Title: **Impulsive Sound and Offshore Wind**

Date: October 24, 2024

Presenter: Sander von Benda-Beckmann, TNO

Abstract: Dr. Sander von Benda-Beckmann obtained a PhD in computational cosmology and has been working in the field of sonar and underwater sound at TNO since 2008. His research focuses on assessing and mitigating of risk of underwater sound on marine mammals, biosonar, and the development of real-time passive and active sonar systems. He is involved in different international research groups that investigates the impact of sound (pile driving, sonar, shipping, seismic exploration, underwater explosions) on marine life. He advises the Netherlands Government and the Royal Netherland Navy on the development of guidelines for underwater noise, is part of the NATO Active Sonar Risk Mitigation (ASRM) Working Group. In 2024 he organized the bi-annual international DCLDE workshop aimed at passive acoustic monitoring of marine mammals. In 2014 he was awarded the A B WOOD MEDAL by the UK Institute of Acoustics, “in recognition of the major contribution of research to assessing impact of underwater sound on marine mammals and the development of real-time passive and active sonar for detecting objects in water.”

Webinar outline:

* Underwater noise, what are we worried about?
* Introduction of offshore wind development
	+ [How is sound used to research wind energy? – Discovery of Sound in the Sea](https://dosits.org/people-and-sound/examine-the-earth/how-is-sound-used-to-research-wind-energy/%22%20%5Ct%20%22_blank)
* What is impulsive sound and why does it matter?
* Investigating the impact of offshore wind on marine life – experiences in

Europe from the North Sea

* + Understanding effects of impulsive noise on hearing
		- [Impacts of Impulsive Sound](https://dosits.org/animals/effects-of-sound/potential-effects-of-sound-on-marine-mammals/impacts-of-impulsive-sound/)
		- [Potential effects of sound on marine mammals – Discovery of Sound in the Sea](https://dosits.org/animals/effects-of-sound/potential-effects-of-sound-on-marine-mammals/%22%20%5Ct%20%22_blank)
		- [Potential effects of sound on marine invertebrates](https://dosits.org/animals/effects-of-sound/potential-effects-of-sound-on-marine-invertebrates/)
		- [Criteria for Effects of Anthropogenic Sound on Fishes](https://dosits.org/animals/effects-of-sound/potential-effects-of-sound-on-marine-fishes/criteria-fishes/)
	+ Effects and consequences of impulsive sound on behavior
		- [Hearing Loss Advanced Topic – Discovery of Sound in the Sea](https://dosits.org/animals/advanced-topics-animals/hearing-loss-advanced/%22%20%5Ct%20%22_blank)
	+ Development of noise guidelines in the EU
		- [Ocean Sound Policies](https://dosits.org/decision-makers/ocean-policies/)