

SWERA – Kick Off Meeting

Introduction and Expectations.

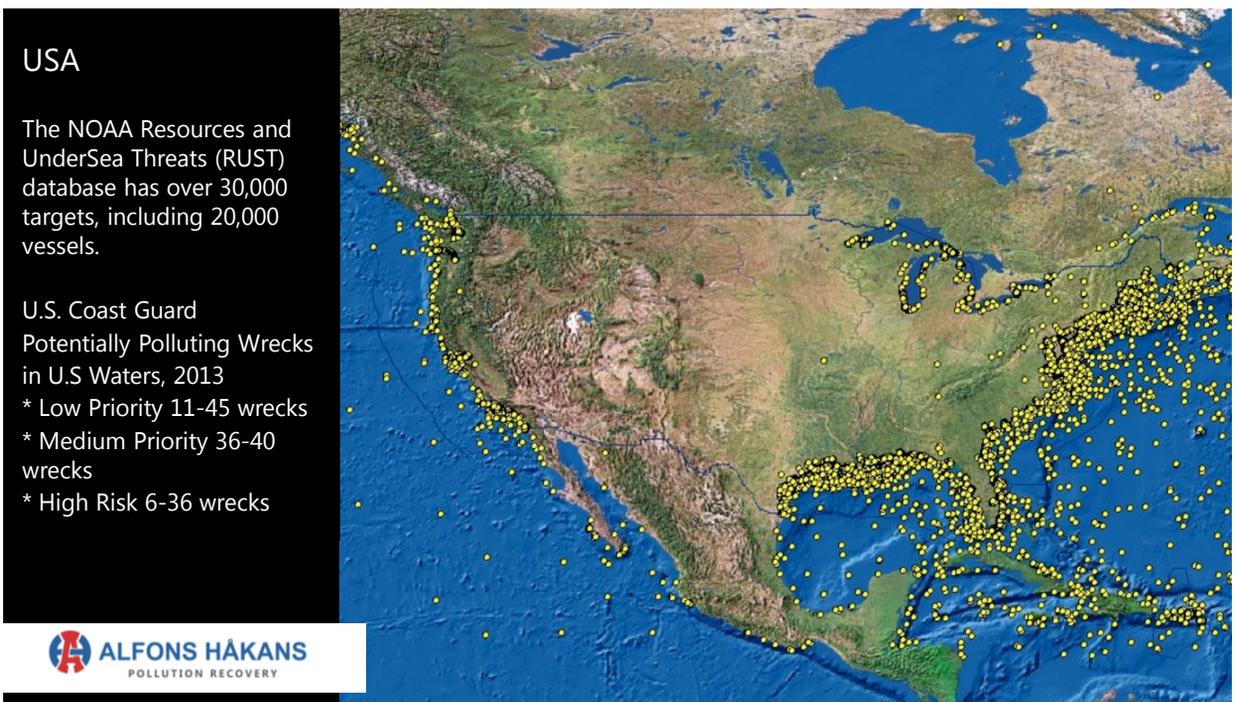
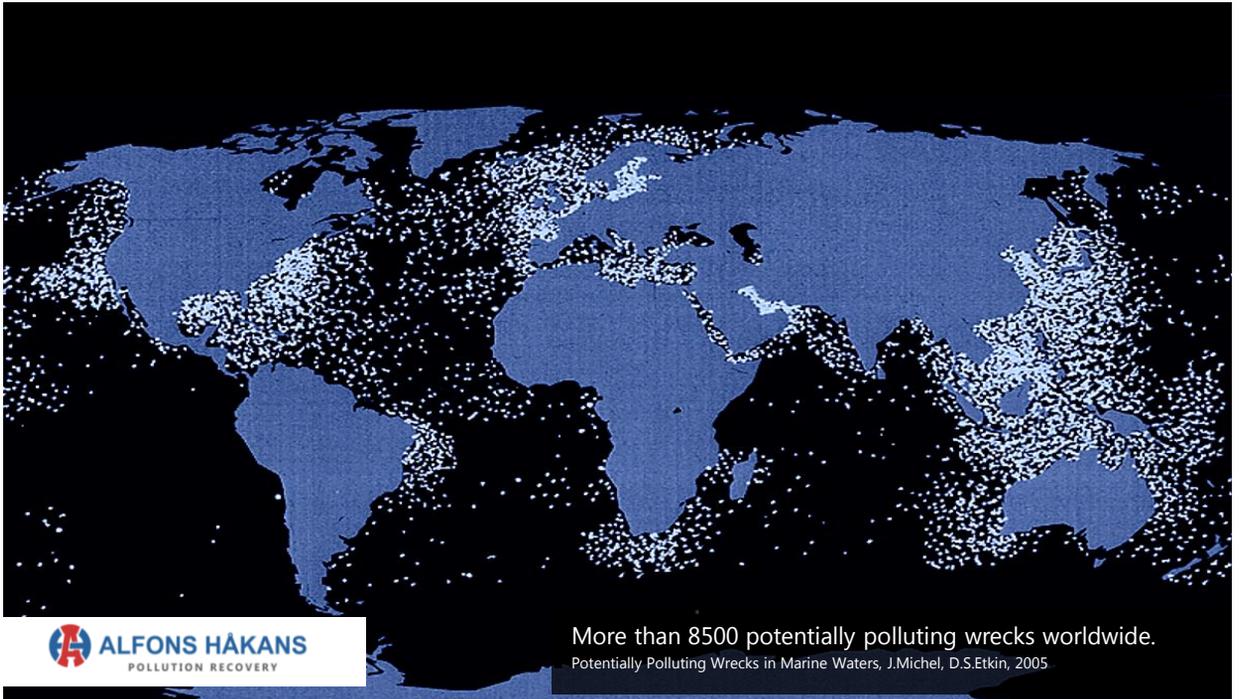
Below the surface ticks a silent clock.
Towards the oil disaster.

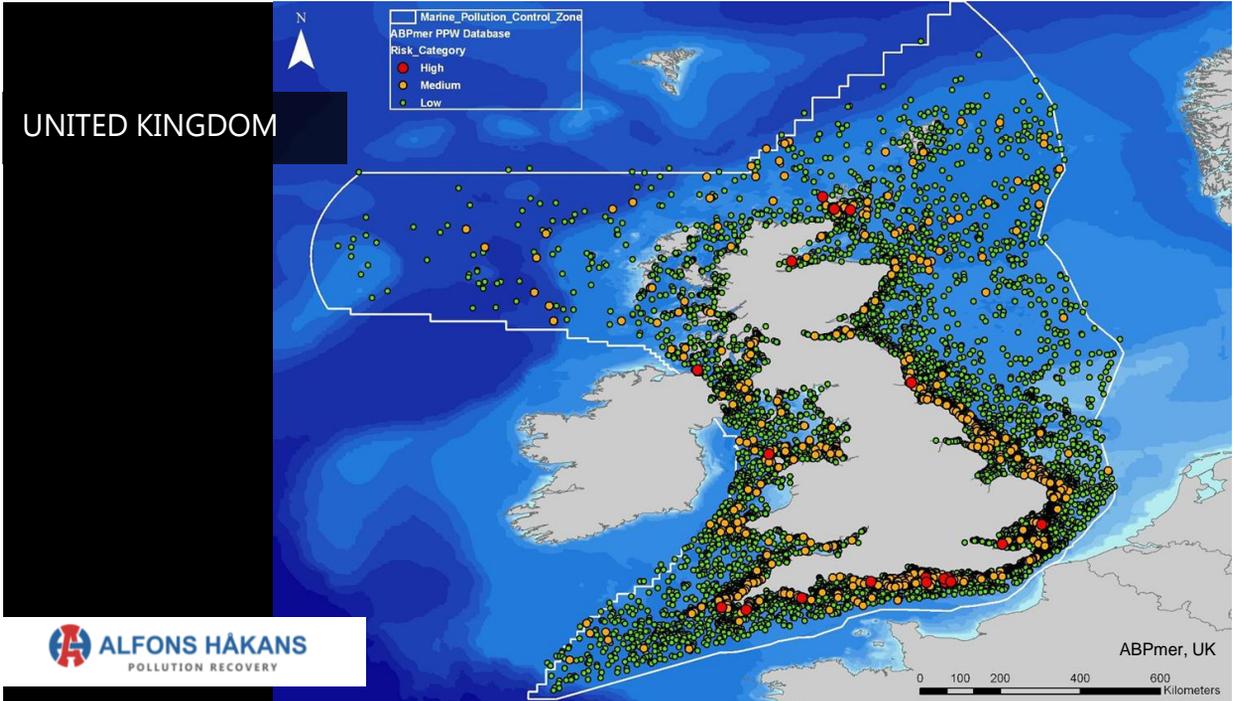
Helsinki 15.5.2014











NORWAY

Wreck database
 * Low Risk 1700 wrecks
 * Moderate Risk 350 wrecks
 * High Risk 30 wrecks

Inventory of more than 2000 wrecks registered in the 1990s ("Wreck Program")

- 30 shipwrecks prioritized
 - 9 wrecks empty
 - 3 wrecks not found
 - 18 wrecks assumed to contain from 10 to 300 tons of oil
- Wrecks drained
 - 1994
 - Blücher (Ger)
 - 2007-2008
 - Velheim (Ger)
 - Nordvard (Ger)
 - 2011-2013
 - HMS Bittern (UK)
 - RFA Boardale (UK)
 - Erich Giese (Ger)
 - Neuenfels (Ger)
 - U-864 (Ger)





HOW MANY POTENTIALLY
POLLUTING WRECKS IN
OTHER COUNTRIES?

 **ALFONS HÅKANS**
POLLUTION RECOVERY

NOW IS TIME FOR ACTION!

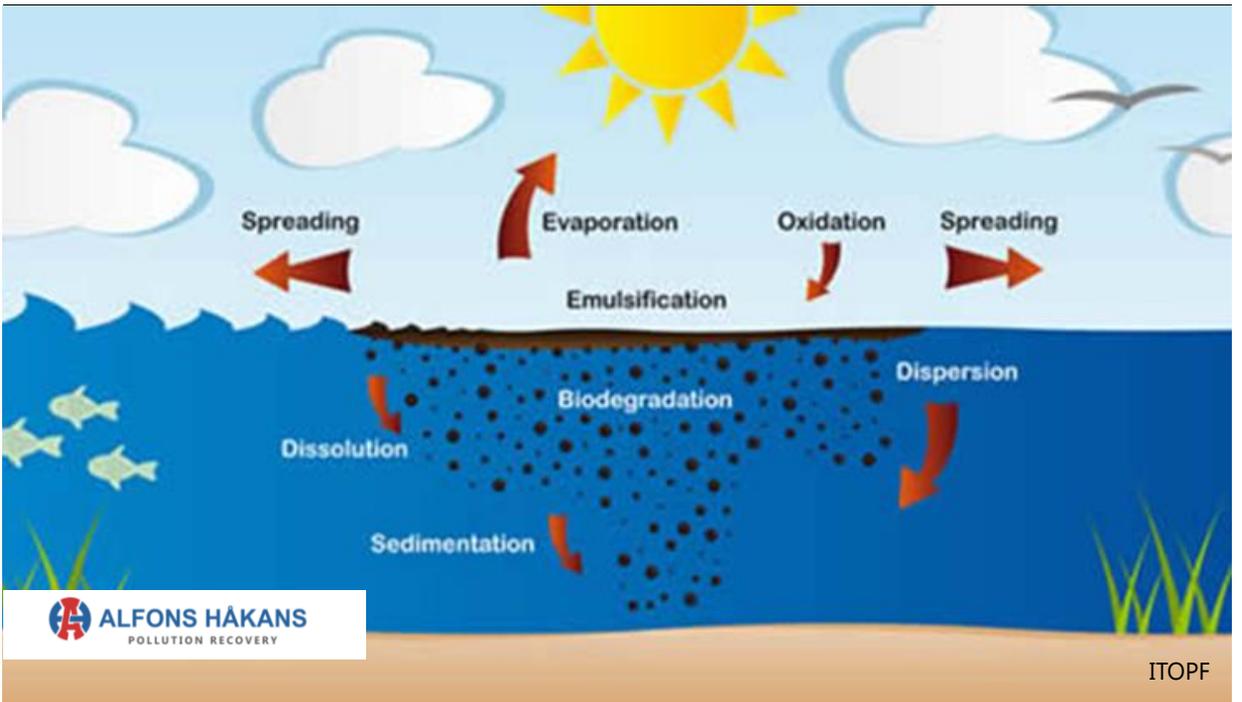
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 **BONUS**
SCIENCE FOR A BETTER FUTURE OF THE BALTIC SEA REGION

Oil leaking shipwreck

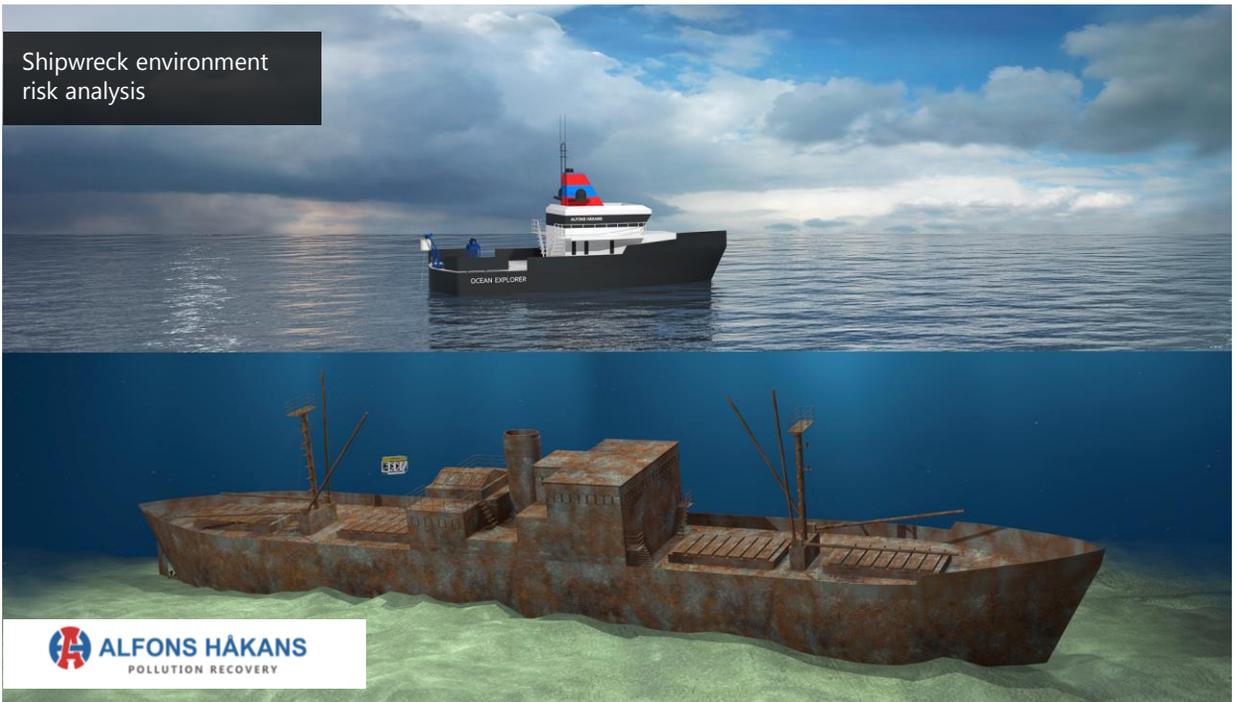


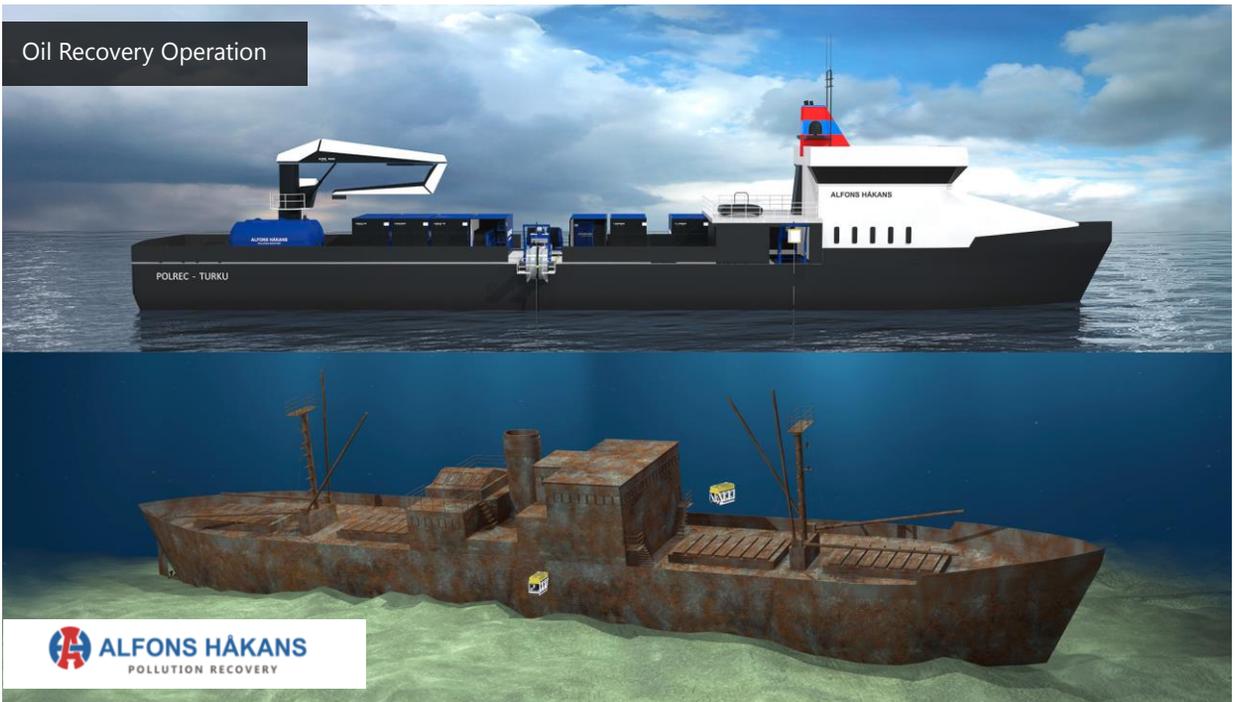
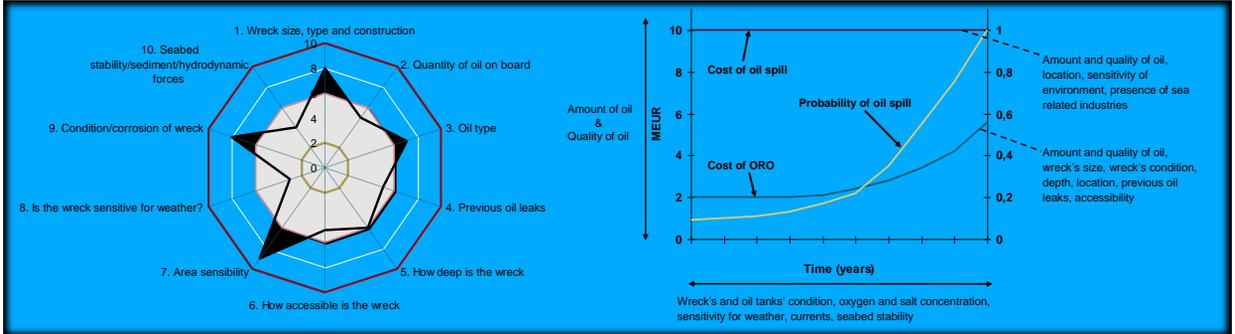
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ITOPF





Case; SS Park Victory
Grounded and sunk in
December 1947.

She is laying
on the seabed in
20-40 meters depth
in Utö, South Finland.

Bow of Park Victory.



Syke

Case; SS Park Victory

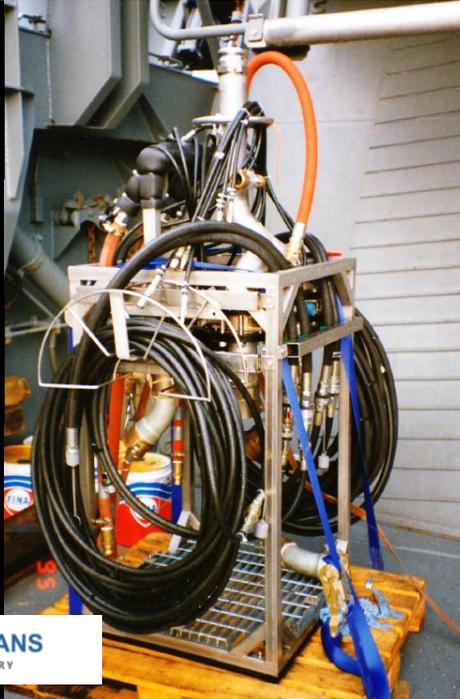


Syke

Case; SS Park Victory

Subsea manifold unit

Removed 410 tons of heavy fuel oil from her tanks.

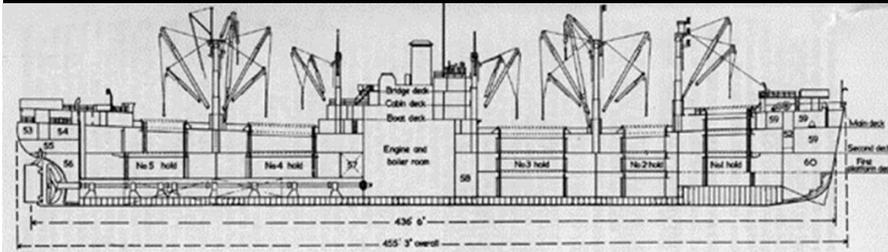


Syke



Case; SS Park Victory

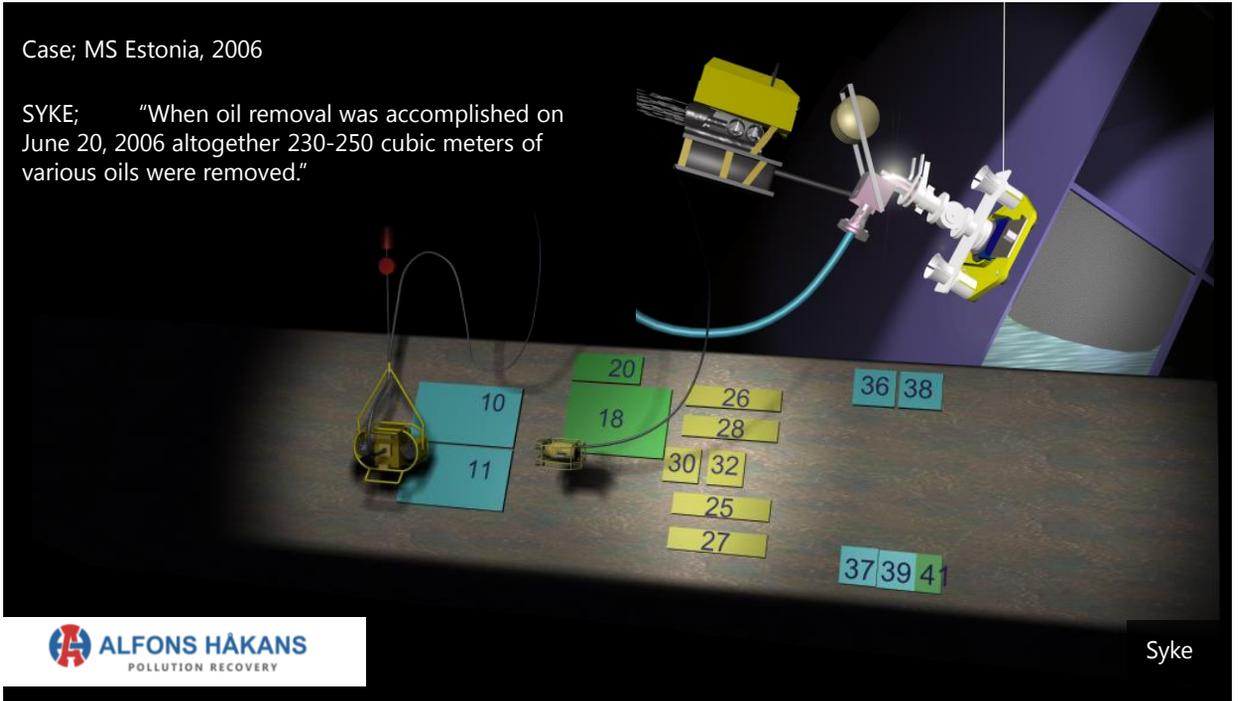
Oil Recovery Operation's working hours 1994-2000;
Oil recovery vessels Halli and Hylje total 5000 h.
Finnish Navy Divers, total 1400 dives and 1200 working hours.
Observation class ROV, 1700 working hours.



Syke

Case; MS Estonia, 2006

SYKE; "When oil removal was accomplished on June 20, 2006 altogether 230-250 cubic meters of various oils were removed."

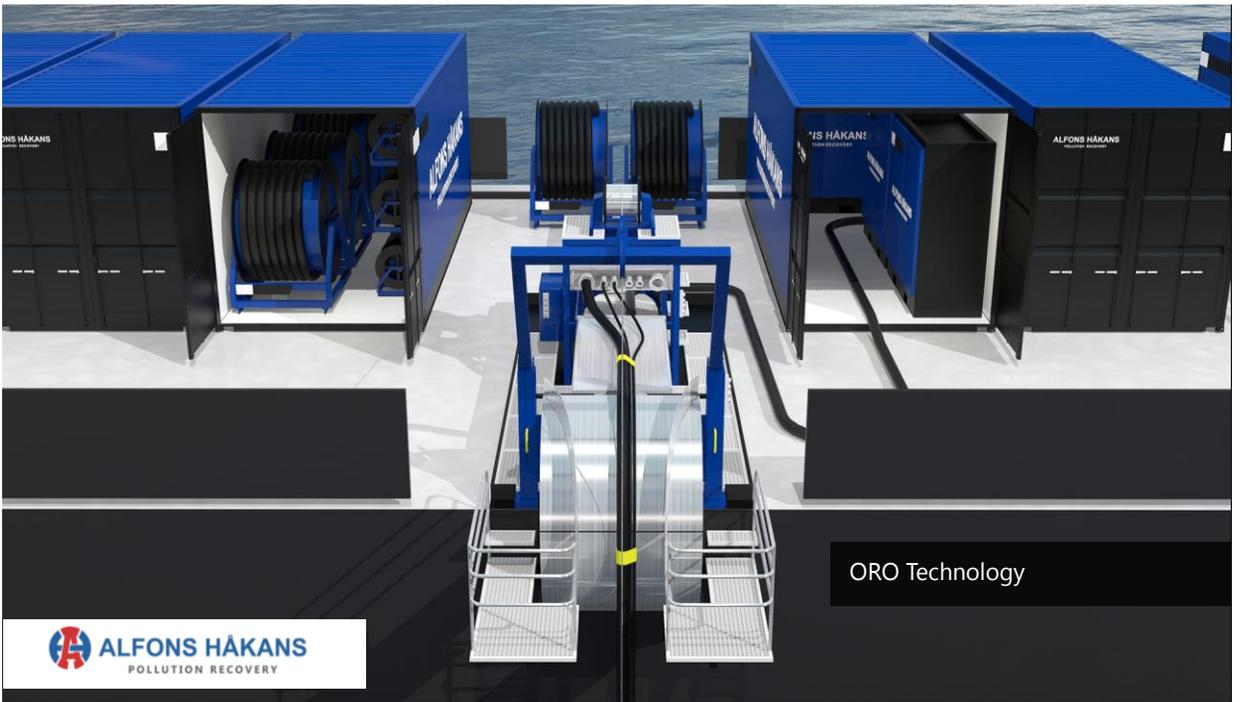
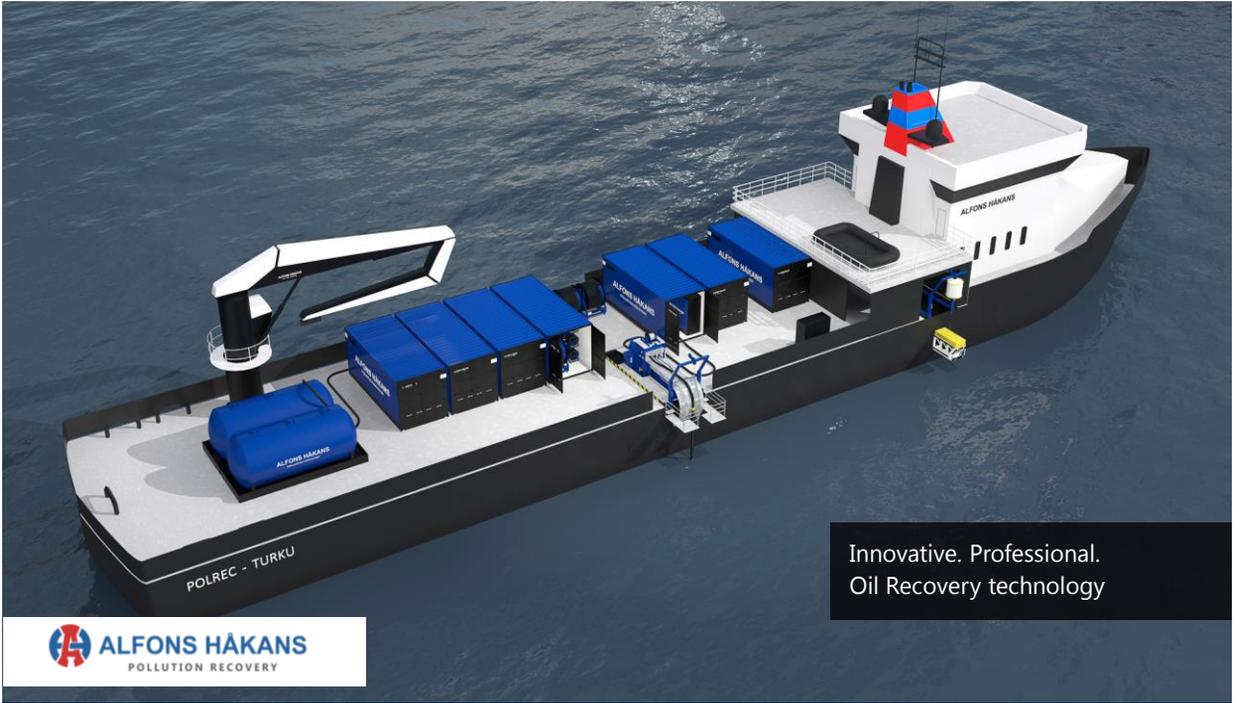


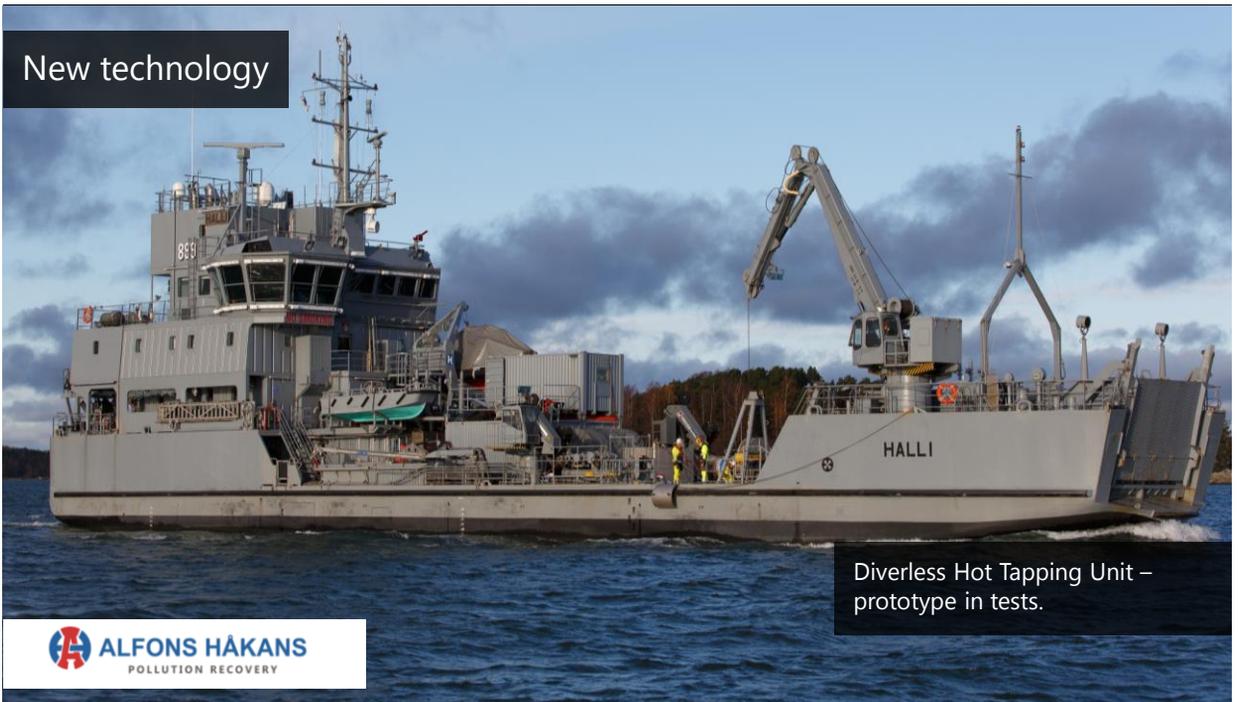
Syke

Case; MS Estonia, 2006



Syke

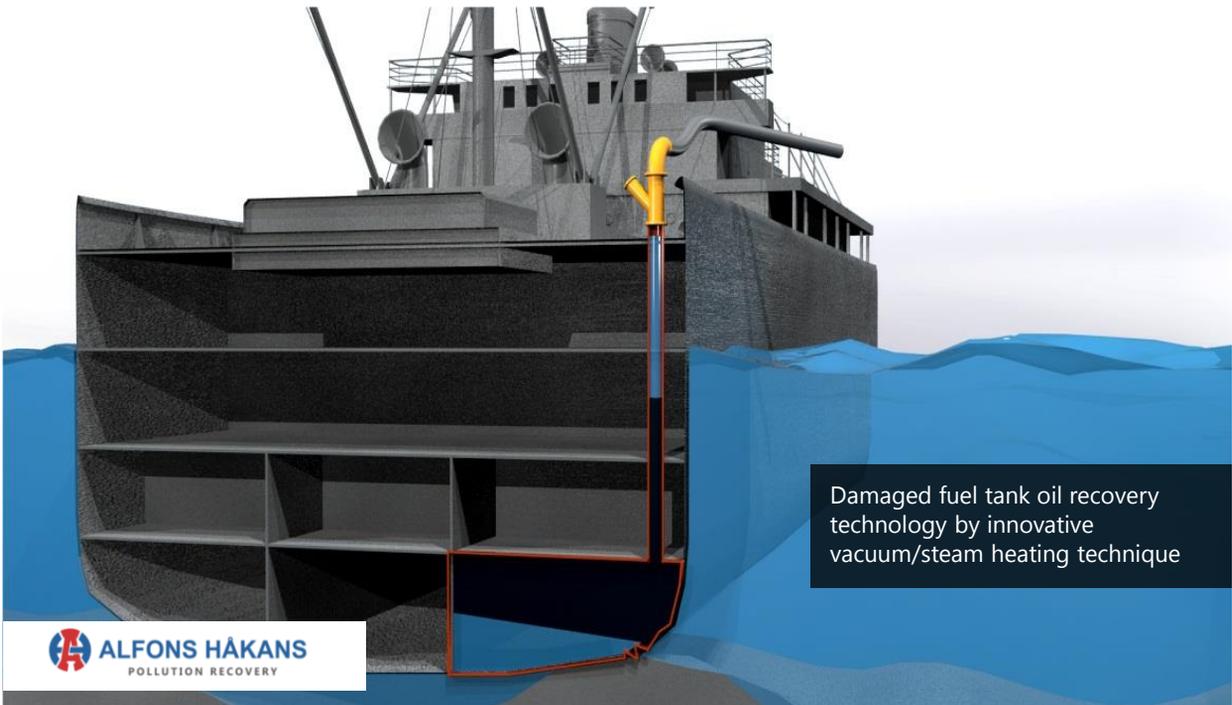




New technology



Diverless Hot Tapping Unit – prototype in tests.



Damaged fuel tank oil recovery technology by innovative vacuum/steam heating technique





Case 1992; grounded dry cargo vessel PAMISOS.
In to 3,5 days removed 374 tons of Heavy Fuel Oil and diesel oil by new, innovative vacuum technology.

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Oil boom handling operation at open sea



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Expectations



PROJECT VISION 2016

"We have globally accepted method, which can be used to analyze environment risks caused by potentially polluting shipwrecks theoretically, operationally and practically."



ALFONS HÅKANS
PROJECT VISION 2016

"We have the Best Available Technology, innovative salvage toolbox, and know-how to do the environment risk analysis of potentially polluting shipwrecks – operations, actions and tools in-situ."



EXPECTATIONS

Innovative, open and good co-operation.
Let's take a view and jump it!



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