



IAPH World Ports Conference 2015

International environmental standards at sea

- Development
- Implementation
- Monitoring
- Consequences and future developments

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Federal Maritime and Hydrographic Agency

IMO - present environmental issues

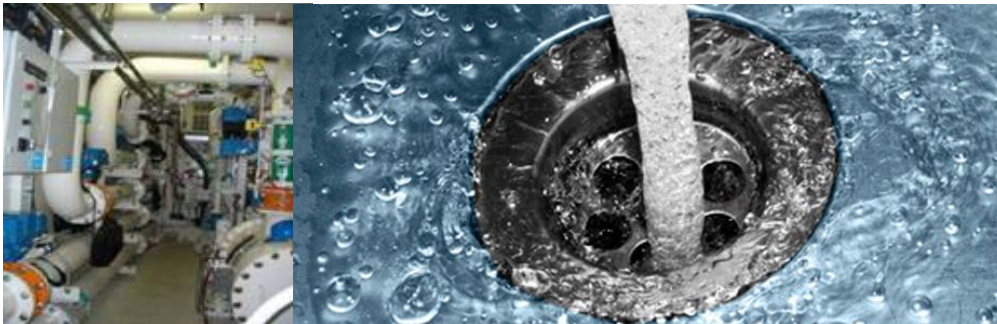


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Convention
(adopted / in force)

Ballast Water (2004 / ?)



MARPOL IV
Sewage (2003 / 2011)



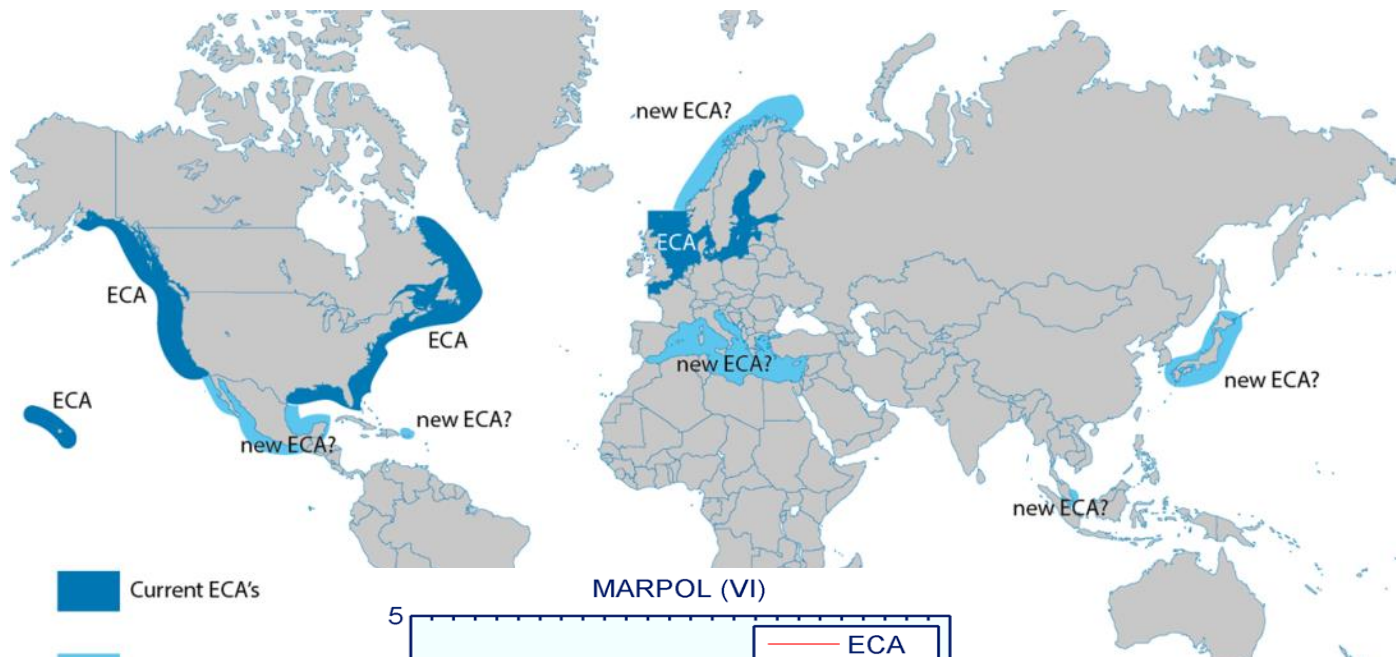
MARPOL VI
Air Emissions (1997/2005)

Photos: Sascha Jankowski, Meckelfeld · wikipedia · IMO

SECA / ECA - history and status

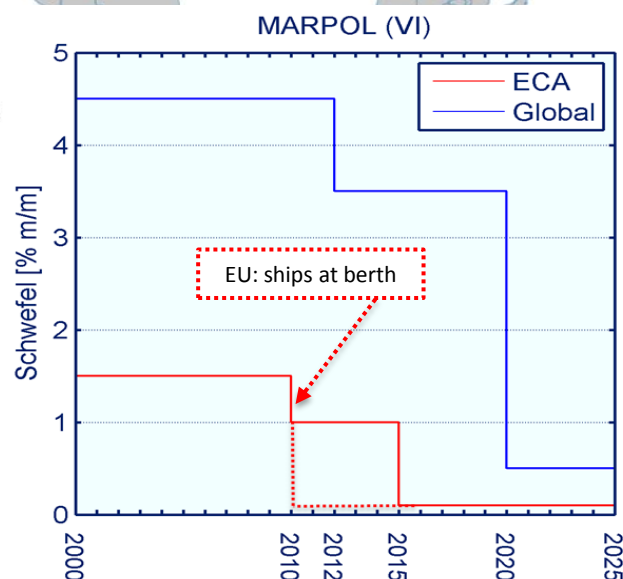


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Current ECA's

Possible future ECA's



Annex VI: Prevention of air pollution by ships (Emission Control Areas)

Special Areas	Adopted	Date of Entry into Force
Baltic Sea (SOx)	1997	2005
North Sea (SOx)	2005	2006
North American (SOx, NOx, PM)	2010	2011
United States Caribbean Sea ECA (SOx, NOx, PM)	2011	2013

Implementation of SECA Rules

IMO MARPOL Annex VI, Thresholds for sulphur content in fuels

EU Enforcement Regime (Sulphur Directive and Implementing Act)

- Determined Frequency of Inspections (10 %) and Fuel Sampling (4%)
- Sampling Guidelines
- Reporting Requirements
- EU Information System („THETIS-S“)

Worldwide Enforcement Regime: Port State Control (Paris MoU ,...)

- Compliance with Regulations by IMO (i.a. MARPOL)
- On board inspections
- Information System THETIS

Implementation in Germany

- Surveillance / remote sensing
- Inspections by Water Police
- Reporting of non-compliances, detention
- Administrative Fines or criminal sanctions

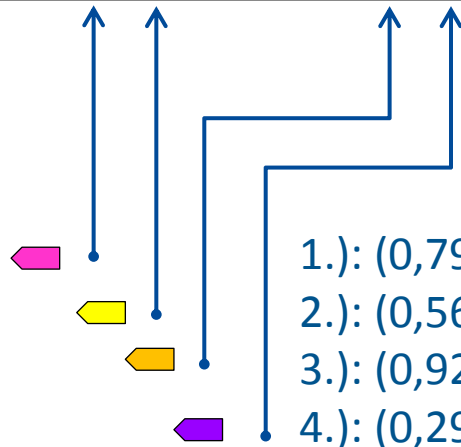
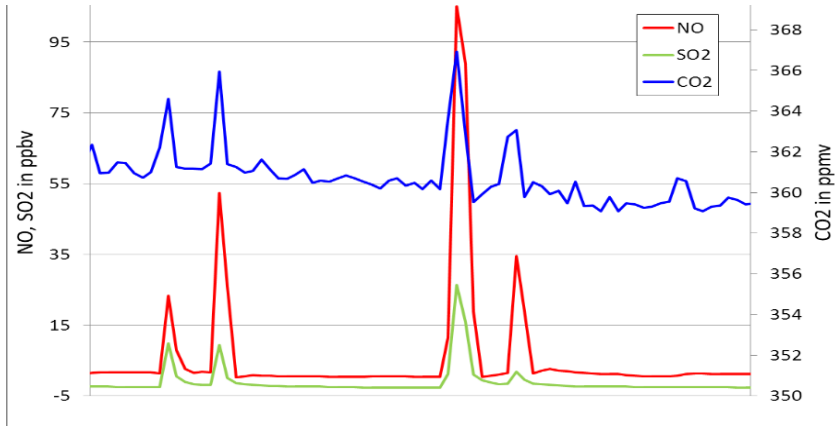
- Inspections by German PSC (BG Transport)

Remote Sensing Technologies

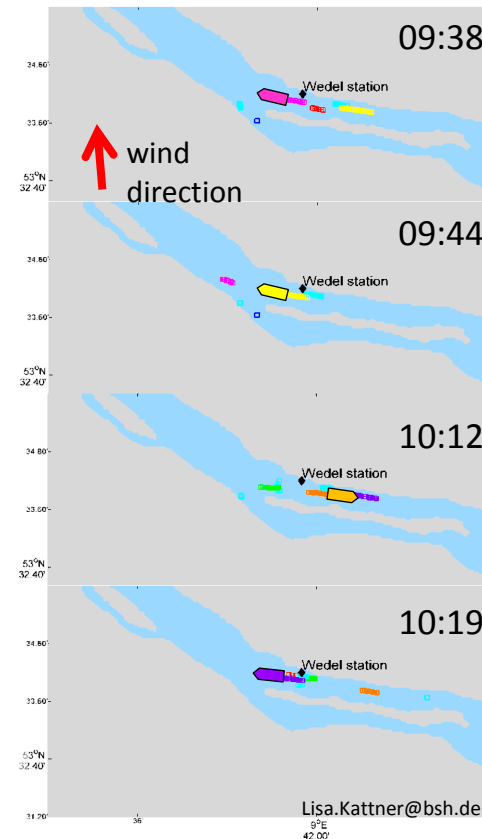


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Data collection with AIS-signal
and ship emission

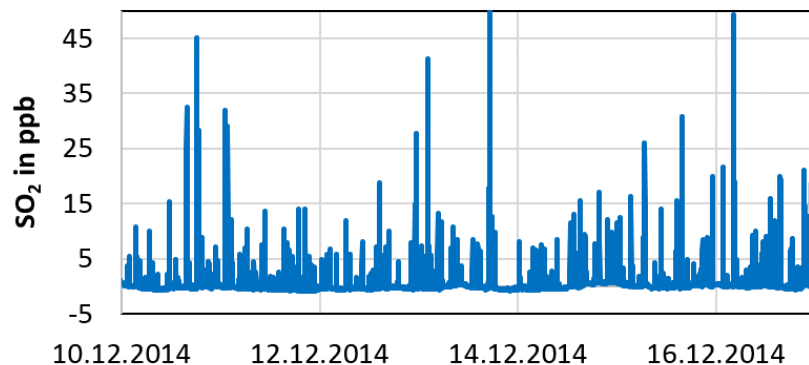


- 1.): $(0,79 \pm 0,11)$ %S in fuel
- 2.): $(0,56 \pm 0,08)$ %S in fuel
- 3.): $(0,92 \pm 0,13)$ %S in fuel
- 4.): $(0,29 \pm 0,04)$ %S in fuel

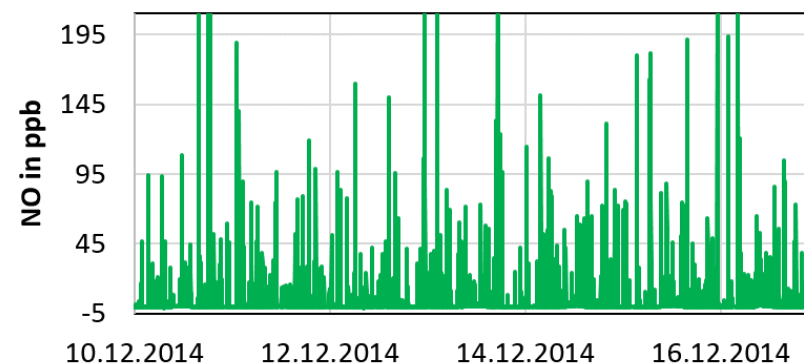


Compliance controls

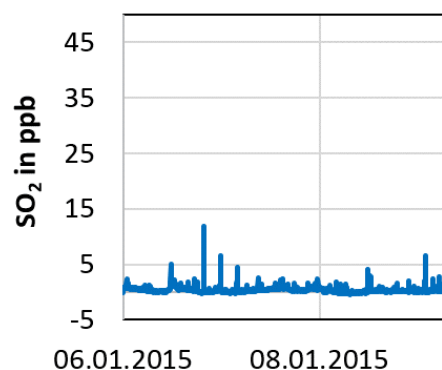
December 2014



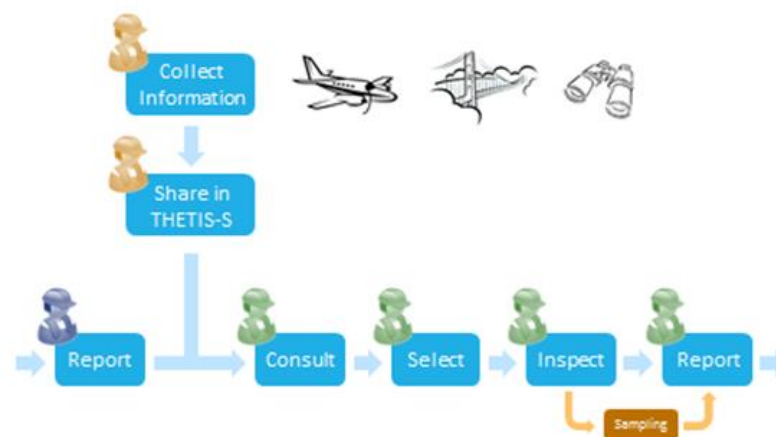
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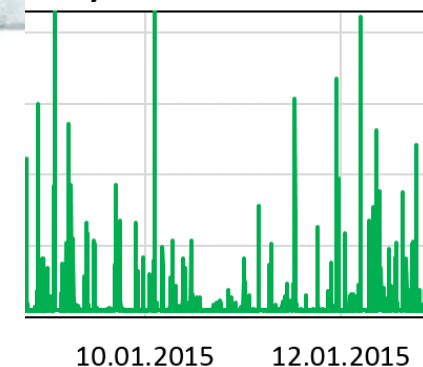
January



THETIS-S Workflow



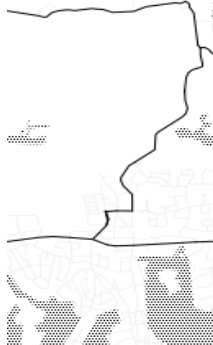
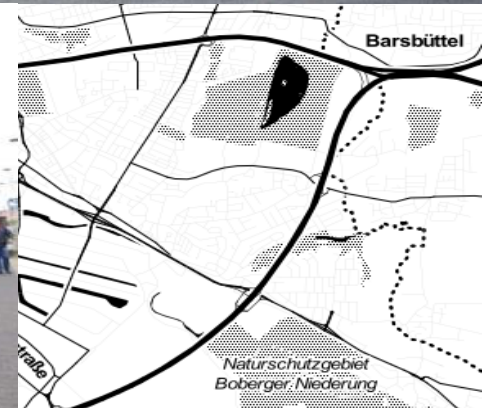
January 2015



Advantages and challenges for Ports & Harbours



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Photos: Becker Marine Systems, Hamburg · Siemens AG · Munich · Olaf Knüppel, Couple Systems GmbH · German Federal Police

Thank you...

... for your kind attention!



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