

# Midterm info-day (Rimini 01/07/2020)

# Final Version of 29/10/2020

Deliverable Number D.2.4.1.

Event's Report























Project Acronym	SOUNDSCAPE
Project ID Number	10043643
Project Title	Soundscapes in the north Adriatic Sea and their impact
	on marine biological resources
Priority Axis	3
Specific Objective	3.2
Work Package	2
Number	
Work Package Title	Communication activities
Activity Number	2.4
<b>Activity Title</b>	Public events
Partner in Charge	CF
Partners Involved	ALL
Authors	Alice Pari (CF)
Status	Final
Distribution	Public



# Summary

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## Midterm info-day Rimini

At the project midterm were invited all stakeholders, target groups and representatives of the Programme to participate to an info-day organized by CF where the project will be illustrated in all its details. The stakeholders were invited to take active part to the process of definition of feasible mitigation actions to be defined in WP5.

The LP collected from the partners in charge of WP3/4/5 (BWI, CNR,) four Power Point presentations to inform the present stakeholders about the progress of the project. These Power Point were presented by Alice and Sauro Pari.

Due to the COVID 19 pandemic wasn't possible to organize a Midterm event like written on the application form. So, with LP we decided to divided the event in two different moments: one divulgative info-day in Rimini (before the event *Different Waves* in Rimini, on 9<sup>th</sup> October 2020) with the participation of some local target groups.

The date set for September 27<sup>th</sup> for *Different waves* has been moved due to weather conditions. At the project Midterm in Rimini CF invited to participate some target groups and collected them signatures. During this event the project and its progress were illustrated in all details by a CF representative and CF also showed a project video and distributed flyers and notebooks.

The event was transmitted also by Facebook on the official Soundscape page (<a href="https://www.facebook.com/watch/live/?v=338316140717424&ref=watch permalink">https://www.facebook.com/watch/live/?v=338316140717424&ref=watch permalink</a>).

The event has been organized together with the Municipality of Rimini and the Nautic Club of Rimini, in order to involved specially two target groups: Public Authority and Associations.

To this event have participated 115 people.

Target group reached:

- n. 3 Associations
- n. 3 Educational training
- n.5 Local regional public authorities
- n.26 NGO's



## Agenda



#### SOUNDSCAPE

Soundscapes in the North Adriatic Sea and their impact on marine biological resources

#### Midterm info-day in Rimini

Ex- Delfinario - Lungomare Tintori, 2 Rimini

9th October, 2020

### Agenda

20:45 - 21:00 Registration

21:00 - 21:15 Welcome words and video presentation (CF - Sauro Pari)

21:15 - 21:30 Project - General Introduction (CF- Sauro Pari)

21:30 - 22:00 Project implementation (CF- Alice Pari )

22:00- 22:45 live performance with underwater sounds recorded in front of Rimini by the Hydrophone of project Soundscape

22:45 - 23:00 General discussion and Closure of the event











European Regional Development Fund

REGIONE MARCHE



## Power Point presentation from the partners

### BWI (WP4)

## **Soundscape ADVANCEMENTS AND FUTURE ACTIVITIES**

BWI - Blue World Institute, Veli Losini, Croatia

Rimini, 27th of September 2020

Interreg Italy - Croatia











## WP4 - Sensitivity of targets

Activity 1 - Data collection about target species

Data on the spatial and temporal presence of common bottlenose dolphin and the loggerhead turtle
dedicated boat surveys
citizen science

- Spatial and temporal presence of dolphins and sea turtles will be related to the presence and nature of anthropogenic noise sources and to the variations in soundscape (diurnal and seasonal cycles)

#### ACTIVITY DELIVERABLES:

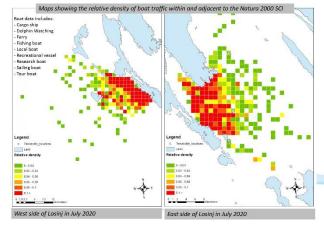
D4.1.1. Report on the distribution of targets species: 1st report done

D4.1.2. Map of distribution of target species within and adjacent to the Natura 2000 SCI: 12 report done

D4.1.3. Map of distribution of boat traffic within and adjacent to the Natura 2000 SCI: Ongoing

D4.1.4. Report on forms of vocalization at sites characterized by different levels of noise: 1st part of the control of the co





## WP 3 - Soundscape Assessment

#### Activity 3.4 - Recreational boats noise source level assessment

- Recreational boating noise represents a considerable contribution to the overall underwater
- noise.

  Within the Adriatic Sea, recreational boating is especially intense in the summer months due to nautical tourism and the presence of numerous ports and marinas visited by these leisure boats
- along the coastline.

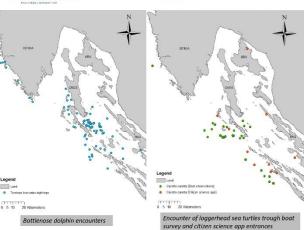
   Evaluating the noise inputs of leisure crafts to the local sea background noise is therefore essential when identifying the most dominant anthropogenic noise sources in this region.
- environment. From these data, acoustic signature of the pleasure activity will be assessed.

   The recreational boats noise source level assessment will be carried out in October 2020 in Losinj, Croatia. Noise levels of the representatives of various types of boats will be recorded in a controlled

#### ACTIVITY DELIVERABLES:

D3.4.1. Recommendation for the source level assessment: Done

D3.4.2. Report on the source level assessment for recreational boats: Ongoing



#### WP4 - Sensitivity of targets

Activity 2 – Review on the sensitivity of each target species

- A review of the current knowledge on sensitivity of each target species:

  Investigation of seasonal cycles in the vocal activity that may be habitat-specific or related to dynamic in the soundscape patterns.
- Better understanding of the conditions for communication and orientation of sensitive target species and the potential impact of the rise in shipping activity
- Critical insights for sensible integration of human activities and the protection of marine animals sensitive to sound that are often at risk of population decline due to noise.

#### ACTIVITY DELIVERABLES:

D4.2.1. Gap-analysis report based on existing knowledge of the sensitivity of target species: Done





#### WP4 - Sensitivity of targets

Activity 3 - Collecting data for habitat modelling in the case study 01/10/2019 - 01/04/2020

Collecting data on environmental conditions that may affect the soundscape: commercial shipping data (AIS and VMS tracking systems)

- Collecting data on recreational boating:
   land-based observations using a theodolite
   over-night stays of recreational boats in local marinas and harbours

Colletion of data on environmental parameters: chlorophyll, bathymetry, temperature, salinity, currents and sea floor type (based on the existing literature knowledge and data availability)



D4.3.1. Database of environmental conditions relevant for the habitat suitability of target organ





- . Constructing an HSM that will predict the probability of the presence/absence of the target species by relating them to available environmental and anthropogenic variables
- · Providing a full coverage mapping of the study area

WP4 - Sensitivity of targets

Activity 4 - Habitat suitability modelling for specific target species

· High relevance for marine management

#### ACTIVITY DELIVERABLES:

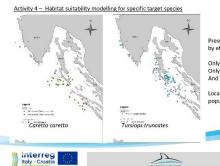
D4.4.1 Creation of habitat suitability models (HSMs) that provide the expected distribution of target

D4.4.2. Relationship between recorded noise from WP3 and recreational boating in Lošinj case study area.





#### WP4 - Sensitivity of targets





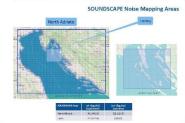
Only in Losijn area Only in year 2019 (Jul-Aug) And in year 2020 (Feb-Apr)

Local model, hopefully local population



#### WP4 - Sensitivity of targets

Activity 4 – Habitat suitability modelling for specific target species



Noise Data level by soundscape modeling

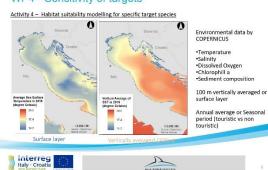
at the selected frequencies 250 Hz 1/3 octave band and 4 kHz 1/3 octave band considering commercial (and recreational?) noise source

Starting activity

Usable only Losijn area for HSM



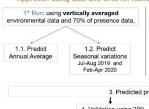
#### WP4 - Sensitivity of targets

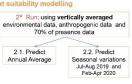


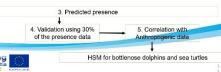
#### WP4 - Sensitivity of targets

Activity 4 – Habitat suitability modelling for specific target species

Approach using GLM and GAM for hall









### CNR-ISMAR (WP3)







#### SOUNDSCAPE - WP3 **ADVANCEMENTS AND FUTURE ACTIVITIES**

✓ ACTION 3.2: Setting up of the monitoring network of underwater noise measurements

• The activity has been concluded and an addition station MS10 was added using the monitoring system of Regione Marche

## WP3 **ADVANCEMENTS AND FUTURE ACTIVITIES**

CNR - National Research Council of Italy ISMAR - Institute of Marine Sciences, Venice, Italy

Venice, 9 September 2020

SOUNDSCAPE - WP3

**ADVANCEMENTS AND FUTURE ACTIVITIES** 

• Activities on monitoring underwater noise sources started on the 21th February 2020

and are continuing at the planned MS1 "Acqua Alta" oceanographic station. In June four video cameras have been installed to have an overview of the boat/ship traffic in the area. Meteo and hydrological parameters are monitored continuously at the



✓ ACTION 3.3: Field surveys for data collection

tower and each month a CTD profile is performed.









#### SOUNDSCAPE - WP5 ADVANCMENT AND FUTURE ACTIVITIES

✓ ACTION 3.3 Field surveys for data collection

✓ Another camera records regularly underwater images that will be used to characterize the natural soundscape of the environment







#### SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES**

✓ ACTION 3.3 Field surveys for data collection

An additional deployment has been set on a station inside the lagoon of Venice in order to characterize the noise pressure during and after the lock-down due to the COVID-19 pandemic event. The deployment started the  $7^{\text{th}}$  of April and is scheduled to end in mid September.



## **ADVANCMENT AND FUTURE ACTIVITIES**

✓ ACTION 3.5 Definition of processing protocols

Deliverables D3.5.1 Report on the definition and implementation of the processing protocols was finalized

SOUNDSCAPE - WP5

D 3.5.3 Processing executable tool was finalized







#### SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES**

- ✓ Activity 3.6 Processing of data input for modelling and uncertainty analysis
- √ The activity has started, and all the data uploaded so fare were processed and output. results netCDF form are available for QO to be used for the modelling with exception with the stations MS4\_ Paloma (uploaded in the last few days) and the IOF stations MS7, MS8, MS9 data were not uploaded and have been now transferred to the CNR-ISMAR server, but we need to create the ensembles to process the data.



#### SOUNDSCAPES IN THE NORTH ADRIATIC SEA AND THEIR IMPACT ON MARINE BIOLOGICAL RESOURCES

#### CNR ISMAR TEAM

Fantina Madricardo, Mauro Bastianini, Antonio Petrizzo, Michol Ghezzo

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- mauro.bastianini@ve.ismar.cnr.it
- www.italy-croatia.eu/soundscape



### CNR-ISMAR (WP4)

Interreg Italy - Croatia







## WP4

#### **ADVANCEMENTS AND FUTURE ACTIVITIES**

CNR – National Research Council of Italy ISMAR – Institute of Marine Sciences, Venice, Italy

Venice, 9 September 2020





#### SOUNDSCAPE - WP4 **ACTIVITIES from AF**

✓ACTION 4.3 Collecting data for habitat modelling in case study

D-4.3.1. Database of environmental conditions relevant for the habitat suitability of target organism Done

✓ACTION 4.4 Habitat suitability modelling for specific

target species

D-4.4.1 Creation of habitat suitability models (HSMs) that provide the expected distribution of target organisms), for further analysis in activity 5.4. In progress

- Target: Caretta caretta and Tursiops truncates
  Area: Loslin
  Environmental and anthropogenic conditions
  1. habitat suitability model to evaluate the probability of presence



#### SOUNDSCAPE - WP4 **ACTIVITIES from AF**

#### ✓ACTION 4.1 Data collection about target species

- D-4.1.1. Report on the distribution of targets species
  D-4.1.2. Map of distribution of target species within and adjacent to the Natura 2000 SCI
  D-4.1.3. Map of distribution of boat traffic within and adjacent to the Natura 2000 SCI
  D-4.1.4. Report on forms of vocalisation at sites characterized by different levels of noise

√ACTION 4.2 Review on the sensitivity of each target species D-4.2.1. Gap-analysis report based on existing knowledge of the sensitivity of target species (bottlenose dolphins, loggerhead turtles, and commercial fish sp.) to sound and the potential effects of noise.

Done

# Interreg Italy - Croatia

#### SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES**





Presence data normalized by effort

Only in Losijn area Only in year 2019 (Jul-Aug) And in year 2020 (Feb-Apr)

Local model, hopefully local



#### SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES** SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES** Environmental data by COPERNICUS SOUNDSCAPE Noise Mapping Areas Noise Data level by Temperature Salinity Dissolved Oxygen Chlorophill a Sediment composition soundscape modeling at the selected frequencies 250 Hz 1/3 octave band and 4 kHz 1/3 octave band 100 m vertically averaged or surface layer considering commercial (and recreational?) noise source Annual average or Seasonal period (touristic vs non touristic) Starting activity Usable only Losijn area for Surface laver Vertically averaged Interreg Italy - Croatia Interreg SOUNDSCAPE - WP5 SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES ADVANCMENT AND FUTURE ACTIVITIES** Approach using GLM and GAM for habitat suitability modelling Other anthropogenic data useful to be included if available as shapefile or in quantitative format (maybe $\,$ by ADRIPLAN or by BWI ) 1° Run: using vertically averaged environmental data and 70% of presence data, 2° Run: using vertically averaged environmental data, anthropogenic data and Distribution of boat traffic within and adjacent to the Natura 2000 SCI Data on the availability of fishes (stock) Data on route and typology of fishing boat (rapido vs other) Sea State data because it influences the presence/absence data 70% of presence data 2.1. Predict 1.1. Predict Annual Average 1.2. Predict Seasonal variations 2.2. Predict Seasonal variations Jul-Aug 2019 and Feb-Apr 2020 Annual Average Jul-Aug 2019 and Feb-Apr 2020 3. Predicted presence 4. Validation using 30% 5. Correlation with of the presence data Interreg Italy - Croatia SOUNDSCAPE HSM for bottlenose dolphins and sea turtles Interreg Italy - Croatia SOUNDSCAPE SOUNDSCAPES IN THE NORTH ADRIATIC SEA AND THEIR IMPACT ON MARINE BIOLOGICAL RESOURCES CNR ISMAR TEAM Michol Ghezzo, Daphnie Galvez, Giorgio Castellan michol.ghezzo@ve.ismar.cnr.it www.italy-croatia.eu/soundscape

Interreg Italy - Croatia



### CNR-ISMAR (WP5)







#### SOUNDSCAPE - WP5 **ADVANCEMENTS AND FUTURE ACTIVITIES**

✓ ACTION 5.1 COLLECTION OF ENVIRONMENTAL DATA FOR MODELING:

- $\bullet\,$  Report "D 5.1.1 Database of environmental data" completed, including three environmental datasets:
- 1) Static data describing geometry and features of the basin useful for noise propagation (Bathymetry, seafloor sediment distribution);
- 2) Temperature salinity and sea roughness from hydrodynamic model (D 5.1.2)
- 3) Shipping (AIS) and fishing data (VMS data) (D5.1.3)

## WP5 **ADVANCEMENTS AND FUTURE ACTIVITIES**

CNR - National Research Council of Italy ISMAR - Institute of Marine Sciences, Venice, Italy



## ADVANCMENT AND FUTURE ACTIVITIES

#### ✓ ACTION 5.2 SOUNDSCAPE MODELING

- Flow of data: temperature, salinity, wind data by TIRESIAS to the server for QO
- Defined areas for NA and Losijni, adjusting the netcdf format
- Data uploaded on the CNR server were processed with the exception of the IOF and ARPAFVG stations
- · Soon QO will start with modeling
- ✓ ACTION 5.3 DATA INTEGRATION AND TOOL SUPPORTING DECISION
- $\bullet\,$  D 5.3.1 Tools4MSP Portal is being integrated with data on noise sources, noise targets, environmental data, sea uses, taking into account an update of D 3.1.1, the integration of 5.1 data and the upcoming outputs from 5.2.
- Preparation of the D 5.3.2 Report describing the Data Portal and its con-



#### SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES**

- ✓ ACTION 5.5 SUPPORT THE IMPLEMENTATION OF MSFD D11
- ✓ Not yet started
- ✓ ACTION 5.6 TRANSFERABILITY
- ✓ Not yet started



#### SOUNDSCAPE - WP5 **ADVANCMENT AND FUTURE ACTIVITIES**

- ✓ ACTION 5.4 DEVELOPMENT OF MITIGATION MEASURES
- √- the analysis of current international legislation is ongoing. The analysis of Italian and Croatian national regulations will start during next weeks (A request for support and translation will be sent to HR partners);
- $\checkmark$  identification of risks for target organisms, based on soundscape and observed/estimated distributions Requires results from WP 4 and 5.2.
- $\checkmark$  identification of possible measures, scenarios and feasibility analysis: the activity is ongoing, gathering information from scientific literature, policies and International projects
- ✓- interaction with public and private key stakeholders to adapt the measures and evaluate their acceptability: not started



#### SOUNDSCAPES IN THE NORTH ADRIATIC SEA AND THEIR IMPACT ON MARINE BIOLOGICAL RESOURCES

#### CNR ISMAR TEAM

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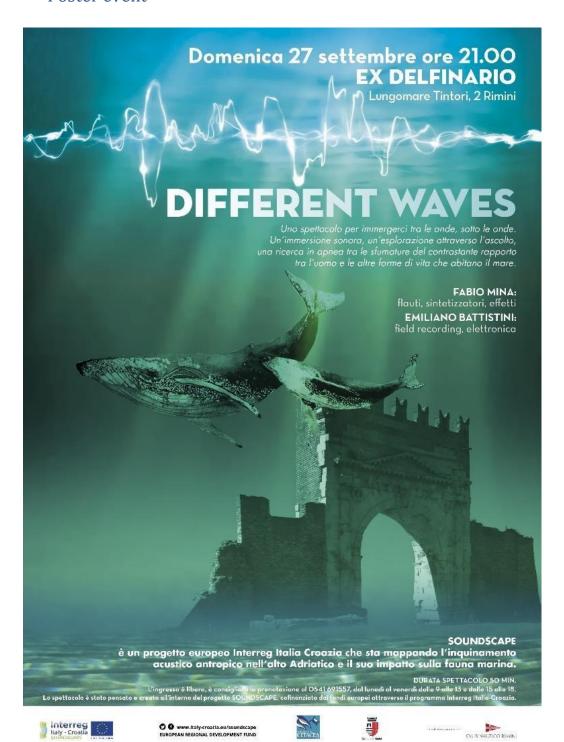
www.italy-croatia.eu/soundscape







#### Poster event





## Photo event

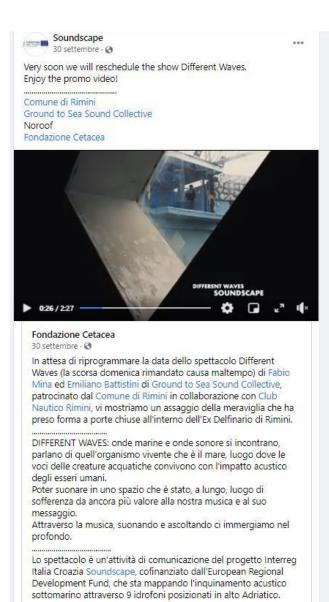
Credits: Elisabetta Zavoli



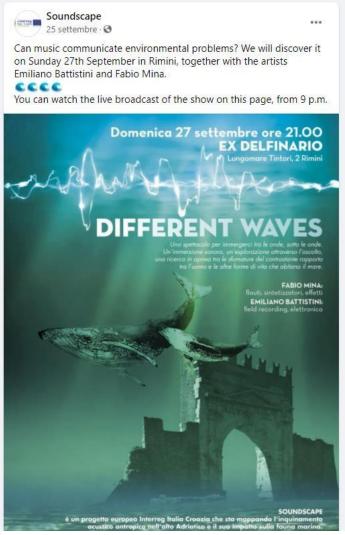




#### Facebook announcements

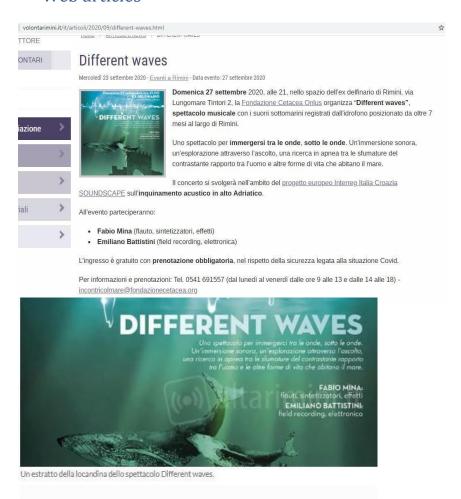


Grazie a Mattia Fornaciari di Noroof per averci aiutato a preparare per voi questa sintesi dell'immersione nei suoni e rumori dell'Adriatico interpretati da Fabio e Emiliano.





### Web articles

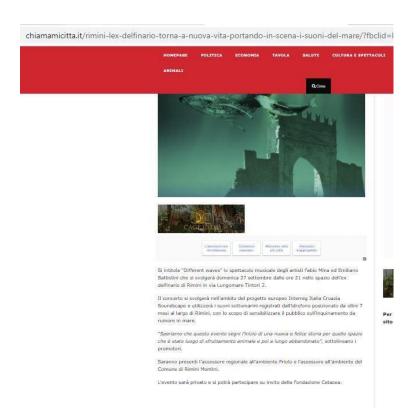


eADV

Domenica 27 settembre alle 21 nell'ex Delfinario di Rimini sul lungomare Tintori andrà in scena lo spettacolo musicale "Different waves" degli artisti Fabio Mina ed Emiliano Battistini nell'ambito del progetto europeo Interreg Italia Croazia "SOUNDSCAPE", che utilizzerà i suoni sottomarini registrati dall'idrofono posizionato da oltre 7 mesi al largo di Rimini, con lo scopo di sensibilizzare il pubblico sull'inquinamento da rumore in mare. Negli organizzatori è viva la speranza che questa iniziativa segni «una più felice storia per quello spazio che è stato luogo di sfruttamento animale e poi a lungo abbandonato». La partecipazione va confermata al 340 230184. L'evento è privato su invito ma la conferma della partecipazione è obbligatoria per poter garantire le distanze di sicurezza.

Carnina can atamaa





it.geosnews.com/p/it/emilia-romagna/rn/different-waves-concerto-a-suon-di-idrofono-all-ex-delfinario-di-rimini-rimini-eventi\_30986041



# Cornice con stampa bifacciale



29,90 €
Cornice con stampa
bifacciale: Carica le tue
foto su PhotoSì e crea
il prodotto...
PhotoSì

>

Obiettivo sensibilizzare sul tema dell'inquinamento acustico in mareUn estratto della locandina dello spettacolo Different waves.Domenica 27 settembre alle 21 nell'ex Delfinario di Rimini sul lungomare Tintori andrà in scena lo spettacolo musicale ", spettacolo musicale ", spettacolo musicale degli artisti Fabio Mina ed Emiliano Battistini nell'ambito

del progetto europeo Interreg Italia Croazia SOUNDSCAPE, che...

Leggi la notizia integrale su: Alta Rimini ${\Bbb Z}$ 

Il post dal titolo: «Different waves, concerto a suon di idrofono all'ex delfinario di Rimini-Rimini - Eventi» è apparso il giorno 24 settembre 2020 alle ore 51515 sul quotidiano online Alta Rimini dove ogni giorno puoi trovare le ultime notizie dell'area geografica relativa a Rimini.



### Provincia di Rimini

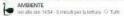
Regione Emilia-Romagna







#### Riapre per una sera l'ex Delfinario di Rimini per lo spettacolo Different Waves (9 ottobre 2020)



lari sera finalmente è andato in scena, presso l'ex Delfinario di Rimini, lo spettacolo #Different/Vaves di Fabio Mina ed Emiliano Battistini, organizzato da noi all'interno del progetto Interreg Italia Croazia SOUNDSCAPE.



progetto Interreg Italia Croazia SOUNDSCAPE

L'idea di questo spettacolo è nata più di un anno fa nella fase progettuale di

Soundscape, l'Interreg Italia Croazia che si sta occupando di monitorare

Ilinquinamento acustico sottomanino nell'alto Adriatio, croato e Italiano, per mezzo di 9 idrofroni postizionati in mare: come comunicare l'Impatto devastante che hanno i rumori causati dalla attività dell'uomo sull'acosistema marino? Come responsabili Gell'acomo ricavate della tatività dell'uomo sull'acosistema marino? Come responsabili Gell'acomo ricava di America de la vore da temper. Fabio Mina de Emiliano battistini, che oltre ad essere artisti con una forte sensibilità legata ai temi ambientali sono da tempo amici di Fondazione Cetacoa, e con loro abbiamo progettato Different Waves affidandogi i mesi di registrazione del profro abbiamo rogettato Different Waves affidandogi i mesi di registrazione che permesso di avere un'idea sonora del mondo sottomarino senza di noi e di quanto sia impattante la nostra presenza in mare. L'estro e la sensibilità di Emiliano e Fabio hanno fatto il resto.

Infine. Tidea sulla location: perchè non



Rimini. 10 attabre 2020

Fondazione Cetacea Onlus Viale Torino 7A - Riccione (RN) Website ufficiale: http://fondazionecetacea.org/



# Staff badge





## Panel

