Sixteenth OSCE Economic and Environmental Forum - Part 1:
“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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Baltic Sea Risk Control Development
- HELCOM, GOFREP, BASSY, Baltic AIS etc.
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Security Aspects Briefly
Conclusions
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.
OIL TRANSPORTATION IN THE GULF OF FINLAND THROUGH MAIN OIL PORTS
Years 1995-2005 and estimated development by year 2015

Estimation for year 2007: 150 Mtn

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)
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 11057,5’ E to a line N-S at 120 44’E
8. The Baltic Sea W of a line N-S at 110 57,5’E
9. The Sound, the Belts and Kattegat S
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
Traffic analysis for FSA based on AIS-surveillance
EMSA’s Concern (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
Accident-Safety Event Frequencies

Accid. 1

Incidents 600

Safety Situations 10000

Finnish Maritime Administration

Kymenlaakson ammattikorkeakoulu
University of Applied Sciences
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)
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,
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.
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
### Top 10 World-Container Ports 2005

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

*estimated

Total: 100,375, 110,385, 10,010, 10%
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 ofr inland terminal operations
5. Risk assessment
6. Conditions to be met by a recognised organisation for supply chain security.
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.
### WCO (World Customs Organisation) Coreprinciples

<table>
<thead>
<tr>
<th>FOUR CORE PRINCIPLES</th>
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<tbody>
<tr>
<td><strong>Advance</strong> electronic information</td>
</tr>
<tr>
<td><strong>Risk</strong> management</td>
</tr>
<tr>
<td><strong>Outbound</strong> inspection</td>
</tr>
<tr>
<td><strong>Business</strong> partnerships</td>
</tr>
</tbody>
</table>

- **Advance electronic information**: Harmonise the advance electronic information requirement on inbound, outbound and transit shipments.
- **Risk management**: Commit to employing a consistent risk management approach to address security threats.
- **Outbound inspection**: Outbound inspection of high-risk consignments being exported, preferably using non-intrusive inspection methods.
- **Business partnerships**: Customs will provide benefits to businesses that meet minimal supply chain security standards and best practices.

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This slide is part of the presentation by Kymenlaakson ammattikorkeakoulu (University of Applied Sciences).
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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