

Enforcement of low sulphur requirements in the low lands

M.C. Vink



19 oktober 2007



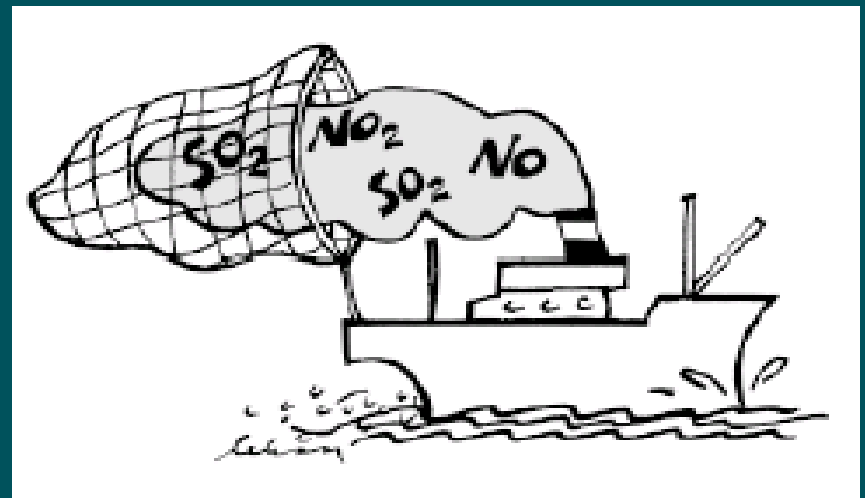
Prevention of pollution by ships

- **MARPOL Annex VI**
- **EU Directive 2005/33/EC***, as regards the sulphur content of marine fuels.

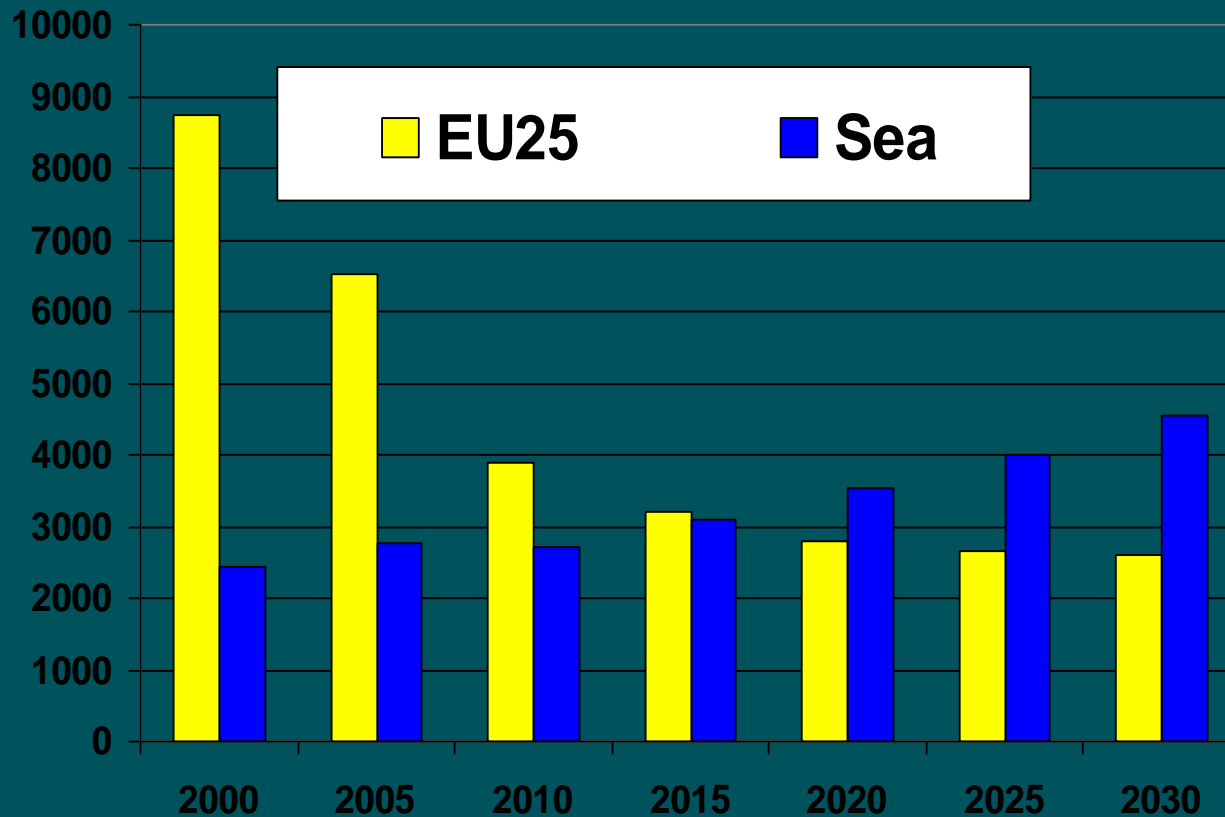
* EU Directive 2005/33/EC amends Directive 1993/12/EEG and 1999/32/EG



- **Why**
- **Against air pollution by Sox**
- **Yellow / brown layer of smog above sea**
- **PM**
- **Acid rain**
- **Damage to our forests**



SO₂-emissions 2000-2030: land-based vs. shipping (thousand tonnes)



www.stichtingdenoordzee.nl



Marpol Annex VI

In force from second of January in NL

Annex VI for all ships!

Ships >400 GT:

An Int. Air Pollution Prevention Certificate (IAPP) if > 400 GT

Ships <400 GT:

The administration may establish appropriate measures to ensure that the applicable provisions of this annex are complied with.



Emission of Sulphur oxides (Sox)

From the 19th of May 2005 any fuel used on board ships shall not exceed 4,5% m/m sulphur

SECA's

Within SOx Emission Control Areas (SECA):

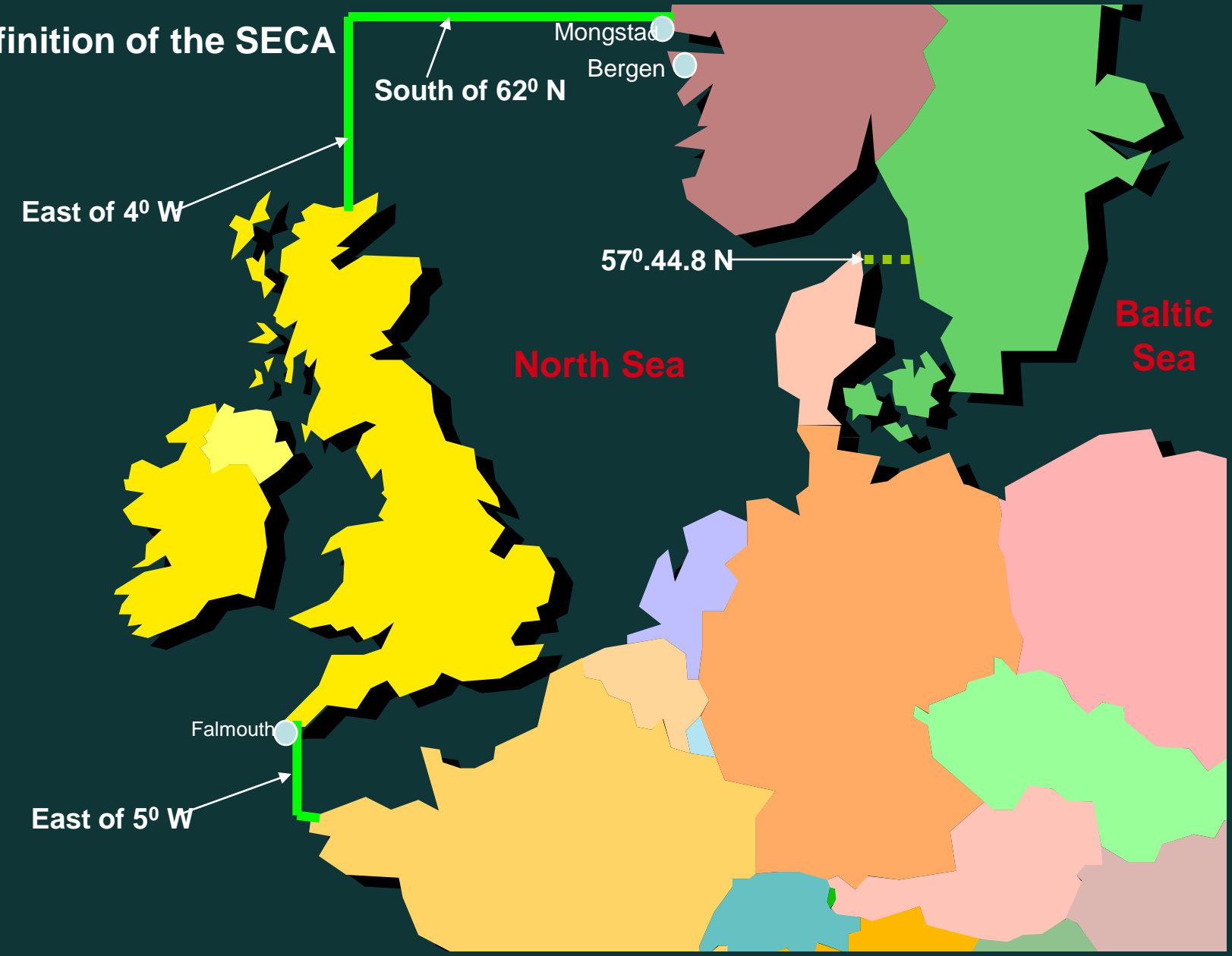
- Any fuel used on board ships shall not exceed 1,5% m/m sulphur
- Approved exhaust gas cleaning system

- Baltic Sea from the 19th of May 2006
- North West European waters from the 21th of November 2007

The definitions of the area's Baltic Sea and North West European waters as defined in Reg 1.11 of Annex I



Definition of the SECA



➤ Ships entering a SECA

Example ship with day tank capacity of 20m³.

With a content of 15 m³, 5m³ FO and 1,3% Sulphur is supplied:

20m³ of which $\frac{3}{4}$ HFO 4,0% and $\frac{1}{4}$ HFO 1,3%:

total Sulphur = 3,33%

20M³ of which $\frac{3}{4}$ HFO 3,33% and $\frac{1}{4}$ HFO 1,3%:

total Sulphur = 2,87%

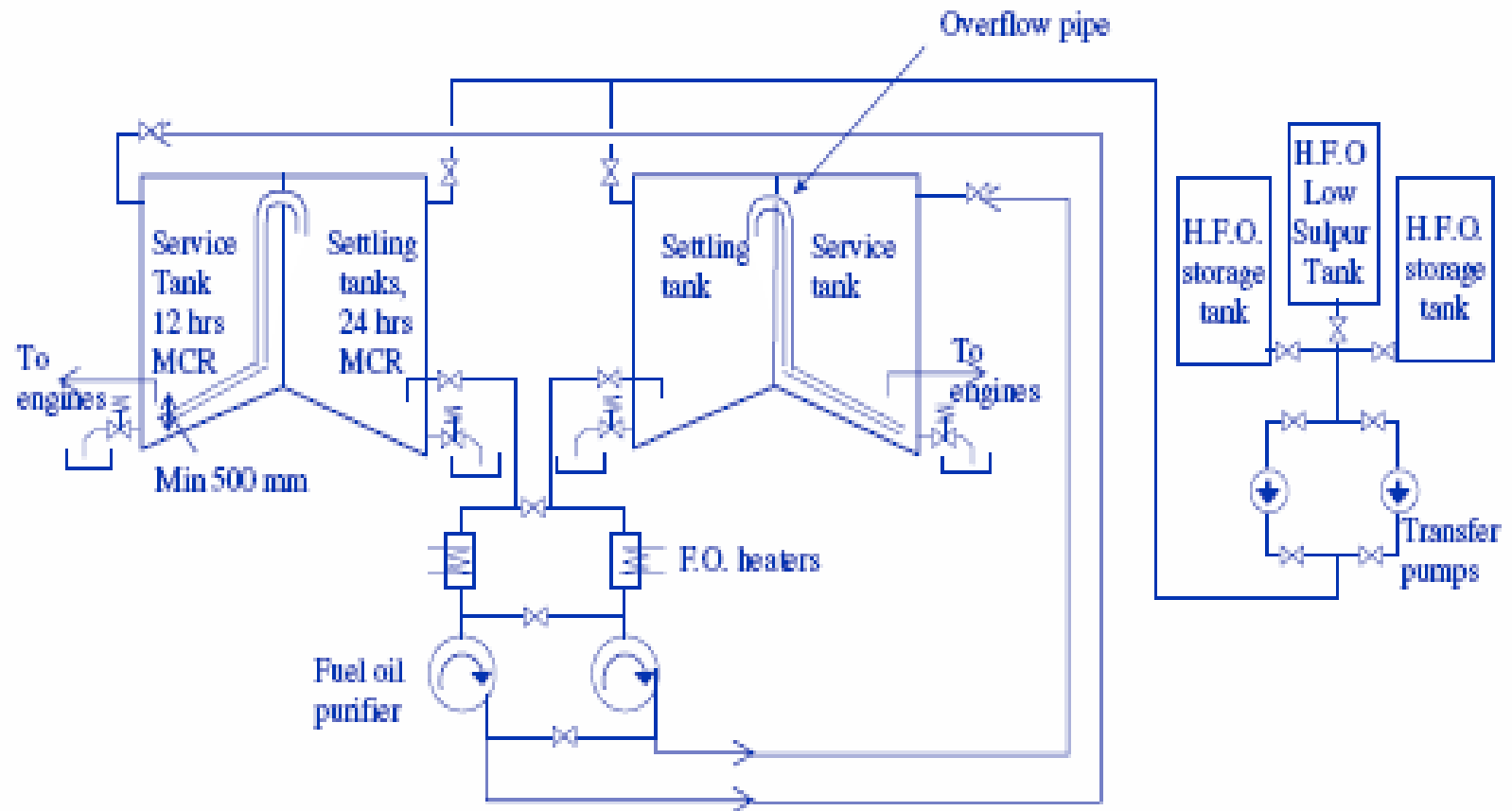
20m³ of which $\frac{3}{4}$ HFO 2,87% and $\frac{1}{4}$ HFO 1,3%:

total Sulphur = 2,53%

After 7 times pumping the Sulphur content is still to high (1,64).
For a ship of about 10000 GT it is two days sailing!



Fuel system example



BDN Bunker Delivery Note:

- **Name and IMO Number of ship, date and name and address of fuel supplier, the product and quantity, density and % of Sulphur**
- **min. 3 year on board**
- **Accompanied with a sample**
- **Sample one year on board**

- **Declaration of the fuel supplier oil supplied is in conformity with Regulations**



EU Directive 2005/33/EC

In force from 19 may 2005

- **EU Directive concerning HFO in line with MARPOL Annex VI:**
- **Same requirements of sulphur 1,5% en 4,5%**
- **Same SECA's**

- **However date of coming into force are different:**
- **SECA Baltic Sea per 11-08-2006**
- **SECA North West European waters per 11-08-2006**



➤ PSCC Instruction 38/2005/09

Initial inspection:

- Documentation equipment ship (IAPP, IEAPP's, Technical Files)
- Bunker Delivery Notes and associated samples

Detailed inspection:

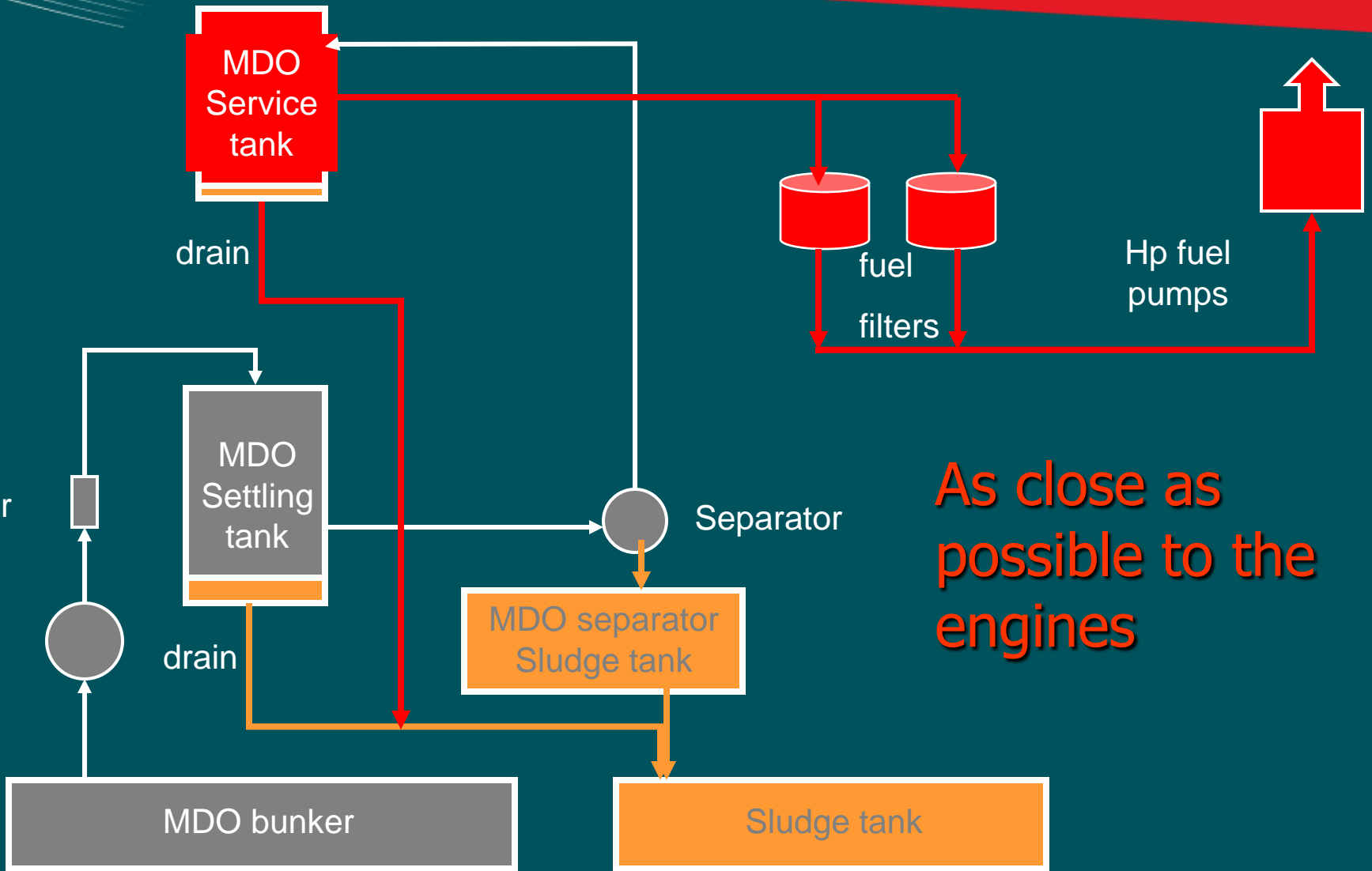
- Fuel sample
- Check log-book



Sampling

- **The Laboratory of SGS take samples, take care of transport and analyses**
- **Reports within two hours**
- **Region's Rotterdam, Amsterdam en Vlissingen**
- **Monday to Saturday**





As close as possible to the engines



Limits

MARPOL Annex VI	Sulphur test method ISO 8754:2003	
	Lower limit	Upper limit
Specified Sulphur Limit (%m/m)		
4.50	4.28	4.72
1.50	1.42	1.58
0.20	0.18	0.22
0.10	0.09	0.11



Port state action in response to alleged contraventions

$\%S > 1,5$ and $BDN < 1,5 \rightarrow$ Rectify before departure

$\%S > 1,5$ and $BDN > 1,5 \rightarrow$ Ground for detention, rectify before departure and Major Non Conformity

Port state send report of violation to the flag state for appropriate action



Fuel oil quality

- Register of local suppliers
- Bunker state take action against suppliers if fuel does not comply with BDN
- Bunker state inform IMO of all cases where fuel suppliers have failed to meet the requirements
- Flag/Port state inform bunker state in case of non compliance



?

