



QUIETMED2 - Joint programme for GES assessment on D11- noise in the Mediterranean Marine Region



From the Impulsive Noise Register in the Mediterranean Sea Region to a MSFD management tool.

Headlines

- The Impulsive Noise Register in the Mediterranean Sea Region ([INR-MED](#)) is a tool designed to record impulsive sound generating activities in order to **support the Marine Strategy Framework Directive (MSFD)** implementation.
- The INR-MED allows further analysis in addition to the simple recording of activities. Advanced analysis including potential impacts associated to those activities could be **useful for management purposes** (e.g. regulation, permits)
- After an evaluation of the needs for the further development of the tool, the availability of data and the need for definition of methodologies appear as the main constrains, rather than technological limitations.
- Using a practical exercise to test different alternatives will lead to guarantee the feasibility of new functionalities to support Competent Authorities in the MSD implementation.

A tool to move from pressure to impact of impulsive underwater noise.

The Impulsive Noise Register in the Mediterranean Sea Region (INR-MED) aims to collect information about impulsive sound generating activities. This information will be the basis to **evaluate the potential impact** due to underwater noise on biodiversity. This combined analysis could be used to assess the **achievement of the Good Environmental Status (GES)** as established in the Marine Strategy Framework Directive (**MSFD**).

The INR-MED is a Geographic Information System (GIS)-based tool that allows further information analysis in addition to the simple recording of sound generating activities. It is a **user-friendly web GIS** application with three main functionalities: data exchange (upload and download data), view on a map and calculation of the impulsive sound criteria associated to the Descriptor 11 (D11C1-anthropogenic impulsive sound in water) of the MSFD.



Co-funded by the
European Union

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In order to move forward with **future combined risk and impact analysis** that could be used **for management purposes** (e.g. licensing, planning and monitoring activities), an evaluation of the feasibility is needed to implement new functionalities into the tool.

Technology is ready, waiting for the definition of methodologies and availability of data.

The main improvement planned for the INR-MED is related to include new functionalities to **support the update of the monitoring programmes** of impulsive noise according to the new GES Decision and to allow **joint analysis of noise and biodiversity information** (Descriptor 1). In particular, it is expected that this tool will be designed to support the data collection and analysis information for the D11C1 assessment including information related to thresholds, i.e., methodologies to establish thresholds, thresholds values etc.

There are **no technological limitations** to address advanced analysis regarding underwater noise or biodiversity information, but the need to build a **user-friendly tool** could conditionate the chosen solutions eventually (e.g. to avoid long processing data timing).

Since the establishment of a common methodology and associated indexes, metrics etc. **to establish thresholds is currently under development**, to define functionalities for its potential implementation raises some uncertainty factors. Also, the **availability of data appears as a potential constraint** to

develop and consequently to implement the final solutions.

The QUIETMED2 project outputs include a proposal of methodology to establish thresholds in the MED.

Once this methodology is defined, it will be tested and validated through the performance of a practical exercise with the best available real data.

Testing and validating the new functionalities through the **implementation of a case of use** will help not only **to assess the feasibility** of the methodology and the proposed functionalities but also **to evaluate the user experience**.

INR-MED for policy-making

Given the importance of evidence-based, risk-informed decision-making, the use of the INR-MED to support the MSFD implementation regarding underwater noise appears as a feasible and useful solution.

This tool was presented in the first workshop training session for Competent Authorities and representatives of European and non-European Countries in charge of the implementation of the MSFD and the Ecosystem Approach process respectively.

Since their involvement as final users of this tool is essential, a second training session will be performed to ensure that the new functionalities are aligned with their needs for policy-making.