

WHAT IS A VULNERABLE SPECIES?

An animal or plant species is considered vulnerable if its population is in a critical condition. According to the classification of the International Union for Conservation of Nature (IUCN), the categories “**Vulnerable**” (**VU**) indicates more precisely a species whose population has suffered a decline of more than 30% in the last 10 years, whose habitat is negatively impacted by human activities, or, when multiple factors lead to a 10% probability of extinction in the next 100 years. However, there are species with a higher level of risk, which fall into the “**Endangered**” (**EN**) and “**Critically Endangered**” (**CR**) category. All species that fall into these categories are commonly called with the general name of vulnerable species. In the Mediterranean Sea, such categories include all marine mammals, sea turtles, about 30 species of birds and over 100 species of cartilaginous fish, such as sharks, mantas and rays. The **main risks** to these organisms derive from human activities at sea, such as ship traffic, fishing, pollution, hydrocarbon detection and extraction.



THE DAMAGES CAUSED BY MARINE LITTER ARE MANY!

Every minute, **tons of waste** are poured into the sea in various forms: from fishing equipment - mainly nets - to industrial and urban waste, containing harmful substances such as heavy metals, emerging contaminants (medicines and hygiene products), and organic material. All this negatively **changes the balance of ecosystems**. Not to mention the enormous amount of abandoned clothes, accessories and objects, often disposable.



Plastic is the worst enemy of the sea! It is estimated that around **230,000 tons** of plastic waste end up in the Mediterranean every year, releasing hundreds of **harmful chemicals**, such as bisphenol A and phthalates. Unfortunately, some of these materials are considered almost “everlasting” as they remain in the environment for hundreds and hundreds of years, either intact or as **microplastics**. For example, 500 years may not be enough for the degradation of a plastic bottle!

Among the most serious consequences caused by waste dumped at sea, there might be cases of **ingestion** by marine animals and their **trapping** in bags, abandoned nets or ropes. All of this can cause the death of animals! For example, over half of sea turtles found dead have in their stomachs small waste items such as caps, wrapping, fishing lines and hooks and even larger plastic bags.

How to choose which seafood consume?

Prefer **short fish supply chains** and products from **sustainable aquaculture** and **artisanal fishing**. The latter is a seasonal fishing which respects the biological cycle of the species, also thanks to the selectivity of the fishing gear used. You can contribute towards greater sustainability by buying fresh fish from the local market. Avoid buying too often fish subject to intensive fishing and with longer supply chains, such as tuna and swordfish, rich in heavy metals harmful to our bodies. For example, prefer lesser-known species and small-sized **oily fish**, which have a lower impact on the environment and contain a lower concentration of contaminants and a high quantity of good fatty acids such as **omega-3**.



REPORT YOUR SIGHT, BECOME A “SENTINEL OF THE SEA”

If you sight one of those vulnerable species or floating waste, please send a report with video, pictures and other useful information such as date, place, time, number of specimens or waste you spotted:



Scan the QR code and enter the details on the dedicated area of our website www.seamarvel.eu

Send an email to one of the addresses of our researchers' team: clara.monaco@unict.it – me.giarrusso@unict.it

Send a message via our social media platforms “SEA MARVEL Interreg Italia-Malta”



4 R FOLLOW THE 4 R'S RULE

REDUCE

REUSE

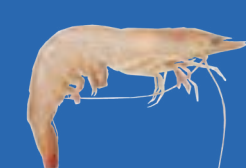
RECYCLE

RECOVER

Do you want to support further the Mediterranean?

Consume also the so-called **alien species**! What are they? They are species of fish, crustaceans and molluscs that have recently **invaded the Mediterranean**, threatening the ecosystems. Some examples with excellent nutritional and organoleptic properties are the atlantic blue crab, the bluespotted cornetfish, and the northern brown shrimp.

Be careful! Not all alien species are edible, only buy those that are regularly and properly labelled.



Northern brown shrimp
Penaeus aztecus



Atlantic blue crab
Callinectes sapidus