# Discards from a deep-sea shrimp fishery in Angolan waters (SW Africa)

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A programme of observers on board Spanish shrimp trawlers in Angola was initiated by IEO in 2018 in order to improve the scientific information required by Sustainable Management of External Fishing Fleets (SMEFF Regulation of the EU). In this context, discard studies are considered very relevant, both for assessment purposes and for obtaining information on adverse ecological impacts in marine ecosystems.

Most fishing hauls performed during the observed period November 2018 to December 2019 were carried out at depths between 384 and 649 m, with classic bottom otter trawl targeting the striped red shrimp *Aristeus varidens*. Discards accounted for 60% of the total catch during the analysed period.
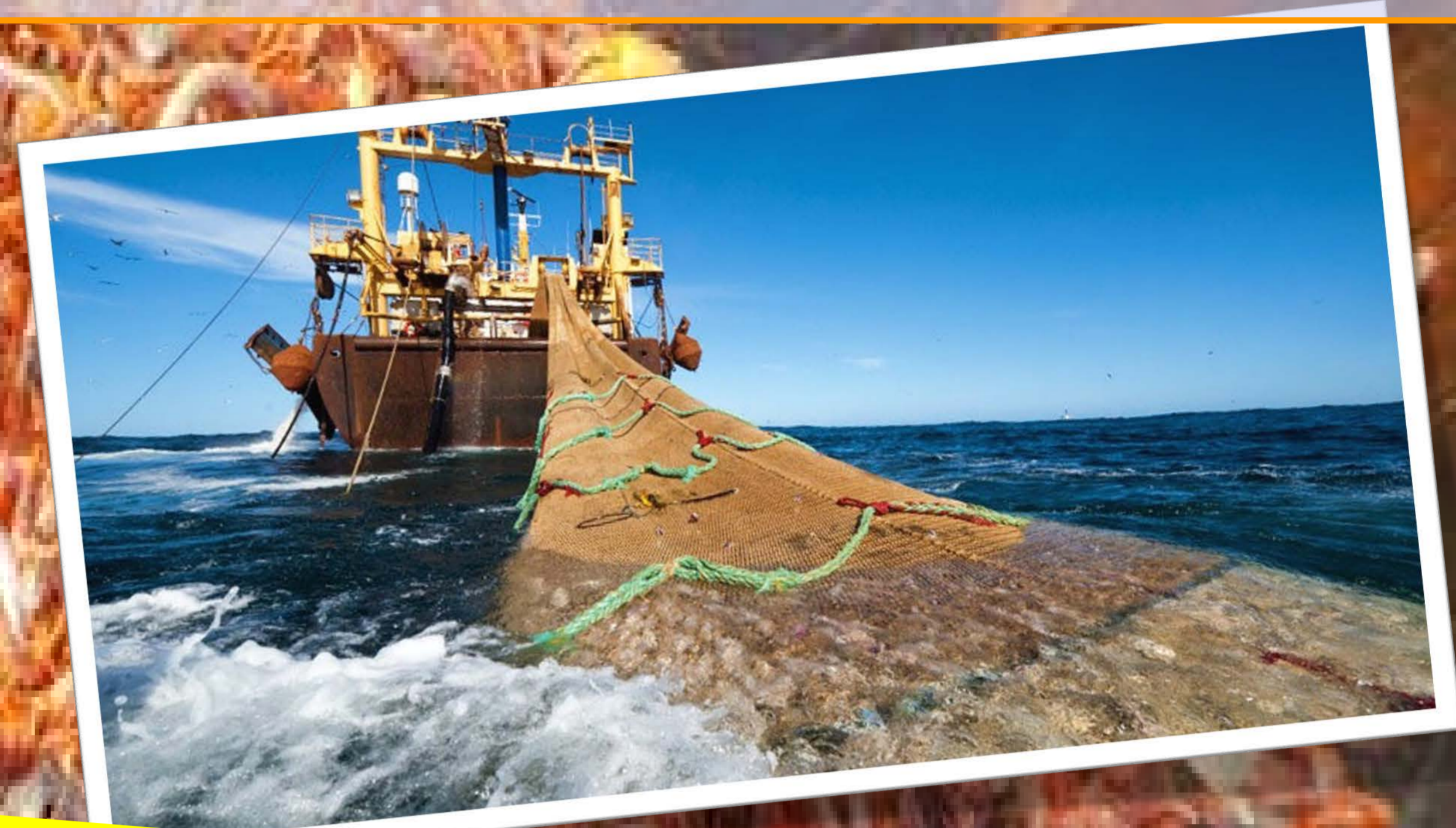
The estimated global discard rate for 2019 (2.2 discard/retained catch) indicates that 1915 tonnes of retained catch produced 4213 tonnes of discards, of which a small amount is of commercial species, as *A. varidens* (3.8 tonnes) and *Merluccius polli* (153 tonnes).

Aristeus varidens

Merluccius polli

A total of 131 discarded species were identified, with the highest group contribution being fish (70%), followed by crustaceans (20%). The most abundant species in discard weight were *Ariomma melanum*, *Lamprogrammus exutus*, *Chaunax pictus*, *Centroscymnus owstonii*, *Hoplostethus cadenati*, *Lophius vaillanti*, *Yarrella blackfordi* and *Ariomma bondi* (all together accounting for 55% of discards). The most frequent species were *H. cadenati* and *L. exutus*, discarded in 95% of the analysed fishing hauls.

Ariomma melanum

Lamprogrammus exutus

Chaunax pictus

Centroscymnus owstonii

Ariomma melanum (11%)
Lamprogrammus exutus (9%)
Chaunax pictus (7%)
Centroscymnus owstonii (7%)
Hoplostethus cadenati (6%)
Lophius vaillanti (6%)
Yarrella blackfordi (5%)
Ariomma bondi (5%)
Nezumia aequalis (4%)
Merluccius polli (4%)
Malacocephalus laevis (3%)
Schedophilus sp (3%)
Laemonema laureysi (2%)
Bathyuroconger vicinus (2%)
Malacocephalus occidentalis (2%)
Chlorophthalmus agassizi (2%)
Synagrops microlepis (2%)

Coelorinchus caelorhincus (2%)
Stereomastis sculpta (1%)
Illex coindetii (1%)
Gadella maraldi (1%)
Benthodesmus simonyi (1%)
Neoharriotta pinnata (1%)
Rajella sp (1%)
Coloconger cadenati (1%)
Maja sp (1%)
Nematocarcinus africanus (1%)
Dasyatis marmorata (1%)
Dasyatis pastinaca (1%)
Polycheles typhlops (1%)
Centrophorus granulosus (1%)
Halosaurus sp (1%)
Etmopterus pusillus (1%)
Other (8%)

Hoplostethus cadenati

Lophius vaillanti

Yarrella blackfordi

Ariomma bondi

Discards estimations of commercial species obtained through a long-term observers program might result in improving the assessments of main commercial species from Angolan deep sea waters.

➢ Reglamento (UE) 2017/2403 del Parlamento Europeo y del Consejo sobre la gestión sostenible de las flotas pesqueras exteriores (UE, 2017).
➢ García-Isarch, E., Z. Romero, V. Duque-Nogal, D. de Santos y P. Expósito. 2018a. Información biológica y pesquera obtenida en las campañas de observación científica a bordo de la flota marisquera española en aguas de la ZEE de Guinea-Bissau (Marzo 2015-Febrero 2018). Informe Técnico del Instituto Español de Oceanografía (IEO). Abril 2018. 107 pp.