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**At-vessel mortality and post-release survival of deep-water sharks: insights from the Azores hook-and-line fisheries.**

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A wide diversity of elasmobranch occurs in the Azores, a Portuguese archipelago located by the Mid-Atlantic Ridge. Subject to a commercial fishery for their liver oil until the late 90s, declines in species abundance has led the EU to progressively implement and strengthen catch limits of deep-water sharks, until a TAC 0 was set in 2010. Nowadays, deep-water sharks are still occasionally taken as bycatch of the deep-sea longline fisheries in the Azores. This bycatch, beside constituting a conservation concern, could turn into a consequent socio-economic problem with the upcoming implementation of the Landing Obligation, as deep-water sharks could rapidly choke those fisheries. Several potential mitigation measures are under study.

This talk will focus on the work that has been undertaken in close collaboration with stakeholders to study survivability of deep-water sharks. Fish condition and vitality upon release was documented onboard commercial longliners by an observer programme carried out in 2017. Some fishing experiments were further carried out onboard a commercial fishing vessel to test how circle hooks (vs J-hook used in the fishery) affect shark catchability, at-vessel vitality and condition. Post-release survival was assessed through telemetry experiments using acoustic and satellite tags. Results suggest that there is high potential for survival for most species of deep-water sharks, but that it requires cautious handling onboard. A manual and posters to display onboard fishing vessels have been developed to help fishers easily identify deep-water shark species along with best handling practices to increase potential of post-release survival.

Keywords: longline bycatch, deep-water sharks, survivability, onboard handling, stakeholder involvement

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