Sudden ban on fish throwbacks could harm ecosystems – researchers

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Sea birds, dolphins, crabs and sharks are among the species that could suffer if commercial fishers abruptly stopped discarding their unwanted catches, research shows.

An international study led by The University of Queensland has found that a gradual reduction – over two decades or more – in the practice is the best way to allow a marine ecosystem to recover its natural balance.

Esther Fondo, a PhD student and the study's lead author, said a range of predator species were reliant on discarded fish – dead and alive – as a food source.

"Human activity – including rubbish dumping, game hunters discarding carcasses, and commercial fishing – returns more than seven million tonnes of discarded fish to the sea each year," said Ms Fondo, of UQ's School of Biological Sciences.

"This has significant negative impacts on the marine environment. It increases scavenger species populations to excessive levels, disrupts ecosystems and places some species at increased risk of predation.

"We looked at two scenarios—drastic and gradual banning of discards – using data from Moreton Bay near Brisbane, Australia, which is a popular site for prawn trawling," Ms Fondo said.

"Ecological modelling software simulated complex food web

interactions and showed that both gradual and abrupt removal of fish discards decreased the survival of scavenger species and changed the ecosystem.

"Scavengers were able to switch to their natural prey when discards were reduced gradually over a 20-year period, but predator numbers declined when discards were abruptly banned."

Ms Fondo said the researchers recommended "gradual reduction of food discards to a minimal level".

"This would maintain the ecosystem's stability and allow species exploiting food discards to adjust to reduced food subsidies," she said.

MS Fondo said the research was timely, as the European Union was introducing methods to improve sustainability of its fisheries, including a commitment to extend the number of fish species included in the discarding ban.

Fishing discard bans currently are not being considered in Australia.

Ms Fondo said the next step in the research would be to extend computer modelling to marine ecosystems in a number of different countries.

Provided by University of Queensland

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