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### **Scientists assess effects of offshore wind farm construction** [by Amanda Scott](#) *Staff writer*

A group of scientists from the United States and the United Kingdom are assessing the potential effects of construction noise from offshore wind farms on marine species.

The eight scientists, including Helen Bailey from the University of Maryland Center for Environmental Science Chesapeake Biological Laboratory in Solomons, developed a method to assess the potential effects of offshore wind farm construction noise on marine mammal populations, particularly the noise generated while driving piles into the seabed to install wind turbine foundations.

"Pile-driving during the construction of offshore wind farms produces an incredible amount of noise," Bailey said in a UMCES statement. "This is potentially harmful to marine species and has been of greatest concern to marine mammal species such as protected populations of seals, dolphins and whales."

On Tuesday, Bailey said the research she focused on was how offshore wind farm construction would affect harbor seals on a population level during a long period of time. The team looked at the worst case scenario, she said, and used their expert judgment and population models to determine what the effects would be.

The research, according to the release, is based on ongoing construction in and around the North Sea (located between Great Britain, Scandinavia, Germany, the Netherlands, Belgium and France), where many proposed wind farm sites are on submerged offshore sandbanks — marine mammals' and seabirds' habitats.

In a statement, Paul Thompson of the University of Aberdeen, the study's lead author, said, "Our framework takes a worst case assessment of the short term impacts of noise and how these may influence longer term population change, thereby providing information that allows regulators to balance their efforts to meet both climate change targets and existing environmental legislation."

During the interview Tuesday, Bailey said, "Even when we take a worst-case scenario, the impacts are relatively short term," such as a slight decrease in harbor seal reproduction, "but it would be able to recover fairly quickly."

In the past, research and attention has focused on the potential effect wind farms could have on birds, but this "new work" looks at how to assess the potential long-term effect on marine life, especially harbor seals, the release states.

Bailey said Tuesday a lot of the existing research also focuses on the number of marine animals that have been or are expected to be killed during offshore wind farm construction, "but we're hoping that there really shouldn't be any that are killed, but there may be these non-lethal effects," such as population migration, reproduction, altering the food chain and competition.

The results of the study, Bailey said, aren't transferrable to other species, but the model for determining the effects could be used for other species.

"In the United States," the release states, "this type of assessment could be applied to wind turbine construction that may impact a number of endangered species, including the North Atlantic right whale, the humpback whale and the fin whale."

While no offshore wind farms currently are planned off Maryland's coast, earlier this year, Gov. Martin O'Malley (D) signed the Maryland Offshore Wind Energy Act of 2013 into law. The law, according to the Office of the Governor website, incentivizes the development of up to 500 megawatts of offshore wind capacity at least 10 nautical miles off Maryland's coast. A range of 40 to 70 turbines have been proposed to the east of Maryland's shoreline, according to the governor's office website.

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