

The Emerging Multi-Species Trap Fishery in the Red Sea Waters of Saudi Arabia

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Abstract : Saudi Arabia has a long history of using traps as a traditional fishing gear for catching commercially important demersal, mainly coral reef-associated fish species. Fish traps constitute the dominant small-scale fisheries in Saudi waters of Arabian Gulf (eastern seaboard of Saudi Arabia). Recently, however, traps have been increasingly used along the Saudi Red Sea coast (western seaboard), with a coastline of 1800 km (71%) compared to only 720 km (29%) in the Saudi Gulf region. The production trend for traps indicates a recent increase in catches and percent contribution to traditional fishery landings, thus ascertaining the rapid proliferation of trap fishing along the Saudi Red Sea coast. Reef-associated fish species, mainly groupers (Serranidae), emperors (Lethrinidae), parrotfishes (Scaridae), scads and trevallies (Carangidae), and snappers (Lutjanidae), dominate the trap catches, reflecting the reef-dominated shelf zone in the Red Sea. This ongoing investigation covers following major objectives (i) Baseline studies to characterize trap fishery through landing site visit and interview surveys (ii) Stock assessment by fisheries and biological data obtained through monthly landing site monitoring using fishery operational model by FLBEIA, (iii) Operational impacts, derelict traps assessment and by-catch analysis through bottom-mounted video camera and onboard monitoring (iv) Elucidation of fishing grounds and derelict traps impacts by onboard monitoring, Remotely Operated Underwater Vehicle and Autonomous Underwater Vehicle surveys; and (v) Analysis of gear design and operations which covers colonization and deterioration experiments. The progress of this investigation on the impacts of the trap fishery on fish stocks and the marine environment in the Saudi Red Sea region is presented.

Keywords : red sea, Saudi Arabia, fish trap, stock assessment, environmental impacts

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