

Scotland's first marine reserve already producing benefits

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Scotland's first fully protected marine reserve, and only the second in the UK, is already providing commercial and conservation benefits, according to new research.

After only two years in operation, it is already showing positive signs for both [fishermen](#) and [conservationists](#), according to a study by the University of York and the Community of Arran Seabed Trust (COAST).

The research, published in the journal [Marine Biology](#), shows that commercially valuable scallops and several species of [algae](#) known to promote biodiversity are much more abundant in the marine reserve, where fishing is banned, than in surrounding waters.

The study follows years of campaigning by COAST, whose efforts helped to turn a small area of seabed in Lamlash Bay, Isle of Arran into a marine reserve in October 2008. Many marine reserves are being developed in Europe and around the world, where they are showing a range of benefits. These areas of sea are protected from fishing and other extractive activities, allowing [natural ecosystems](#) to recover and flourish.

Lead author of the study, Leigh Howarth, who carried out the research during his MSc degree in the Environment Department at York, said: "[Marine ecosystems](#) can continue to recover for decades when protected inside reserves, the reason this study is so exciting is because this is just

the beginning".

One of the most significant findings of the work was that the abundance of juvenile scallops was much higher in the reserve than outside. This was linked to the high levels of kelp and maerl, a type of algae that forms coral-like beds, inside the reserve where adult scallops were also larger and older. As stocks of scallops build up in marine reserves they can start to breed at high levels, helping to seed surrounding fishing grounds.

Dr Bryce Beukers-Stewart, who supervised the project, added "It is brilliant that our results have provided a win-win scenario. Marine reserves like this can benefit both fishermen and conservationists."

Although scallops are not widely consumed in the UK, they are currently our third most valuable seafood species, worth almost £50 million in 2009. However, dredging for them can severely damage some sensitive [seabed](#) habitats.

The marine reserve at Arran is small, but highly significant. The UK and Scottish governments have recently passed Marine Acts, which will fundamentally change the management of our seas. Part of this process will involve setting up networks of marine protected areas around the UK coast, some of which will be fully protected marine reserves similar to the one off Arran.

Dr Beukers-Stewart added: "Despite some scepticism in the UK fishing industry about [marine reserves](#) due to their being largely untested in our waters, the work at Arran provides some very positive and timely evidence about their potential."

COAST chair Howard Wood explained: "The University of York's partnership with COAST is a highly progressive collaboration, because it

provides meaningful research for a vital policy area."

But he added: "Without political will for genuinely changing the management of our seas it doesn't matter how many scientific papers are published. We hope the Scottish Government will take this study seriously."

Staff in the Environment Department at the University of York have supported the campaign and work of COAST for many years and the Department has also secured funding to continue monitoring the Arran marine reserve for a further three years.

Provided by University of York

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