



Algal forests restoration in Mediterranean Sea - AFRIMED

Silvia Bianchelli and Roberto Danovaro
AFRIMED Consortium

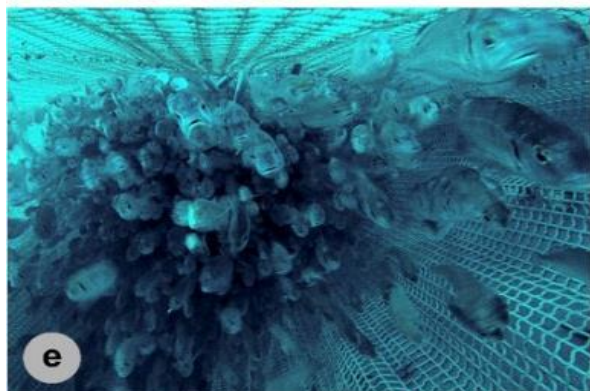
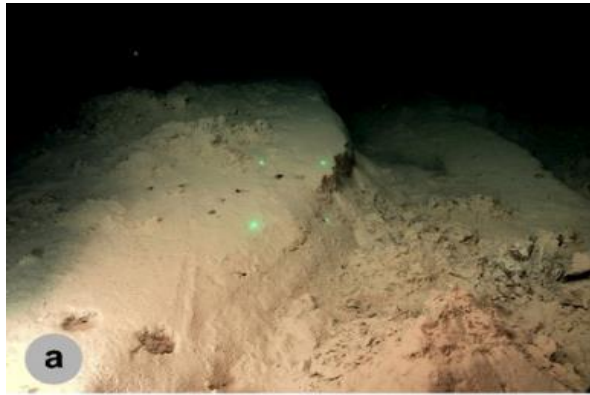
CINEA-EMFF Workshop
'Integration, Scaling Up and Cooperation
with other EU Funding Instruments'

28th February 2022

This project has received funding from the Executive Agency for Small and Medium Enterprise (EASME)
And European Maritime and Fisheries fund (EMFF) under grant agreement No 789059

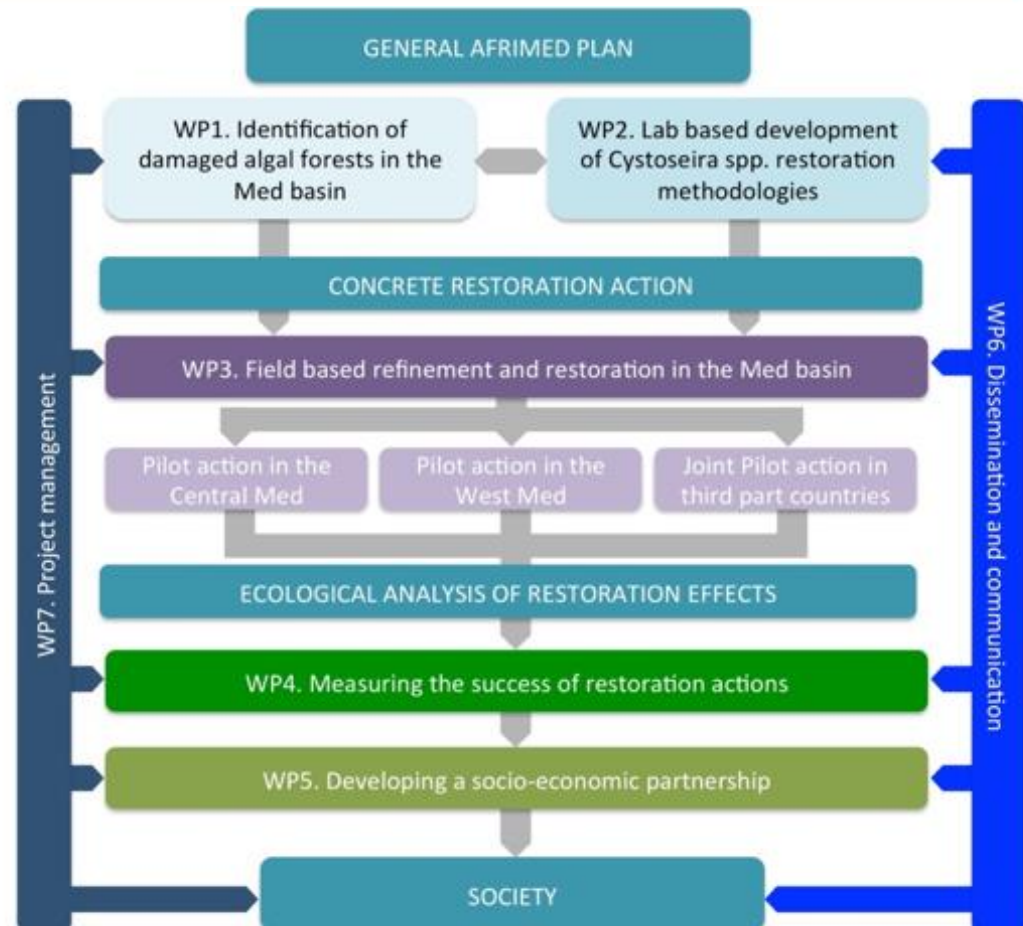


The Problem



Habitat and biodiversity loss

- Deterioration of coastal ecosystems can alter the key areas of many species, as marine mammals, sea turtles and seabirds.
- Major evidence of habitat loss in tropical coastal systems.
- But also in coastal Mediterranean habitats
- Loss of Ecosystem Services and Natural Capital



The journey of the project



Marine Ecosystem Restoration
in Changing European Seas



AFRIMED
ALGAL FOREST RESTORATION
IN MEDITERRANEAN SEA



...and other international
and national calls

About AFRIMED:
Project budget 1.486.683 €
11 Partners
8 Countries
Starts January 2019
Duration 4 years

PANACEA – MBPC
Mediterranean Biodiversity
Protection Community



Main results



Effects of Natural and Anthropogenic Stressors on Fucalean Brown Seaweeds Across Different Spatial Scales in the Mediterranean Sea

Sotiris Orfanidis^{1*}, Fabio Rindi², Emma Cebrian^{3,4}, Simonetta Fraschetti^{5,6}, Ina Nasto⁷, Ergun Taskin⁸, Silvia Bianchelli², Vasileios Papathanasiou¹, Maria Kosmidou¹, Annalisa Caragnano², Sultana Tsioli¹, Stefano Ratti², Erika Fabbrizzi^{5,6}, Jana Verdura^{3,4}, Laura Tamburello⁵, Sajmir Beqiraj⁷, Lefter Kashta⁷, Denada Sota⁷, Apostolos Papadimitriou¹, Ezzeddine Mahmoudi⁹, Hajdar Kijaj⁷, Konstantinos Georgiadis¹, Amel Hannachi⁹ and Roberto Danovaro^{2,5}

Mapping and identification of stressors at basin scale

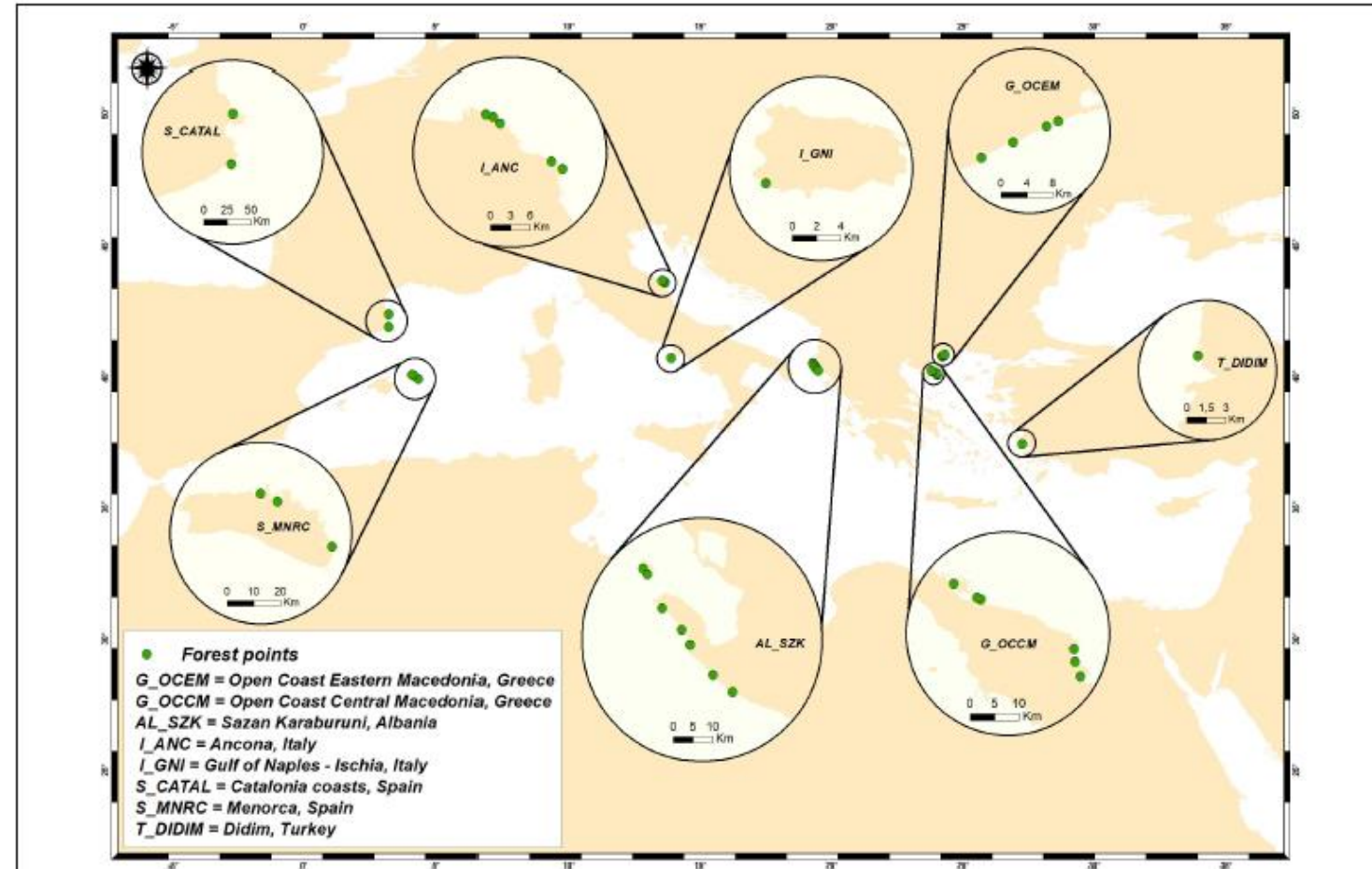


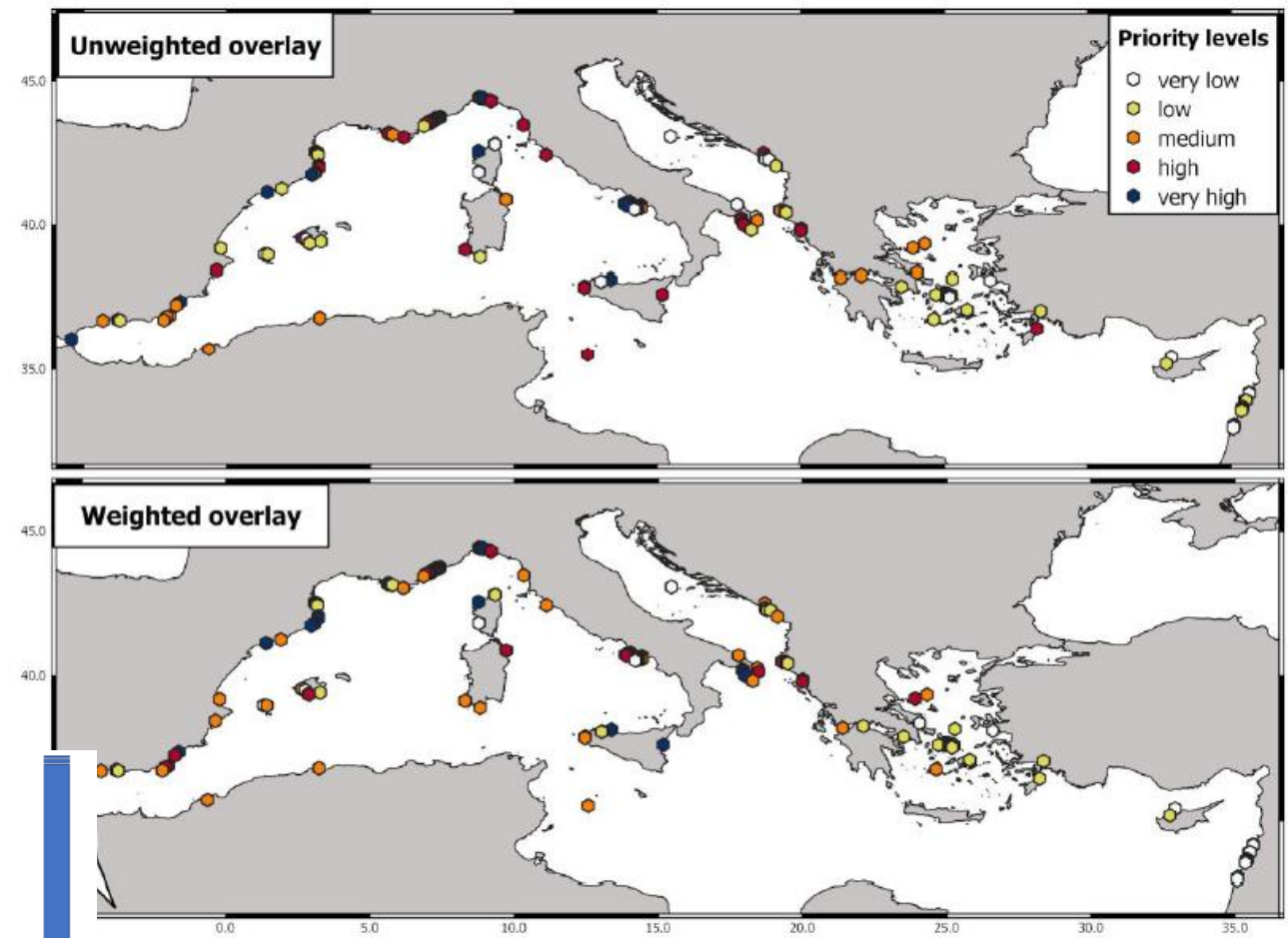
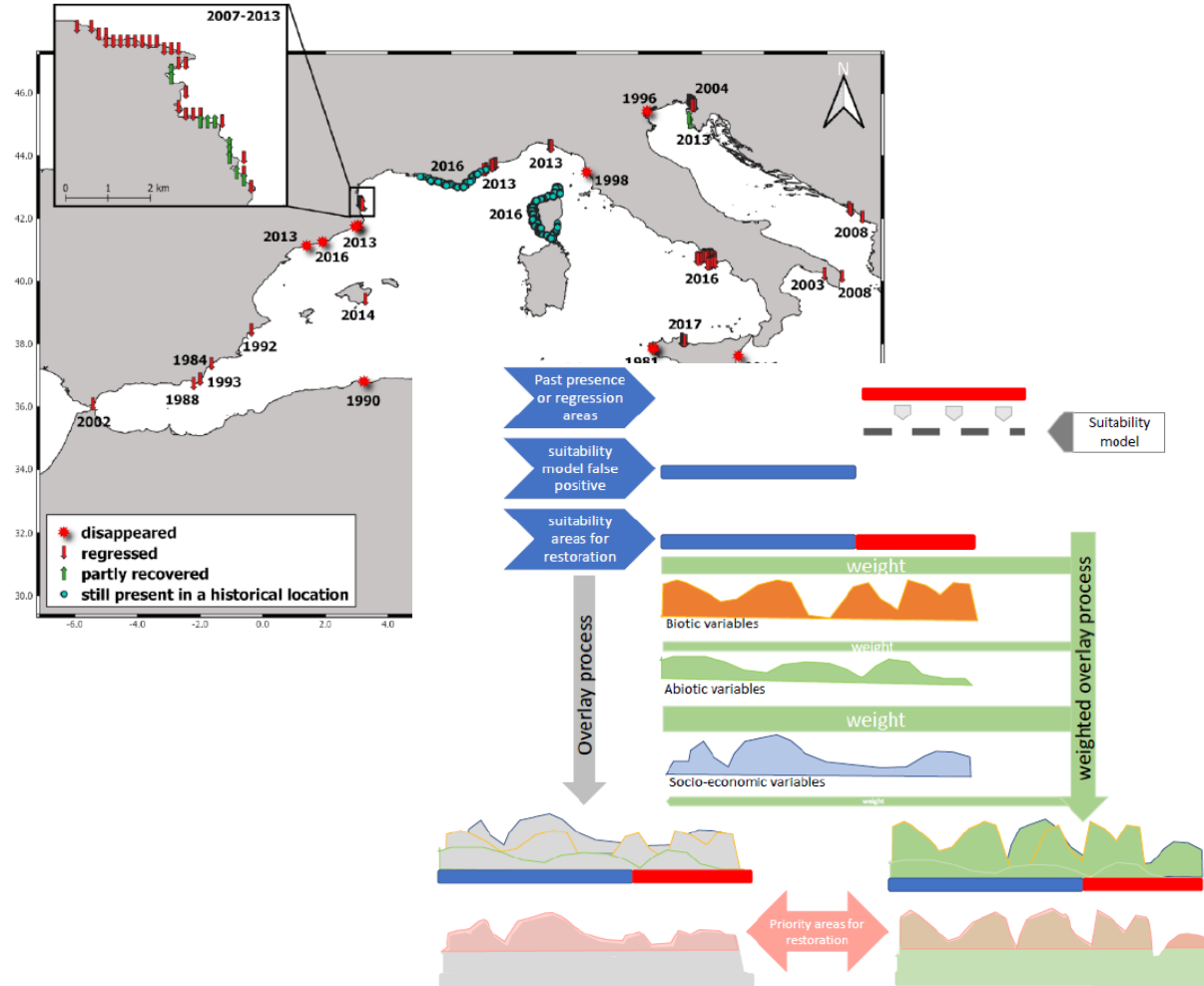
FIGURE 1 | A map of the sampled fucalean seaweed forests in the Mediterranean Sea.

Main results

WP 1

Deliverable 1.3

D1.3: A map detailing the location of the priority areas for the restoration of *Cystoseira* meadows in the Mediterranean



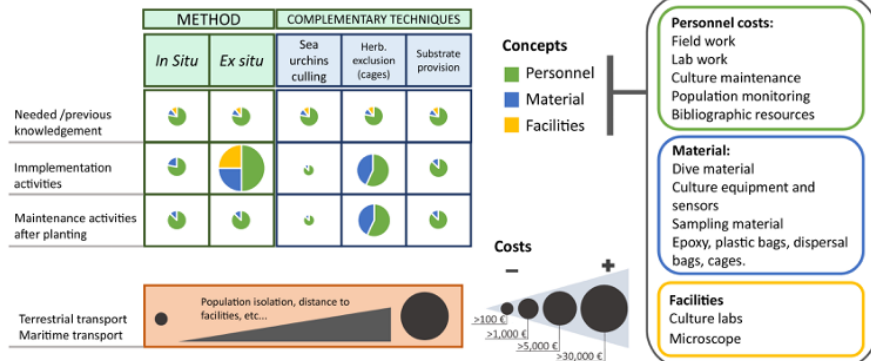
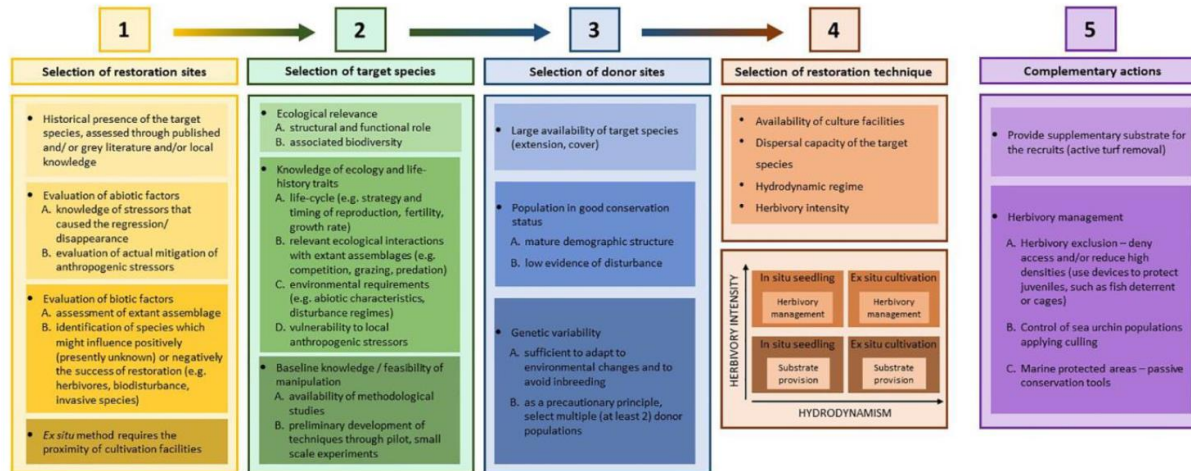
From mapping
to spatial prioritization
at basin scale

Figure 1. The conceptual diagram of the spatial prioritization process.

Main results

A Roadmap for the Restoration of Mediterranean Macroalgal Forests

Emma Cebrian^{1*}, Laura Tamburello², Jana Verdura¹, Giuseppe Guarnieri^{3,4}, Alba Medrano⁵, Cristina Linares⁵, Bernat Hereu⁵, Joaquim Garrabou⁶, Carlo Cerrano⁷, Cristina Galobart¹ and Simonetta Fraschetti^{2,4,8}



Setting approaches and protocols

Main results

Tunisia



Spain, France, Italy,
Albania



Day 0

Spain, Greece
Italy, Albania



Implementation of standardized approaches and protocols (at lab & sea) across Mediterranean

Next step (2022): analyses of drivers of restoration success (as grazing pressure) across Mediterranean through joint experiments

Main results

WP 5

Deliverable 5.2

Deliverable 5.2

Report of the first stakeholder meeting

Stakeholders engagement

- Business Club
- 2nd Stakeholder meeting in May



Best practices

AFRIMED - ALGAL FOREST RESTORATION IN MEDITERRANEAN SEA

SAVE THE DATE

21 APRIL 2021
11:00 - 12:00
(UTC+1)

ADVANCES IN MARINE FORESTS RESTORATION UNDER THE EU PROJECT AFRIMED AND STAKEHOLDER INVOLVEMENT

WEBINAR

This webinar will briefly describe the importance of restoring algal marine forests, the scientific advances realized in the AFRIMED project as much as the efforts of involving all the potential stakeholders of the 7 Mediterranean countries involved in the project, with the aim of raising awareness on the importance of such ecosystems and exploring the potential of creating new business. Advances in marine forests restoration under the EU project AFRIMED and stakeholder involvement.

PRELIMINARY PROGRAM

10:00. Opening (P. Boissery, Agence de l'Eau, F. Bernard, Conservatoire du Littoral).

10:10. Implementing macroalgal forests restoration; new insights and future challenges (overview of AFRIMED project) (R. Danovaro, S. Bianchelli – Polytechnic University of Marche, Italy).

10:25. Challenges of Marine Restoration under the Biodiversity Strategy (S. Fraschetti, Università di Napoli Federico II, Italy).

10:40. Is it possible to recover an extinct forest? Yes, we can! (E. Cebrían, Centre d'Estudis Avançats de Blanes, Spain).

11:00. Context-dependent restoration actions: case studies (L. Mangialajo, Ecoseas, Université Côte d'Azur).

11:15. Stakeholder involvement in restoration: stronger together (N. Papadopoulos, IMBRIW, Hellenic Centre for Marine Research, Greece).

11:30 – 12:00. Discussion

WWW.AFRIMED-PROJECT.EU
WWW.ICO-SOLUTIONS.EU

Restauration des forêts marines et participation des parties prenantes dans le cadre du projet européen AFRIMED

AFRIMED BUSINESS CLUB

The diving activities club (CAP Bizerte) aims to promote underwater sports, social and professional integration through the practice of sport and the conservation of Mediterranean aquatic biodiversity. It's director, **Jebalia Fathi**, was leading several projects of prospecting and biomonitoring of marine biodiversity notably in Bizerte region such as:

- project 1 - "Le Sentier sous marin de Ghar El Melh, un outil de développement durable"
- project 2 - "Les ambassadeurs des fonds marins, suivi de l'état de la biodiversité marine à Bizerte par les jeunes"

JEBALIA FATHI
A DIRECTOR OF DIVING ACTIVITIES CLUB (CAP BIZERTE)

AFRIMED BUSINESS CLUB

Didier Laurent, is the project manager of the Site Natura2000 "Baie et Cap d'Antibes - Îles de Lérins". He is actively promoting marine forests restoration projects, such as the restoration of the Vauban harbour (Cystoseira project) and the research performed by the Université Côte d'Azur (AFRIMED project), actively participating to the field activities.

DIDIER LAURENT
A PROJECT MANAGER INVOLVED IN MARINE FORESTS RESTORATION

NATURA 2000

The site Natura2000 "Baie et Cap d'Antibes - Îles de Lérins" was created in 2006. It covers 12627 ha (98% marine, 2% continental). It is a very important site as it hosts several fucaid species that have been lost in most of the Alpes Maritimes area. The forests present in this site are important at the regional scale and deserve a strengthened conservation strategy.

JOIN THE AFRIMED BUSINESS CLUB
WWW.AFRIMED-PROJECT.EU

JOIN THE AFRIMED BUSINESS CLUB
WWW.AFRIMED-PROJECT.EU

INVESTIGATION ALONG OF BIZERTE COAST

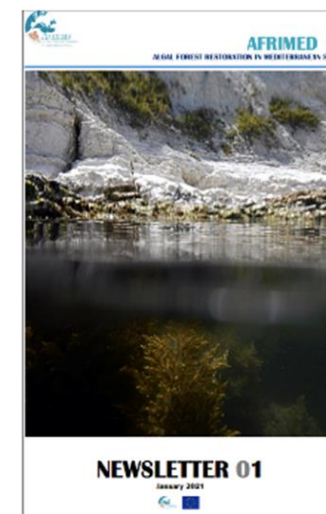
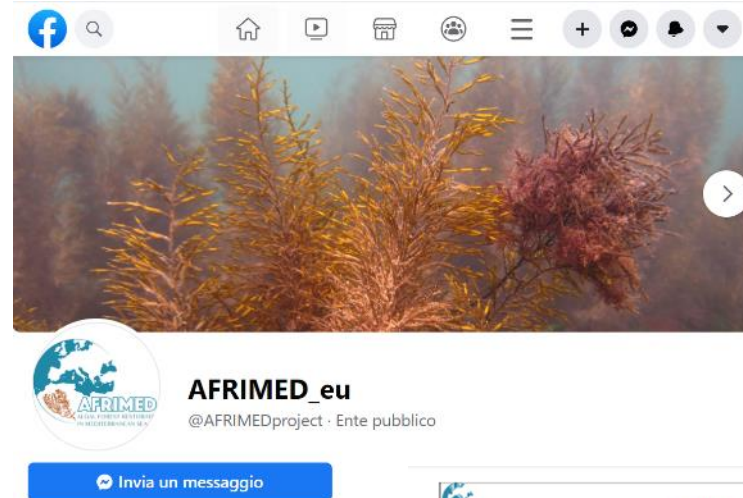
Based on his experience he could contribute to identify the sites and status of Cystoseira species in the region (AFRIMED project). The investigation along of Bizerte coast (North of Tunisia) show the presence of algal belts formed by several species needing protection and conservation, such as:

- Cystoseira sedoides;
- Cystoseira compressa;
- Cystoseira spinosa;
- Cystoseira brachycarpa.

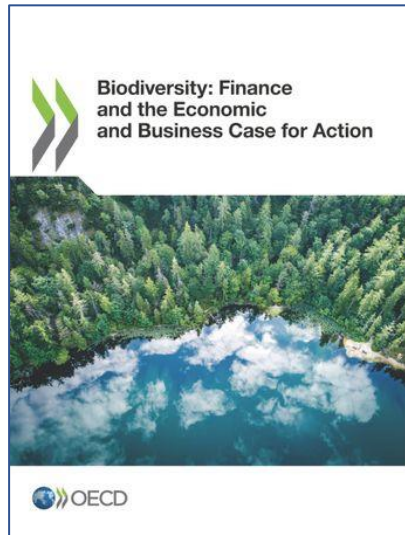
JOIN THE AFRIMED BUSINESS CLUB
WWW.AFRIMED-PROJECT.EU

Raise awareness in the Society

- 2 symposia at World and EU SER Congress
- scientific papers
- link with conservation networks
- e-material, newsletter and factsheet
- documentary on youtube
- social networks
- involvement of young students
- international students exchange
- local events for citizens
- dialogue with EASME-EMFF



OECD: Building the industry of Marine Ecosystems restoration



Home About us Organization Our Research Communication & Outreach Business Club Partners Area Log



The need of Marine Restoration Governance Arrangements



“A linkage between the top-down and the bottom-up restoration governance arrangements is lacking.

*To fill this implementation gap, a **process of institutionalization of restoration governance arrangements at different levels** needs to take place”*



Algal Forest Restoration in MEDiterranean Sea (AFRIMED)



www.afrimed-project.eu



AFRIMED_eu



AFRIMED_eu



afrimed_eu



Afrimed Project



AFRIMED (community)

AFRIMED project has received funding from the Executive Agency for Small and Medium Enterprise (EASME) and European Maritime and Fisheries fund (EMFF) under grant agreement No 789059

This output reflects only the author's view and the European Union cannot be held responsible for any use that may be made of the information contained therein.