Delivering on-ground support to the commercial crab pot fishery (Queensland)

OceanWatch Australia has recently acquired funding through the Australian Government's 'Envirofund' grant scheme to set up a BRD (Bycatch Reduction Device) library.

The BRD library will provide commercial fishers nationally with the latest bycatch reduction devices and equipment to trial. This will further fishers' understanding and acceptance through valuable first hand experience of these new or modified devices, before they purchase or modify their existing gear.

As part of this funding, commercial crab pot fishers in Moreton Bay will be trialling a modification of an existing crab pot design, which aims to minimise interactions with threatened, endangered and protected species, mainly sea turtles. The modified crab pot also meets the corrective actions that are outlined in an Environmental Management System (EMS) risk assessment that is currently being developed by the commercial crab pot fishers of Moreton Bay.

Bruce Sutton, a commercial crab pot fisher based at Bribie Island designed the modifications, and with assistance from Michael Wooden, OceanWatch Australia's South-east Queensland SeaNet officer, 40 of the turtle smart crab pots have been constructed for distribution and trialling in the commercial sector. A total of 8 fishermen per month can utilise this service, with the first month already pre-booked by interested Moreton Bay crab fishers.

South-east Queensland SeaNet Officer, Michael Wooden delivering the turtle smart crab pots to commercial crab pot fisher, Ian Mackenzie who is based at Wynnum/Manly.

The variation to the existing pot design includes the insertion of two additional steel rings. The inclusion of the rings to the pot reduces the damage caused through sea turtles predating on the captured crab and bait bags within the pot. Anecdotal evidence provided by commercial fishers, indicates turtle interactions can be a problem with fishing operations, with gear damage and loss of captured crabs. The inclusion of a centralised heavy twine divider in the entry funnels of the crab pot prevents sea turtles from entering and therefore reduces the potential of mortality through entrapment.

Another problematic component of the crab pot gear is the rope which attaches the pot to the surface float. Sea turtles have been known to become entangled in this rope, mainly due to it being loose and floating on the surface. Proactive commercial operators are currently trialling a number of rope types in combination with the turtle-smart crab pot. These include: lead core and sink rope which are negatively or neutrally buoyant, respectively. These types of rope aim to minimise surface entanglements with sea turtles, and also reduce the instance of float lines being cut-off, consequently minimising the possibility of ghost fishing.

Ghost-fishing is the process whereby lost or displaced gear continues to capture fish, crustaceans and other marine organisms, resulting in un-accounted mortality and removal of species from overall stock biomass. Unbaited pots may also attract moulting crabs seeking refuge from predators when they shed their shells. These derelict pots have also been described as potentially interfering with the effectiveness of active pots.

To combat these issues, commercial fishers use bio-degradable components on their crab pots, hence ensuring if a pot is lost to ghost fishing it will disintegrate after a given period of time. Without these components, pots may continue to catch for several months, even years. The use of bio-degradable components is a proactive solution by fishers to the ghost fishing problem.

Commercial fishers have been discussing the issue of lost or derelict pots with OceanWatch Australia staff and with the help of the Queensland Seafood Industry Association, the Moreton Bay Seafood Industry Association and the Moreton Bay Access Alliance members, plans to remove derelict pots from Moreton Bay are being established. It is essential that all crab pots are effectively marked with name and contact details, so they are not removed during the clean up.

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