Ship Tracking Data

ESSF MRV SG on Verification & Accreditation

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EMSA

REGULATION (EU) 2015/757 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 29 April 2015

on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC

(26) Verification by accredited verifiers should ensure that monitoring plans and emissions reports are correct and in compliance with the requirements set out in this Regulation. As an important element to simplify verification, verifiers should check data credibility by comparing reported data with estimated data based on ship tracking data and characteristics. Such estimates could be provided by the Commission. In order to ensure impartiality, verifiers should be independent and competent legal entities and should be accredited by national accreditation bodies established pursuant to Regulation (EC) No 765/2008 of the European Parliament and of the Council (²).

Article 14

General obligations and principles for the verifiers

3. The verifier shall only consider emissions reports submitted in accordance with Article 12 if reliable and credible data and information enable the CO_2 emissions to be determined with a reasonable degree of certainty and provided that the following are ensured:

(a) the reported data are coherent in relation to estimated data that are based on ship tracking data and characteristics such as the installed engine power;

Article 15

Verification procedures

1. The verifier shall identify potential risks related to the monitoring and reporting process by comparing reported CO_2 emissions with estimated data based on ship tracking data and characteristics such as the installed engine power. Where significant deviations are found, the verifier shall carry out further analyses.

As per IMO Requirements under SOLAS

- Navigation Log-Book,

- Nautical Charts,

- *Electronic Chart Display and Information System* **ECDIS**

Coastal/Global Positioning Systems such as…

- *Automatic Identification System* **AIS**

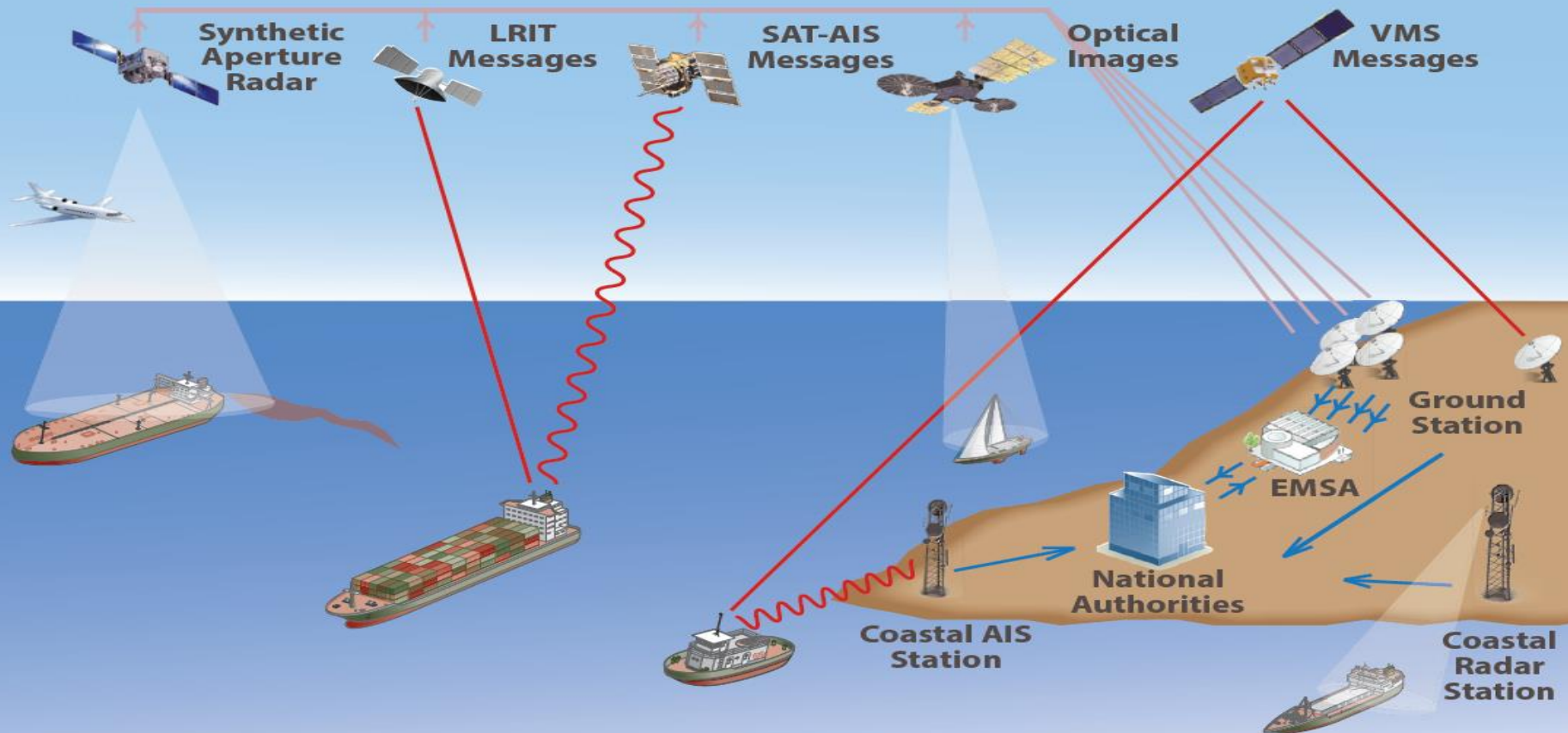- *Long-Range Identification and Tracking* **LRIT**

Positioning Systems - AIS overview

- Capable of providing information about the ship to other ships and to shore/coastal authorities, including the ship's identity, type, position, course, speed, navigational status and other safety-related information automatically.

- ***Regulation 19 of SOLAS Chapter V*** - *Carriage requirements for shipborne navigational systems and equipment* - fitted aboard all ships of 300 GT and upwards engaged on international voyages, cargo ships of 500 GT tonnage and upwards not engaged on international voyages and all passenger ships irrespective of size. The requirement became effective for all ships by 31 December 2004.

- Ships fitted with AIS shall maintain AIS in operation at all times except where international agreements, rules or standards provide for the protection of navigational information.

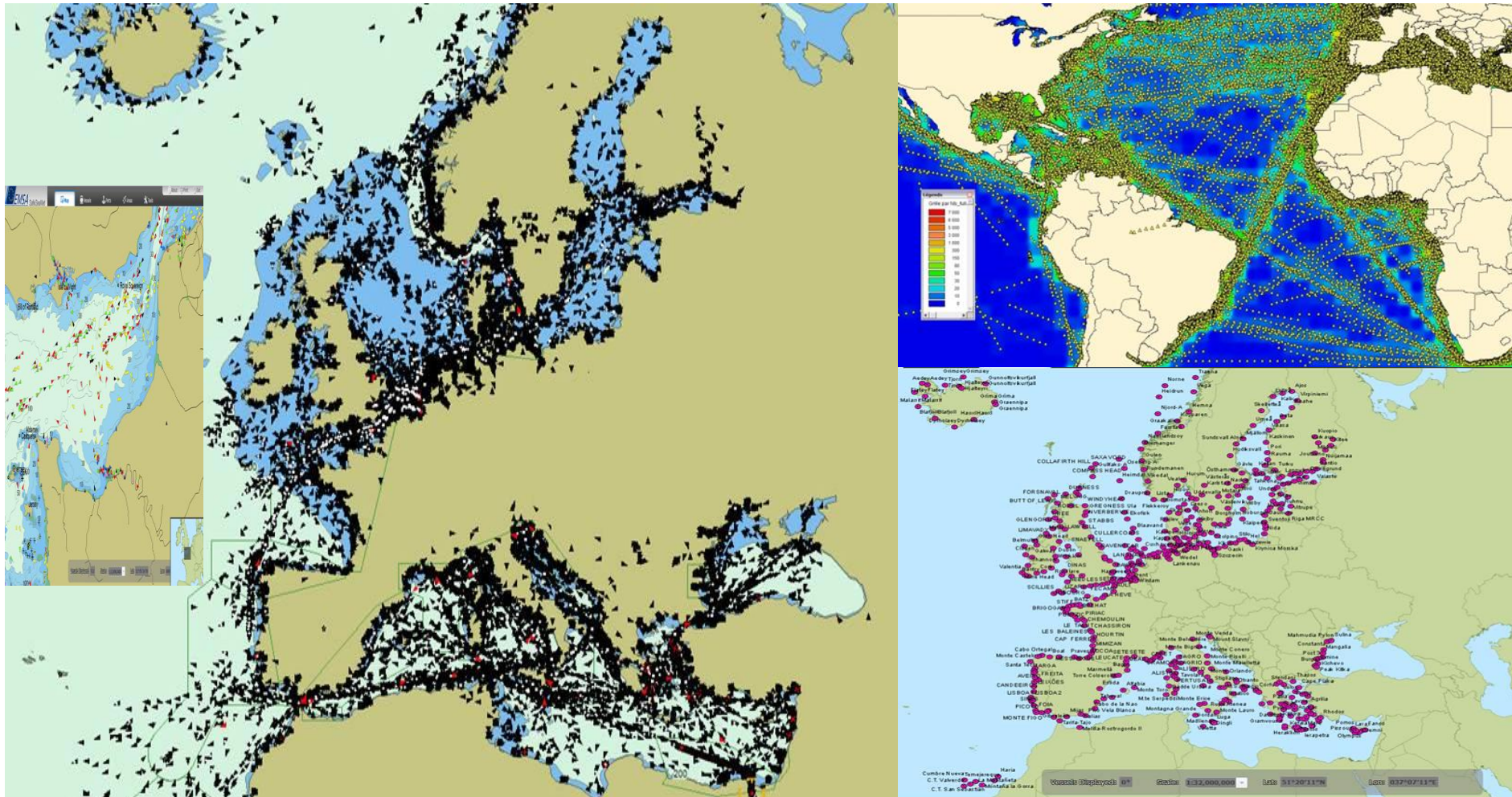## *Positioning Systems - LRIT overview*

- Capable of providing information about the global identification and tracking of a ship. The main purpose of the LRIT ship position reports is to enable a Contracting Government to obtain ship identity and location information.

- ***Regulation V/19-1 of SOLAS*** - sets the obligations of ships to transmit LRIT information and the rights and obligations of SOLAS Contracting Governments and of Search and Rescue services to receive LRIT information. The LRIT system is mandatory for all passenger ships, high speed craft, mobile offshore drilling units and cargo ships of over 300 GT.

- Similarly to AIS, LRIT shall be maintained in operation at all times.

## *Positioning Systems - AIS & LRIT concept schematics*

Synthetic Aperture Radar — LRIT Messages — SAT-AIS Messages — Optical Images — VMS Messages — Ground Station — EMSA — Coastal AIS Station — National Authorities — Coastal Radar Station

INTEGRATING DATA FOR A MORE SAFE, SECURE AND CLEAN MARITIME ENVIRONMENT

Positioning Systems - AIS & LRIT concept schematics

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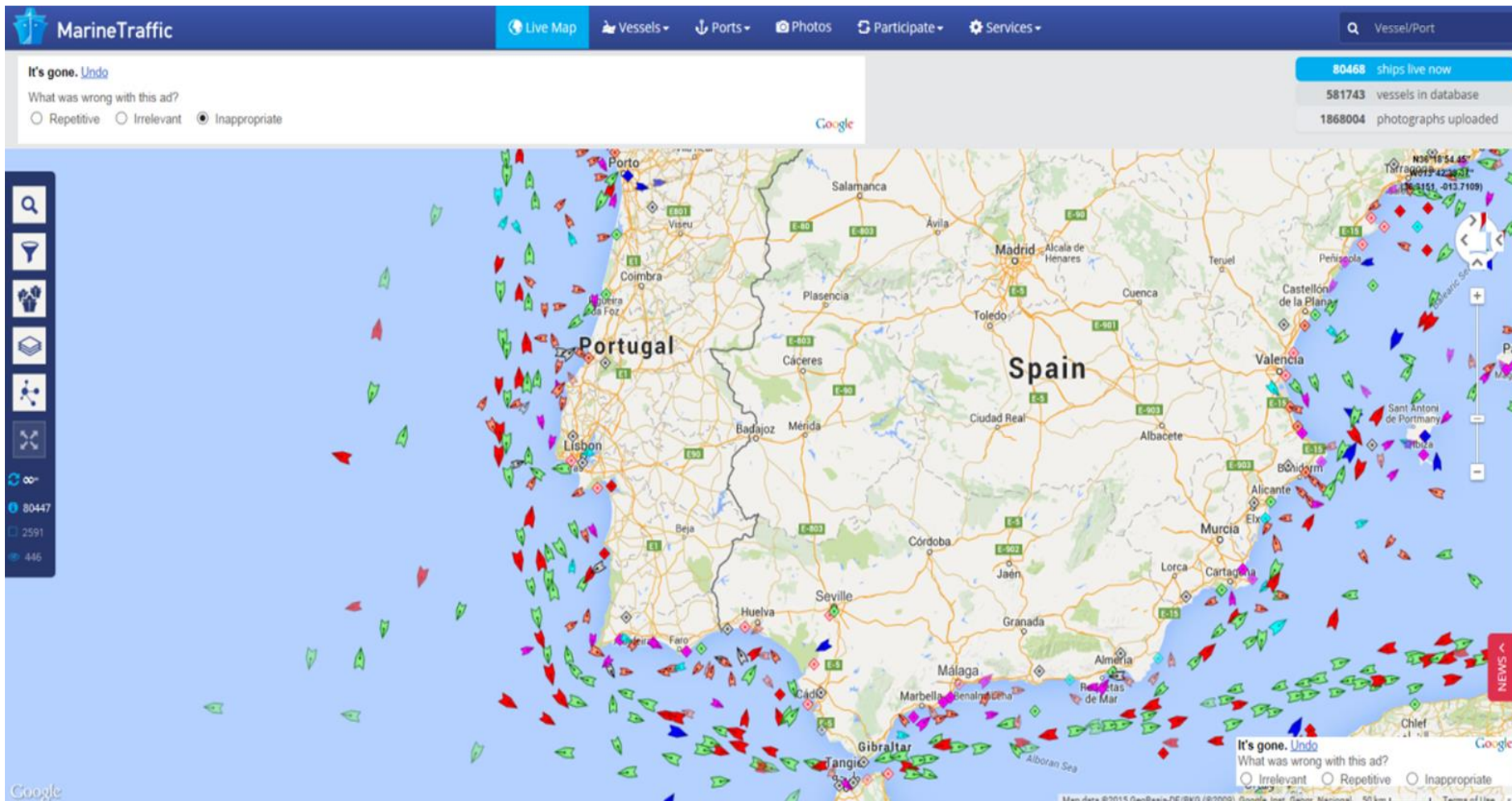
Key aspects related to Positioning/Activity Systems

- Ship movements i.e. activity data can be detected by using other ship tracking sources besides AIS and LRIT e.g. port calls.

- Ships' activity data is already available from both commercial and non-commercial sources being the last previously authorised by the 'owners' of such data i.e. Member States or Contracting Governments.

- AIS can be made available from both satellite and terrestrial tracking systems. Although satellite sources are becoming more reliable, shore-based coastal systems (radio and radar) are still more accurate and complete, particularly w.r.t. high density traffic areas e.g. large ports.

Key aspects related to Positioning/Activity Systems

- Biggest advantage of these systems is that the information is remotely available i.e. time positioning, routing and true sailed distances.

- Resolution, quality and uncertainty will highly depend on the sources and procedures to collect and treat ships' data.

- Confidence in quality and minimizing uncertainty highlight the importance of an improved AIS/LRIT coverage. An increased and combined use of satellite and terrestrial positioning systems will contribute to obtaining a more complete and robust maritime activity picture while increasing the accuracy of ships' tracking for verification purposes.
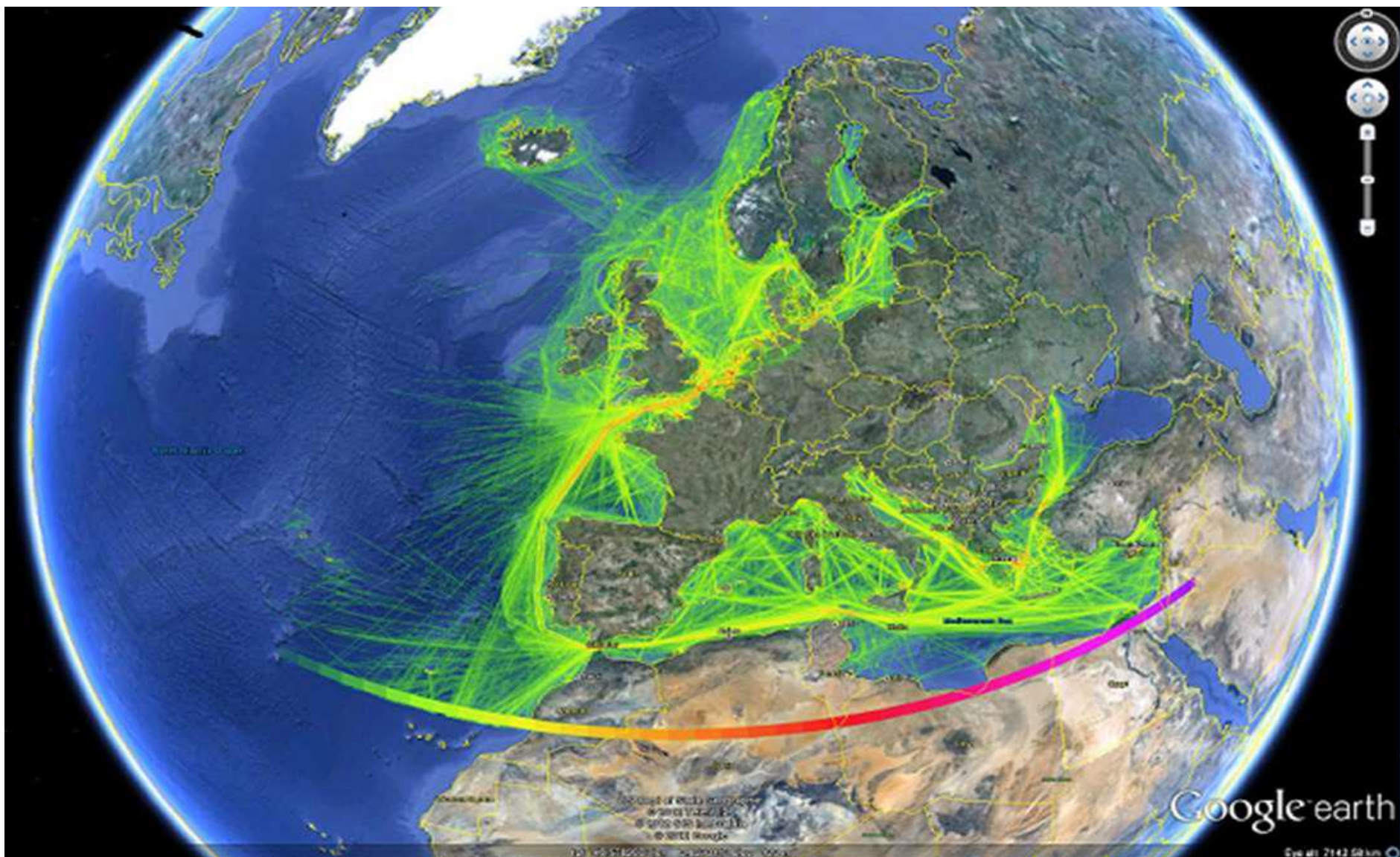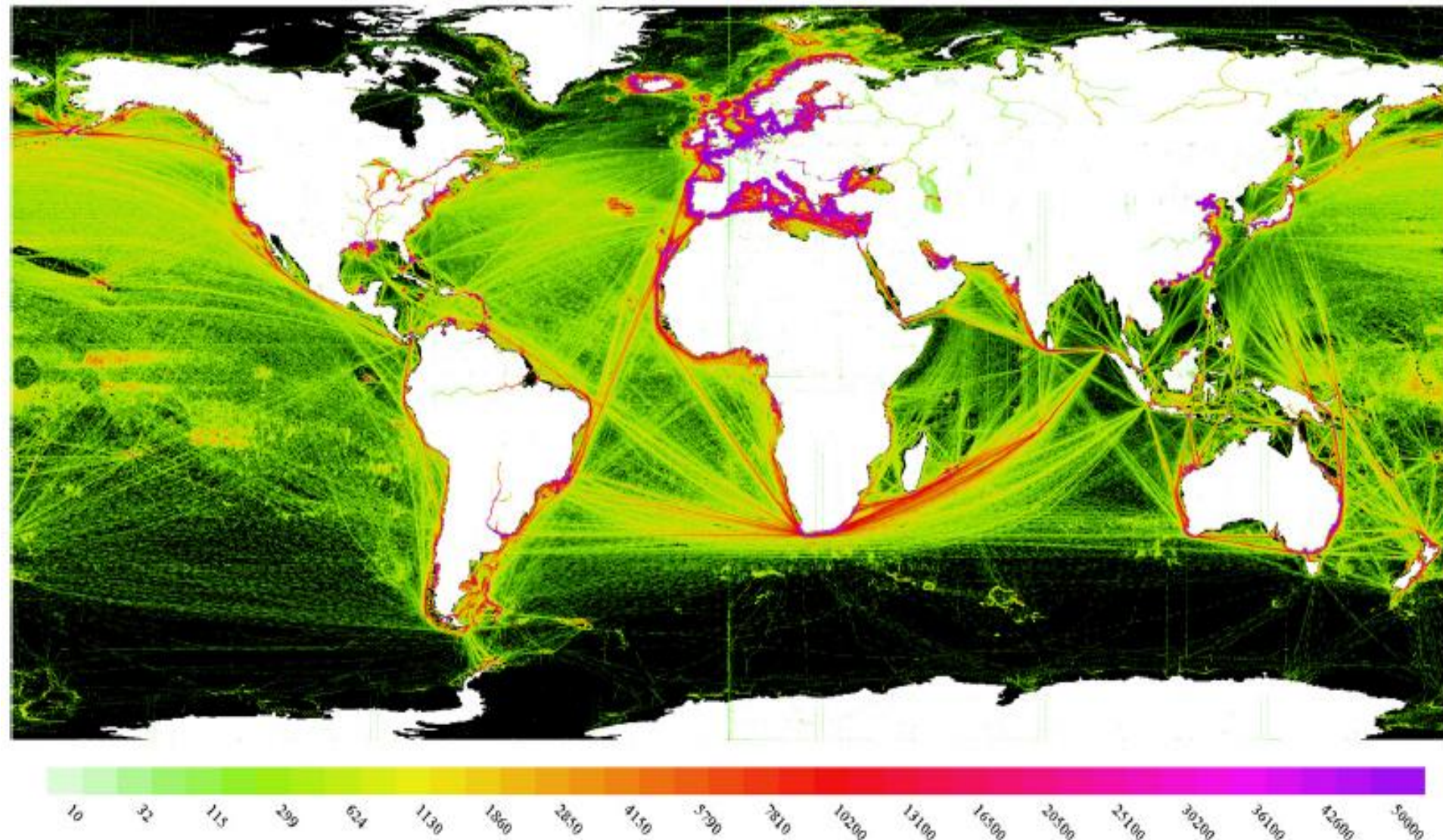
Questions?

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