



1st SSN LRIT Group Meeting

LRIT Data quality report

Agenda item 1.5.1

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Department C: Operations/Unit C.2.1

Lisbon / 17 May 2017

LRIT IDE PROD. Performance

(19 October 2016 – 31 March 2017)

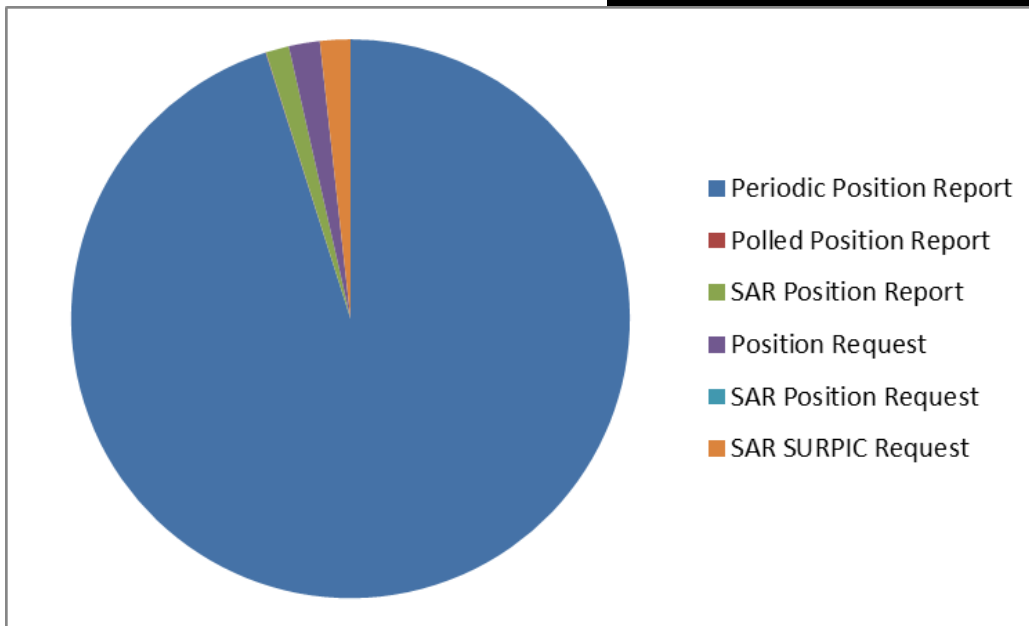


- Availability: 99.83%
- Processing time below 30 seconds: 99.45%
- Messages processed: more than 7.3 million
- Helpdesk Support (LRIT User Community) and Additional Activities:
 - Tests Validation of Mongolia NDC, Singapore NDC, and Panama NDC

LRIT IDE PROD. Statistics

(19 October 2016 – 31 March 2017)

Type	Number of Messages
Periodic Position Report	6,027,856
Polled Position Report	1,691
SAR Position Report	84,527
Position Request	113,681
SAR Position Request	350
SAR SURPIC Request	111,245
Total	6,339,350



LRIT IDE PROD. Incidents

(19 October 2016 – 31 March 2017)



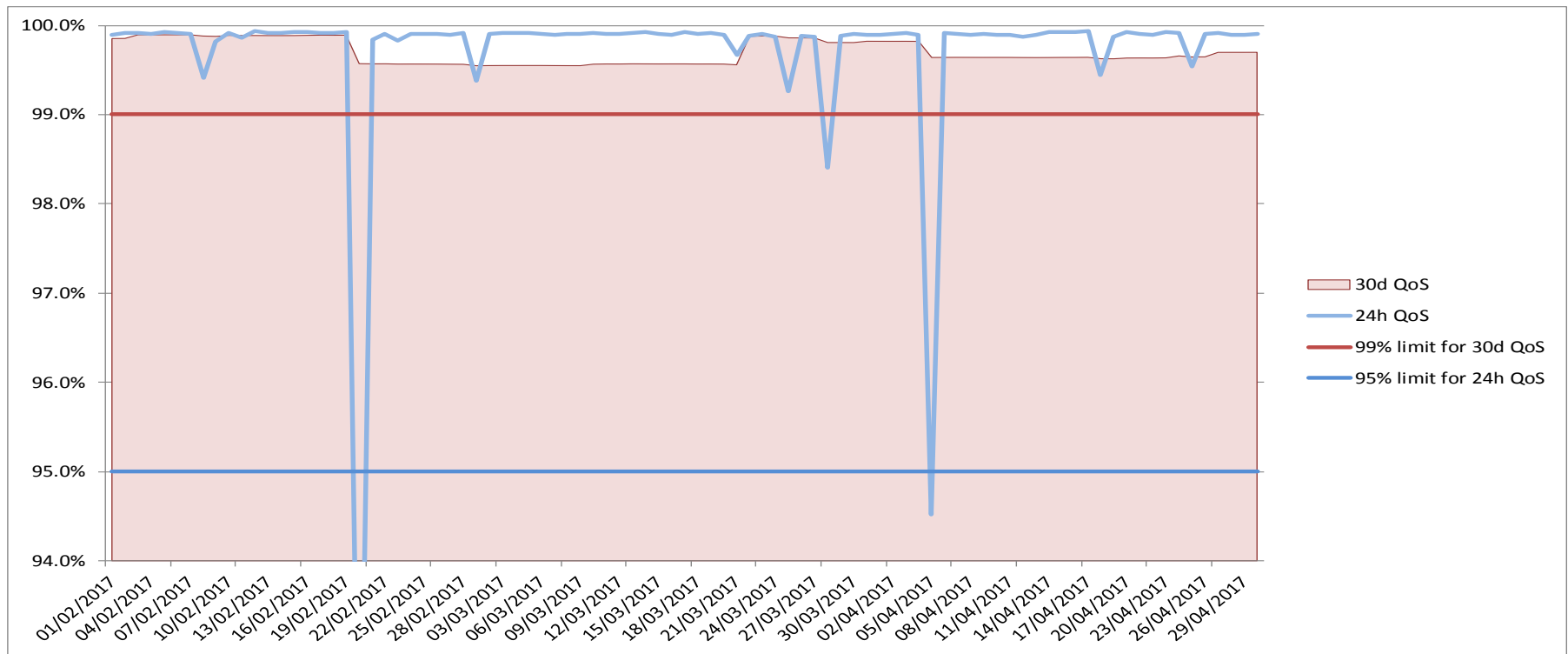
- **Relevant Incidents**
 - During the period at the DR site
- **Maximum Continuous Downtime**
 - 4 hours due to network upgrades
- **Switchovers to BCF**
 - Two, due to infra issues
- **Failovers to DR**
 - None



- **Maritime Support Services**
 - Test environment being re-configured
- **ICT 24/7 Contractor**
 - Regularly scheduled
- **Switchovers to BCF**
 - None
- **Failovers to DR**
 - Two (to test network infra at DR site)

Feb-Apr 2017: 2 breaches in IMO requirements:

- **20-02: switch to BCF too long: 2770 reports delayed**
- **05-04: DB upgrade, 1600 reports delayed**



Quality of Service = Number of Position Reports meeting Latency requirement
Total number of Position Reports

Reference Period	EU CDC availability > 99%	User Web Interface availability > 99%
Q2 2016	99.79%	99.84%
Q3 2016	99.82%	99.74%
Q4 2016	99.73%	99.88%
Q1 2017	99.81%	99.89%

Measure using message 11 System status



- **EU LRIT CDC: IMSO Audit n°8 (06-2016 to 06-2017):**
 - Sample data send to IMSO
 - First analysis without remarks, waiting detailed report
- **LRIT IDE: IMSO Audit n°8 (10-2015 to 10-2016):**
 - Final audit report received from IMSO, no finding note



- **Since 01-2017: information on LRIT issues in the “SSN status report” -> renamed “Status Report”**
- **Include a section on LRIT status, containing :**
 - **Ships probably not flying the MS’s flag anymore**
 - **Ships not integrated**
 - **Ships not reporting**
 - **Recommendations**
- **Done for : UK, Romania, Bulgaria, France, Netherlands, Estonia, Croatia, Lithuania, Iceland**



- **Following a PSC inspection, a shipowner complained to EMSA that one of his ship got wrongly a deficiency linked with LRIT**
- **The PSCO made the proper LRIT requests in the EU CDC, and got no position for this ship**
- **The LRIT DC to which this ship was reporting claimed that all was ok**
- **Nevertheless a deeper analysis show that all was ok with EU LRIT CDC and LRIT IDE. EMSA reported this to the shipowner**



LRIT checks for PSCO: 2 steps:

• **Make the Coastal request**

- Use the UWI of the EU CDC / XML interface
 - Poll request
 - Most recent position report (**free** for EU CDC ships)

• **Analyse the result of the request:**

- One position returned : check date
- No position returned: check why (tooltip)
 - Not entitled to data (ship in internal water of other CG, or >1000NM)
 - Ship not reporting LRIT position
 - Invalid request

Alternative: use an active Coastal Standing Order (CSO)

If a ship is reporting normally: positions received, date should not be older than 6 hrs (e.g. CSO, poll, archived data request)

Manage requests

Selection	Request type	Start date	Ship	IMO number	Positions	Status	Us
	Most recent po...	17/10/2...	SOLYMAR	9167344	1	Terminated	
	Most recent po...	17/10/2...	BBS SURF	9218222	1	Terminated	
	Most recent po...	17/10/2...	MIGHTY O...	9331892	1	Terminated	

Request status

In progress: ☒

If date older: shows since when the ship is not reporting:

Export

IMO	Ship	MMSI	Call sign	Flag	Latitude	Longitude	Date
9167344	SOLYMAR	209664000	P3WG9	CYP	54.502	11.44333	17/10/2013 07:48:00

The date may be very old... **Ship not LRIT compliant**

If no position is received, status and tooltip in “Manage requests” menu explain why.

- **Not entitled to receive data:**

Positions	Status
0	Terminated
0	Rejected

CIW: ship in internal Waters of another flag

CSNM: ship above 1000 NM from the coast

Positions	Status
0	Terminated
0	Terminated
0	Terminated

- **Ship is not reporting: Ship not LRIT compliant**

Positions	Status
0	Terminated
1	Terminated
1	Terminated

- **Invalid request: Status “Rejected”:**

Ship not LRIT compliant OR wrong IMO / flag

Always double check the IMO number

and the flag when making a request

Positions	Status
0	Rejected
1	Terminated
0	Rejected

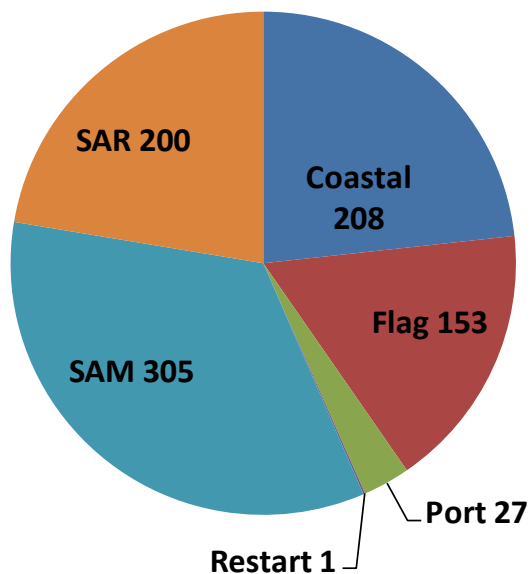
Positions	Status
0	Rejected
1	Terminated
1	Terminated

Positions requests coming:

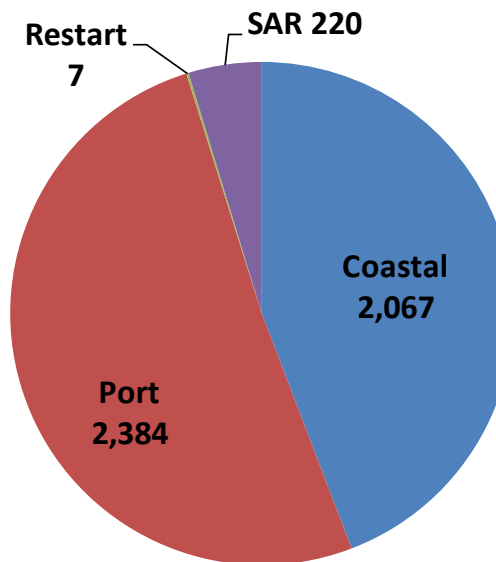
- From EU CDC (589 without SAM)

- From 55 DCs, through IDE (4678)

EU CDC



IDE





Use of the XML interface:

- 8 out of 34 countries have a XML link to the EU CDC

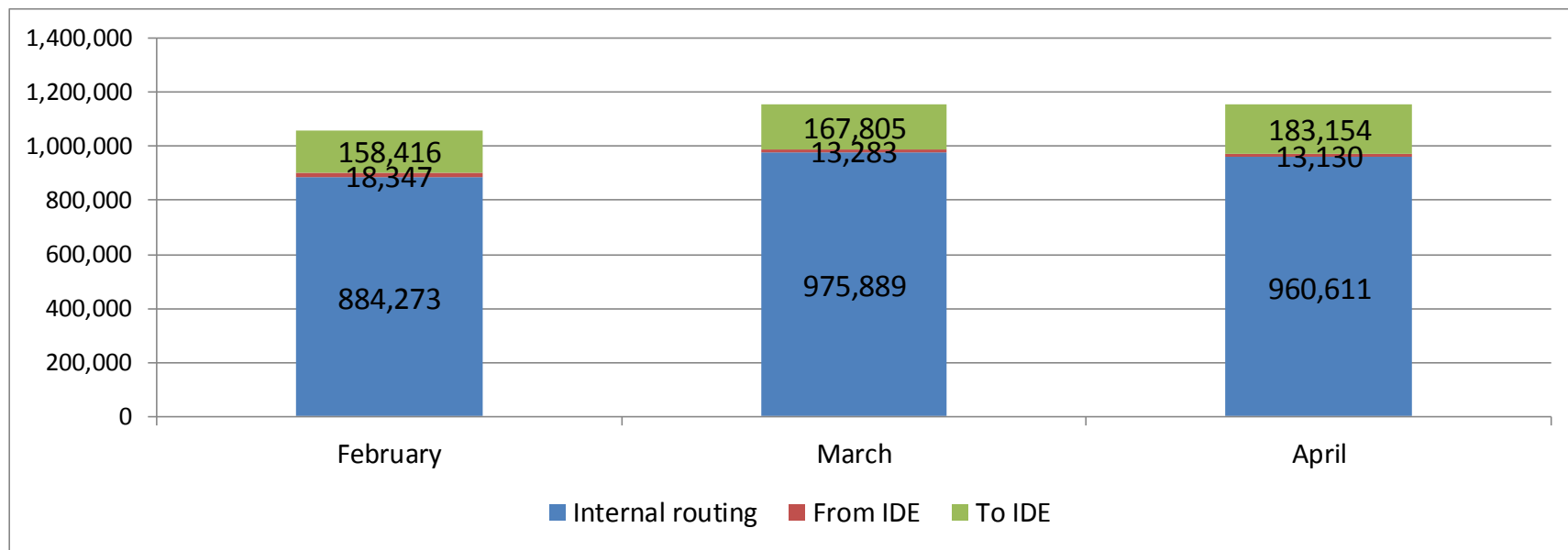
Use of the UWI:

- 762 users, 1699 connections

Out of 589 EU CDC positions requests:

- 41% done through User Web interface (UWI)
- 59% done through XML interface

Position reports coming from ASP (internal), from IDE, and delivered to IDE



LRIT Ship DB

Evolution of number of ships



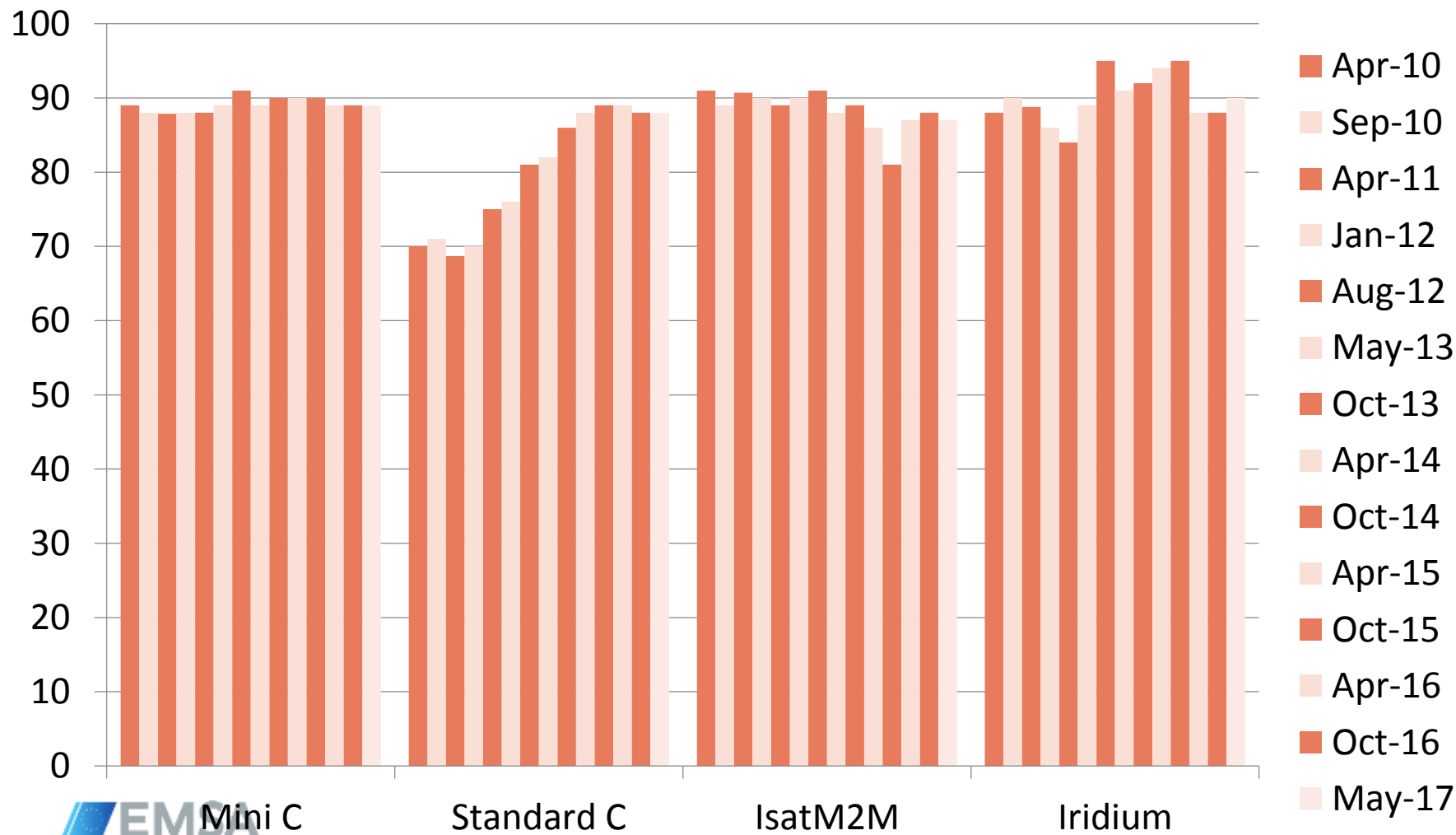
- **In Ship DB:** (green: increase, orange: decrease)

Jun-09	Apr-10	Apr-11	Aug-12	May-13	Apr-14	Apr-15	Oct-15	Apr-16	Oct-16	May-17
4860	7790	8907	8717	8615	8773	8930	8953	9053	9007	9062

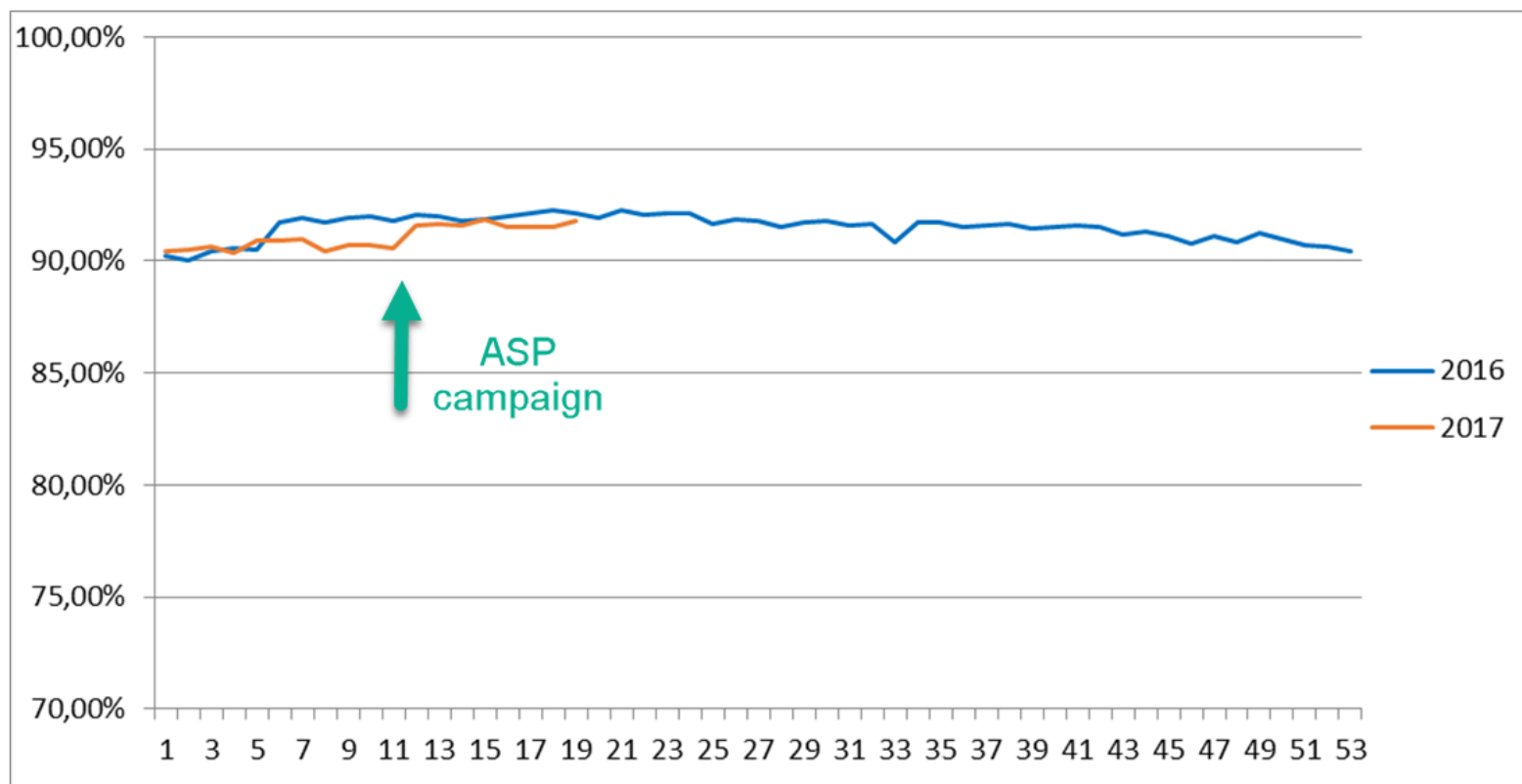
Decrease in October 2016 was due to removing ships that were still in the LRIT Ship DB, but under a wrong flag.

EU CDC: Evolution of % reporting terminals per communication network

- Reporting stabilized



- Slight decrease along the year
- ASP campaign in February 2017 to restore higher values



EU CDC: reporting per CG



> 90%



delegated to EMSA

- Almost all countries > 90% or delegated

Flag	Ship 05-2017	without stopped			with stopped	
		Oct-16	May-17		Oct-16	May-17
BEL	118	96.4	99.1		93.1	93.2
BGR	11	92.9	90.9		92.9	90.9
CUW	44	85.4	81.8		85.4	81.8
CYP	949	98.2	99.3		93.8	94.5
DEU	184	97.8	96.7		97.8	96.7
DNK	431	92.4	90.8		88.8	86.8
ESP	214	84.3	83.8		80.6	79.9
EST	18	100.0	100.0		100.0	100.0
FIN	110	100.0	94.5		100.0	94.5
FRA	222	96.3	97.3		80.7	80.6
GBR	520	80.6	82.1		79.8	81.3
GIB	228	85.5	86.3		85.1	86.0
GRC	647	97.3	98.9		90.7	96.6
HRV	41	97.6	100.0		97.6	100.0
IRL	37	88.2	91.9		88.2	91.9
ISL	2	100.0	100.0		100.0	100.0
ITA	610	98.8	98.9		92.9	90.7
LTU	28	96.4	96.4		96.4	96.4
LUX	155	93.9	95.2		82.1	77.4
LVA	17	95.2	94.1		95.2	94.1
MLT	2098	89.1	90.2		88.8	89.8
MNE	4	100.0	75.0		100.0	75.0
NLD	918	97.0	96.3		94.5	91.1
NOR	731	80.5	77.4		77.6	74.7
POL	23	100.0	100.0		90.5	91.3
PRT	333	88.0	90.1		87.7	89.8
ROU	2	50.0	50.0		50.0	50.0
SVN	1	N/A	N/A		0.0	0.0
SWE	88	97.7	95.4		96.6	94.3
VGB	4	50.0	50.0		50.0	50.0
Total	8788	91.6	91.9		88.8	88.6



- **16 CGs have a reporting rate > 90%**
- **13 CGs delegated fleet monitoring to EMSA**
- **AAS enabled for 1188 ships from 13 different flags, which allow shipowners to react quickly (activated by Ship DB Managers)**
- **AAS enabled for 15 EU CDC users (Flag Administration) from 9 countries**

EU CDC & LRIT Ship DB

AAS improvment



- **All EU Ship DB managers were requested to provide an email adress to include in the generic AAS message**
- **Up to today: 11 emails to be added. Answer before 22 May (can be added later)**
- **Then Ship Contact Persons will know exactly who to contact in each Administration**

Dear Ship Contact Person or EU LRIT DC user,

Your National LRIT Ship Database Manager or NCA has enabled you to receive this email to inform you that the ship with IMO=xxxxxxx has stopped reporting.

To start the ship reporting again, could you please ensure that the following actions are done on board this ship:

- Switch off the terminal transmitting LRIT positions;
- Wait 30 minutes;
- Switch on the terminal.

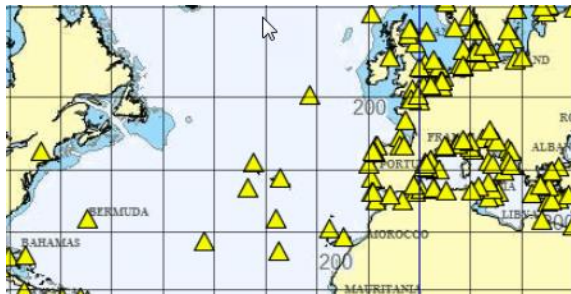
Once these actions are done, please report to your National LRIT Contact Person.

Regards,

EU LRIT CDC Administrator

- **2 maps available:**

- Mercator



- Orthographic



- Orthographic was set-up to have better visualization in polar areas
- Orthographic currently almost not used (2 users with this preference set) and does not allow SURPIC requests
- Old technology, start causing daily issues in EU CDC
- No evolution possible in EU CDC UWI due to SEG foreseen to replace EU CDC UWI within one year, tbc
- Will be deactivated in EU CDC UWI to avoid issues
- Need in SEG?



- **Request from DG Environment in 07/2016, for inventories of shipping emissions : Sulphur Directive 2016/802/EC**
- **Based on shipping activity data for domestic, short sea and international shipping**
- **Covering Mediterranean, Baltic and North Atlantic areas**
- **Was processed by EMSA, unit B.3 (Environment and capacity building), through a new module in THETIS-EU**



Position data processed:

➤ **T-AIS**

- *Limitation: AIS coverage only;*

➤ **S-AIS**

- *Limitation: At the time of start of the project not fully available for requested years;*

➤ **LRIT**

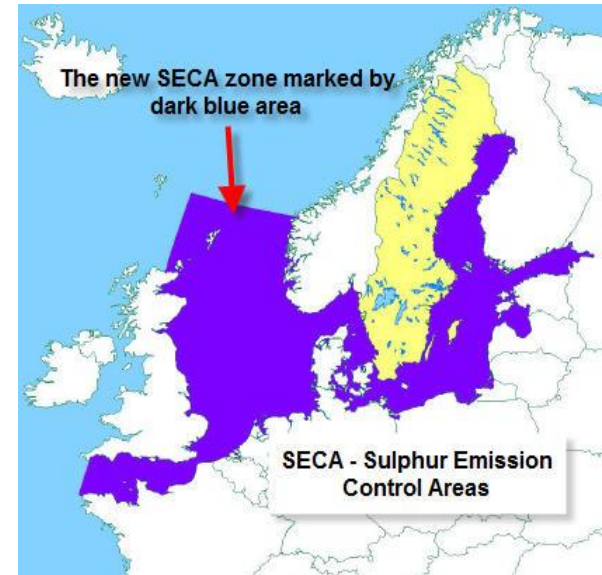
- *best available addition to T-AIS. Archived LRIT data from 01/2011 to 01/2016*

Methodology:

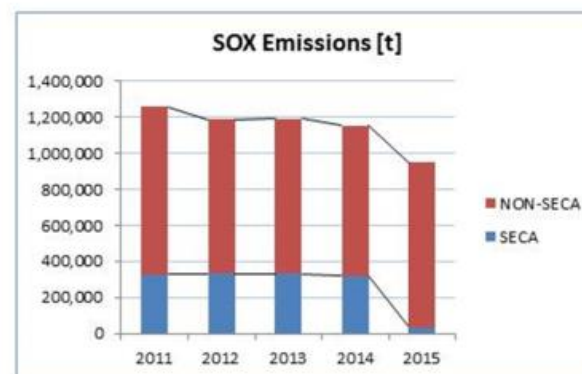
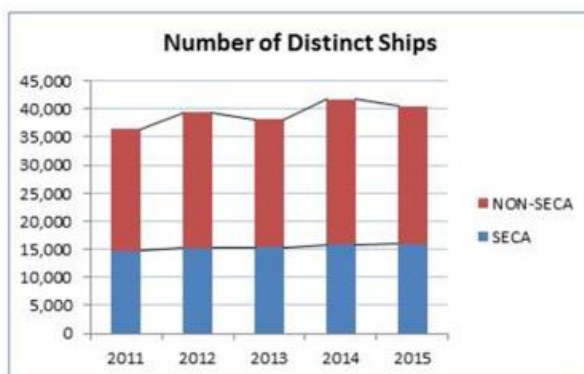
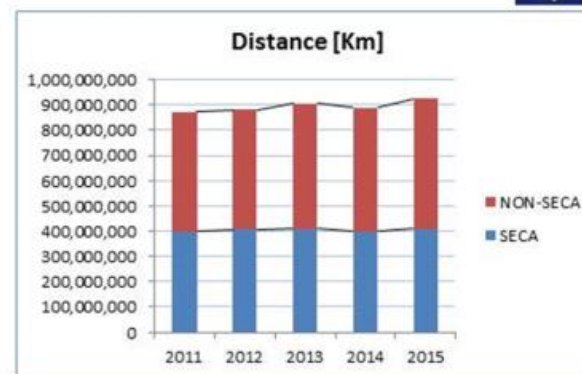
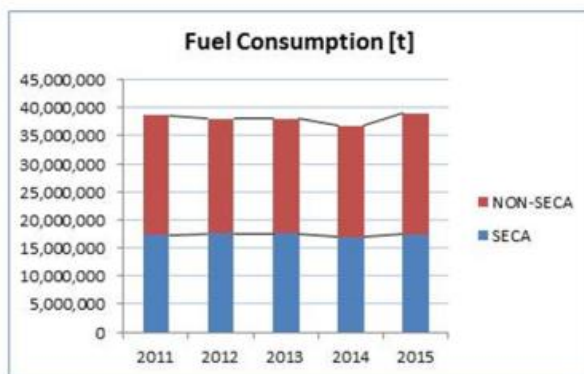
- ***Movement (2 positions) -> speed***
- ***Speed -> effort (power)***
- ***Power -> fuel consumption***
- ***Fuel consumption -> emission***



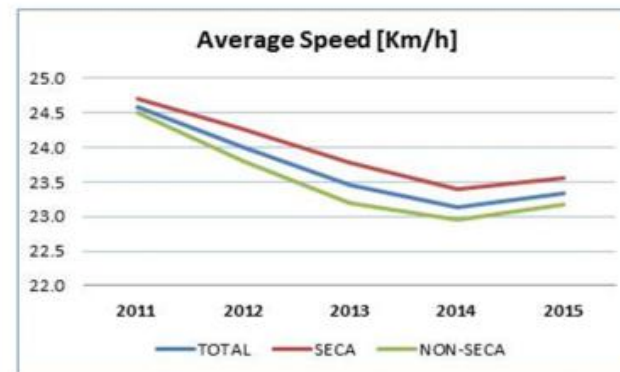
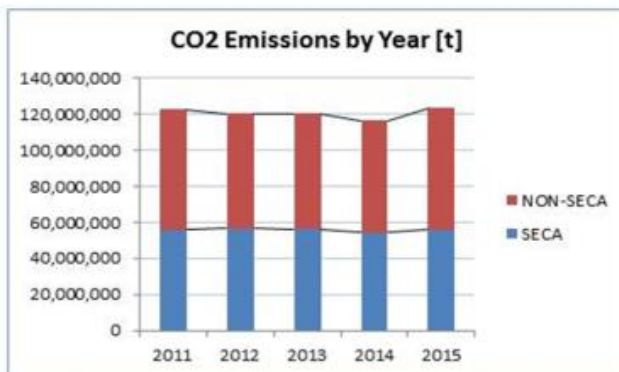
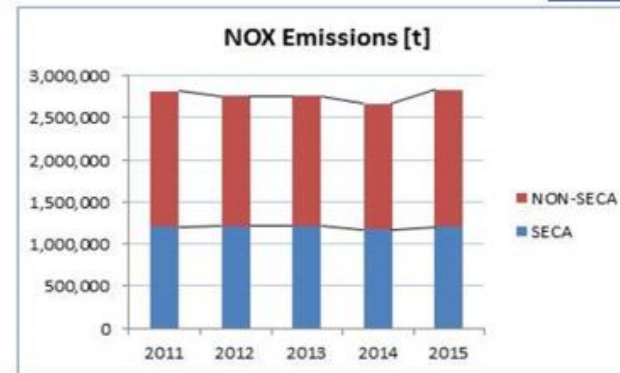
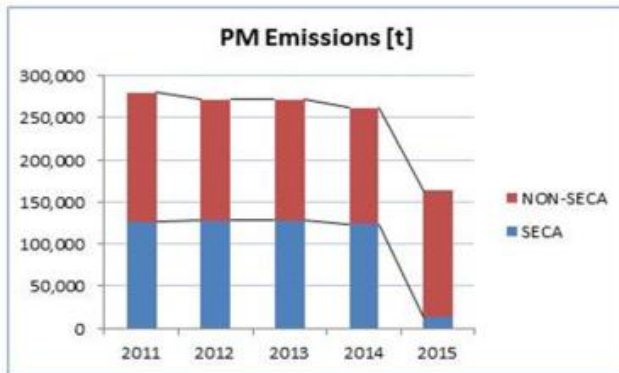
- **SECA: Sulphur Emission Control Area (Marpol Annex 6)**
- **As from 01-01-2015: lower content of sulphur (from 1% to 0.1%) in fuels used in this area**
- **SOx: sulphur oxides**
- **NOx: nitrogen oxides**
- **PM: particulate matter**
- **Results presented at 5th Sulphur committee in Brussels**



The Air Emission Inventories



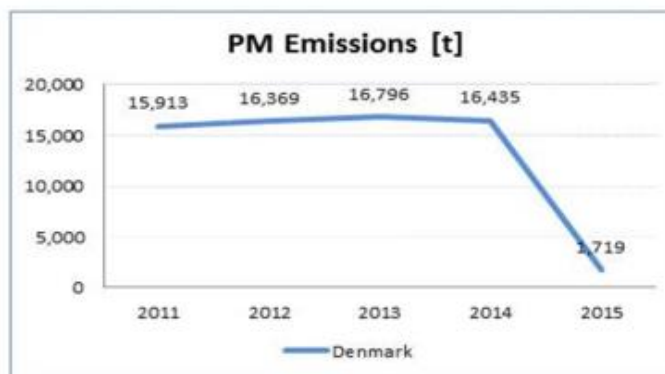
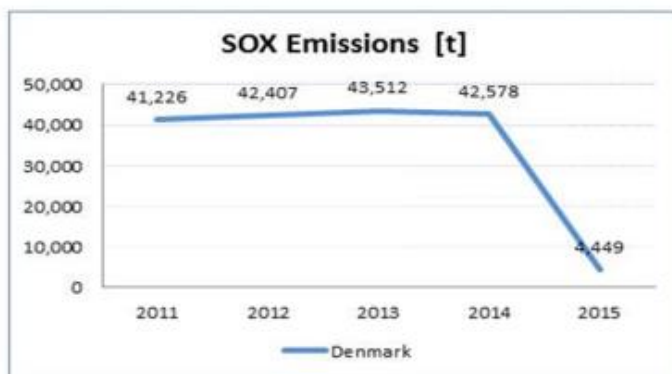
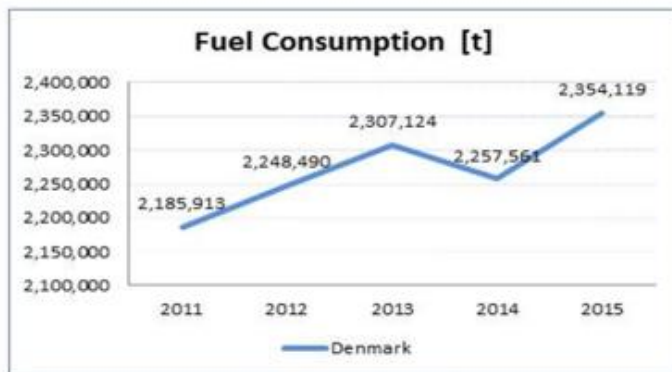
The Air Emission Inventories



The Air Emission Inventories

Example State 1 (SECA area)

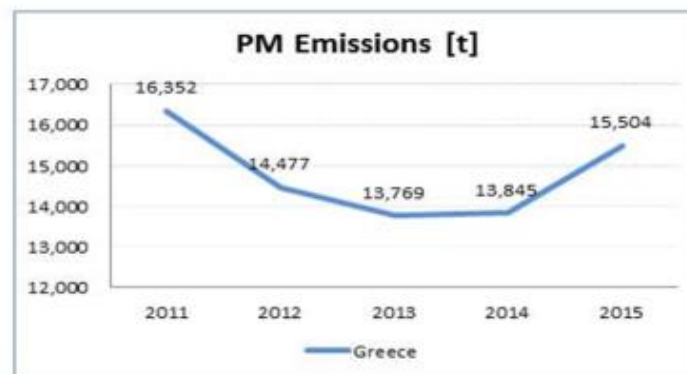
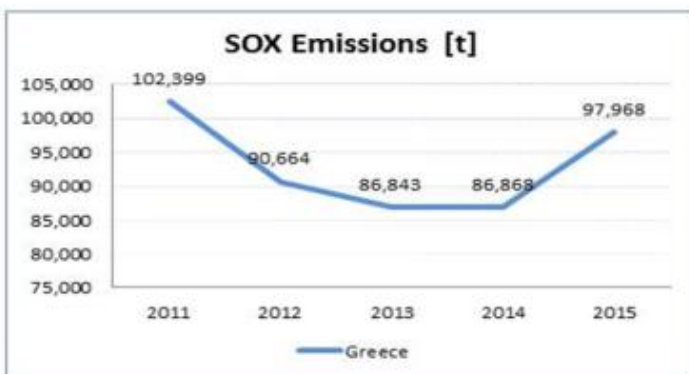
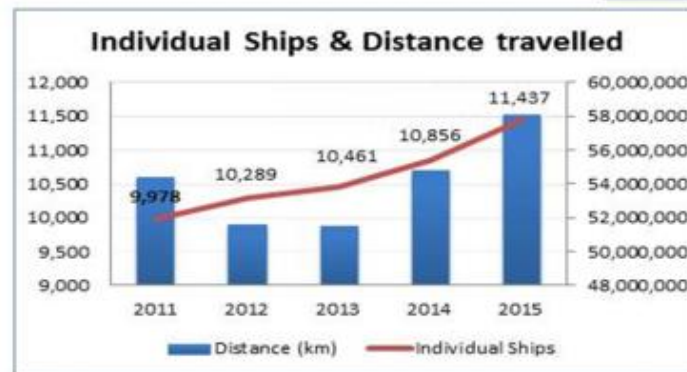
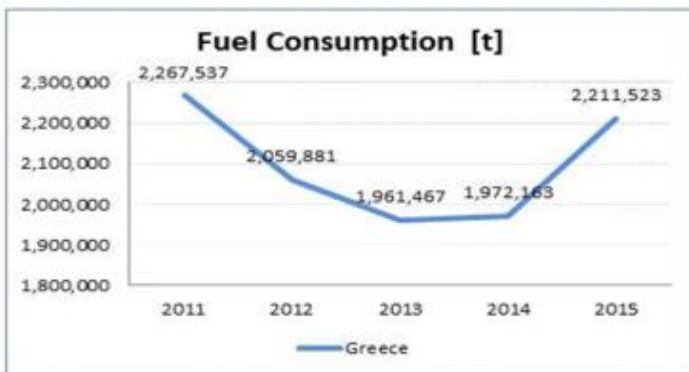
Denmark



The Air Emission Inventories

Example State 2 (non SECA area)

Greece



SULPHUR COMMITTEE TAKES FORWARD PUBLIC FACE OF THETIS-EU

EMSA provided valuable support to the Commission and member states during the fifth sulphur committee held in Brussels on 3 March, presenting on many key issues such as compliance based on data from THETIS-EU, the use of alerts by individual authorities, and remote sensing technologies. The committee agreed to the THETIS-EU prototype for publicly available information, a functionality expected by the end of May. EMSA also presented a technical report on the development of the ship emissions modelling functionality. Visuals were shown of the inventories of ship emissions covering the waters per member state, based on historic Automatic Identification System (AIS) and Long Range Identification and Tracking (LRIT) shipping activity data provided by the member states for the 2011-2016 period. The deliverables are to be used as the basis for an assessment of existing practices to determine the current level and evolution of air emissions from ships (SOx, NOx, primary and secondary PM and Black Carbon, and other relevant substances) by the relevant European Sustainable Shipping Forum sub-group.



- **NCAs should revoke EU CDC accounts of retired users in their Administration**

- **User creation: follow EMSA login policy:**
CC_FIRSTNAME.LASTNAME

CC: country code, according to ISO

- **EU LRIT Ship DB: MSS creates the accounts; but previously, the user (login) must exist in the EU CDC**



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European Maritime Safety Agency