

Stiff winds hit Mannar Island wind turbine project

Powerful four-member panel says study flawed due processes not followed

By Kumudini Hettiarachchi and Minushi Perera

Gale-force winds of criticism are buffeting the proposed wind-turbine project of the Ceylon Electricity Board (CEB) on Mannar Island, known for its unique eco-systems.

All environmentalists are in total agreement on the need for Sri Lanka to make use of wind power, which is an environmental-friendly renewable source of energy, but controversy is creating turbulence about the proposed installation of more than 50 wind turbines on Mannar Island.

In the eye of the storm is the 'Study of impact on local and migratory birds from the proposed wind farms in entire Mannar Island for the submission to the Asian Development Bank and for subsequent clearance' put out in May this year, copies of which were distributed at a media conference on September 21.

A four-member panel of powerful environmentalists, while reiterating that they are not opposed to wind turbines, however, expressed serious concerns about their 'positioning' on Mannar

Island. According to them the wind turbines would be in the flight pathway of a large number of migratory birds and they are adamant that the study is "flawed". They also charge that due approval processes have not been followed. (See box)

A stronger and wider argument against placing the giant windmills with their blades making an unpleasant and constant whooshing noise on Mannar Island - with Adam's Bridge National Park to one side and Vankalai Sanctuary to the other, making it a critical area for protection - came from a research scientist who knows the area like the back of his hand.

It is not just a "no, no" from him but also a feasible solution. "Avoiding the Mannar Island completely, the wind-turbine project should go farther south, closer to Silavaturai and Arippe, to a less environmentally-sensitive area with equally strong winds to provide the country with the benefits of wind-energy and the local community more jobs," said Dr. Sampath Seneviratne, Research Scientist

in Evolution Molecular Biogeography and Senior Lecturer in Zoology at the Colombo University, adding that then it would be a win-win situation for all.

Dealing with some of the concerns over the study, he said that the raw data which have come forth from the study are good, for an efficient and qualified team headed by Prof. Devaka K. Weerakoon and including himself had



Research Scientist Dr. Sampath Seneviratne

fanned out across Mannar Island, spent long hours in the field, from January 2014 to April 2016, and gathered good data, working within the terms of reference decided by the CEB.

The need of the hour is to analyze this data thoroughly, he says, underscoring that the data do not show a clear "black and white pattern" about the wind turbines being in the flight pathways of migratory birds.

Drawing detailed sketches, he explains to the Sunday Times in a three-hour interview on Tuesday, not only the migratory flyways, which indicate that this is not the worst consequence of the wind turbines but also the colossal harm on the ecology which would have a gargantuan and disastrous impact on the habitat of both migratory and local birds as well as on all other wildlife.

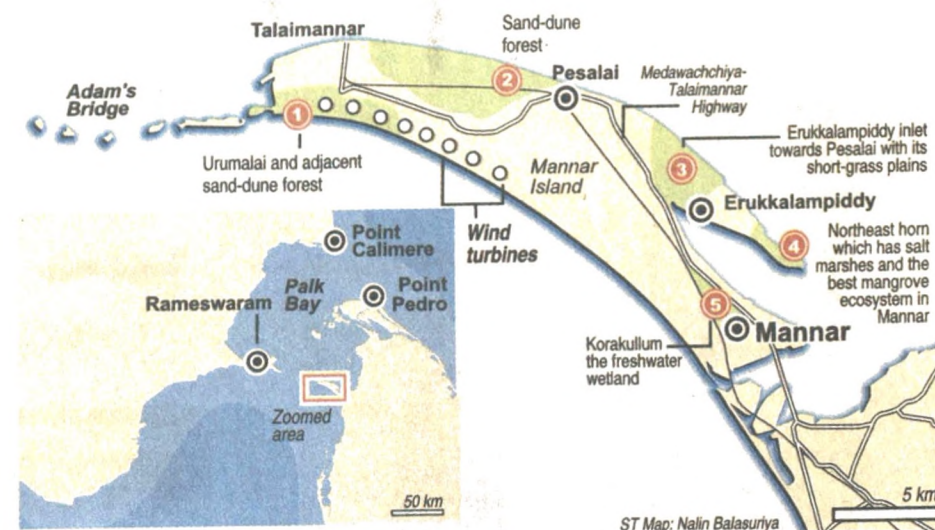
What is a major worry for Dr. Seneviratne is that the turmoil caused by the wind turbines would have a huge impact on the "marketplace" that is Mannar Island and its environments within the Greater Palk Bay Marine Ecosystem. And he should know what he is talking about as he is a study-member on birds had recorded rare bird-sightings including the Brown Noddy species breeding at Adam's Bridge, the Bar-headed Goose in Vankalai and numerous other species breeding throughout the year.

Before looking at the migratory flyways, he stresses that Mannar Island and its surroundings are a big wetland and all those birds which pass through the Palk Bay use it as a feeding, breeding and nesting ground. The island includes: Urumalai and its adjacent sand-dune forest; relatively undisturbed sand-dune forests of the northern shore; Erukalamipiddy inlet towards Pesalai with its short-grass plains; the northeast horn of the island which has salt marshes and the best mangrove ecosystem in the whole of Mannar; and Korakullum, the freshwater wetland. (See graphic)

Satellite data of four birds which have radio collars clearly indicate that the whole area encompassing Point Calimere and Rameswaram on the Indian coast and Sri Lanka's Adam's Bridge, Mannar Island and Jaffna peninsula is used as the primary feeding and breeding grounds by both migratory and local birds which would be greatly disturbed by the wind turbines. The birds would not know the man-made boundaries of this big wetland.

"The wind turbines will cut through this very productive ecosystem which is an inextricable part of the Greater Palk Bay Marine Ecosystem which is sandwiched between Sri Lanka and India," says Dr. Seneviratne, pointing out that some of the essential areas for migratory birds to feed, breed and nest are the northern shores of Mannar Island.

Citing the example of the tidal mudflats, which turn into feeding grounds for the birds during low tide and wash



Initial collision risk assessment done

"Based on the vantage point survey data, a collision risk assessment has been performed. It should be noted that this assessment has been made on a limited data set and therefore should be considered as preliminary risk assessment. Based on this analysis the key species that could be at risk of collision with the wind turbines include Northern Shoveler, Painted Stork, Spot-billed Pelican, Little Cormorant and Whiskered Tern," states the Executive Summary of the Study by Prof. Devaka K. Weerakoon commissioned by the Ceylon Electricity Board.

"The four main impacts on avifauna due to wind power development have been identified based on experiences in other countries and Sri Lanka. These include collision, displacement and disturbance, barrier effect and habitat change and loss. A range of mitigation measures have been proposed. These mitigation measures must be carried out to ensure that the potential negative impacts due to the pro-

posed project are minimised. It is extremely important that the project establish an independent monitoring mechanism for the operational phase to assess the actual impact on avifauna as well as the adaptive changes that should be effected to mitigate the negative impacts on avifauna," the study urges.

It adds: "Based on the findings of the present study, the site selected for the proposed wind farm poses a significantly lower risk of avian collision as the site comprises habitats that do not support a rich species assemblage or high densities of birds or bats. Further, the species richness of birds was found to be relatively low during the period when maximum power generation (80% of the power will be generated during the period May to October) is expected to take place. Finally a suite of mitigation measures has been proposed to minimize the negative impacts that may arise from the establishment of the proposed 100 MW wind farm along the southern shore of Mannar Island."

The conclusions arrived at on the data are faulty

"The methodology of the study is flawed." This is what the four-member panel of environmentalists comprising Wayamba University Senior Lecturer Sevvandi Jayakody, environmental lawyer and Senior Instructor of the Young Zoologists' Association (YZA) Jagath Gunawardene, YZA President Parami Vidyaratne and Udittha Hettige, Chief Instructor of the YZA's Bird Group told the media on September 21.

Explaining that the wind turbines will disrupt the pathway of the migratory birds, Ms. Jayakody said that there should be a scientific study to map the pattern of bird-migration which changes over time, for then only can be determined whether there is major or minor harm.

One of the seven objectives of the study, she says, is to understand which migratory birds come to the area, their migratory patterns and also the reasons for such patterns. Anyone who is studying migratory birds would know that a majority of them fly-in at night. This is why it is essential for data on migratory birds to be collected both during the day and the night. The study, however, has collected data only from 6 in the morning till 6 at night, which would not produce accurate data.

Echoing similar concerns, Mr. Hettige said that a large number of birds of certain species such as white-eon (50,000) are recorded as having migrated in 2011 or 2012 to Sri Lanka but the study does not report these species. Even though the study claims that it uses a 'collision risk model', the researchers do not have enough data to compare them.

"The sampling is wrong and so the calculation for the end result is wrong. Instead of doing proper calculations, the team has manipulated the data to show that there is no difference between the migratory and non-migratory seasons," he alleged, stating that the study seems to be emphasizing that the area is scrubland and not valuable, which is wrong, for in that arid-zone environment that is the climax vegetation.

Mr. Gunawardene, meanwhile, highlighting a point of law, said that all projects within a mile from the border of a National Reserve, in this instance the Adam's Bridge National Park, need permission from the Department of Wildlife Conservation (DWC) under Section 9A of the Fauna and Flora Protection Ordinance (FFPO). But such approval has not been sought from the DWC, instead the Coast Conservation Department (CCD) has given approval.

"The CCD is granted power to approve a project being done in a coastal area under the Coast Conservation Act. It can get an Initial Environmental Examination (IEE) Report or an Environmental Impact Assessment (EIA) Report but the first does not require public comment and objections. However, the FFPO requires such opinions to be



Wayamba University Senior Lecturer Sevvandi Jayakody and Young Zoologists' Association President Parami Vidyaratne



Jagath Gunawardene, YZA President, and Udittha Hettige, Chief Instructor of the YZA's Bird Group, making a point while the Chief Instructor of the YZA's Bird Group Udittha Hettige looks on. Pix by Indika Handuwala

sought from the public," he said.

Referring to the two-step approval process, Mr. Gunawardene said that the report needs to be approved by the CCD and also an advisory body of the CCD. The advisory body must review the report for 60 days but this has not been done. Even if it was done, there are doubts as to whether it would be able to see the impact this project would have on wildlife because those on the advisory body are not experts on wildlife.

"Moreover, the DWC has just given a conclusion indicating that there are no issues with the proposed windmills but this is inadequate. It is totally wrong for the DWC to bypass its own legal procedures and give such approval to other institutions. The DWC needs to review the reports in a similar two-step process - studying it by itself and then submitting it to an advisory body, neither of which has been done," he added.

Telephone calls by the Sunday Times to get a comment from the Ceylon Electricity Board's Environment Unit elicited no response.

Get set for a rough ride on power costs

Coal, LNG or renewables? Authorities toss and turn

By Sandun Jayawardana

Sri Lanka's power sector is set to endure an extremely volatile period in the next several years, with electricity tariffs likely to rise significantly as the country moves to head off a power crisis expected in 2018/19, the Ceylon Electricity Board (CEB) has warned.

According to CEB Chairman Anura Wijepala, the Board hopes to expedite construction on the 300 megawatt (MW) diesel powered combined cycle power plant at Kerawalapitiya as a first step towards building a network of plants capable of meeting the rising demand in electricity. The plant will initially run on diesel and would later be converted to Liquefied Natural Gas (LNG).

Given the higher cost of diesel, Mr. Wijepala acknowledged that the CEB's generation costs would rise significantly. This in turn would mean higher electricity tariffs unless the Treasury chose to absorb the CEB's losses. Even if that happens, consumers would stand to be affected as the govern-

ment would have to cut its losses in some other way.

He explained the CEB had hoped to have a coal power plant in place at Sampur by 2017. Repeated delays eventually saw it pushed back to 2021 before ultimately being scrapped altogether. Thus, the Board had to look for other options.

While LNG would be far cheaper than oil, Mr. Wijepala stressed the CEB would not be able to convert such diesel plants to LNG for several years. Much would depend on how soon the government would be able to construct an LNG terminal, designed for the storage of imported LNG.

The CEB was currently in discussions with the Ministry of Petroleum Industries and other government stakeholders to see how they can operate the terminal as a joint venture, he revealed, adding, "However, it would take at least five years for us to have an LNG terminal".

According to the Least Cost Long Term Generation Expansion Plan (LCLTGP) 2015-2034 submitted by

the CEB to the Public Utilities Commission of Sri Lanka (PUCSL), the country's electricity sector regulator, Sri Lanka's electricity demand is set to grow annually at a rate of 6.9 per cent from 2017 to 2020.

This is a dramatic increase from the growth rate of 4.1 and 4.3 per cent that the sector experienced in 2015 and 2016. Peak hour electricity demand will also grow from 2483 MW in 2016 to 3131MW by 2020.

While approving the plan, the PUCSL had emphasised to the CEB that the plants listed for the 2017-2020 period should immediately be constructed and operated to prevent possible power shortages during 2018 and beyond.

Eight power plants are scheduled to be completed within this period. The plants, a mix of thermal power, natural gas, gas turbines and renewable energy, are set to add about 1,230 MW to the national grid during the next four years.

The key to averting the crisis was to get the plants operational at the correct time, PUCSL Director-General Damitha Kumarasinghe

told The Sunday Times. He acknowledged that the PUCSL has concerns over how efficiently the CEB would be able to meet the challenge.

The PUCSL this week sent a letter directing the CEB to submit the implementation plans, including milestones for each power plant identified in the schedule for the 2017-2020 period. As per PUCSL instructions, the implementation plans should be submitted to the commission on or before October 28.

Earlier, the PUCSL chose not to approve the two coal power plants in Sampur scheduled to be completed in 2021 and 2022 due to the government's policy decision not to build coal power plants at the location.

The government's decision on Sampur came in for criticism this week by the CEB Engineers' Union (CEBEU).

CEBEU President Athula Wanniarachchi argued that the primary goal of the government should be to supply uninterrupted electricity to the public at a lower

cost. He insisted that this was currently possible mainly due to the Lakvijaya coal power plant in Norochcholai.

Mr. Wanniarachchi cited the average cost of a unit of electricity, which has now come down to Rs.15 from the Rs.20 it was two years ago. The average electricity selling price has also come down from Rs.18.50 in 2014 to Rs.15.95 in 2015.

If a coal power plant is commissioned by 2021, it would have to be retained for about 30 years. This is impractical considering most countries would have retired their coal power plants and shifted to renewable energy sources by then, noted Asoka Abeygunawardena, Chairman of the Strategic Enterprise Management Agency, attached to the Presidential Secretariat.

"Instead of coal, the government has given a clear direction that we need to explore all other possibilities, mainly concentrating on indigenous resources," Mr. Abeygunawardena reiterated, accusing the CEBEU of represent-

ing the "coal lobby" and trying to subvert government policy.

The need of the hour was to invest more on renewable energy sources and also to engage in "demand-side management," which aims to encourage consumers to use less energy during peak hours, he emphasised.

If power shortages do arise in 2018/2019, the responsibility should mainly lie with the CEB as it would have been precipitated due to lack of commitment and inefficiency on its part, Mr. Abeygunawardena stressed.

While the debate over coal power continues, the main danger for consumers in the event of a power crisis was from private power producers eager to exploit the situation, observed Bandula Chandrasekara, an energy expert and consumer rights advocate.

If the government was forced to turn to them on account of there not being enough state-run power plants, the operators would likely sell power at exorbitant prices, as was witnessed during past such crises, he pointed out.