

# BONUS SEAMOUNT

New surveillance tools for remote sea monitoring and their application on submarine groundwater discharge and seabed surveys

Evo  
Logics®

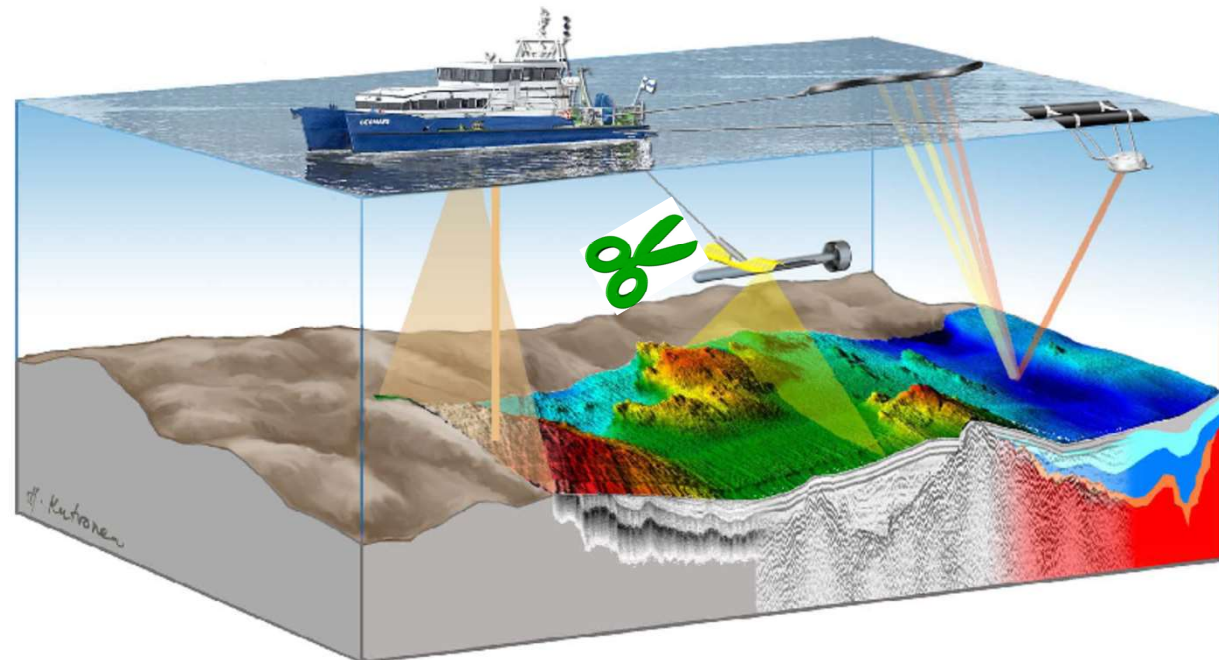


# New Technologies

- Innovative Autonomous Underwater Vehicle (ROV / AUV), integrating an adaptable set of sensors for *in-situ* underwater measurements of the Baltic Sea
  - An intelligent diving laboratory in essence
  - New-generation bionic drive system (Squid Drive) for propulsion on a gentle, energy-wise way
- Intelligent Subsea Monitoring Network with integrated AUV
  - An adaptable and autonomous sensor network with advanced underwater communication system for cost-effective sea research without the need of a ship on the proximity

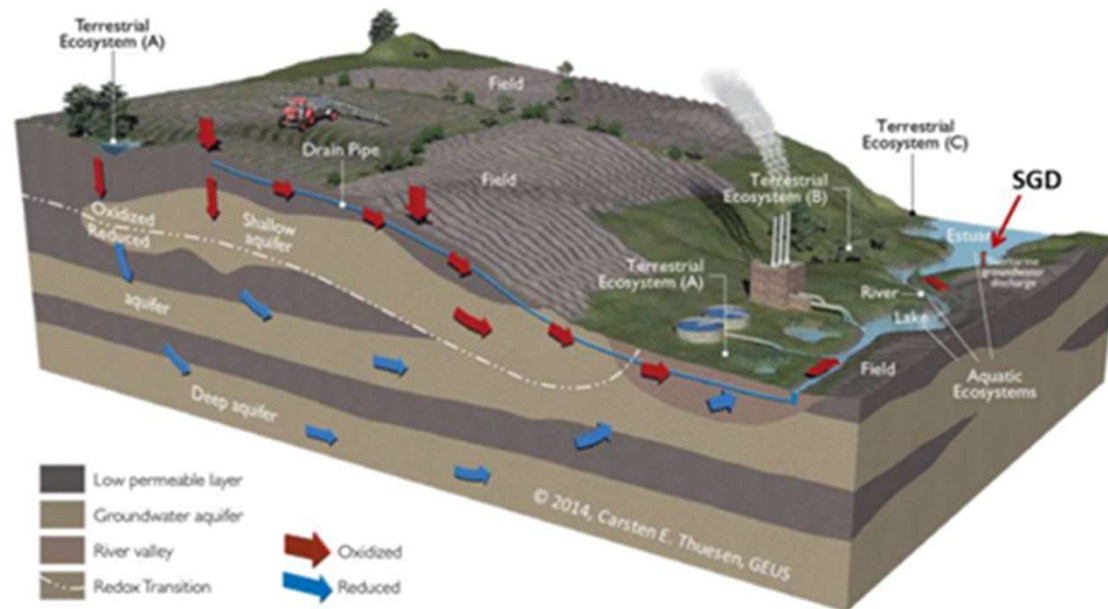


NOA Sentinel



# Scientific Advancement

- Apply the new technology on a complex study for the detection and understanding of subsurface groundwater discharge at selected sites in Denmark, Germany and Finland
  - Improvement of the ecological status of the Baltic Sea is one of the main objectives of EU-policies (Marine Strategy Framework Directive, Water Framework Directive etc.)
  - Large uncertainties exist about nutrient and pollutant load from submarine groundwater discharge
  - Detailed spatial examination in discharge areas is urgently needed, to quantify the groundwater influx and to investigate its composition/origin and influence on the seafloor environment, and salinity, oxygen, nutrient and pollutant fluxes in the Baltic Sea
- New technology is necessary to allow a better assessment of submarine groundwater discharge and loads, and their importance for the Baltic Sea ecosystem



**Coordinator**

No	Abbreviation	Legal name	Country	Person in charge
1	EvoLogics	EvoLogics GmbH	Germany	Rudolf Bannasch
2	NOA	NOA	Poland	Michal Latacz
3	CAU	Christian-Albrechts-Universität Kiel, Institute of Geosciences	Germany	Jan Scholten
4	GEUS	Geological Survey of Denmark and Greenland	Denmark	Klaus Hinsby
5	IOW	Leibniz Institute for Baltic Sea Research	Germany	Ralf Prien
6	GTK	Geological Survey of Finland	Finland	Joonas Virtasalo
7	MIG	Maritime Institute in Gdansk	Poland	Benedykt Hac