

Sethusamudram Shipping Canal Project

*3. SHRI RANGASAYEE RAMAKRISHNA: Will the Minister of SHIPPING be pleased to state:

(a) whether the Rail India Technical and Economic Service (RITES) has submitted a report on the retention of the Ram Sethu structure for construction of the Sethusamudram Shipping Canal Project; and

(b) if so, the details thereof?

THE MINISTER OF SHIPPING (SHRI NITIN JAIRAM GADKARI): (a) and (b) Rail India Technical and Economic Service (RITES) has submitted a pre-feasibility Report in November, 2014 to explore the possibility of an alternate route for Sethusamudram Ship Channel Project through Pamban Pass without affecting the Ram Sethu/Adam's Bridge. Key findings of the Report are given in Statement.

Statement

Key findings of the pre-feasibility Report of Rail India Technical and Economic Service (RITES) on the alternate route for Sethusamudram Ship Channel Project through Pamban Pass

- (i) The major constraint in the Pamban channel is the narrow and shallow channel between the two Coral Reef Islands of Pullivasal and Krusadai. This narrow channel is silted up due to trap of long shore sediment transport between Gulf of Mannar and Palk Strait. The channel width at this location is about 125 meter and the depths are 2.13 meter below Chart Datum (CD). Only during high tide this critical channel can be negotiated.
- (ii) The bathymetric surveys carried out have revealed that the depths available under the Pamban Bridge are 5.5 to 5.6 meter. Without dredging in the proximity of the Pamban bridge the draft of the vessel can be increased to 4.5 meter with a depth of 5.5 meter by deepening and widening the narrow approach channel to Pamban between the Coral Islands.
- (iii) The manually operated lift span in the Railway bridge can be replaced by a Swivel type mechanism which would open the bridge horizontally and would allow passage of vessels. Since the opening is horizontal, there would be no restriction of air draft as far as Railway bridge is concerned. However, the air draft would be restricted to 21 meter due to road over-bridge across the Pamban Pass.

- (iv) If the channel is dredged for 12 meter (*i.e.* about 36 million cum of dredging quantity), vessels of about 30,000 Dead Weight Tons (DWT) size can navigate the Pamban channel.
- (v) The Pamban Channel alignment will have navigational length of 136 Kms out of which 54 Kms fall in Palk Strait. This 54 Kms channel has already been dredged substantially under the original Sethusamudram Ship Canal Project (SSCP) and would require around 1 meter additional dredging at present. The alignment includes 43 kms in Pamban Channel which require substantial dredging to achieve 12 meter depth. The balance length of the channel would not require dredging as natural depth is available for navigation of 30,000 DWT vessels.
- (vi) The replacement and increase of the Railway bridge span will require stoppage of Rail movement for a period of 24 months.
- (vii) The estimated expenditure for providing a navigable channel for 30,000 DWT vessels through the Pamban alignment is around ₹2350 crores, which includes the cost of replacement of the lift span of the Railway bridge, dredging cost of 36 million Cum, cost of Vessel Traffic Management System (VTMS) and other shore based support to the project.
- (viii) To facilitate navigation of vessels more than 30,000 DWT size such as Capesize Vessels (80,001 to 2.0 Lakh DWT) the restriction of air draft of 21 meter due to the road bridge needs to be removed apart from additional dredging cost. One option which can be explored is an undersea tunnel through which road and rail movement to Rameswaram island can be maintained. The undersea tunnel would obviate the requirement of the rail and road bridge. The estimated cost of tunnel construction is about ₹15,000 Crores. The dredging cost would be additional and would increase progressively as the draft requirement increases.
- (ix) The Cost Estimates are only rough estimates and firm estimates would be available after the detailed Techno-Economical Feasibility studies.
- (x) The alternate route for Sethusamudram Ship Channel Project through Pamban Pass as suggested by the RITES is subject to environment clearance and concurrence of Government of Tamil Nadu, under whose jurisdiction Pamban channel falls.