



# Fire safety of ro-ro decks

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European Maritime Safety Agency

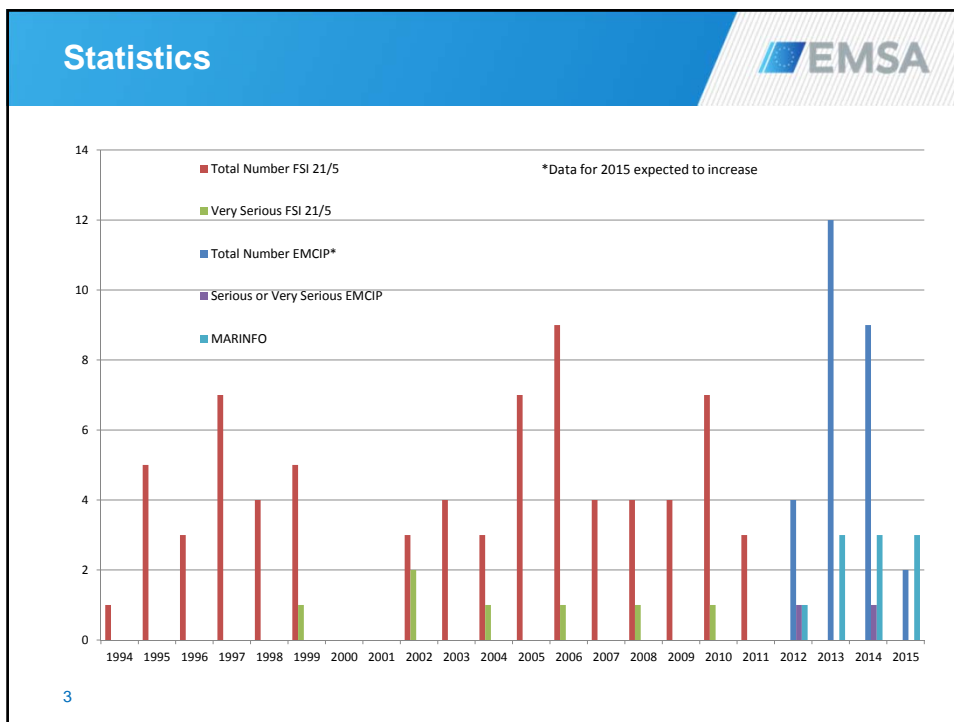
## Background



**A number of accidents have taken place involving fires on ro-ro decks. FSI 21/5 (2012) summarizes analysis for accidents during 1994-2011. Very serious accidents after 2011:**

- **NORMAN ATLANTIC (2014);**
- **SORRENTO (2015);**
- **SUN FLOWER DEISETZU (2015).**

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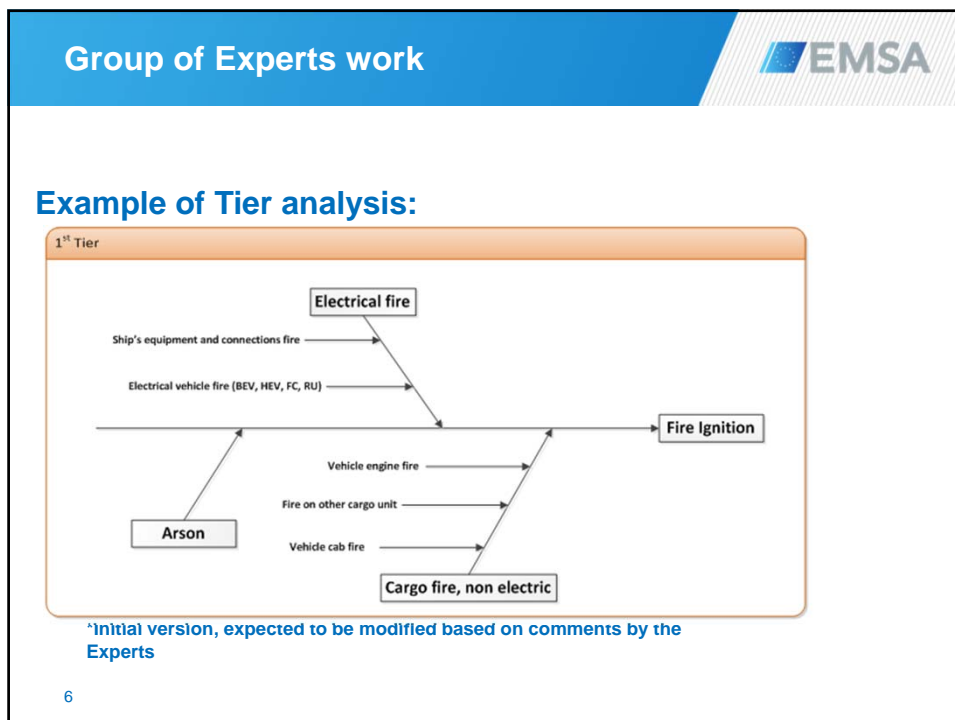
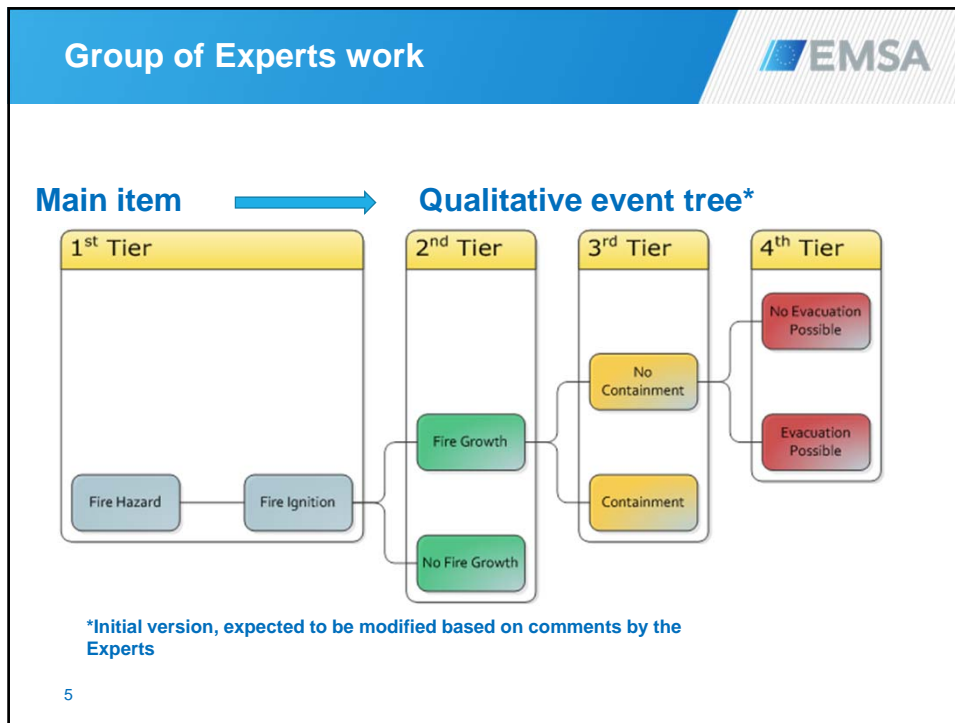


### Initiative

**Actions taken:**

- **Workshop organised in September 2015;**
- **Group of Experts established;**
- **Tender bid for study (FIRESAFE) published;**

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## Group of Experts work



### Marks on risks leading to choosing elements for FIRESAFE

	Summation	Summation with 50% feasibility weighting	Summation with 0% feasibility weighting
→ electrical fire	380	325	270
arson	228	203.5	179
non-electrical cargo fire	289	250.5	212
fire detection failure	341	282	223
→ fire extinguishing failure	384	326	268
fire exceeding 60'	324	283.5	243
fire not exceeding 60'	303	248	193
LSA launching failure (due to fire)	350	293	236
failure of evacuation in port (evacuation route affected by fire)	283	230.5	178

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## FIRESAFE



### Main elements:

- **Input of Group of Experts taken into consideration;**
- **FSA methodology followed;**
- **Focus on *Electrical Fire* as an ignition risk and *Fire Extinguishing Failure*.**

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## FIRESAFE



For both items the following is required:

- **Step 2 of the FSA process as described in the FSA Guidelines; a partial risk analysis shall be performed in order to quantify the probabilities of occurrence;**
- **Step 3 of the FSA process; risk control options (RCOs) shall be developed;**
- **Part of step 4 of the FSA process; Cost Benefit Analysis of identified RCOs.**

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## Way forward



The following are foreseen:

- **2<sup>nd</sup> workshop on fires on ro-ro decks towards the end of November 2016;**
- **Group of Experts to continue its work within 2016 on a qualitative event tree;**
- **FIRESAFE to be finalised towards the end of October 2016.**

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