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With ocean warming, wild seaweed stocks risk collapse without protection, experts warn

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By Responsible Seafood Advocate

Wild seaweed can't take the heat from ocean warming, experts say

A group of world-leading seaweed scientists has warned that global wild stocks are at risk of disappearing unless urgent international protection measures are implemented.

In a **policy brief** (<https://cris.unu.edu/thefutureofourseaweedindustries>) published by the United Nations University's Institute for Comparative Regional Integration Studies (UNU-CRIS), the research team highlights the significant reduction in native seaweeds in South-East Asia, where the seaweed industry supports millions of livelihoods.

The policy brief points to pest and disease outbreaks, which stem from climate change and over-harvesting, as the main causes of the decline in wild stocks. It calls for seaweeds to have the same protection status as other threatened marine features, such as coral reefs and mangroves.

"The world's wild stock of seaweed is not in a good state of health," said Elizabeth Cottier-Cook, the report's lead author and professor at the Scottish Association for Marine Science (SAMS) in Oban. "Our



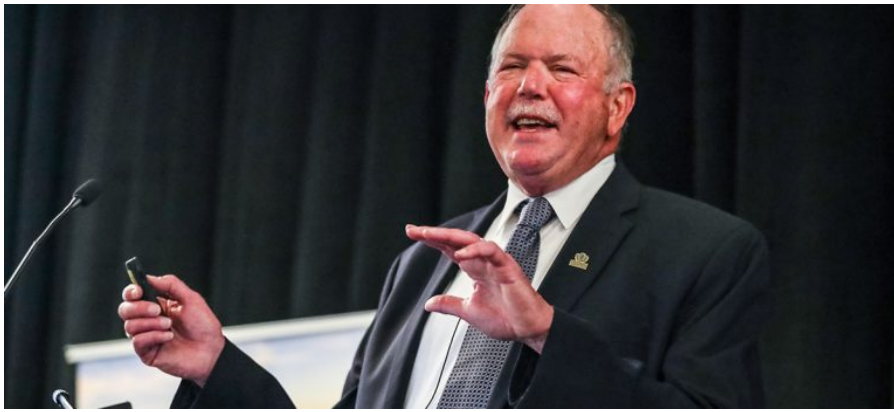
Divers harvest wild seaweed in Malaysia. Photo courtesy of Scottish Association for Marine Science.

seas – particularly in coastal areas where seaweed grows – are warming up and put simply, many seaweed species are unable to stand the heat.”



(<http://www.expalsa.com/>).

Demand for farmed seaweeds has grown exponentially over the past 50 years, as the seaweed industry has expanded to produce a wide variety of products, including food, animal feed and pharmaceuticals. The sector now accounts for more than 50 percent of total global marine production, which in 2019 equated to roughly 35 million tons with a value estimated at (U.S.) \$14.7 billion.



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Wild stocks provide the genetic diversity that seaweed farmers need to ensure the industry can adapt and survive as climate change alters conditions in the marine environment. However, protection measures for wild seaweed stocks are lacking at national and international levels.

“We recently mapped wild harvesting sites in Malaysia – one of the world’s major seaweed farming nations – and compared those sites to the designated marine protected areas,” said Cottier-Cook. “We found that the majority of seaweed forests had no protection and as a consequence, we are seeing these wild stocks shrinking.”

The research was conducted as part of the ASTEC (Innovative Seaweed Aquaculture) project led by Prof Juliet Brodie at the Natural History Museum in London and including SAMS and the University of Malaya. The project is funded by the UK’s Department for Environment, Food and Rural Affairs (DEFRA) Global Centre on Biodiversity for Climate.

[Read the full policy brief here \(https://cris.unu.edu/thefutureofourseaweedindustries\)](https://cris.unu.edu/thefutureofourseaweedindustries).

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