



Racket in the oceans and responsible innovation

Coordinators: Héloïse Berkowitz and Hervé Dumez (Ecole polytechnique, i3)

Workshop 2: The Impacts of Underwater Noise on Marine Life

Scientific coordinator: Michel André (Technical University of Catalonia, BarcelonaTech)

To reduce anthropogenic sounds' impacts on marine fauna such as cetaceans, fish, invertebrates, we need to better understand these impacts, and especially how underwater acoustics can affect animals' behaviours and life. This workshop, by welcoming international, recognized scientists and experts, aims to give a state of the art on these questions.

Program of the Workshop

The workshop is scheduled over one day (10th of March, 2016), at Mines ParisTech, **60 Boulevard Saint-Michel, 75006 Paris, room Vendôme:**

8h30-9h00: welcoming participants and coffee

9h00-9h10: i3 and Michel André presentation and introduction of the day

9h10-9h30: **What does MaRVEN have to say about noise? A large-scale study of the environmental impacts of noise from marine renewables**, Frank Thomsen (*Ecology and Environment, DK-EED, DHI Denmark*)

9h30-9h50: **Use of at-sea experiments to describe how cetaceans respond to naval sonar signals**, Patrick Miller (*University of St Andrews, UK*)

9h50-10h10: Break

10h10-10h30: **Contrasting behavioural responses to noise and predator presentations to assess biological significance**, Charlotte Curé (*Cerema Dter Est, Laboratory of Strasbourg, Acoustics Group, Strasbourg, France*)

10h30-10h50: **A fish's life in a changing soundscape**, Mathias Andersson (*FOI, Swedish Defence Research Agency, Sweden*)

10h50-11h05: Discussant

11h05-12h05: Morning General Discussion





12h05-12h30: Press conference

12h30-13h30: Lunch Break

13h30-13h50: Effects of noise on invertebrates: non-auditory specialists present acoustic trauma when exposed to low-frequency sounds, Michel André (*Technical University of Catalonia, BarcelonaTech, UPC, Spain*)

13h50-14h10: Quantifying biological risks from anthropogenic noise, Thomas Folegot (*Quiet-Oceans, Brest, France*)

14h10-14h30: Break

14h30-14h50: The view of the industry (Oil and Gas), John Campbell (*International Association of Oil & Gas Producers, UK*)

14h50-15h05: Discussant

15h05-15h25: From paper to practice: the challenge to effectively address anthropogenic noise in our oceans, Nicolas Entrup (*Consultant to NRDC & OceanCare, Austria*)

15h25-15h45: Break

15h45-16h45 : Final Round Table

The aim of the workshop is to give a state of the art on the impacts of marine sound on all forms of marine life. A presentation is meant to last 20 minutes. A discussant will discuss each session of four presentations. The morning session will be concluded by a general round table with the audience and with a press conference before lunch. The final session concludes the day with a presentation synthesizing the discussions of the day and outlining the main issues that the third workshop (on management solutions) might try to answer.

Global calendar:

Workshop 1 on measurement: **9th February 2016**

Workshop 2 on impacts on marine life: **10 March 2016**

Workshop 3 on solutions and regulation issues: **May 2016**

International conference: **Sept 2016**

