

'Carbon sink' Bhutan counts cost of plans for green future

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Bhutan is the only carbon negative country in the world but major obstacles stand in the way of the Himalayan kingdom's decision to follow a green path over rampant economic expansion

The gentle whirring of the wind turbine speaks volumes of Bhutan's record as the world's only carbon negative country, but major challenges

stand in the way of the Himalayan kingdom's decision to follow a green path over rampant economic expansion.

The mountainous state, holding only its third election on October 18, absorbs three times more CO₂ than it emits, thanks mainly to the lush forests covering 72 percent of its land.

Famed as the "last Shangri-La" for using happiness as a measure of success, Switzerland-sized Bhutan has been careful to keep its environment pristine, often by sacrificing profits.

The nation of 800,000 has restricted tourist numbers with a daily fee of \$250 per visitor in high season, helping keep at bay the kind of boom that has ravaged other scenic hotspots.

In May, Bhutan opted out of an India-backed regional road connectivity project mainly over concerns that trucks coming in from other countries will pollute its air.

The constitution stipulates that at least 60 percent of Bhutan must be covered in forest, putting a brake on farming and a potentially lucrative timber industry.

"There was a great temptation to dig into our forest wealth but we thought of the longer term," said Dasho Paljor Dorji from Bhutan's National Environment Commission.



Bhutan's first pair of wind turbines in the village of Rubesa symbolise the Himalayan kingdom's achievement as the world's only carbon negative country

Five-year plan

Under its 11th five-year-plan, Bhutan aims to reduce "substantially" its forest fuel imports by 2020. It has just 100 electric cars so far but wants to increase numbers and plans to introduce a nationwide network of charging stations. In 2016 it installed its first wind turbines.

A walk through spick and span Thimpu—Asia's only capital city with no traffic lights—gives a glimpse of Bhutan's green commitment.

A rare sight in South Asia, heavy road-cleaning vehicles sweep the

streets in slow circular motions, while trucks collect organic waste from households.

Just two hours away in Punakha district earthmovers and bulldozers are chugging away at a hydropower project.



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It is one of the 10 the country aims to build as part of its plan to remain carbon neutral.

All existing and future hydropower projects are financed by its friend and biggest partner India.

Hydropower was also Bhutan's largest export in 2016, accounting for 32.4 percent of the country's total exports and eight percent of its GDP, according to the Asian Development Bank.

All of the energy currently goes to India but there are plans to export also to Bangladesh.

But concerns have been growing over the impact of dams on biodiversity especially as Bhutan shifts from low-impact "run-of-the-river" dams, which do not require large reservoirs, to larger-scale barriers that do.



The Punatsangchu River—the site of an existing hydropower project that is currently being expanded

Heavy price

And being able to afford staying on a green path depends on Bhutan receiving outside funding, something in doubt since President Donald Trump announced last year that the US would withdraw from the 2015 Paris climate accord.

Under that accord, wealthy nations agreed to establish an annual \$100-billion fund to help developing nations adapt to a heating planet.

Bhutan is keenly feeling the ravages of climate change, from melting glaciers, changing crop patterns to the spread of mosquito-borne diseases.

Temperatures have started touching 30 degrees Celsius (86 Fahrenheit), alarming locals unused to heat and humidity.

Carbon negative Bhutan

The sparsely populated mountainous state absorbs three times more CO₂ than it emits



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Map locating Bhutan, the world's only carbon negative country.

"Even the snowfall pattern has changed. Earlier it would snow for a few days, now it doesn't even last a day," Tenzin Wangmo, Bhutan's chief environment officer, told AFP.

Wangmo said the warmer climates meant paddy fields dot places like Bumthang that never grew rice in the past.

"Climate change is not in our control. We haven't done anything but we are paying a heavy price," she said.

Furthermore, new drainage systems required to prevent flooding downstream require the deployment of workers in remote areas high in the mountains, Wangmo explained.

"A lot of money and manpower is needed for such measures. But where is the funding and capacity-building?"



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A Green Climate Fund (GCF) delegation that visited Bhutan in August said it would help the country's progress on a low-emission and climate-resilient path.

"I think Bhutan's contribution to the global community through keeping its carbon sinks intact, its nature as pristine as possible is a great one," said Dorji.

"Our cause is worth supporting. We should be rewarded equally, if not more."

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