

Annexure 7-3: Estimated Suspended Sediments Generation Standards from Dredging and Dumping operations

Estimations had been made in Assessment Manual for dredging and Reclamation, Ministry of Transport, Japan for suspended sediment generation from dredging and dumping operations is given below. These can be used for estimating the suspended sediments to be generated from dredging for construction and operation of terminal.

Activity / Type of the Bottom	SS generated by dredging or dumping of one cubic metre of sandy material	SS generated by dredging or dumping of one cubic meter of silt / clay
Pump dredging	Kg/m ³	Kg/m ³
Ordinary 4,000 PS ^{1/}	(2) 2.2 – 4.5	(2) 1.2 – 1.4
Ordinary 2,000 PS	(3) 0.1 – 0.3	NA
Low – pollution type 1,600 PS	NA	(3) 1.2 – 1.6
Low – pollution type 800 PS	NA	(2) 1.5 – 3.5
Grab dredging		
Ordinary 8m ³ bucket	NA	(2) 10 – 89
Ordinary 3 m ³ bucket	(1) 8.4	(4) 12 – 84
Water – tight type 8 m ³ bucket	NA	(1) 3.5
Bucket dredger	(1) 17	(1) 56
Dumping		
By grab bucket	(11) 0.4 – 5.0	NA
From hopper barge	(2) 2.4 – 5.2	(5) 12 – 203

Note: Parentheses are the number of times of observations

NA: Not Available

^{1/}: Capacity of pump in Horse Power

Source: *Assessment of the Environmental Impact of Port Development, United Nations, New York, 1992*