

## Work Package 3 – Mapping of Adriatic Reefs from different perspectives

### Activity 1 – Reefs' Classification in the cooperation area

## DATA COLLECTION

Online questionnaires sent to PPs & other Institutions involved in Adriatic reefs studies and researches

## Deliverable D3.1.2

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## PREFACE

Starting from a CNR-IRBIM database of existing ARs in the Italian seas established in 2009, the WP3 Leader coordinated all PPs involved in this activity to implement the mapping existing Adriatic reefs. This target has been achieved collecting related scientific publications and grey literature.

Starting from January 2019 WP3 Leader staff worked to verify the existing data and to develop two different questionnaires to collect all the possible information on Adriatic natural and artificial reefs, respectively.

These questionnaires have been shared online on 11<sup>th</sup> of March 2019 to the all PPs and other Institutions involved in Adriatic artificial and/or natural reefs studies and researches.

A total of 37 questionnaires on Italian ARs and of 20 questionnaires on NRs (19 Italian and 1 Croatian) have been filled in.

## NATURAL REEFS' QUESTIONNAIRE

Dear Colleagues,

we invite you to fill in the questionnaire regarding the Adriatic natural reefs in the context of the Interreg Italy-Croatia project ADRIREEF.  
If you think there are other experts of Adriatic natural reefs, please submit the questionnaire to them.

Thank you for your collaboration.

CNR-IRBIM Ancona, Italy

**Natural Reef Questionnaire**

The current situation of natural reefs in the Adriatic Sea has not been clarified yet. There is a need to collect, organize and capitalize all the information produced with independent projects and research. The sharing of knowledge, resulting from the cooperation between experts, could provide a comprehensive view and an useful comparison within Adriatic reefs.

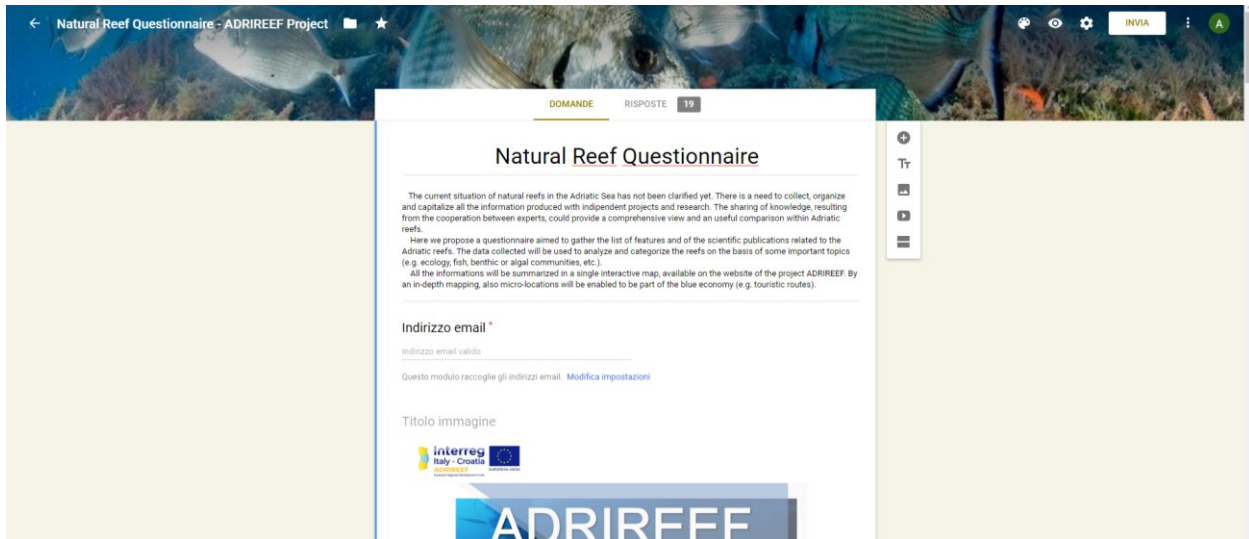
Here we propose a questionnaire aimed to gather the list of features and of the scientific publications related to the Adriatic reefs. The data collected will be used to analyze and categorize the reefs on the basis of some important topics (e.g. ecology, fish, benthic or algal communities, etc.).

All the informations will be summarized in a single interactive map, available on the website of the project ADRIREEF. By an in-depth mapping, also micro-locations will be enabled to be part of the blue economy (e.g. touristic routes).

[COMPILA MODULO](#)

[Crea il tuo modulo Google](#)

e-mail sent to the PPs and other Institutions



← Natural Reef Questionnaire - ADRIREEF Project

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**Indirizzo email \***

Indirizzo email valido

Questo modulo raccoglie gli indirizzi email. [Modifica impostazioni](#)

**Titolo immagine**

interreg Italy - Croatia ADRIREEF

Online first sheet of the questionnaire

## Questionnaire contents

1. Name and Surname: .....
2. Occupational qualification and workplace: .....
3. Name of the reef: .....
4. Location of the reef: .....
5. Geographical coordinates LATITUDE (WGS84 DD.DD. e.g. 43.023N): .....
6. Geographical coordinates LONGITUDE (WGS84 DD.DD. e.g. 13.123N): .....
7. Reef bottom depth (m) (If it is in a range please specify the max and min): .....
8. Reef edge (m): .....
9. Minimum distance from the coast (km): .....
10. Total area occupied by the Natural Reef (m<sup>2</sup>): .....
11. Typology of the reef:
  - High profile reef (the reef protrudes more than 20 meters from the base substratum)
  - Low profile reef (the reef protrudes less than 20 meters from the base substratum)
  - Ledges (vertical reef face characterized by visible crevices)
  - Boulder reef (structure elevating from the flat seabed)
  - Patch reef (sand bottom with small reef structures protruding from the sediment)
  - I don't know
12. Origin of the reef:
  - Biogenic
  - Geogenic
13. Type of surrounding seabed:
  - Rocks
  - Sand
  - Mud
  - Detritic
  - Gravel
  - Other
14. Occurrence of meadows?
  - Yes, phanerogams
  - Yes, algae
  - no

15. Which are the most important biocenoses? .....

16. Any alien species?

- Yes
- No
- Maybe

17. If "Yes", which alien species? .....

18. Any protected species? (e.g. IUCN Red List of Threatened Species, ASPIM Protocol, Berna Convention, etc.)

- Yes
- No
- Maybe
- If "Yes", which species?

19. Is the natural reef within a protected area?

- Yes, MPA
- Yes, Natura 2000 site
- Yes, National park
- Yes, Natural park
- Yes, Marine reserve
- No

20. Is the reef managed?

- Yes
- No
- I don't know

21. If yes, which is the Managing Subject? (Please give a short summary of the management measures adopted) .....

22. Does exist a monitoring program?

- Yes
- No

23. If "Yes" please give a short summary of the program .....

24. Surveillance service?

- Yes
- No

25. Current use of the Reef:

- Diving
- Mariculture
- Research

- Professional fishery
- Recreation fishery
- Fishing tourism
- Nothing
- Other (please, specify) .....

26. Development perspectives of the Natural Reef:

- Diving
- Mariculture
- Research
- Professional fishery
- Recreation fishery
- Fishing tourism
- Nothing
- Other (please, specify) .....

27. Please list the available data (If "Other" please specify):

- Geophysical map
- Water column
- Sediments
- Benthic community
- Fish community
- Other (please, specify) .....

28. Available literature (Scientific or Grey):

(Please add as many papers/works you know about the reef using the scheme:  
1 Title/ 2 Authors / 3 Year of publication / 4 Journal or project / 5 Pages / 6 Abstract / 7 Keywords)

## ARTIFICIAL REEFS' QUESTIONNAIRE

Hai problemi a visualizzare o inviare questo modulo?

**COMPILA IN MODULI GOOGLE**

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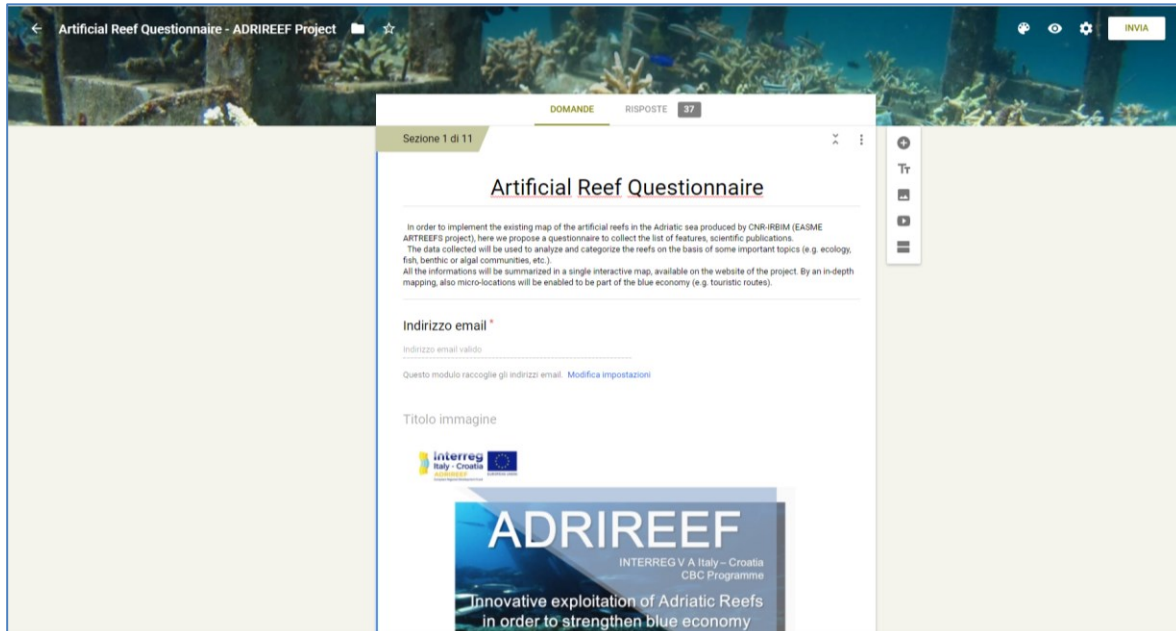
we invite you to fill in the questionnaire regarding the Adriatic artificial reefs in the context of the Interreg Italy-Croatia project ADRIREEF.  
If you think there are other experts of Adriatic artificial reefs, please submit the questionnaire to them. We ask to the Italian Colleagues to verify if the artificial reef/s is/are already reported in the website [www.habitatartificiali.it](http://www.habitatartificiali.it) (section "map"). If yes, please fill the questionnaire only if the information are incomplete.

Thank you for your collaboration.  
CNR-IRBIM Ancona, Italy

**Artificial Reef Questionnaire**

In order to implement the existing map of the artificial reefs in the Adriatic sea produced by CNR-IRBIM (EASME ARTREEFS project), here we propose a questionnaire to collect the list of features, scientific publications.  
The data collected will be used to analyze and categorize the reefs on the basis of some important topics (e.g. ecology, fish, benthic or algal communities, etc.).  
All the informations will be summarized in a single interactive map, available on the website of the project. By an in-depth mapping, also micro-locations will be enabled to be part of the blue economy (e.g. touristic routes).

e-mail sent to the PPs and other Institutions



Artificial Reef Questionnaire - ADRIREEF Project

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### Artificial Reef Questionnaire


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The data collected will be used to analyze and categorize the reefs on the basis of some important topics (e.g. ecology, fish, benthic or algal communities, etc.).  
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Indirizzo email \*

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Titolo immagine



**ADRIREEF**  
INTERREG V A Italy - Croatia  
CBC Programme  
Innovative exploitation of Adriatic Reefs  
in order to strengthen blue economy

Online first sheet of the questionnaire



## Questionnaire contents

1. Name and Surname: .....
2. Occupational qualification and workplace: .....
3. Name of the reef: .....
4. Location of the reef: .....
5. Geographical coordinates LATITUDE (WGS84 DD.DD. e.g. 43.023N): .....
6. Geographical coordinates LONGITUDE (WGS84 DD.DD. e.g. 13.123N): .....
7. Year of deployment of the AR: .....
8. Bottom depth (m) (If it is in a range please specify the max and min): .....
9. Minimum distance from the coast (Km): .....
10. Type of surrounding seabed:
  - Rocks
  - Sand
  - Mud
  - Detritic
  - Gravel
  - Other (please, specify) .....
11. Occurrence of meadows?
  - Yes, phanerogams
  - Yes, algae
  - No

## ARTIFICIAL REEF STRUCTURE

1. Reef typology:
  - Specifically designed modules (basic module)
  - Decommissioned structures
  - Other (please, specify) .....

### Specifically designed modules (basic module)

1. Material:
  - Concrete
  - Sea-friendly concrete (e.g., Tecnoreef)

- Coal Ash
- Rocks
- Fiberglass
- Other (please specify) .....

2. Shape of the single module:

- Cube
- Pole
- Plinth
- Other (please, specify) .....

3. Dimension of the single module (m): .....

4. Total volume of deployed material (m<sup>3</sup>): .....

5. Arrangement of the modules:

- Geometrically assembled to form structures
- Scattered
- Other (please, specify) .....

**Artificial Reef geometrically assembled to form structures**

1. Typology (e.g., pyramid): .....

2. Number of deployed structures: .....

3. Height of the structures (m): .....

4. Distance among structures (m): .....

**Scattered Artificial Reef**

1. Number of deployed structures: .....

2. Distance between structures (m): .....

**If the Artificial Reef is composed by areas or oases, please indicate:**

1. Number of the oases: .....

2. Distance among oases: .....

3. Dimension of each oasis (m<sup>2</sup>): .....

4. Total area occupied by the Artificial Reef (including the area covered by the bodies, the distance between the bodies and the area of respect) (m<sup>2</sup>): .....

## Decommissioned structures

Please specify the nature of the structure:

- Offshore extraction platform
- Sunk vessel/ship
- Other (please, specify).....

Offshore extraction platform:

1. Type of the platform (e.g., one-leg platform): .....
2. Part of the platform used to realize the AR (e.g., jacket, deck): .....
3. Total area occupied by the Artificial Reef (m<sup>2</sup>): .....

Sunk vessel/ship:

1. Number of sunk vessels: .....
2. Vessel material:
  - Wood
  - Iron
  - Fiberglass
  - Other (please, specify).....
3. Dimension of the sunk vessel/ship - LFT (m) and Weight (ton):.....

Other Artificial Reefs:

1. Number of bodies: .....
2. Material of bodies:
  - Wood
  - Iron
  - Fiberglass
  - Concrete
  - Other (please, specify).....
3. Dimension of each body - length (m) and Weight (ton):.....

## ARTIFICIAL REEF UTILIZATION

### 1. Scope:

- Habitat protection
- Habitat restoration
- Finfish enhancement
- Diving
- Mariculture
- Research
- Professional fishery
- Recreational fishery
- Fishing tourism
- Other (please, specify).....

### 2. Type of Artificial Reef:

- Experimental
- Professional

### 3. Is the Reef exploited at present:

- Yes
- No
- Maybe

If "Yes", by whom? .....

### 4. Does exist a management program?

- Yes
- No
- Maybe

If "Yes", please specify the Managing Subject and give a short summary of the adopted management measures.....

### 5. Concession area?

- Yes
- No

### 6. Surveillance service?:

- Yes
- No

### 7. Does exist a monitoring program?

- Yes

- No
- Maybe

If “Yes”, please give a short summary (Duration / Monitored aspects / Involved Institute or Agency /address, e-mail address).....

**8. Possible exploitation of the Artificial Reef:**

- Diving
- Mariculture
- Research
- Professional fishery
- Recreational fishery
- Fishing tourism
- Nothing
- Other (please, specify).....

**9. Please list the available data:**

- Geophysical map
- Water column
- Sediments
- Benthic community
- Fish community
- Other (please, specify).....

**10. Available literature (Scientific or Grey):**

(Please add as many papers/works you know about the reef using the scheme:  
1 Title / 2 Authors / 3 Year of publication / 4 Journal or project / 5 Pages / 6 Abstract / 7 Keywords)