



The Dangers Sri Lanka and Tamil Nadu face from Sethusamudram

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Last December, Sri Lanka and India failed to warn their coastal inhabitants of the Tsunami hazard in spite of past Tsunamis in the Indian Ocean and 55,000 died. The blind spots of the establishment which was so awfully exposed should have led to the Indian authorities to reconsider the Sethusamudram canal project. Yet, even though their plans had overlooked Tsunami risks, they continue to rush into dredging this massive canal between the Bay of Bengal and the Arabian Sea.

Last year's Tsunami also brought out how careless officials were in implementing zoning and local government laws, in providing services to the vulnerable and the poor. The poverty of disaster risk management was exposed. The limited attentivity of scientific establishment to crucial environmental problems was exposed.

It is on account of the repeated failures to anticipate complications of projects until too late that the "precautionary principle" is being instituted in international treaties. This principle merely states that one should not undertake actions that can lead to major environmental and health impacts if one cannot be sure that the project is safe. For when one tampers with ecosystems and habitats that have been sustained over millennia, the consequence may be unforeseen.

The canal plans do not adequately address hazards such as earthquakes, submarine landslides, cyclones, storm surges or denudation of the marine life and fisheries. The proposals claim that human-induced hazards such as oil spills, nuclear accidents and terrorist attacks will be prevented. The plans overlook the unforeseen in a region where the oceanography, biology and geology are barely understood. The proposals do not address a combination of hazards.

In this article, I review the history of this project, describe the hazards it poses particularly the tsunami, military and nuclear hazards, while not repeating material from previous articles. The Indian authorities did not submit their proposals for environmental review in Sri Lanka. I argue that the danger to Sri Lanka's habitat and security is so great and so long lived that it must pay attention even if the threats seem remote.

A Brief History

In 1997, a conceptual plan for the canal was drawn up by the Indian Navy at the urging of the then Defense Minister (George Fernandes) in the Bharathiya Janatha Party led government. This was shortly after the demonstration of nuclear capability by India and Pakistan. I identified some of the hazards and called for social and environmental review based on the precautionary principle (*Ceylon Daily News*, 07-04-99 and *The Island*, 29-03-1999). After Minister Fernandes was removed from his post, the project lost momentum.

The DMK party in Tamil Nadu proposed to implement this project and it supported the Congress Party which came to power last year. The DMK obtained the portfolios of Shipping and Environment in the Union government. Upon assuming office, the Shipping Minister said he would no longer wait for further approvals.

Subsequently, the Minister requested the Tuticorin Port Authority to do the groundwork. An Environmental Impact Assessment (EIA) was prepared by a consultant and it was approved with conditions by the Tamil Nadu Pollution Prevention Board and the Central Government's Environment Ministry. A summary of this EIA was released bereft of the technical details.

The report does not reassure when it comes to the serious risks. For example, the summary EIA report claims that no leakage or accidents of ships will be permitted in the channel. The risk of oil spills or the potential of sabotage by rebels and smugglers were discounted. The oceanographic possibilities were limited to a study of an idealized canal which discounted erosion, changes in regional oceanography, tsunamis and earthquakes.

The plans have left the residents of Tamil Nadu anxious particularly about the fate of the ecosystems, fisheries and the fate of coral reefs and the marine park that shelters unique species including sea horses and dugongs. The Chief Minister of Tamil Nadu is against the project and has bemoaned the politicized nature of its approval. With all these objections, the track of the canal was shifted further and further away from the Tamil Nadu coast and it now skirts the line of bisection of the Palk Straits.

Dr. Radhakrishnan Ramesh of Tamil Nadu, India argues convincingly (Economic and Political Weekly of India, 22 January 2005) that common sense had failed in approval of the project. The Indian Prime Minister has been skeptical of the blue skies scenarios presented by the Tuticorin Port Trust and its consultants.

Even though the canal shall be in India, its impacts shall not be confined to its territory. The currents, the suspended sediments and dredged toxins, the fish do not respect territorial boundaries. Yet, the project review has only been in India and for India. Last year, I listed examples of hazards that were not addressed in the summary EIA (The Island, 05-08-2004; The Daily Mirror, 05-10-2004).

The Sri Lankan Foreign Ministry reviewed the scientific expertise in Sri Lanka last year. A technical team visited India and the response of the chairman of the Tuticorin Port Authority was.

“Given the fact that the channel may affect economic and strategic interests of Sri Lanka, Co-operation between India and Sri Lanka for utilizing the natural depths available in the Sri Lankan side of the maritime boundary is not feasible. Such co-operation would have led to drastic reduction in the capital cost of the project. When I made a proposal to this effect to the Sri Lankan delegation in January, 2005, I could see their shock and disbelief.”

The project was formally inaugurated in July 2005, but the canal is not built. It should not be taken as a done deal as projected by its champions. The Chief Minister of Tamil Nadu and the Indian Prime Minister has reservations and the PM has been quoted as saying that any disputes shall be resolved in Sri Lanka's favor.

Disaster Risks

The EIA is based upon a decision to implement the project regardless. It is an exercise in justification based on insufficient data, use of scientific tools far beyond their limitations, limited to few scenarios and with discounting of the risks of the unknown and unforeseen. These reports side-steps difficult issues, digress to mind-numbing detail on side-issues, and are oblivious or tendentious on the unknown.

For example, the proposals claim that if there is a cyclone, there shall be warning, due communication down the channels, due response, due mitigation steps and there shall be no damage. There is no room for failures. It is not grounded on how well India has done in the past with cyclones. There is no learning from the many failures in the chain of command that led to 10,000 deaths from the cyclone in Orissa in 1999.

The EIA assures that there shall be no accidents in the canal. The report assumes that there shall be no human errors, no sabotage and all officials will execute their assigned parts as they were trained to.

Palk Bay and Gulf of Manar are ecosystems that are not adapted to ship traffic. There is a new risk of marine pollution, oil spills and risks from ammunition in warships perhaps with nuclear materials. The project plans do not address the consequences of accidents similar to the Exxon Valdez oil spill in a region confined by two heavily populated coastlines.

The plans do not address the possibility of missiles targeting the region – a likelihood given that India's Kalpakkam nuclear reactors are close by. Indeed, given the strategic importance of the canal, it could be a military target that eliminates a shelter for warships and impairs mobility. The added nuclear risk from the Sethusamudaram project should be addressed as it can be even more dangerous than a Tsunami since it can long live in the ecosystems and humans.

Can the Canal Conduit a Tsunami?

When a leading Tsunami expert, Dr. Tad Murthy (who advised the Indian Government on Tsunami Warning Systems) raised the risk of Tsunamis (Indian Express, 18 January 2005), the response from the Tuticorin Port Authority was an attempt to dismiss him rather address the Tsunami risk.

Sri Lankas' Western Coast and Tamil Nadus' Southern Coast are sheltered from Tsunamis as the Tsunami wave cannot traverse the Palk Straits at present. A canal through the Palk Straits can act as a conduit for Tsunamis from the Andaman to Burma seismic fault zone. Computer simulations of the Tsunami with an opening through the Palk Straits show a risk of Tsunami being conduited to the Western Coast.

Here are extracts from the Tuticorin Port Authorities website discounting the risk from Tsunamis:

“the animation models of the tsunami of 26.12.2004 available with the Port Trust indicates that tsunami waves would have entered the channel at its mouth near the Bay of Bengal after being refracted by the north eastern and northern Sri Lanka, irrespective of where the mouth lay- towards the north-east or north. Reorienting the channel entrance to the north-west could be a better alternative but this alternative would increase the capital cost significantly, take the alignment closer to the Indian coast and, therefore, the ecologically sensitive Point Calimere Wild Life Sanctuary and Muthupet mangroves, besides reducing or virtually bisecting the fishing grounds, and could result in increased maintenance dredging because of cross currents. ...

Irrespective of orientation [of the canal] in its present form or toward the north (as possibility suggested by Dr. Murthy), tsunami wave energy from Andaman Bay or Sumatra (the high risk areas where tsunami can originate) could enter Palk Strait and Palk Bay. Orientation towards the northwest may not be feasible economically, socially and environmentally.”

In other words, since the proponent chooses to cut costs and is under pressure from Indian environmentalists, they shall simply pass on the risks of Tsunami to the coastal dwellers in Tamil Nadu and to Sri Lanka.

The canal authorities focus on refuting one of Dr. Murthy’s suggestions that the canal may leave Kerala at risk while being oblivious to the stripping of the protection of the sheltered coasts of Tamil Nadu and Sri Lanka.

These sheltered coasts afford a locale for the development of ports, fisheries and coastal industries. This project also enhances the risks of enhanced coastal erosion, beach and marine pollution.

Tsunamis can be initiated not only from earthquakes but also from submarine landslides. While earthquakes initiates only at seismological fault lines, a landslide can occur anywhere the seafloor is disturbed or where there is a steep slope. The risks of tsunamis due to landslides have not got due attention in the Indian Ocean so far. A retired Director of the Indian Geophysical Survey (Dr. D.N. Seshagiri) pointed out that the excavation of the Panama Canal led to several submarine landslides (Decan Chronicle, 21 June 2005). The Sethusamudram project excavation shall exacerbate the submarine hazard.

What should Sri Lanka do?

The confluence of interests of those who matter at the moment: the Indian military and geopolitical strategists, a leader of the Congress party with an unfortunate history with the LTTE, the businesses and political agenda of the DMK is driving this project hard. Yet, the poor along Tamil Nadu coast particularly the fisherfolks, environmental organizations and civic organizations are opposed to the project. There are reservations at various levels in India but they too need the Sri Lankan authorities to speak up.

Sri Lanka has limited resources and these are difficult times for Sri Lanka, in dealing with the Tsunami along with its fratricidal conflicts. In fairness, the officials have at least, registered the

objections. Yet, it is incumbent on the government of Sri Lanka to respond, as the consequences can be monumental. Protecting the life, security and livelihood of its citizens is after all the primary role of governments. But it has been slow to respond and far too secretive and tentative so far.

Until the canal is built, the government and public should lobby to stop it. Alongside, the government should engage in four directions.

First, the government should publicize the viewpoints from Sri Lanka. At present, it seems to be the Shipping Minister of India who speaks on behalf of Sri Lanka in the press (They are not objecting, he said recently). The newspaper reports in India about the Sri Lankan response have selectively highlighted support for this project from a politician, historian, geographer and a geologist in Sri Lanka. This project is a complex undertaking and one should be careful when so much is unknown and the habitat of current and future generations are at risk even if it seems unlikely.

Fortunately, last year a review of the impacts for Sri Lanka was instigated by the Foreign Ministry and this report is based on wide expertise. The consensus viewpoint should be communicated to the public, particularly those at risk in language that can be widely understood.

Second, the legal ramifications of this project and the implications of International treaties such as the Law of the Sea and of bilateral agreements should be pursued. If the project goes ahead, then the Indian government should be requested to back up their verbal assurances with binding guarantees of restitution and compensation. One needs bear in mind that the project proponent (Sethusamudram Corporation) will certainly argue that they are not responsible for damage in Sri Lanka for they did not present the project for EIA in Sri Lanka.

The Indian government must assure that fair and expeditious remediation if the plans go awry and compensation for the affected along with mutual agreement on arbitration. Recall that the half million victims of the Bhopal disaster had not been compensated even after 25 years. The plight of the victims of the Orissa cyclone is unfortunately similar.

The government and public should engage with scientific and civic organizations and environmental lobbying groups in Sri Lanka, India and Internationally.

Third, the environmental monitoring on the Sri Lankan side of the Palk Straits has to be ramped up. Fisher folks have to be included in the response so that they understand the consequences and can be alert to changes. The coastal residents should be alive to and prepare for changes in currents, erosion patterns and of changes to fishing grounds and to the fish. The government shall have to back them up if their livelihood is affected.

Fourth, the risk of disasters has to be managed by reducing the coastal vulnerabilities. The Western Coast in Sri Lanka should be prepared for the loss of livelihood of fisher folks, enhanced erosion, oil spills and contamination. The government should educate coastal dwellers in Jaffna and its islands, Mannar, Puttalam, Gampaha and Colombo on the risks. Sri Lanka

should reduce the vulnerability on its Western Coast to Tsunamis even if it did not experience it last December or experienced it only moderately as in Colombo.

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