

©Dimitris Poursanidis/FOORTH



The red seastar, *Echinaster sepositus*, is a typical aquatic citizen of rocky habitats.

The Mediterranean Large Marine Ecosystem



©Dimitris Poursanidis/FOORTH

A close encounter with the common octopus, *Octopus vulgaris*.

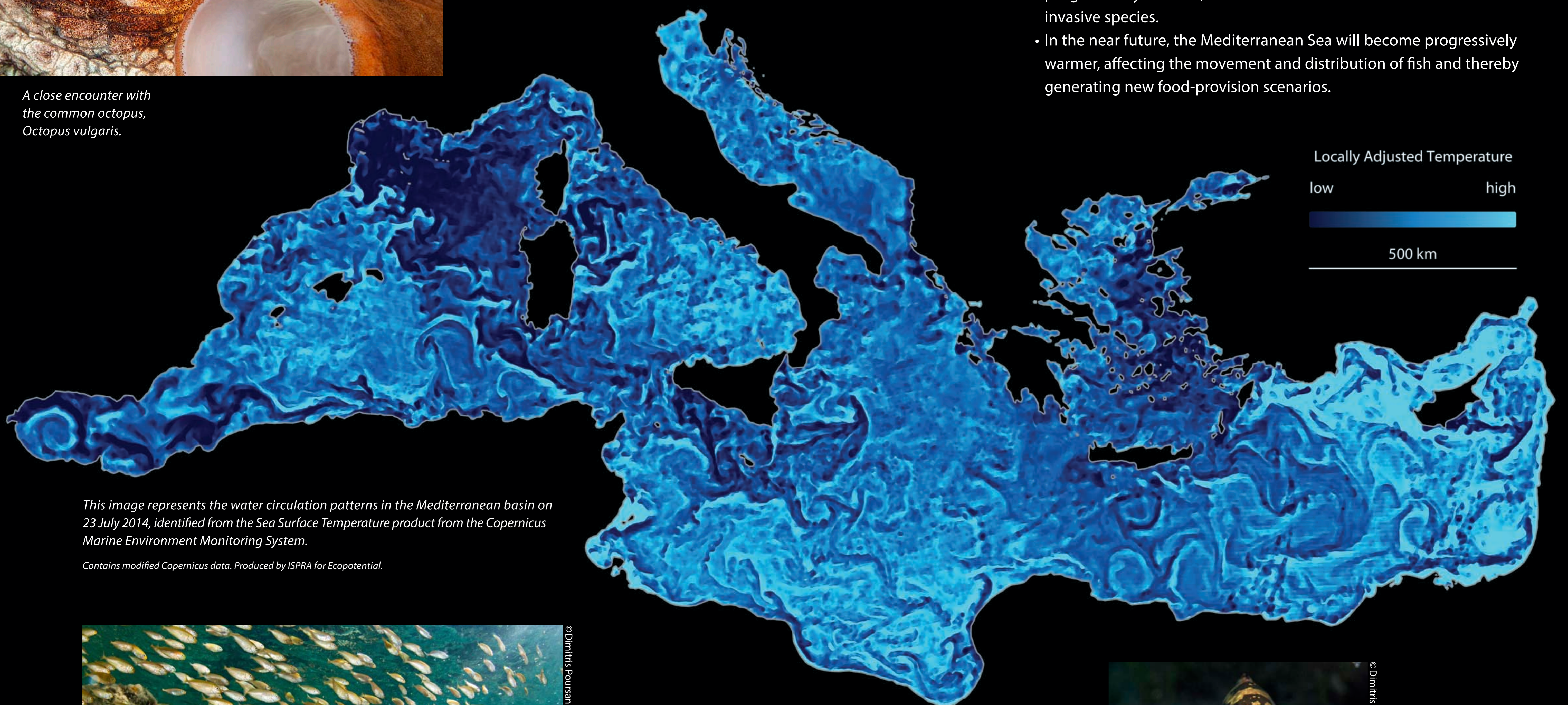
The Mediterranean Sea is a Large Marine Ecosystem and the largest enclosed sea in the world. Its 46,000 km coastline spans many countries across three continents (Europe, Africa and Asia). Rich in marine life and other features, it is estimated to host between 4 per cent and 18 per cent of the planet's macroscopic marine organisms. It provides many valuable goods and ecosystem services to society, including coastal protection, food, tourism, recreational opportunities and many more.

The Mediterranean Sea's fish and other living resources supply the fishery and aquaculture sectors, which may be threatened by human activities, especially under changing climate conditions.

Monitoring seawater conditions is therefore of paramount importance for scientists and the Marine Protected Area managers, who are involved in the conservation of marine natural resources. For example, changes in seawater temperature affect the delivery of ecosystems services such as food provision, as seawater temperature influences the activity and health of fish, including their feeding, reproduction, movement and distribution.

Through the use of Earth Observation (by examining over 12,000 images) and other tools, the ECO-POTENTIAL project team has observed that:

- Over the past few decades, the Mediterranean Sea has become progressively warmer, which has favoured the establishment of invasive species.
- In the near future, the Mediterranean Sea will become progressively warmer, affecting the movement and distribution of fish and thereby generating new food-provision scenarios.



This image represents the water circulation patterns in the Mediterranean basin on 23 July 2014, identified from the Sea Surface Temperature product from the Copernicus Marine Environment Monitoring System.

Contains modified Copernicus data. Produced by ISPRa for Ecopotential.



©Dimitris Poursanidis/FOORTH

A school of juvenile rabbitfish (*Siganus rivulatus*), which is among the 100 worst invasive species in the Mediterranean.



©Dimitris Poursanidis/FOORTH

The European seabass *Dicentrarchus labrax* is harvested in the wild and also successfully farmed in commercial aquaculture.



©Dimitris Poursanidis/FOORTH

The dusky grouper *Epinephelus marginatus* is under pressure due to overfishing.



This project is funded by the European Union