

Seychelles president's underwater speech: Protect our oceans

In a striking speech delivered from deep below the ocean's surface, the Seychelles president on Sunday made a global plea for stronger protection of the "beating blue heart of our planet."

President Danny Faure's call for action, the first-ever live speech from an underwater submersible, came from one of the many island nations threatened by global warming, AP wrote.



taiwannews.com
Seychelles President Danny Faure

He spoke during a visit to an ambitious British-led science expedition exploring the Indian Ocean depths. Oceans cover over two-thirds of the world's surface but remain, for the most part, uncharted. We have better maps of Mars than we do of the ocean floor, Faure said.

"This issue is bigger than all of us, and we cannot wait for the next generation to solve it. We are running out of excuses to not take action, and running out of time," the president said from a manned submersible 400 feet (121 meters) below the waves, on the seabed off the outer islands of the African nation.

The president told The Associated Press after his speech that the experience was "so, so cool. What biodiversity."

It made him more determined than ever to speak out for marine protection, he said. "We just need to do what needs to be done. The scientists have spoken."

The oceans' role in regulating climate and the threats they face are underestimated by many, even though as Faure pointed out they generate "half of the oxygen we

breathe." Scientific missions are crucial in taking stock of underwater ecosystems' health.

Small island nations are among the most vulnerable to sea level rise caused by climate change. Land erosion, dying coral reefs and the increased frequency of extreme weather events threaten their existence.

During the expedition, marine scientists from the University of Oxford have surveyed underwater life, mapped large areas of the sea floor and gone deep with manned submersibles and underwater drones.

Little is known about the watery world below depths of 30 meters, the limit to which a normal scuba diver can go. Operating down to 500 meters, the scientists were the first to explore areas of great diversity where sunlight weakens and the deep ocean begins.

By the end of the mission, researchers expect to have conducted over 300 deployments, collected around 1,400 samples and 16 terabytes of data and surveyed about 25,000 square meters (269,100 sq. feet) of seabed using high-resolution multi-beam sonar equipment.

The data will be used to help the Seychelles expand its policy of protecting almost a third of its national waters by 2020. The initiative is important for the country's "blue economy", an attempt to balance development needs with those of the environment.

"From this depth, I can see the incredible wildlife that needs our protection, and the consequences of damaging this huge ecosystem that has existed for millennia," Faure said in his speech. "Over the years, we have created these problems. We can solve them."

Currently, only about five percent of the world's oceans are protected. Countries have agreed to increase the area to 10 percent by 2020. But experts and environmental campaigners say between 30 percent and 50 percent of the oceans outside nations' territorial waters should get protected status to ensure marine biodiversity.

Brazil to auction oil camps despite environmental warnings

The administration of Brazilian President Jair Bolsonaro plans to auction seven offshore oil fields in the northeast despite contrary advice from analysts of Brazil's main environmental body, according to documents obtained by the Associated Press.

Environmentalists say it's the latest example of how Bolsonaro, who campaigned on promises to revive Latin America's largest economy by cutting red tape, is pushing aside warnings and scientific evidence in the name of progress, abcnews.go.com wrote.

It comes at a time when Brazil, one of the world's largest oil producers and energy consumers, is moving toward the privatization of several industries, including offshore exploration.

"There is no need to explore these areas," said Carlos Rittl, executive secretary of environmental group Climate Observatory.

"This decision is in line with a government that sees the environment as an obstacle."

Brazil's environment institute, called IBAMA, enforces legislation and aims to promote the sustainable use of natural resources. IBAMA analysts recommended against the exploration of oil in seven out of 42 offshore fields originally offered for exploration in March by regulating body Brazilian Petroleum Agency.

Three of the fields to be auctioned in October are in the Jacupe Basin and four in the Camamu-Almada region, both in the waters off the coast of the northeastern state of Bahia.

Appointed by Bolsonaro, the new head of the institute, Eduardo Bim, rejected its analysis, which warned that exploration of "highly sensitivity areas" could lead to spills.

The study also said spills could lead to the destruction of the Abrolhos islands, an area of 353 square miles (913 square kilometers).

Four of Abrolhos' five islands are home to a marine national park with



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rare coral formations, tropical fish, whales, seabirds, turtles and dolphins.

The dispute within IBAMA was first published by daily O Estado de S. Paulo. The documents were obtained and verified by the AP.

IBAMA analysts said the blocks are in regions that have never been tapped, which require more "strategic studies that could evaluate the aptitude of the area."

The document said those studies are needed to give investors "more legal protection" in the case of an accident.

The analysts also wrote that a spill could get to the coast and the island chain within two days, and authorities would not be prepared to respond quickly or adequately to protect marine life.

"Add to that the fact the impact of a spill of large proportions over mangroves and corals are in general irreversible, harming the local economy and health," the document said.

In response, Bim said in a letter to

the environmental ministry, that he doesn't "see the need of exclusion of the (seven) fields as suggested by technical information." He did not detail why he believed it was fine to ignore the warnings.

In a statement, IBAMA said that it, along with the environmental and energy ministries, agreed the auction was viable. The auction "means neither automatic authorization for tapping oil and gas nor the anticipation of the result of the environmental licensing." The institute said that studies on possible spills will still be required.

The statement also said that previous auctions were made in oil fields that sit closer to the Abrolhos marine park than the ones expected to go on sale in October.

Carlos Minc, Brazil's environmental minister between 2008 and 2010, said he had blocked attempts to explore for oil near Abrolhos because the migration of whales and dolphins

in the region would be affected by ships.

"Humpback whales left the list of animals under threat of extinction because of this. How could Brazil be taking this step back?" Minc said. "We have to stop them from destroying our marine biodiversity in the name of profits."

Brazil is the world's ninth largest producer of oil in the world, and the third largest in the Americas, according to the US Energy Information Administration. In 2016, Brazil produced 3.24 million barrels per day of petroleum and other derivatives. Brazil is also the eighth-largest total energy consumer in the world.

Bolsonaro has often said environmental protections should not block business. Before taking office Jan. 1, he promised to remove Brazil from the Paris agreement on climate change. He has since back-peddled, saying Brazil would remain in the agreement.

Climate change affecting vegetable crops in Canberra region for backyard gardeners, farmers alike

Autumn is upon in Australia, which means it is time to plant their sweet peas, broad beans and lettuce so they can establish well before the frosts. Or is it?

Across Australia backyard gardeners use time-tested planting schedules to ensure a good yield, but no place is more inextricably linked to the seasons than Canberra, abc.net.au wrote.

Newcomers to the city will be quickly told that Anzac Day signals the time to turn on the heater and not to even bother planting tomatoes until after Melbourne Cup.

But as the capital last month recorded the hottest March ever, the unseasonably warm days have also had an effect on how and when to plant.

"Climate change has most definitely affected the timing of those established rules of when you plant and when you don't plant," Dr. Steven Crimp, a climate applications scientist from the Australian National University said.

Among many changes Crimp noted, an increase in frosts in September and October, a lack of steady rainfall, and warmer minimum and maximum temperatures had contributed to battered copies of the Canberra Gardener rule book being thrown off shelves.

"The warmer temperatures have people continuing to plant well into autumn and winter, because the soil temperatures are warm enough to sustain the crops," Crimp said.

Of course, it was not just keen

backyard gardeners who had noticed the effect of erratic weather events.

"We've had a lot of evaporation and not enough rain," Geoff Foster from Jer-rabatt Gully Organics in Bungendore, just outside of Canberra, said.

But for Foster, who grows and sells a range of produce through a subscription-style weekly delivery service, the weather was more than just an annoying, unpredictable frustration.

The heatwave the region experienced in January saw a lot of Foster's crop fail, particularly his tomatoes.

"In spite of trying to plant more, we're getting less per plant."

Chris Fowler, who operates Bywong Garlic, ran into a similar problem last winter.

"When I reflect on last winter and the winter before, I remember walking around in short sleeves for most of the time. I don't call that a cold winter," Fowler said.

"So I have brought planting forward from April into March. I've also brought my late season crop forward."

Fowler had observed the slow change in his soil over a number of years.

"When I first came here we had a 100mm of soil moisture depth most of the year, except for the hottest part of the summer. Now I would say it's 25-30mm for most of the year," he said.

"Because I don't run stock, I used to mow these paddocks. I haven't done



KATE MIDENA/ABC NEWS

that now for five years because the grass doesn't grow as well.

"It is dry, there's no soil moisture depth."

Ruth Gaha-Morris is the vice president of the Southern Harvest Association, an organization that represents local growers and runs a weekly farmers market in Bungendore.

"Most of them are struggling," she said.

Gaha-Morris said the producers she represented and spoke to all shared a few common experiences over the last few years.

"One of the biggest issues is the erratic weather patterns that we're having, and

extreme rain rather than regular rain," she explained.

"When it's dry they're searching for water and when it's wet they're trying to save their crops and their animals from water damage that happens with large storms.

In Bywong just a few weeks ago, Fowler experienced that kind of rain on his garlic crop.

"I had 31 millimeters in 10 minutes, which flooded the place, but when the water had gone you'd never have known it had rained," he said.

"Because you don't get the gentle soaking rain over a period of time you don't get that soil moisture.

Is better irrigation the solution?

Gaha-Morris said almost every producer she talked to said they needed increased or different irrigation.

"There's a huge pressure on already depleted water sources," she said.

"Even olives are needing to be irrigated."

But while irrigation was one of the solutions, Crimp explained it came at a cost. Aside from the infrastructure required, there was the cost of water, especially for those who did not have access to bore water.

"The rainfall we rely on to get a crop from a seedling to maturity [is not] sufficient," Crimp said.

"So we are more reliant on irrigating crops, which increases the cost of growing things."

"Unless we have permanent water sources, it's not hugely sustainable."

If the prolonged heat, dry soil and dumpings of rain were not enough for growers to deal with, unseasonable frosts were also destroying their crops.

"Managing heat stress and frost has become more of a challenge," Crimp, who has conducted research into the impact of changing frost frequency, explained.

"There used to be clear windows where the frost would occur. Now we have heatwaves and frost events which are occurring and intersecting, which makes it difficult to sustain crops."

While changing frost frequency had

already had an impact on wheat production nationally, locally, fruits like cherries and apples, which could usually be grown successfully during cold weather, were suffering.

"There are more extreme frosts, but less chilling time, and there needs to be that chill for the plants to fruit the following year," Gaha-Morris said.

"Every year the bar gets moved. We can't rely on what the weather's going to do anymore."

If even experienced farmers and community growers are having trouble with unpredictable weather patterns, what does that mean for the humble backyard gardener?

"I'd encourage people to keep a record of their temperature and rainfall and go back and review that regularly," Crimp suggested.

"If you're seeing a trend in that information, respond to that trend by adjusting your planting next year."

Gaha-Morris urged gardeners to concentrate on building soil fertility.

"The more fertile your soil is, the more water it's going to hold," she said.

"Also, make sure gardens are shaded, that they're caring for pollinators, and avoid pesticides that kill pollinators."

But Gaha-Morris said, if growing your own produce was not a possibility, people should continue to shop locally to support farmers.

"Buy seasonal and local and build a relationship with them," Gaha-Morris added.