Although the 1000m isobath constitutes a somewhat arbitrary limit, scientific studies point to the non-existence of fish populations below 1000m. The view that this depth constitutes a barrier to the migration of fish species is not supported by sound scientific evidences, in the Mediterranean as in other oceanic areas. For example, observations suggest that the Mediterranean sea bed is a nursery for juvenile Mediterranean swordfishes (Xiphias gladius). Furthermore, the proposed deep-sea fishing limitation is supported by sound scientific evidences, in the Mediterranean as in other oceanic areas. For example, observations suggest that the Mediterranean sea bed is a nursery for juvenile Mediterranean swordfishes (Xiphias gladius). Furthermore, the proposed deep-sea fishing limitation is supported by sound scientific evidences, in the Mediterranean as in other oceanic areas. For example, observations suggest that the Mediterranean sea bed is a nursery for juvenile Mediterranean swordfishes (Xiphias gladius). Furthermore, the proposed deep-sea fishing limitation is supported by sound scientific evidences, in the Mediterranean as in other oceanic areas. For example, observations suggest that the Mediterranean sea bed is a nursery for juvenile Mediterranean swordfishes (Xiphias gladius). Furthermore, the proposed deep-sea fishing limitation is supported by sound scientific evidences, in the Mediterranean as in other oceanic areas. For example, observations suggest that the Mediterranean sea bed is a nursery for juvenile Mediterranean swordfishes (Xiphias gladius).
The Mediterranean Sea is a semi-enclosed basin with particular environmental characteristics, such as relatively warm deep-water (around 13°C below 200m depth) and oxygen-rich conditions. It is bounded on the north by the Black Sea, on the south by the Levantine Sea, and on the east by the Adriatic Sea. The Mediterranean is one of the few remaining areas on Earth that is relatively pristine and not yet extensively degraded, which makes it a priority for conservation efforts.

This general ecological setting shows, however, geographical variability and local environmental characteristics, such as relatively warm deep-water (around 13°C below 200m depth), high salinity and high biomass and species richness, including higher diversity and number of endemisms. These habitats are fundamentally different and very fragile environments.

Deep-sea habitats show a strong latitudinal and vertical environmental gradient that has been well-documented by faunistic and floristic surveys. In general, and for the area considered, a dominance of chaetognaths and fish (chiefly vendace and salmon) has been observed with increasing depth, as well as a longitudinal gradient from west to east of abundance of macrobenthos, megafauna and meiofauna.

Submarine canyons
These are the apparently homogenous habitat of soft (mostly) bottom communities, mesoscale variations in structure (e.g. species distribution and function), food web dependencies on rivers, wave energy dissipation and bathymetric effects (e.g. bathymetric effects on demersal fish), and the important exception of high density of the commercial red shrimp.

The Mediterranean deep-sea ecosystem includes cold-water corals. Cold-water coral reefs are benthic marine communities found at abyssal depths (500-6000 m) that are characterized by the presence of cold-water coral taxa, such as Lophelia pertusa and Madrepora oficinalis. These habitats provide unique and diverse ecosystems that support a wide range of marine life, including cold-water corals, sponges, and a variety of other invertebrates and fish species. However, these habitats are under threat from human activities such as fishing, pollution, and climate change.

Deep-sea habitats are vulnerable to a variety of threats, including overfishing, habitat degradation, and climate change. Overfishing is a major threat to deep-sea ecosystems, as many commercially valuable species are harvested at abyssal depths. Habitat degradation can occur due to bottom trawling, which can cause significant damage to the seafloor. Climate change is also a major threat, as it can alter the temperature and oxygen levels of deep-sea habitats, which can affect the distribution and abundance of marine life.

The Mediterranean deep-sea ecosystem is a unique and important part of the global oceanic biodiversity, and its conservation is crucial for the sustainability of marine ecosystems and the services they provide. However, the conservation of deep-sea habitats is challenging, as they are remote and difficult to access, and many of the threats that affect them are not well understood. Therefore, continued research and monitoring of deep-sea ecosystems are essential to ensure their conservation and sustainability.