

Executive summary

The continued increase in human pressure in the ocean and the associated impact of this upon biodiversity is of major concern to scientists, policymakers, and wider society. In particular, the increasing levels of continuous anthropogenic noise from activities such as shipping and offshore construction have the recognized potential to cause significant negative impacts on many marine species and can be considered a potential threat to the environmental status of marine ecosystems.

Descriptor 11 of the EU Marine Strategy Framework Directive (MSFD) addresses this threat, and states that to attain Good Environmental Status (GES), anthropogenic noise should be at levels that do not adversely affect the marine ecosystem. To achieve this aim, EU member states must cooperate on a regional basis to monitor and manage noise pollution in European seas.

A pilot initiative is nearing completion in the Baltic Sea where the BIAS Life+ funded project (2012-2016) has developed measurement, modeling and processing standards and produced a monthly noise atlas for 2014. Building on the BIAS experience, the JONAS consortium* proposes to address the ocean noise monitoring and prediction challenge by adapting and generalizing these methods and standards for the larger scale and more diverse oceanography of the Atlantic region.

To manage the large scale of this undertaking, a hierarchical approach will be taken based on the OSPAR maritime regions (see Fig. 1), that addresses the scale of the anthropogenic pressure, the technical feasibility, and the cost involved. In particular, the JONAS consortium proposes to address MSFD noise monitoring and risk assessment at two scales: 1) at large scale (basin level), a monthly noise atlas based on spatial modelling of noise characteristics and the statistics of several bio-indicators and, 2) at small scale (sub-regional level), for which real-time coverage and data access will be set up to include a pilot demonstration of a real-time decision support tool.

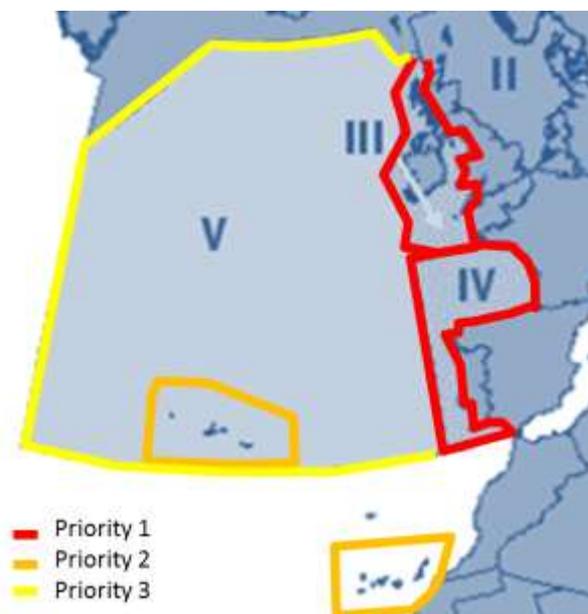


Figure 1: OSPAR regions (I to V) and preliminary priority regions identified for the project.

*JONAS is a joint initiative from several institutions from Portugal, Spain, France, Ireland and UK.

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