S'pore to expand sea carbon dioxide removal project

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SINGAPORE: The city-state is planning to expand a pilot project that boosts the ocean's capacity to absorb carbon dioxide emissions, using one of several emerging technologies that supporters hope can play a decisive role in the global battle against climate change.

As scientists call for more research into ocean carbon dioxide removal (OCDR), PUB, Singapore's national water agency, has built a plant that uses electricity to extract carbon dioxide from seawater, allowing it to absorb more greenhouse gas from the atmosphere when it is pumped back out into the ocean.

The project, built at a desalination facility on Singapore's western coast, extracts 100kg of carbon dioxide a day using technology designed by United States firm Equatic, founded by scientists at the University of California, Los Angeles.

At the plant, seawater is run through an electrolyser, which converts dissolved carbon dioxide into calcium carbonate and produces hydrogen.

PUB aims to secure funds by the end of the year to build a demonstration plant with a daily capacity of 10 tonnes, and will look at expanding further, said Gurdev Singh, a PUB general manager who leads the experimental project.

But while OCDR has been described by one environmental group as an "unsung hero" in the fight against global warming, it remains unclear whether the new technologies are feasible when deployed at scale.

Some experts warn that the potential ecological impact of these technologies is still unknown.

On Tuesday, more than 200 scientists said in an open letter that OCDR research should be prioritised not only to maximise its potential, but also head off potential risks.

Sir David King, head of the Climate Crisis Advisory Group and one of the letter's signatories, said he favoured nature-based approaches, and was sceptical about the efficacy of energy-intensive OCDR technologies like the Equatic venture, which will cost a lot to pump water in and out of the plant.

But billions of tonnes of carbon dioxide need to be removed from the atmosphere, and more investment in OCDR research was needed urgently, he said.

"What is needed today is to shorten the experimental timeline, and that really demands much more funding," he said.

"If somebody came up with a few billion dollars, I believe we would accelerate these programmes to the level that is really needed," said King. **Reuters**