

Impact of renewable energy on our oceans must be investigated, say scientists

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Dolphin. Photo: Dr Matthew Witt, University of Exeter.

Scientists from the Universities of Exeter and Plymouth are today calling for urgent research to understand the impact of renewable energy developments on marine life. The study, now published in the *Journal of Applied Ecology*, highlights potential environmental benefits and threats resulting from marine renewable energy, such as off-shore wind farms and wave and tidal energy conversion devices.

The research highlights the capacity for marine [renewable energy](#) devices to boost local biodiversity and benefit the wider marine environment. Man-made structures on the sea bed attract many marine organisms and sometimes become 'artificial reefs', for example, supporting a wide variety of fish. The study also points out that such devices could have negative environmental impacts, resulting from habitat loss, collision risks, noise and electromagnetic fields.

The study highlights the gaps in our understanding of the effects of marine renewable energy devices on the health of our oceans. The team calls for more research to improve our understanding of these threats and opportunities. The researchers also stress the importance of considering the impact on marine life when selecting locations for the installation of marine energy devices.

Corresponding author Dr Brendan Godley of the University of Exeter said: "Marine renewable energy is hugely exciting and it is vital that we explore the potential for it to provide a clean and [sustainable energy](#) source. However, to date research into the impact of marine renewable energy on sea life has been very limited. . Our study highlights the urgent need for more research into the impacts of marine renewable energy on marine life. This will involve biologists, engineers and policy-makers working together to ensure we really understand the risks and opportunities for marine life."

Professor Martin Attrill, Director of the University of Plymouth Marine Institute said: "Our paper highlights the need to take a fresh look at the effect marine renewable energy generation has on the environment if we are to deliver a higher proportion of energy from renewable sources and start to combat climate change. We need to have the industry working directly with conservation bodies to plan the next phase of development. We suggest further research could demonstrate the potential of security zones around, for example, wave farms to act as Marine Protected Areas. Therefore, if all stakeholders can work together in a coordinated way we can possibly address two key issues - combating climate change and creating a network of MPAs. We need the research on [environmental impact](#) to help move the whole field forward."

More information: R. Inger et al. (2009) Marine renewable energy: potential benefits to biodiversity? An urgent call for research. [Journal of Applied Ecology DOI: 10.1111/j.1365-2664.2009.01697.x](#) ; Published

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