

# Pakistan island puts wind-power to work

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Pakistani technicians install a wind turbine on the island of Kharochhan, a land of creeks and mangroves couched on the cyclone belt of the Arabian Sea

A tiny island of fishermen is light years ahead of the rest of Pakistan, powering homes and businesses with wind turbines -- protecting the environment and improving the quality of life.

The government may lack the cash to harness hydro, wind and solar resources on a large scale in the electricity-starved country but charities are lighting the way forward by putting wind power to work in remote villages.

"We've been given two bulbs a house, it's a blessing for all of us," said 42-year-old fisherman Mohammad Arif on the subtropical island of

Kharochhan, a land of creeks and mangroves in the cyclone belt of the Arabian Sea.

Lying 150 kilometres (94 miles) due south of Pakistan's financial capital Karachi, Kharochhan is an island of thatched homes where fishermen scrape by on 75 dollars a month and never dreamed of having electricity.

Then a local charity pitched up and installed five [wind turbines](#). Now a fifth of homes -- 100 out of around 500 -- have been hooked up to the system.

"Each of us saves up to 1,500 rupees (18 dollars) that we would have spent on kerosene. I couldn't afford to educate my children, but now I'll put two of my four daughters in school," Arif said.

"We're poor with meagre resources. Our boys usually become fishermen and our girls illiterate housewives. This money could help us improve our children's future," he added.

Pakistan faces a catastrophic [energy](#) crisis, able only to produce 80 percent of the electricity that it needs, suffocating industry and making life tough in extreme winter and summer weather.

The shortfall has been blamed on government incapacity, corruption, short sightedness, debts, a creaking distribution system and lack of money to invest in energy sources.

To help cut energy needs Pakistan last year introduced daylight saving time in summer, but experts say the most sustainable long-term solution is to tap into abundant renewable resources.

Half an hour by boat from the mainland, development on Kharochhan has been hampered by isolation, said Nadeem Jamali, secretary general

of a charity helping coastal villages use strong winds to generate electricity.

"Our project is to avoid environmental degradation and help provide the population with a proactive social life," said Jamali, of the Pakistani charity Action for Humanitarian Development.

Before his organisation erected turbines, villagers cut down mangroves for firewood to cook meals and used kerosene to light homes, damaging the environment and producing heavy smoke causing allergies.

"Wind energy should stop the use of kerosene and we advise people to use acacia wood for cooking because mangroves protect them from rampant cyclones," said Jamali, of the trees that are a buttress against waves during storms.

Shah Kamal, who designs wind turbines, says the high winds that batter Pakistan's 1,050-kilometre (656-mile) coastline are perfect for powering turbines and cutting power shortages.

The applied physics graduate said the energy crisis, which sees power cut for 10 hours a day when temperatures top 40 Celsius (104 Fahrenheit), forced him to design and mount a wind-turbine generator on the roof of his house in Karachi.

"When I solved my own problems, I thought why not provide similar advantages to other people?" he said.

"We have given electricity to more than 100 houses in Kharochhan with five turbines. There are also four street lights," Kamal said.

"I see a great future for this technology," he added.

It has revolutionised villagers' lives, which once ended at sunset.

"With light available at night we can now do business for longer and our women do more embroidery work to earn for the family," said local fisherman Shahid Ali.

"Stray dogs don't bark at us now because they can recognise us in the light. And most satisfying of all -- our lights don't go off as routine in big cities," said Ali.

Pakistan's Alternative Energy Development Board says small wind turbines provide electricity to a few dozen coastal villages and that one large wind farm was established in April.

"Our target is to meet at least five percent of total installed capacity through renewable energy resources by 2030," said AEDB chief Arif Alauddin.

The Pakistan Meteorological Department says the country has the potential to generate 50,000 megawatts -- more than its total needs -- through wind, mostly in southern Sindh province.

Swat, the northwest valley ripped apart by fighting with the Taliban, also enjoys favourable wind conditions where authorities intend to invite investors once militancy is suppressed, said an official in Islamabad.

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