Lost fishing gears and litter found at Gorringe Bank: a call for conservation

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Evidence of human impact on deep sea confirms the significant threat to its biodiversity that requires urgent action. The most relevant seamounts in the NE Atlantic are within the Portuguese EEZ (and extended continental shelf). These prominent structures, rise from bathyal depths to near surface, and harbour fish stocks with high economic value.

The Gorringe Bank is characterized by an intense maritime traffic from the Mediterranean and Atlantic and threatened by fishing activities. Longlines are commonly used in Portuguese multi-specific fisheries in a wide depth range. The catch composition on Gorringe Bank accounts for a total of 61 fish species and several crustaceans typically associated with rocky outcrops where the risk of losing or damaging the fishing gear is highest. Marine litter was analysed from photo and video imagery obtained during ROV surveys carried out down to 3015 m depth. The high fishing pressure in Gorringe Bank is confirmed by the frequency of lost or discarded fishing gear (cables, longlines and nets), whose effects are direct and immediate (e.g. damaging corals, by-catch), persist over time (e.g. ghost-fishing), but have poorly known long-term impacts.

Data provided by the Portuguese Directorate of Marine Resources (DGRM) showed an intense longline fishery activity in recent years in the Gorringe area, which almost stopped with the economic downturn in 2012. Due to the high value of the fisheries at these seamounts one can expect that, in the absence of further protective legislation, the economic improvement will resume the fishing pressure and subsequent habitat degradation on Gorringe Bank.

Large rocky outcrops on Gorringe Bank support vulnerable marine ecosystems (VMEs) such as coral gardens and sponge aggregations at bathyal depths and coralligenous algae and kelp beds at the summit.

Protection of these seamounts is expected to maintain healthy ecosystems, contributing to fisheries productivity in the region. Under this scope, our work is a powerful tool to support VMEs conservation actions in Gorringe Bank.

FIGURE 1
Examples of lost fishing gears found in the Gorringe Bank.

FIGURE 2
Deep-sea fauna observed during the ROV dives.