

Students' Sea Turtle Conservation Network

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Robert B. Zoellick
President and Chief Executive
The World Bank
1818 H Street, NW
Washington, DC 20433
USA

January 17, 2008

Subject: Complaint against World Bank funded coastal shelterbelt project. Endangered sea turtle nesting habitat in south India under dire threat.

Dear Mr. Zoellick,

We're writing to lodge a complaint about an ecological disaster that is quietly unfolding in our State of Tamil Nadu, south India, as a result of a World Bank funded project. We hope that the Bank will see fit to take urgent mitigation measures, since the implementing agency for the project, the Tamil Nadu Forest Department (TNFD), has shown no signs that it is willing to take any action, despite our written pleas. Indeed, we have heard from highly placed sources within the TNFD that even if they wished to do something about the problem, they lack the funding for it, since the World Bank project has been completed.

We think that the best way of resolving this issue is for the Bank to insist - urgently - that the Tamil Nadu Government reverses the serious damage done, and provide it with the necessary funding to do so. The Bank's reputation can only benefit from this move. On the other hand, inaction on the part of the Bank on this issue will be ecologically, morally and ethically unconscionable. We hope that the Bank will do the right thing quickly. The problem and the solution are outlined herewith. The time to act is *now*.

The problem:

After the Asian Tsunami in December 2004 the World Bank funded an Emergency Tsunami Reconstruction Project (ETRP) in the south Indian State of Tamil Nadu. One of the measures, implemented at great cost, was the raising of 'bio-shield' shelterbelts on the beaches, with stands of *Casuarina* (an exotic species that grows extremely fast, especially on the coast). The problem is that the plantations - covering over *one third* of the TN coastline - have been established ***right up to the high-tide line***, going against all ecological reasoning and even plain common sense. In the process, the ETRP shelterbelt project has eliminated large stretches of sea turtle nesting habitat, as can be seen below.



Above: This *Casuarina* plantation raised by the TNFD with World Bank assistance has ***needlessly*** encroached upon prime turtle nesting beach. Sea turtles nest well away from the reach of the tide to prevent inundation of their eggs. They need open beaches where the eggs can receive the warmth of the sun throughout the day.

Severe threat to an endangered species:

It is a well-established fact, based on over three decades of monitoring, that the wide, sandy beaches on this coast are extensively used for egg laying by endangered olive ridley sea turtles (*Lepidochelys olivacea*). Studies show a nesting density of about 10 nests/km during the annual nesting season between December and March. Turtles use the open beach beyond the high tide line for nesting.

The planting of *Casuarina* ***on the beach platforms used for nesting*** by the turtles will sound their death knell by virtually eliminating their nesting habitat along the long Tamil Nadu coast. This is tantamount to institution-sponsored 'species cleansing'.



Above: Olive ridleys - and the beaches they nest on - are an intrinsic part of the natural heritage of Tamil Nadu and must be preserved for future generations. Eliminating the nesting grounds of a sea turtles is no less cruel than shutting down all the maternity wards in a city. Where will the turtles lay their eggs now?

Recommendations flouted:

Immediately after the tsunami, the M.S. Swaminathan Research Foundation (MSSRF), a reputed research organization, did a rapid assessment of the efficacy of shelterbelts in tsunami impact mitigation. Their study, supported by the Tamil Nadu Forest Department, emphatically states the following vis a vis coastal *Casuarina* plantations:

“Starting of casuarina plantations right from the high tide line is one of the serious concerns relating to shelterbelt plantation along the coastal areas. This may have serious implications on the ecology of the coastal areas, sometimes even on the wildlife.

Many of the sandy beaches are utilized by sea turtles as nesting grounds and it has been reported in many places that raising casuarina very close to the sea prevents nesting by sea turtles.

Different species of crabs live in different vertical zones near the high tide line and planting of casuarinas close to the high tide line would affect the niches of these crabs.

Most importantly, a sandy beach supplies sand to the littoral current, which runs parallel to the shoreline. This current system, in combination with wind-induced waves, takes away sand from one place and deposits it in another area. Since this process takes place simultaneously all along the coast, a balance is achieved between removal and supply of sand in a given place and this balance prevents sea erosion. If shelterbelt plantations are raised from the high tide line, the supply of sand to the littoral current would be reduced or stopped (due to sand binding property of the plantation) and to compensate this, current and waves would remove large amounts of sand from other areas, leading to erosion in those areas.

In order to avoid such environmental problems it is recommended, on the basis of the above study, that shelterbelt plantations should start at least 50 to 75 m away from the high tide line.”

The ultimate irony:

The Casuarina plantations have ostensibly been raised to protect fishing communities and other humans living on the coast from the fury of tsunamis and cyclones. Our surveys show that most of these communities have insisted that no trees be planted on the beachfront facing their habitations, as that would impede their progress to the sea and obscure their view of it. ***The irony of the ETRP shelterbelt project is that the only areas that actually need some form of protection are the only ones devoid of plantations.***



Above: While vast stretches of empty beaches have been needlessly planted with Casuarina, destroying their natural beauty and ecological value, fishing hamlets, like Devaneri kuppam south of Chennai – the only enclaves in need of protection – are devoid of shelterbelts. So what purpose are the plantations actually serving? Who exactly is being protected?

Implementing agency's response:

The ETRP shelterbelts have been established by the Tamil Nadu Forest Department (TNFD), the very agency that is also charged with protecting the olive ridley, which is a **Schedule I species** under the Wildlife (Protection) Act (1972). Many officers we've spoken to agree – off the record - that planting *Casuarina* right up to the high-tide line was a mistake, but plead helplessness. Apparently, before the work was taken up, ***the acreage available for planting was grossly overestimated***. So, faced with an impossible target, officers at the field level were told to plant wherever they could.

When alerted to the problem, the Chief Wildlife Warden of Tamil Nadu ordered an inspection by an officer of the rank of Chief Conservator of Forests on December 17, 2007. However, no further action has been initiated, and we have not received any response from the TNFD to our letters.

Ethical and Moral dimensions to the problem:

Apart from the ecological problem, there are ethical and moral issues involved here. Sea turtles have been nesting on this coast for millennia and even find reference in ancient Tamil literature from the Sangam period (400 AD). To completely – and needlessly -eliminate their prime nesting beaches is callous and without justification. Sea turtles are an intrinsic part of the heritage of our State and so are the wide and wonderful beaches of our long coastline.

The questions that arise foremost, and which we would like to pose to the World Bank are:

1. Were any Ecological Impact Assessments made before funding these plantations? If so, what was the basis on which plantations were allowed to be established right up to the high tide line? Were independent biologists and experts consulted?
2. Were any consultations or public hearings held to ascertain the views of different sections of society?
3. Why were the recommendations of the M.S. Swaminathan Research Foundation not heeded?

We fear that the casuarina plantations very close to the high tide line will cause severe, irreparable erosion of the entire coastline in the long run, affecting not only turtles and other species but also fishing communities, beach resorts, residences, harbours and ports along the coast, resulting in huge economic losses for the state in the future.

The solution:

There is a simple solution to this problem, and that is to remove the *Casuarina* plantations up to **at least 50 m** from the high-tide line. If done immediately, this is NOT difficult to do. There is an urgency to do this, since the olive ridley nesting season has already started.

Steps to be taken:

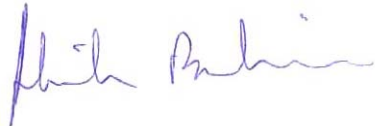
The exact steps to be taken urgently are as follows:

1. **Call for** detailed records and maps of World Bank funded shelterbelt projects on the Tamil Nadu coast, specifically, the plantations within 50 m from the high tide line. (These records are readily available with the Tamil Nadu Forest Department and can be accessed rapidly).
2. **Provide emergency funding** for the removal of plantations within 50 m of the high tide line. (Saplings planted in 2007 can be easily uprooted by bare hands. Plants more than a year old will need a little more effort as the roots too have to be dug up).
3. **Set up** a monitoring committee that includes representatives from credible non-governmental organizations to ensure compliance.
4. **Take** clear photographs with date stamps, which show the area before removal of plantations and after removal of plantations from the same angle and perspective.
5. **Ensure** that, in the future, such shelterbelt projects - and other projects that will impact natural ecosystems - are scientifically assessed before funding, and carefully and independently monitored during implementation.

In conclusion:

We are deeply concerned with the short and long-term effects of these plantations close to the high tide line and strongly urge the World Bank to heed this complaint and take urgent measures to undo the damage.

Yours sincerely,



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1. Greenpeace
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8. Center for Science and Environment
9. Reef Watch
10. Bombay Natural History Society
11. M.S. Swaminathan Research Foundation
12. Salim Ali Centre for Ornithology and Natural History
13. Care Earth
14. Dr. Kartik Shanker, Editor, Indian Ocean Turtle Newsletter
15. Other NGOs and Media organizations