



AMAre, Actions for Marine Protected Areas

Fine scale monitoring and shared management strategies to improve marine biodiversity conservation

E. C. La Marca^a, S. Fraissinet^a, G. Guarneri^b, A. Picciolo^{a,c}, L. Rizzo^d, L. Tamburello^a, P. Panayotidis^e, D. Poursanidis^e, V. Vassilopoulou^e, A. Deidun^f, A. Drago^f, E. Fabbrizzi^a, A. Gauci^f, A. García-Rubies^g, E. Macpherson^g, F. Foglini^h, V. Grande^h, S. Fraschettiⁱ.

^a CoNISMa - Consorzio Nazionale Interuniversitario per le Scienze del Mare, Roma

^b DiSTeBA - Department of Biological and Environmental Sciences and Technologies, University of Salento

^c Management consortium of Porto Cesareo MPA

^d Stazione Zoologica Anton Dohrn

^e HCMR- Hellenic Centre for Marine Research

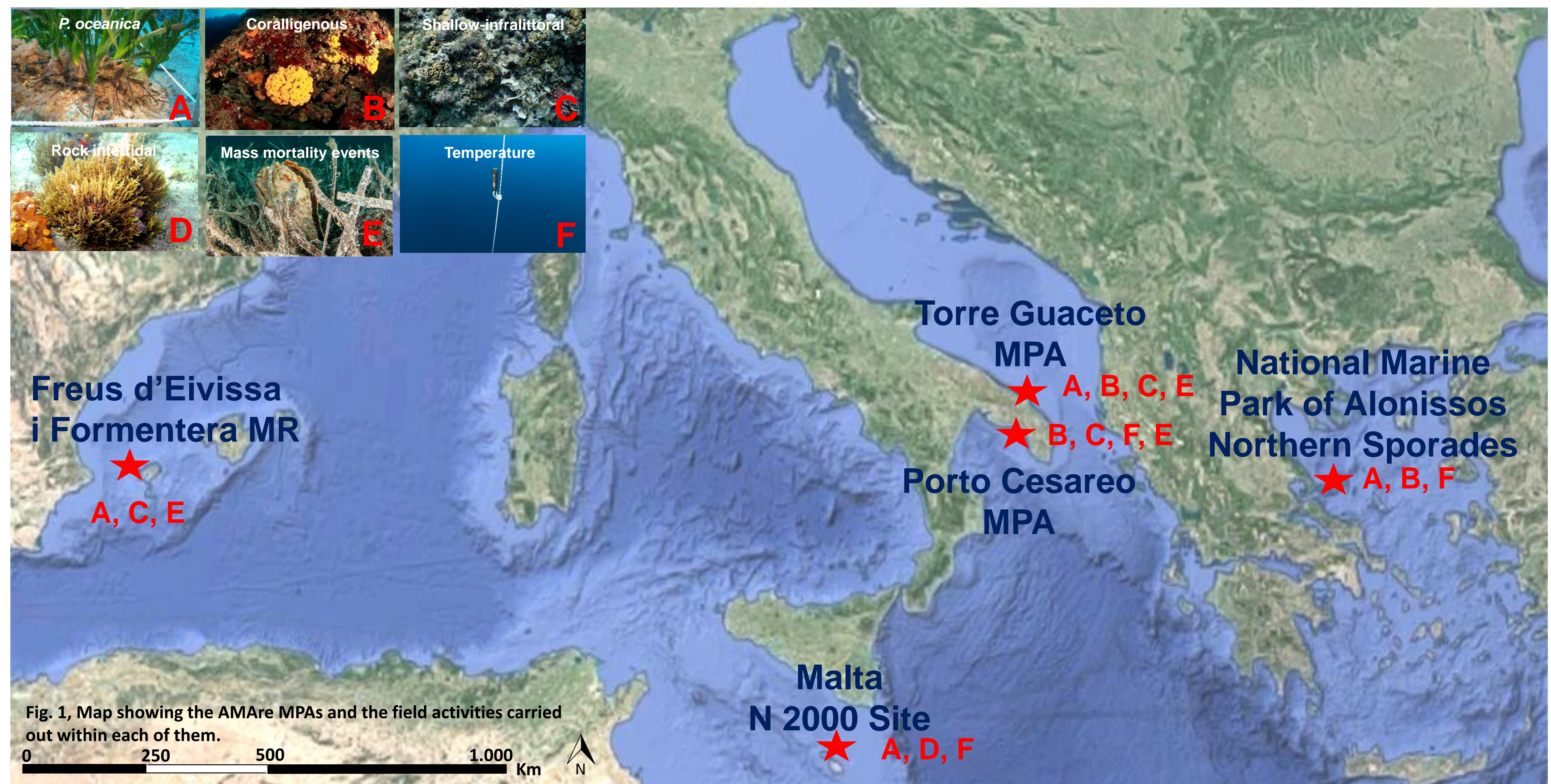
^f Physical Oceanography Research Group, Dept. of Geosciences, University of Malta

^g Centre d'Estudis Avançats de Blanes (CSIC)

^h CNR ISMAR, Bologna

ⁱ Department of Biology, University of Naples Federico II, Naples

One of the objectives of AMAre is to develop shared **monitoring and management strategies** among Mediterranean MPAs, to assess the status of marine biodiversity. Well designed **monitoring** carried out **at fine scale to feed management** is crucial to implement common strategies to support current EU environmental legislation, especially MSFD and MSP. Here, we describe field activities carried out across different habitats in the AMAre MPAs, following a common design (Fig. 1).



FIELD ACTIVITY RESULTS

A: *P. oceanica* shoot density/m² is significantly higher under protection regime compared to external controls in the MPAs included in the project, with the exception of Sporades.

B: Coralligenous quantitative assessment carried out by ROV and visual estimates showed relevant signs of disturbance in Porto Cesareo and Sporades.

C: Shallow-infralittoral assemblages did not show significant differences among protected and unprotected areas.

D: *Cystoseira* spp. map of distribution and abundance has been produced at Malta, including the distribution of human activities along the coast.

E: Mass mortality of *Arca noe* and *Spondylus gaederopus* was found at Formentera. Mortality of *Pinna nobilis* was detected in all MPAs; extensive bleaching of *Cladocora caespitosa*, *Balanophyllia europaea* and *Ircinia variabilis* was registered in the NTZ of Formentera.

F: Temperature record is ongoing across MPAs, following the MPA-ADAPT protocol. The aim is to achieve long term data series collected with the same approach, allowing to detect thermal anomalies to support the understanding of biodiversity changes (e.g. mass mortality events).

PRODUCTION OF JOINT MANAGEMENT PLANS

Common monitoring is necessary for data comparability among MPAs. Fine scale data are critical to support MSP. Results from the fieldwork will be translated into management indicators together with the consideration of the eventual re-distribution of human activities and the identification of new management strategies. Transferring across the AMAre MPAs to other MPAs in the Med with common guidelines and best practices is the goal of the project, to further reinforce the vision of having an MPA network at Mediterranean level.

CONTACTS: <https://amare.interreg-med.eu/>; <https://twitter.com/AMAreMed?lang=it>; simonetta.fraschetti@unina.it