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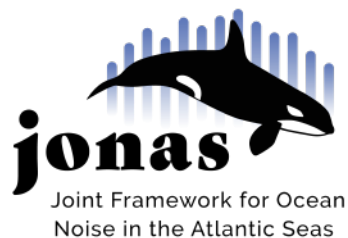


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Project Newsletter
Issue No. 1
December 2019

Happy Holidays!

JONAS (Joint Framework for Ocean Noise in the Atlantic Seas) is delighted to bring you our first project newsletter, covering our activities for the first 6 months of the project.

In the following pages you'll get acquainted the JONAS project and our future outputs. Over 2019, we started creating noise maps, launched hydrophones, began modelling activities, and participated in events like the World Marine Mammal Conference. We hope you enjoy this summary of 2019, and we're looking forward to what 2020 will bring.

Wishing you many happy returns,

The JONAS Team



JONAS is co-funded by the European Regional Development Fund (ERDF) under the Interreg Atlantic Area Programme.

About the Project

Underwater noise from shipping, fossil fuel exploration, coastal development, and recreational boating is having a significant impact on marine life, impairing their ability to communicate, breed, avoid predators, and find food. Research is exploring how to reduce underwater noise and help EU countries monitor and comply with limits.

JONAS (Joint Framework for Ocean Noise in the Atlantic Seas) is an INTERREG Atlantic Area funded project that addresses the issue of underwater noise and the threats it poses to sensitive species in the northeast Atlantic.

JONAS will develop better noise monitoring and risk management for the region, a noise monitoring and visualisation platform, streamlined technical approaches for assessment, and will promote the adoption of joint operational practices that are proven to reduce the effect of noise on European marine biodiversity.

Key Deliverables

- 1 Data Sharing Platform
- 2 Validated Risk Maps
- 3 Common Methodologies
- 4 Noise Reduction Case Studies

Expected Outcomes

> CAPACITY

Enhanced technical capacity to address MSFD D11 obligations in Atlantic Area

> HARMONY

Harmonised methods based on best practice and a cooperative transnational approach

> QUALITY

Improved quality and consistency of MSFD reporting in the northeast Atlantic



Work Packages

1 Coordination

The MaREI Centre for Energy, Climate, and Marine at UCC ensures effective implementation of the project including executive planning, strategic oversight, governance and control.

2 Communication

WP2 communicates and disseminates project findings to a range of audiences, including competent authorities relevant to European Directives, private sector organisations and industry, academia in related fields of expertise, and citizens.

3 Capitalisation

Capitalisation by WP3 will integrate the project's outputs into a sustained online resource visualising underwater noise that will be defined, designed and developed according to the requirements expressed by stakeholders.

4 Monitoring Support

WP4 will develop the tools and methodologies for implementing an efficient MSFD noise monitoring strategy throughout the regions and member states of the Atlantic arc.

5 Noise Mapping

WP5 provides relevant methodologies for computing noise maps to the evaluation of the Descriptor 11 Criterion 2 of the MSFD. Validated noise indicator maps with confidence assessments will be ground-truthed and then used for the evaluation of the MSFD D11C2.

6 Risk Mapping

WP6 will design a suitable methodology valid throughout the Atlantic Area for large-scale noise risk assessment and mapping. The methodology will be applied to the Atlantic Area as for a period of one year in order to serve to all countries as a common reference for future implementation of the MSFD at national levels.

7 Threshold Setting

WP7 will support Atlantic Area states in meeting the MSFD threshold values for anthropogenic noise by developing proposals for how such thresholds can be defined in a way that promotes regional coherence across the unique environment of the Northeast Atlantic. Proposals for threshold-setting methodologies will be tailored to the needs and priorities of policy makers and managers in the Atlantic area.

8 Noise Management Case Studies

WP6 will design a suitable methodology valid throughout the Atlantic Area for large-scale cumulative noise risk assessment and mapping. The methodology will be applied to the Atlantic Area as for a period of one year in order to serve to all countries as a common reference for future implementation of the MSFD at national levels.

AT A GLANCE

9 partners

5 associated partners

5 countries



Recent Events

05.19 Project Kickoff

JONAS successfully kicked off in May in Vilanova i la Geltrú, Spain. Nine partners and two associated partners met for two days of fruitful discussions on future deliverables, necessary collaborations, and future challenges for the project. Coordinated by our partner at the Polytechnic University of Catalonia, the meeting provided a solid base for future interactions in the project.



The consortium at the project Kickoff in Vilanova i la Geltru, Spain.

09.19 Technical Kickoff

Project partners gathered in Nantes to discuss the technical aspects of data collection, sharing, and processing. Topics included format standards for noise and risk maps, key species in the northeast Atlantic for assessment, and the current availability of acoustic, environmental, and marine data.



Social media graphic for the technical kickoff meeting in Nantes.

12.19 WMMC2019

JONAS was represented by several project researchers at this year's World Marine Mammal Conference in Barcelona. Members of our consortium presented their work across four different sessions, and together with our sister project, JOMOPANS, we hosted a booth in the exhibition hall to engage attendees about the project.

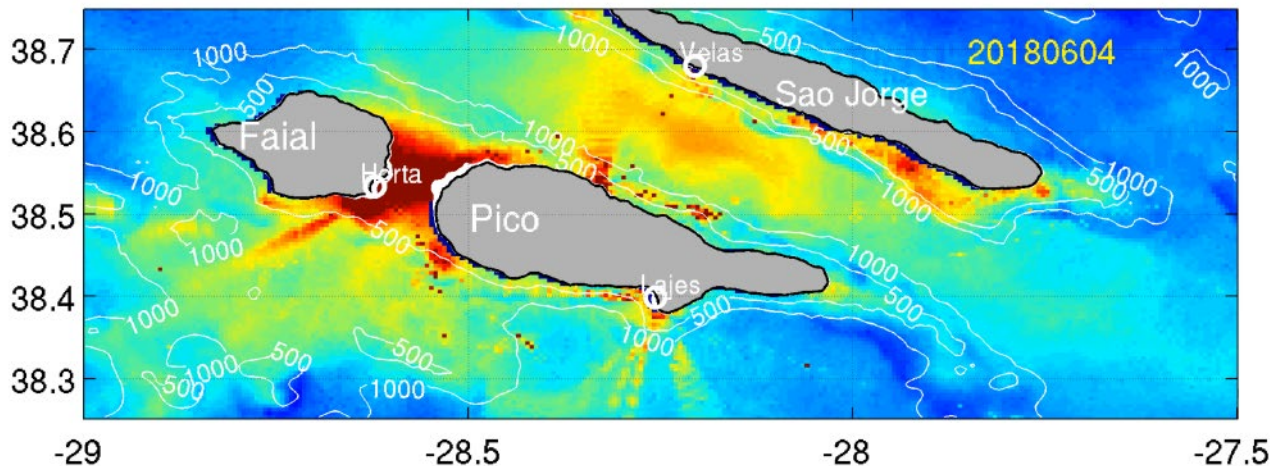
Acoustics and underwater noise featured heavily on the WMMC programme, demonstrating what a key issue this is for marine sciences at the moment. Many of the presentations stressed the need for more research on noise propagation and reception along with increased efforts to standardise terminology, measurements, techniques and ways of reporting.

JONAS and the other Interreg projects are posed to push this forward and support researchers, policy makers and industry in working together to reduce negative impacts of anthropogenic underwater noise.



Attendees of the WMMC meet project researchers from JONAS and JOMOPANS at our joint booth.

Noise Mapping



➤ Mapping the Atlantic Area

JONAS researchers have begun modelling activities for the creation of noise maps. Dr. David Dellong of SHOM created the map in the lower right corner showing monthly shipping noise for the Atlantic area at 63Hz. The map presents the median acoustic level of shipping noise for the month of August 2017 at a depth of 20m. The main shipping lanes, such as the English Channel, are the noisiest areas.

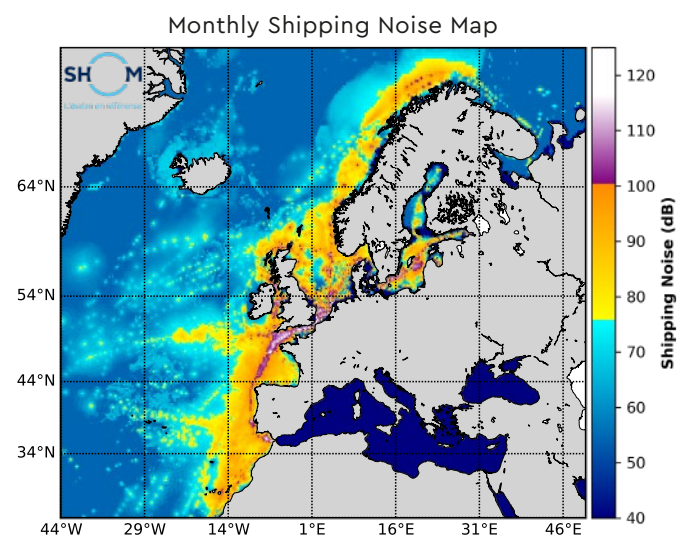
More information on the modelling method used for the Atlantic area region map can be found in Le Courtois, F. et al (2016). Statistical ambient noise maps from traffic at world and basin scales are available in the *Proceedings of the Institute of Acoustics*, Cambridge (UK).

➤ Mapping the Azores

The team at the University of Algarve have also begun preliminary noise mapping for the central islands of the Azores, a heavily trafficked and high interest area for noise monitoring. The graphic at the top of the page

Above: Noise map showing daily mean sound pressure in the central Azores. **Below:** monthly shipping noise map for the Atlantic.

shows the predicted daily mean sound pressure by location. To create such a map, acoustic propagation models are used to predict the risk of high noise areas using ship positions. The next step will be to take sound measurements at selected spots to calibrate these models.



JONAS PROJECT

UNDERWATER NOISE SURVEY

Help us improve the quality and relevance of JONAS project outputs and communication material about underwater noise.

<https://s.surveypplanet.com/aEq-cBbO>

Our survey on underwater noise can be accessed through the link at right, or by visiting our Twitter and website. Both contain links to the online survey. It takes about 5 minutes to fill out.

Below is the roll up informational banner designed for the project and displayed at WMMC19.



Public Engagement

Underwater Noise Survey

We recently launched a survey on underwater noise to inform the communication outputs for the project. Responses will help us produce high-quality, relevant science communication and engagement materials for the project, as well as enabling us to provide data and information relevant to the needs of a range of end-users. So far we've received over 80 responses from researchers, policymakers, and interested citizens.

If you haven't taken it yet, please do so! You can find the 5 minute survey at the link below.

s.surveypplanet.com/aEq-cBbO

Communications Materials

In order to communicate the impact of underwater noise and our findings on appropriate management solutions, we will be creating a number of visual communication materials for specific audiences. Among these is an A5 brochure to be used at various types of engagement events to inform people about the project and its funding.



Presentations

08.10 Jomopans Mid-Term Workshop Royal Society, London

Project Coordinator Gerry Sutton presented the JONAS project to attendees of the JOMOPANS Mid-Term Workshop, hosted at London's Royal Society. We're working on harmonising our data approaches with Jomopans, which is measuring and modelling ambient underwater noise in the North Sea.

12.11 Atlantic Area Workshop Atlantic Stakeholder Platform Conference

Professor Sergio Jesus of SiPLAB at the University of Algarve presented the project at the 6th Atlantic Stakeholder Platform Conference in Porto, Portugal. The presentation was part of the INTERREG Atlantic Area workshop on Environmental Actions on Atlantic Coastal Waters.



Above: Gerry Sutton presents in London at the JOMOPANS workshop, while beneath Sergio Jesus presents at the Atlantic Area event in Porto.

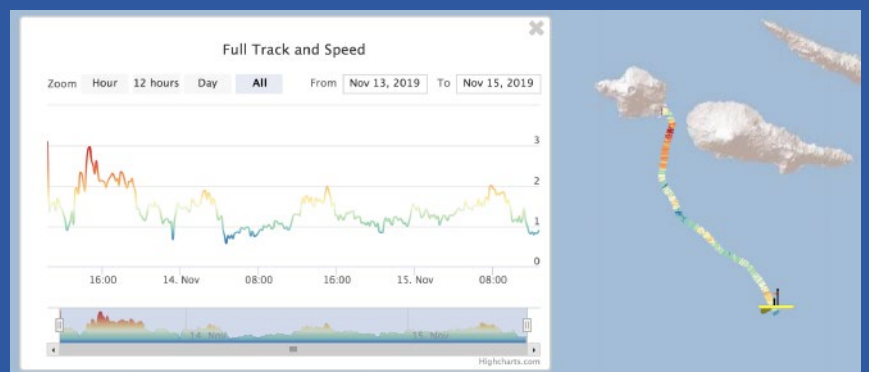


Above: Illustration of a waveglider. Right: PLOCAN's online portal shows the real-time tracking data as the glider makes its way to the Canaries.

Listening In

In November, we mounted a hydrophone to waveglider that will make the 1750km crossing from the Azores to Gran Canaria. The waveglider is operated by PLOCAN (Oceanic Platform of the Canary Islands) for the iFADO project, and will take around two months to complete the journey. The marine mammal sounds it records will help inform JONAS research.

The waveglider has been trackable through PLOCAN's online observation platform, allowing viewers to see the glider's track and speed along the way.



Present & Future

Risk Mapping

While our researchers continue to make progress in noise mapping, risk mapping activities are just getting underway. To assess noise risk, we've selected a number of focal species to represent a range of depths and acoustic sensitivities (see list at right). Distribution data is currently being gathered for each species to feed into resulting risk maps, which will be created at the appropriate spatial and temporal resolutions using best available approaches.

Collaboration

Collaboration with other projects (JOMOPANS, RAGES, iFADO) has been established to ensure coherence across Atlantic projects. The consortium has agreed on the acoustic data standards to be used to ensure maximum compatibility with other Atlantic projects. Partners have also inventoried the noise monitoring capacity of the Atlantic area, including PAM moorings, moored hydrophones, autonomous recorders, and observatories.

Case Studies

JONAS will undertake cumulative noise management case studies designed to address specific drivers of noise in the Atlantic area. These will demonstrate how risk mapping and indicator methodologies can support decision making in the management of anthropogenic noise. These case studies will focus on ship quieting scenarios and cost-benefit analyses, seismic survey noise prediction tools, offshore wind risk mapping, and an assessment of acoustic deterrent devices impacts.

Noise Visualisation Platform

A workshop with end-users in research and policy will be held in March of 2020 to determine what's desired from our future noise visualisation and decision-support tool.

Selected Species

The following species have been chosen to represent various depth ranges and acoustic sensitivities for use in risk mapping.

European seabass
Blue mussel
Sperm whale
Norway lobster
Fin whale
Common cuttlefish
Atlantic herring
Harbour seal
Atlantic cod
Bluefin tuna
Long-finned pilot whale
Bottlenose dolphin

**Join us at OCEANOISE2020
in Vilanova i la Geltrú,
Barcelona, 25-29 May.
2020.oceanoise.com**



We hope you enjoy the holidays.

See you in 2020!