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“Maritime and inland waterways co-operation in the OSCE area: Increasing security
and protecting the environment”
Vienna, 28- 29 January 2008**

**Session I
Security aspects related to maritime co-operation**

Baltic Sea Maritime Safety and Security -Risk Control Options in Focus

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Baltic Sea Maritime Safety and Security - Risk Control Options in Focus

**The 16th OSCE Economic and Environmental
Forum, Vienna, 28-29 January 2008**

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Contents

- Trends in Maritime Business**
- Safety Definition**
- Interaction with Safety and Security**
- Baltic Sea Risk Control Development**
 - **HELCOM, GOFREP, BASSY, Baltic AIS etc....**
- Incidents & Accidents**
- Electronic Failures**
- Security Aspects Briefly**
- Conclusions**



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Development Trends

Maritime Traffic is increasing in the Baltic Sea,
Oil Transportations will grow significantly
especially in the Gulf of Finland area,
New Risk Control Options are scheduled in the
near future,
Recent statistics shows increased risks for
collisions and groundings in the Baltic Sea
(Helcom statistics)
Winter Navigation may encounter problems in
severe winters.

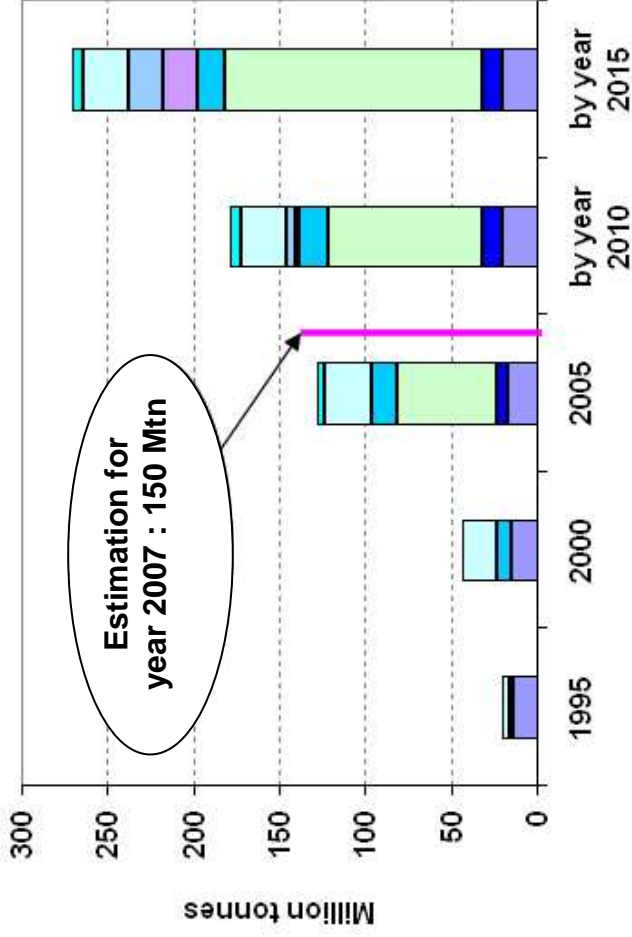


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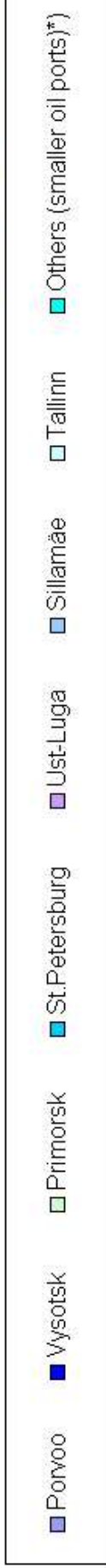
OIL TRANSPORTATION IN THE GULF OF FINLAND THROUGH MAIN OIL PORTS

Years 1995-2005 and estimated development by year 2015

MH Dec 2007



Seatrack Web



Sources: www.transneft.ru, www.seanews.ru, www.rzd-partner.com
Main oil ports of the Gulf of Finland



Maritime Safety Issues

- External Safety (fairways, ports, other ships),
- Internal Safety (hull, stability, fire protection),
- Human Impact,
- Risks to the Environment

Interaction of Safety and Security

- The Risk Approaches within inbuilt safety and security related RCO's will give a reliable and transparent view over the sustainable maritime development
- If
- The risk approach used is
 - Using harmonised approach, such as IMO's adopted FSA
 - Recognizes relevant Risks
 - Has inbuilt Cost and Benefit analyses with the Environmental Impact Assessments
 - Understand the differences for RCO selection procedure based on national and geographical differences
 - Has transparent and innovative management structure with true expert-public-industry participation.



MT Baltic Carrier Accident in 2001 and HELCOM's Extraordinary Ministerial Meeting acted as a catalyst for recent risk enhancement activities in the Baltic Sea

ICE EWG

PILOT EWG

AIS EWG (in progress)

ROUTEING EWG (in progress)

SURVEYING EWG (in progress)



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Pilot Expert Working Group / High Risk Areas

- 1 Gulf of Finland
2. The Northern Quark
3. The Southern Quark
4. The Strait of Irbe (Latvia's contribution)
5. The area between Bornholm and Sweden
6. The area between the Sound, the Katetrende
7. The Baltic Sea from a line N-S at 11o57,5' E to a line N-S at 12o 44'E
8. The Baltic Sea W of a line N-S at 11o 57,5'E
9. The Sound, the Belts and Kattegat S
10. Kattegat N of a line between Sjaellands Rev and Fornaes.

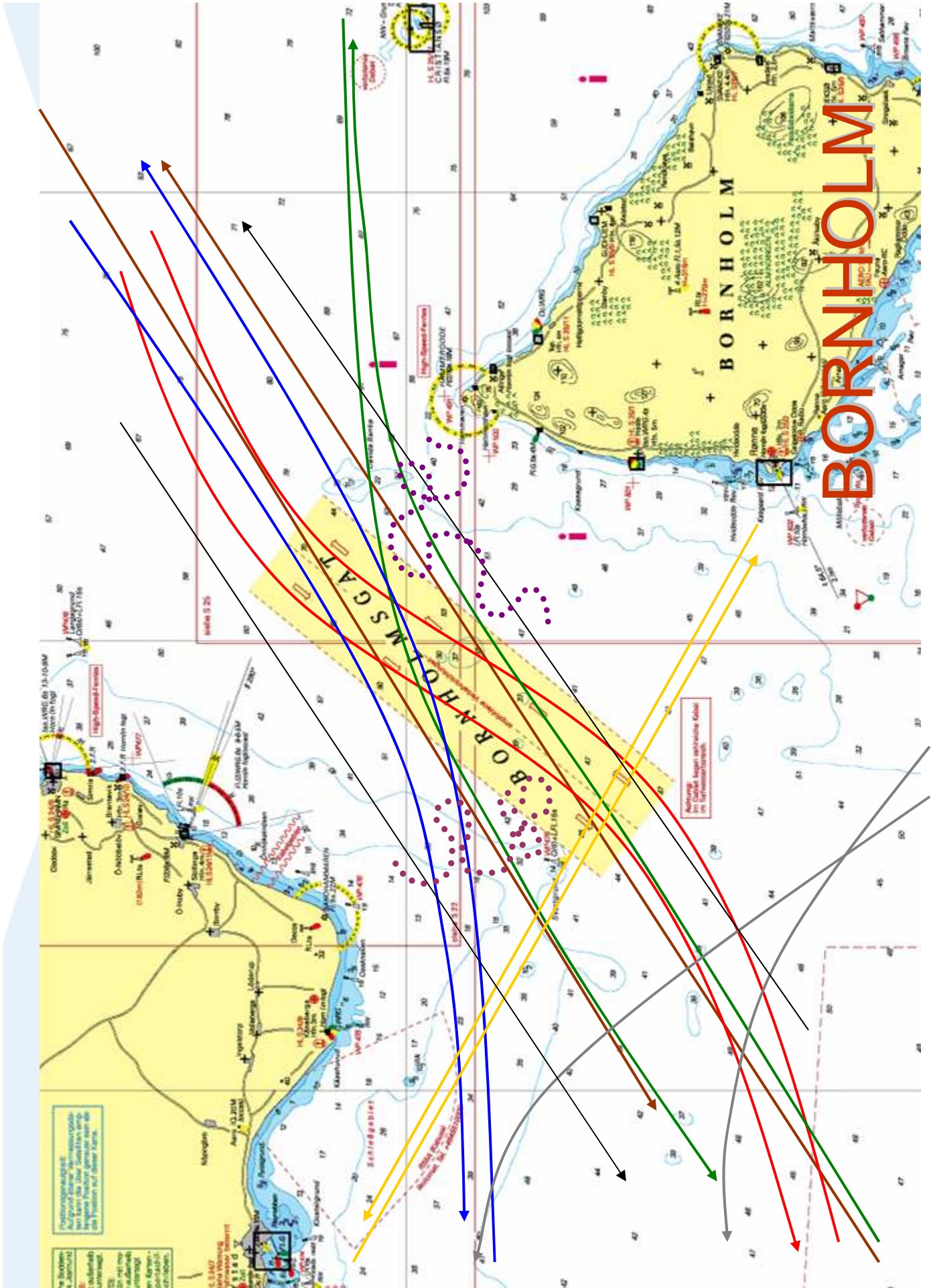


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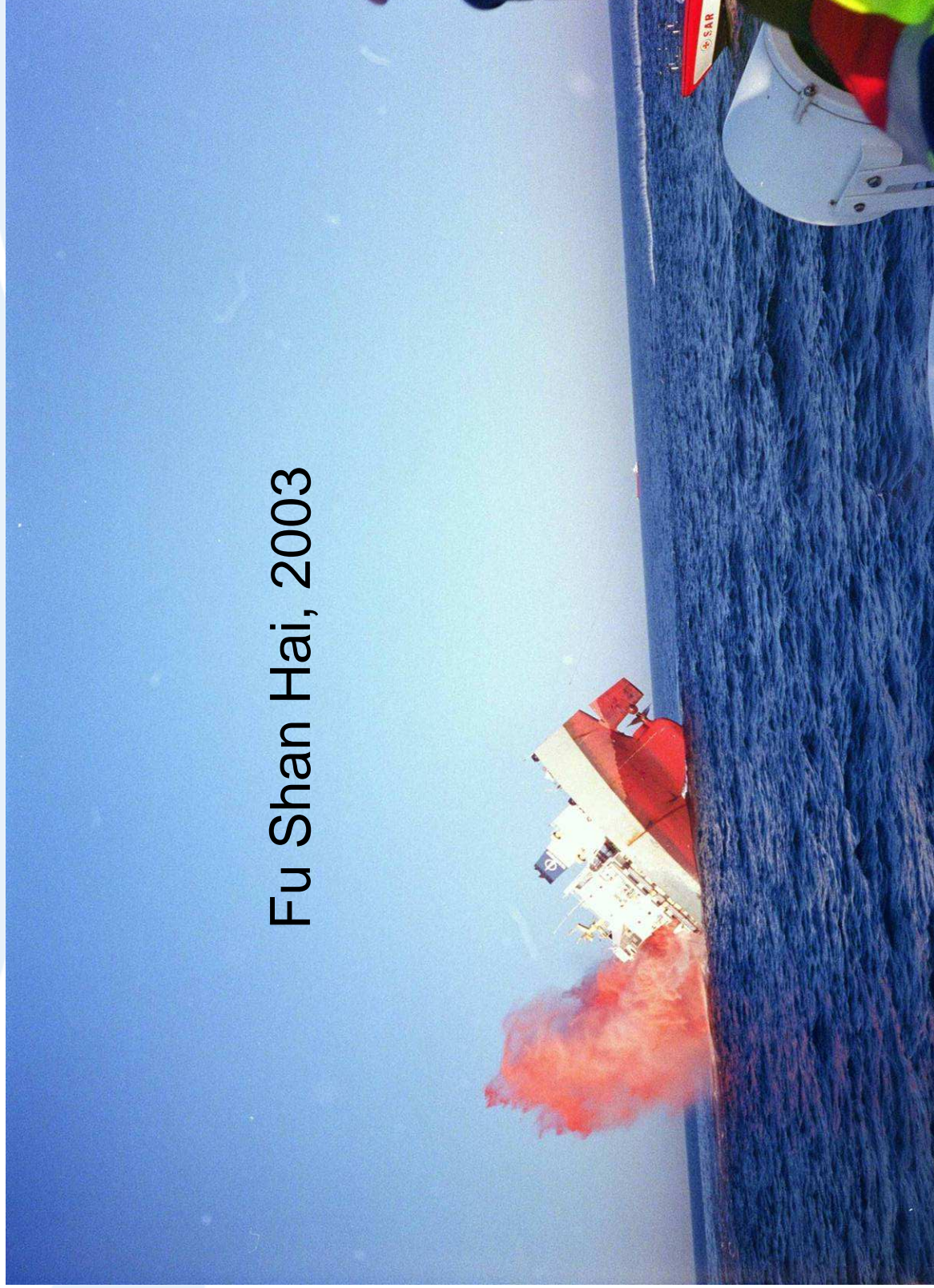


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BORNHOLM



Fu Shan Hai, 2003



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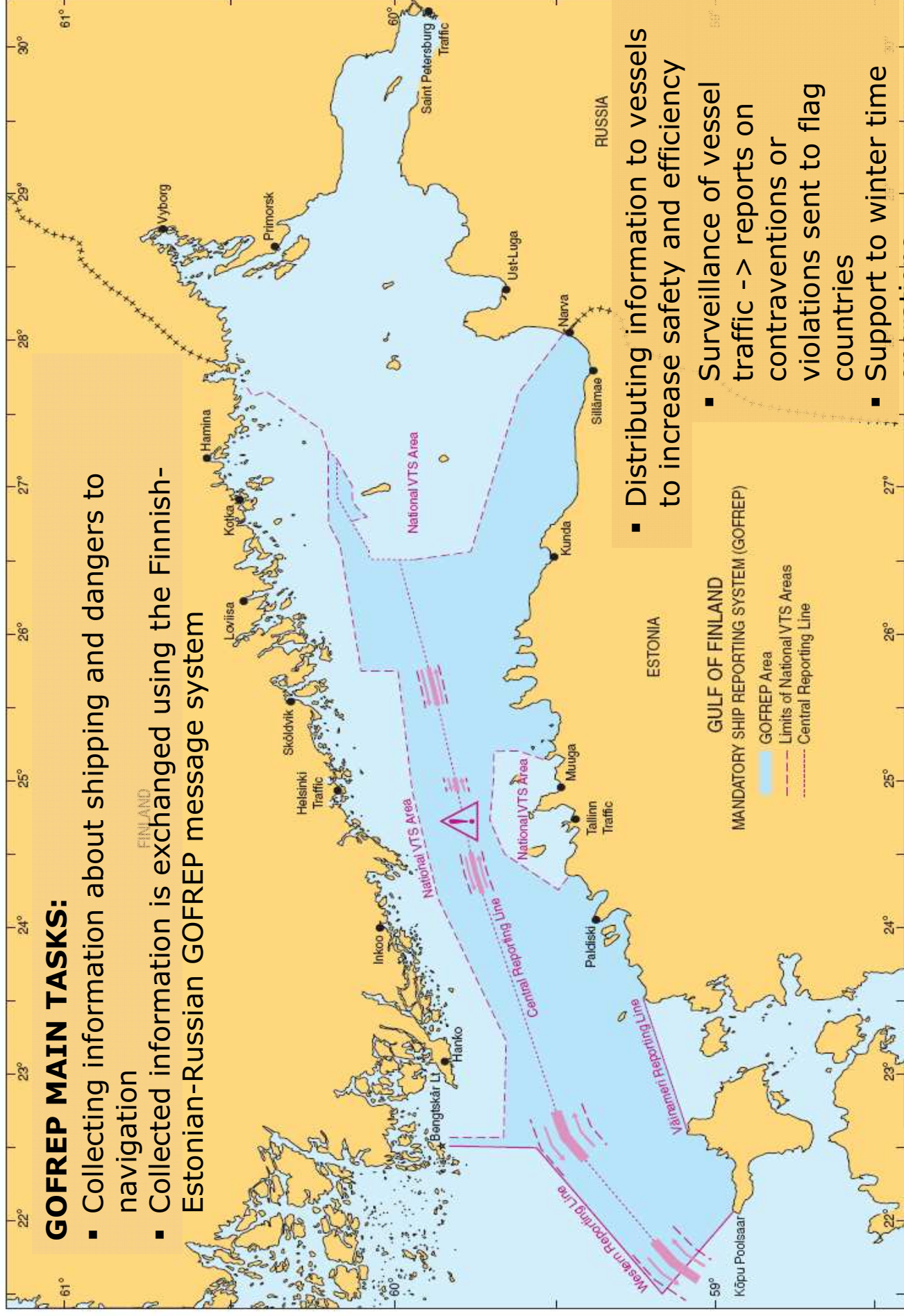


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the Gulf of Finland

GOFREP MAIN TASKS:

- Collecting information about shipping and dangers to navigation
- Collected information is exchanged using the Finnish-Estonian-Russian GOFREP message system

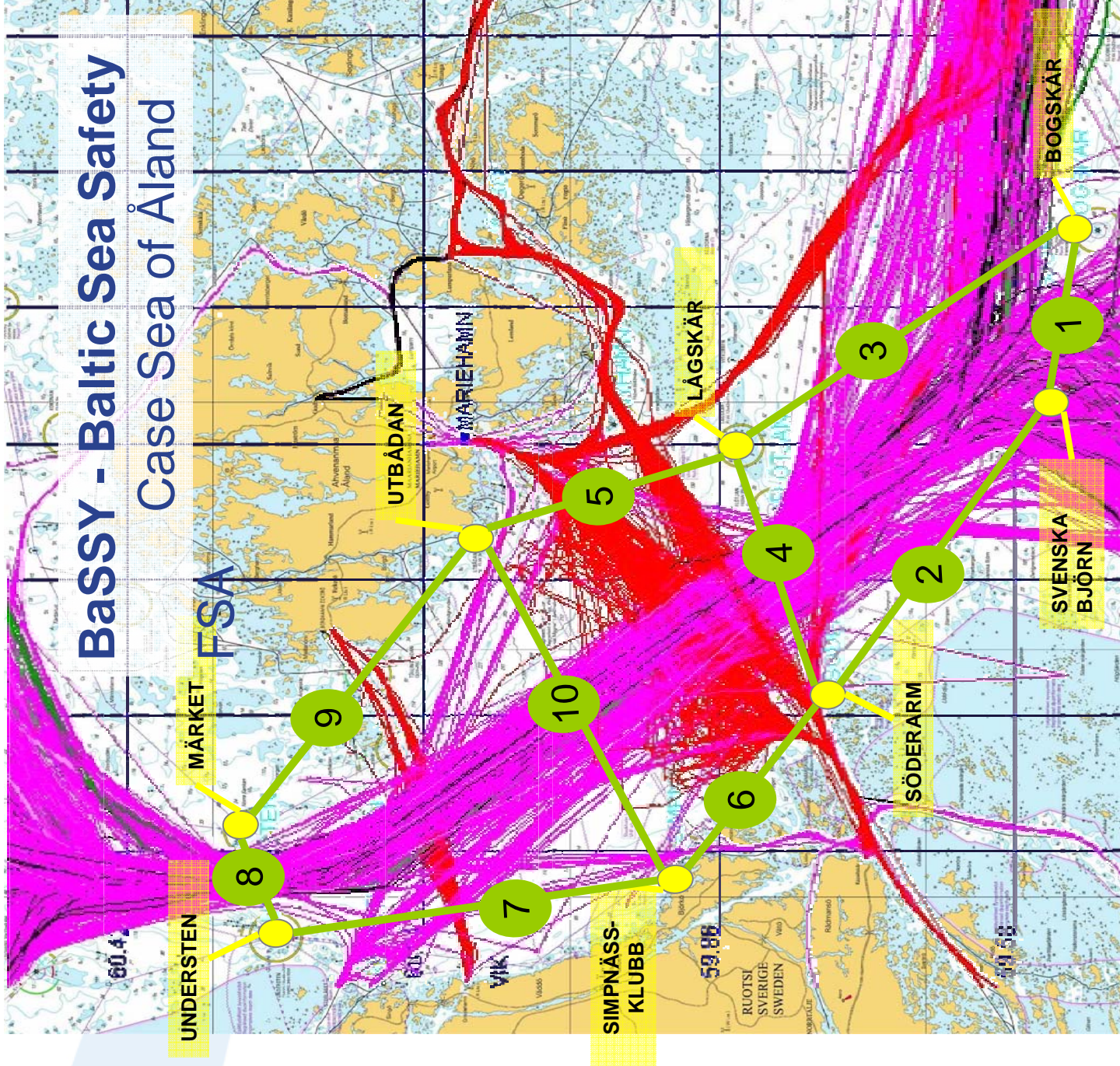
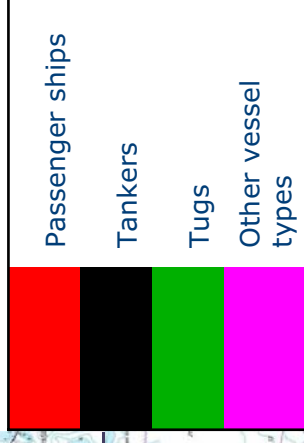


▪ Distributing information to vessels to increase safety and efficiency

- Surveillance of vessel traffic -> reports on contraventions or violations sent to flag countries
- Support to winter time operations

BASSY - Baltic Sea Safety Case Sea of Åland

Traffic analysis for FSA based on AIS- surveillance



EMSA's Consern (W. de Ruiter)

- 1. Baltic Sea as a whole**
- 2. English Channel**
- 3. Spanish Coastline**
- 4. Turkish Strait**

A systematic Risk Approach is required with FSA in order to understand optimal RCOs

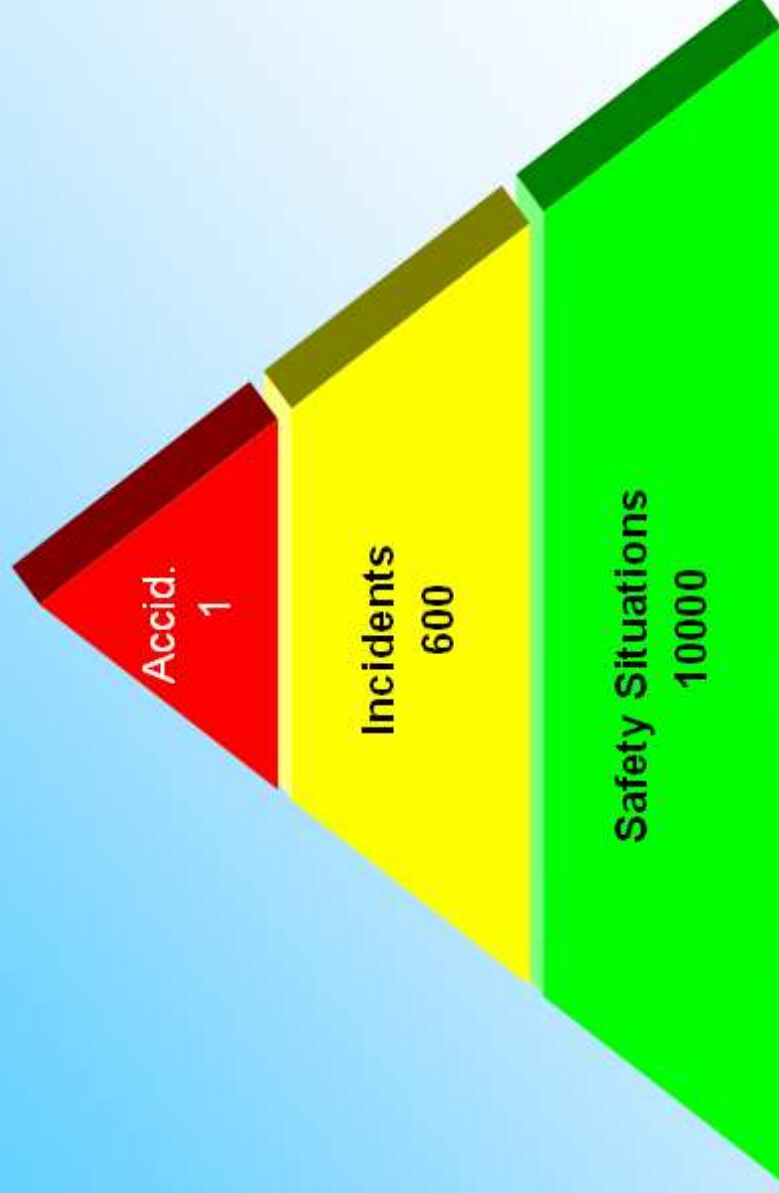


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Accident-Safety Event Frequencies



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Some "System" Development Needs

- Casualty Database (EMSA)**
- Incident Reporting Systems (for example Swedish INSJÖ)**
- Systematic reporting of the failures in the ship electronics (Electronic Failures)**
- Identification of the risk factors related to ship electronics**
- Identification, development and assessment of the risk control measures**
- Harmonized Practices (for example GOFREP Operator's Operational Manual)**



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Baltic AIS Trial – AIS Baltic

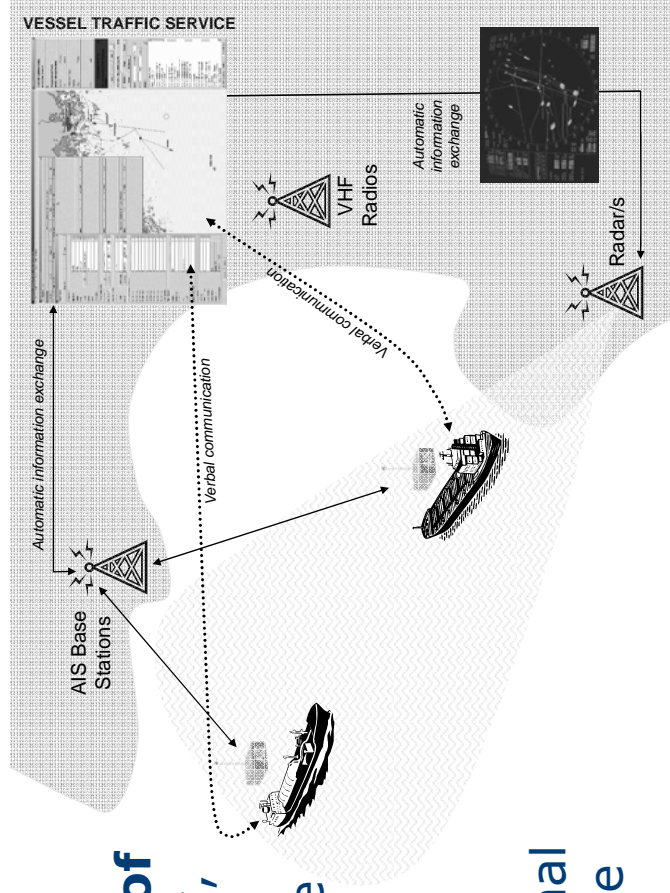
The objective:

To identify the information needs of Baltic Sea states maritime safety, security, environment and SAR authorities that may realistically be fulfilled by the limited information available from AIS,

To study the possibilities of using AIS binary messages as additional source of information e.g. to reduce VHF traffic and minimise the workload onboard caused by various reporting requirements,



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Baltic AIS Trial – AIS Baltic

To critically analyse the present content of these messages to reach such a common definition of new AIS binary message contents that adequately provides for the requirements of the above mentioned authorities,

To define what modifications to the present AIS information would be essential to enhance the usability of the information and identify any demonstrated need for information not presently included in AIS information and

To test the usability of binary messages in field tests at least in the Gulf of Finland, but not necessarily limited to that area.



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Maritime risks can be divided into safety and security related aspects – here a brief list on the security related “drivers”

Antiterrorism

Management of the international supply chain

Containerization

Cargo tracking

Identification – Sensor development, for example cameras, underwater sensors, satellites,

Monitoring - View over the certain maritime area: VTS, AIS, eNavigation -

SAR

Environmental Protection

Smart AtoN’s Technical Development (for example RFID, Radiographic monitoring, Gamma &

Neutron



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Top 10 World-Container Ports 2005

in 1.000 TEU



		2004	2005	Diff.	in %
1	(2) Singapore	21,340	23,192	1852	8.7%
2	(1) Hong Kong	21,984	22,427	443	2.0%
3	(3) Shanghai	14,557	18,084	3527	24.2%
4	(4) Shenzhen Ports	13,655	16,197	2542	18.6%
5	(5) Pusan	11,430	11,840	410	3.0%
6	(6) Kaohsiung	9,714	9,470	-244	-2.5%
7	(7) Rotterdam	8,281	9,287	1006	12.1%
8	(9) Hamburg	7,003	8,088	1085	15.5%
9	(10) Dubai Ports*	6,429	7,600	1171	18.2%
10	(8) Los Angeles	7,321	7,485	164	2.2%
		100.375	110.385	10.010	10%

*estimated



PORT of HAMBURG

53°33'N 9°58'E

www.mainport-hamburg.de

Regulation of the EU Parliament and of the Council on enhancing supply chain security (proposal) 27/02/2006

From Container security to the wider Intermodal supply Chain.

With Annexes:

1. Shipper
2. Transport Company
3. Forwarding Company
4. Warehouse, storage, facility of inland terminal operations
5. Risk assessment
6. Conditions to be met by a recognised organisation for supply chain security.



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Container Security Initiative, CSI 2002

Announced in January 2002, CSI was first implemented in the ports shipping the greatest volume of containers to the United States.

Today, customs administrations all over the world have committed to joining CSI and are at various stages of implementation.

CSI is now operational at ports in North, Central, and South America, the Caribbean, Europe, Africa, the Middle East, and throughout Asia.

The World Customs Organization (WCO), the European Union (EU), and the G8 support CSI expansion and have adopted resolutions implementing CSI security measures introduced at ports throughout the world.



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Customs to Customs (11) and Customs to Business (6) WCO Standards

1. Integrated Supply Chain Management
 2. Cargo Inspection Authority
 3. Modern Technology in Inspection Equipment
 4. Risk-Management Systems
 5. High-risk Cargo or Container
 6. Advance Electronic Information
 7. Targeting and Communication
 8. Performance Measures
 9. Port Security Assessments
 10. Employee Integrity
 11. Outbound Security Inspections
1. Partnership
 2. Security
 3. Benefits
 4. Technology
 5. Communication
 6. Facilitation



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Future Need: Harmonized tools is a requirement for future safety and security improvement

A systematic FSA risk evaluation is required to understand the optimum RCO's for various national sea areas and international waters (of EU)

The Approach should contain both safety and security related aspects

Among with the new RCO's (VTS; AIS; ECDIS; SURVEYING;) new essential failure modes must be understood such as

- **Human aspect**
- **Electronic failures**
- **Security aspects**



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