{rokbox title=| Technical drawing of the bottom-line deployment system :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-trap-tools-monitoring-valls-2026-thumb-et-al.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-trap-tools-monitoring-valls-2026-et-al.jpg{/rokbox}

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Abstract: The Norway lobster (*Nephrops norvegicus*) and the deep-sea blue and red shrimp (*Aristeus antennatus*
) are among the most valuable fishing resources in the Mediterranean Sea. Both species are caught by bottom trawling, which causes significant ecological disturbance in deep-sea environments. This study investigates the viability of traps as a sustainable alternative for their capture. Experimental trap surveys were conducted in two geographical subareas (GSAs) of the western Mediterranean Sea: one targeting
N. norvegicus
in the GSA 06 at 350-550 m depth, and the other targeting
A. antennatus
in the GSA 05 at 550-850 m. We tested two bottom-line-trap designs and three trap types: for
N. norvegicus
, traps with 12 and 24 mm diamond mesh nets, and for
A. antennatus
, including also semi-floating traps with 24 mm diamond mesh. Traps were effective for
N. norvegicus
, particularly using 12 mm traps, although the finest mesh sizes increased bycatch of smaller individuals. In contrast,
A. antennatus
was not captured, potentially due to species-specific behavioural and operational constraints. Other commercial species, such as
Plesionika spp.
, were effectively caught. Although traps are not a fully viable alternative to trawling, our findings highlight their potential as selective tools for research and monitoring in sensitive deep-sea habitats.

Keywords: Trap, deep-sea, *Nephrops norvegicus*, *Aristeus antennatus*, sustainable, fishery.