

## Bonus-SWERA Sunken wreck environmental risk assessment



Chalmers University of Technology, Sweden;  
Marine Systems Institute of the Tallinn University of Technology, Estonia;  
Alfons Håkans Ltd, Finland;  
Finnish Environment Institute, Finland

- There are more than 8 500 sunken wrecks around the world with certain amount oil onboard. Also Baltic Sea waters hide numerous wrecks with oil onboard. Alone in the Finnish coastline exists hundreds of wrecks with oil onboard. Similarly Swedish government has carried out a study with Swedish Coast Guard and Chalmers University of Technology and mapped significant amount of wrecks with oil onboard. Sunken ships pose also environmental risk close to the Estonian coastline. Significant amount of these ships are already in such age, where corroded steel plates will let oil penetrate through the hull, thus causing a continuous source for pollution. Moreover, all wrecks have their own environmental characteristics which jointly with the wrecks own condition will cause confusion when evaluation risk of pollution.
- SWERA, Sunken Wreck Environmental Risk Assessment is a new approach towards better understanding of the pollution threat of sunken ships. The new and innovative approach combines the theoretical risk assessment method developed at Chalmers University of Technology, Sweden with an oil removal risk tool by SYKE and Alfons Håkans Ltd. Preparing a joint wreck register will be coordinated by Tallinn Technical University. The novel salvage support tool will further advice technicians and salvage operators to design the safe and economically feasible way to work close to the sunken wreck, and to execute successful operations.



# Hylkysukellus 2016 Wreck Diving

13.2.2016 seminaaritila 101, Helsingin Messuhalli

- 11:00 Seminaarin avaus**  
Opening remarks, *Immi Wallin*, SubZone
- 11:05 Ajankohtaisasioita hylkysuojelusta**  
Topical issues on the wreck protection  
*Maija Matikka*, curator, National Board of Antiquities  
*Riikka Alvik*, researcher, National Board of Antiquities
- 11:30 SWERA – Sunken Wreck Environmental Risk Assessment (BONUS project, EU)**  
Ship Wreck Classifications and case MS Volare  
*Tarmo Kõuts*, PhD, Tallinn University of Technology, Marine Systems Institute  
VRAKA - Ship Wreck Risk Analysis  
*Hanna Landquist*, PhD Student, Chalmers University of Technology, Shipping and Marine Technology/GeoEngineering  
Innovative Salvage Tool Box for Oil Removal Operations  
*Kari Rinne*, Project Manager, Alfons Hakans  
SWERA Project related to HELCOM's Submerged working group  
*Jorma Rytkönen*, LicTech., Marine Pollution Response Board R&D Manager, Finnish Environment Institute  
Discussion, SWERA Project Group Members
- 12:45 Mihin meriarkeologian kenttätyöt pyrkivät ja miten- ja entä sitten?**  
*Harry Alopaeus*
- 13:15 Kahvitauko – Coffee break**
- 14:00 Lefort, battleship of the Imperial Russian Baltic Fleet**  
*Konstantin Bogdanov* and  
*Ivan Borovikov*, Regards to ships of Great Victory -Project
- 15:15 Viimeisimpiä hylkylöytöjä Pohjoisella Itämerellä ja Suomenlahdella**  
Latest wreck findings in the Northern Baltic Sea and Gulf of Finland  
*Immi Wallin*, SubZone
- 16:00 Seminaarin päättäminen**  
Closing of the seminar





- BONUS SWERA had a joint international seminar with WOW III (World of Wrecks) international Conference in Gothenburg Sweden in 12.-13 October 2015. You can find all the presentations of the WOW III from: <http://www.lighthouse.nu/node/1142>
- SWERA project's webb page:
  - <http://www.syke.fi/projects/swera>
- Cover photos: Jouni Polkko/BADEWANNE