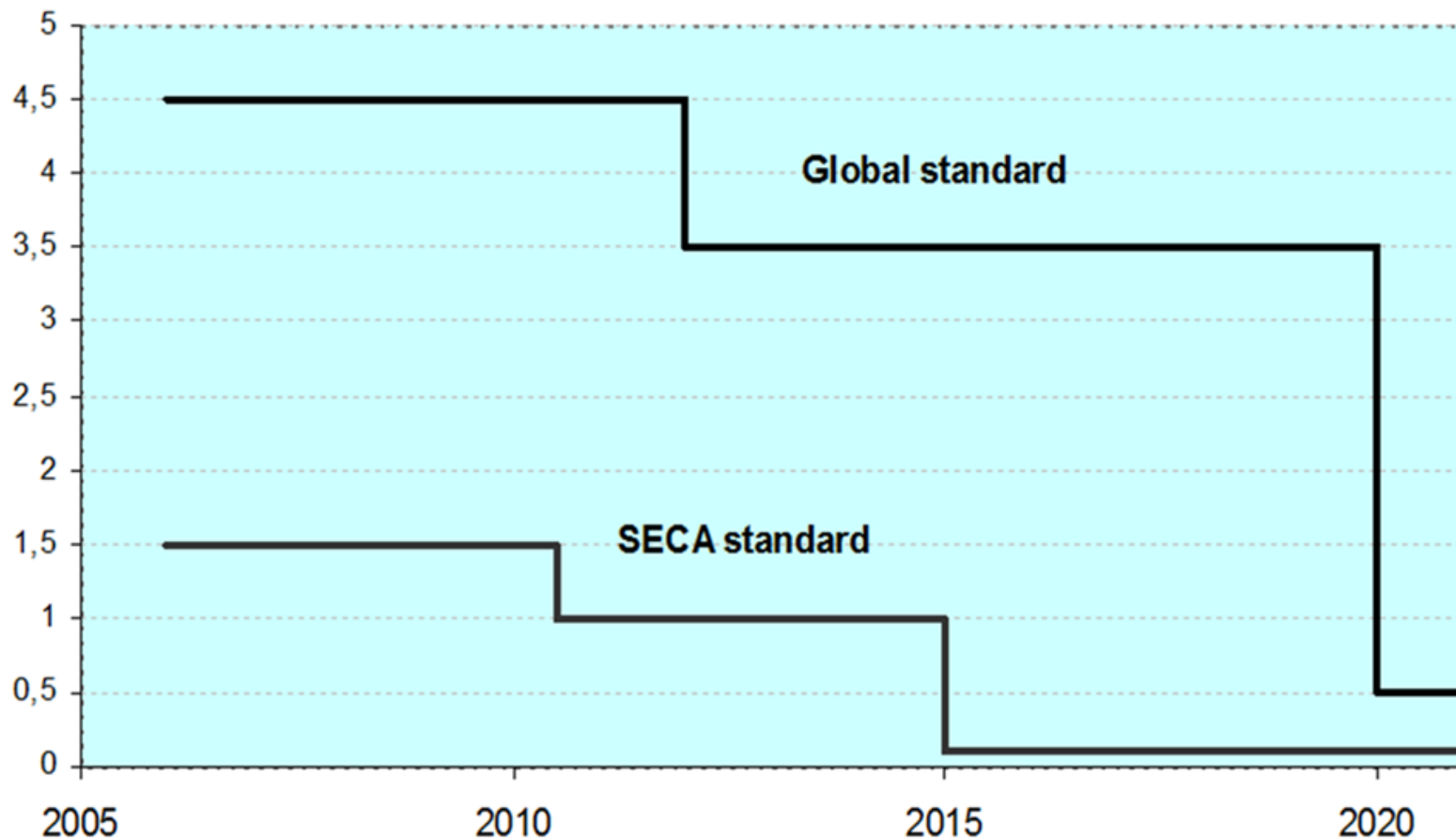


- **MARPOL**
- **Annex VI → adopted in 1997, to address air pollution from shipping**
- **Entry into force: 19 May 2005**
- **October 2008: revised Annex VI, stricter requirements (2020 deadline already decided, with possibility to defer to 2025)**
- **Entry into force: 1 July 2010**
- **October 2016: new amendments, global sulphur cap**
- **Entry into force: 1 January 2020**
- **Comprehensive work to prepare implementation (ex. carriage ban as of 1/3/2020)**

Route map



Requirements for marine fuels under MARPOL



Agenda



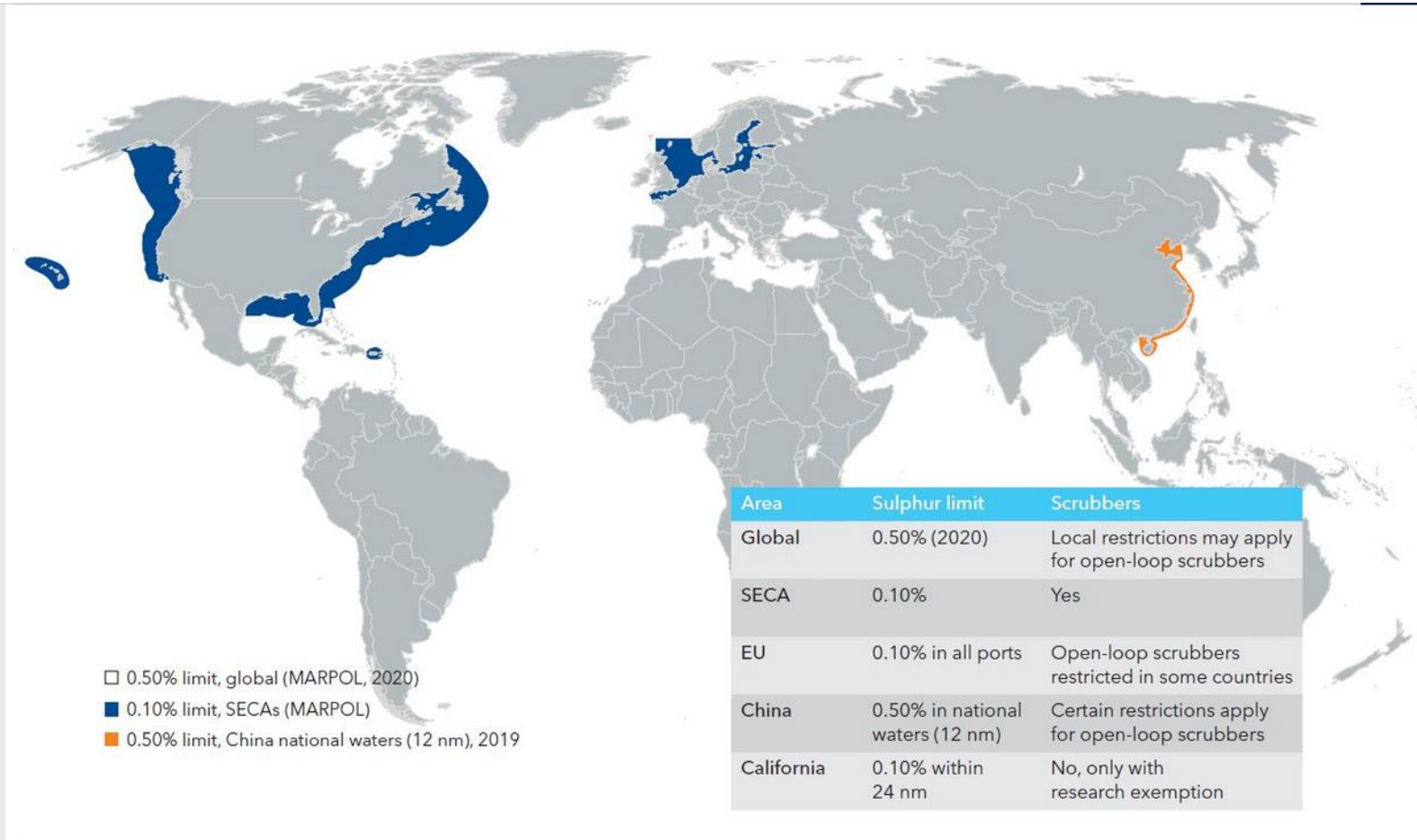
1. *Problem definition*
2. *The Sulphur in Fuels Directive*
3. *Work under the IMO*
4. ***New landscape from 2020***

Ways of compliance

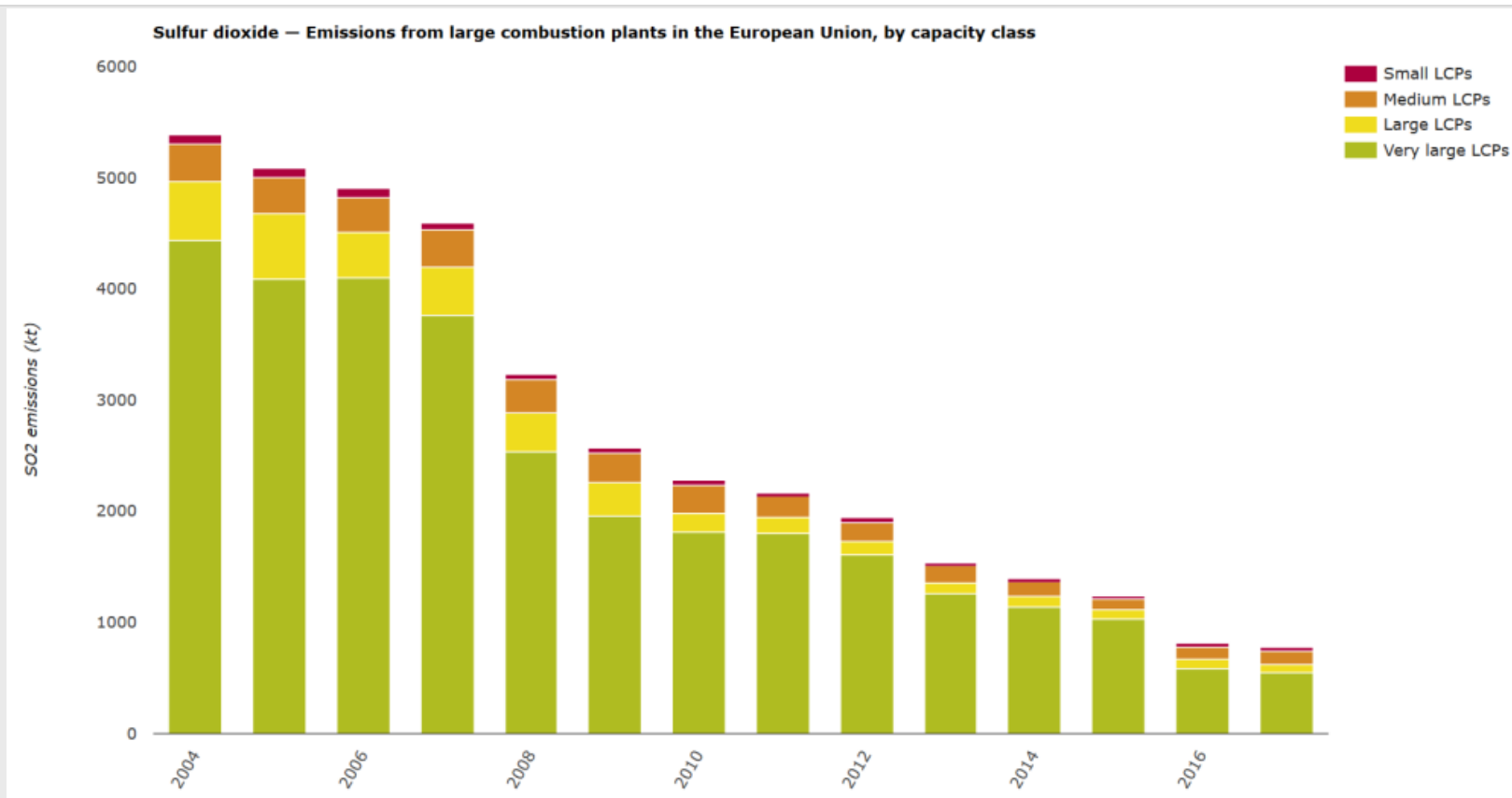


- **Fuel switch (Low-sulphur fuel oil, gas, methanol)**
- **On-board de-sulphurising systems (scrubbers)**
- **0.10% sulphur content for ships in EU and EnC ports**
- **constrains on the discharge of scrubber water (relevance for open-loop scrubbers) → locally**

Sulphur cap for marine fuels



SO2 emission reduction – showcase



Source: European Environment Agency

Way forward



- **Port authorities *enforcement* – on-board sampling and controlling of HFSO carriage ban**
- **Possible SO_x ECA in the Mediterranean Sea perhaps as of in 2025 (Barcelona Convention/IMO) and in other EU seas (ratification of Annex VI of the MARPOL Convention is an essential pre-requisite)**
- **Possible work on NO_x reduction from shipping**



THANK YOU FOR YOUR ATTENTION

Peter.Vajda@energy-community.org

GET IN TOUCH

 www.energy-community.org

 [Ener_Community](https://twitter.com/Ener_Community)

 [/company/energy-community](https://www.linkedin.com/company/energy-community)

 [/Ener.Community](https://www.facebook.com/Ener.Community)

 [/EnergyCommunityTV](https://www.youtube.com/EnergyCommunityTV)