

# Science for Environment Policy

## A bird's eye view of fishery discard reforms

**Reforms to reduce** discards of over-quota fish catches are generally predicted to have positive effects on marine ecosystems and biodiversity. Although concerns have been raised over the impacts of the changes on scavenging seabirds who feed upon discarded fish, new research on gannets indicates that, while they often forage near fishing vessels, more than half their time is spent foraging 'naturally' in the open sea.

**Vast amounts of fish** are discarded by commercial fishing boats, roughly 7.3 million tonnes per year worldwide, either in the form of unwanted guts or catch that has exceeded quotas. The reforms to the EU's Common Fisheries Policy<sup>1</sup> to reduce discards are therefore essential to sustainable fisheries management. Little is known, however, about how seabirds will be affected by the reduction of such an abundant source of food.

The study, partly-funded by the EU<sup>2</sup>, explored whether scavenging seabirds have become completely reliant on fisheries discards, or whether they will continue to hunt for naturally-occurring prey. The researchers focused on Northern gannets habitating an island off the west coast of Britain. This is a wide-ranging seabird that is known to feed on discards from fishing boats. To gather accurate data on feeding trips, the researchers attached miniature cameras and a GPS logger to 10 birds.

The camera, fitted to the tail of each bird, recorded pictures to allow researchers to identify the presence of fishing vessels, and the GPS logger recorded the exact location of the bird. Both devices recorded data every minute. Searching behaviour, indicated by the movements of the birds, was used to identify trips searching for food, or 'foraging bouts'.

The results revealed that 42% of the birds' active foraging bouts occurred when a fishing vessel was present. The results also suggested a difference between male and female birds, with males more likely to forage near fishing vessels (80% of foraging bouts) than females (30%). However, the researchers do point out that the number of birds they studied was very small, so it is difficult to draw firm conclusions about this.

Overall, the fact that 58% of foraging bouts were not associated with fishing vessels suggests that gannets may be able to switch to naturally-occurring prey under a discard ban. However, the study cautions that this switch will only be successful if there is enough natural prey available, and removing discards as a source of food could have an impact on gannets. Males could be particularly affected if the patterns observed among these 10 birds are true for the wider population.

The study recommends an ecosystem-based approach to fisheries management, which takes account of all aspects of the ecosystem. This approach ensures that a range of impacts of different policies are fully understood. The researchers also highlight the value of their method to record illegal and unregulated fishing, which is extremely difficult to monitor.



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[www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0057376](http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0057376)

**Contact:**

[stephen.votier@plymouth.ac.uk](mailto:stephen.votier@plymouth.ac.uk)

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1. [http://ec.europa.eu/fisheries/ref orm/index\\_en.htm](http://ec.europa.eu/fisheries/ref orm/index_en.htm)

2. This study was partly funded by the EU under the INTERREG project CHARM-III (Channel Integrated Approach for Marine Resource Management-III). See: [www.charm-project.org/en/](http://www.charm-project.org/en/)