

**1. Research & Development Port Sector (CS)**

FINANCIAL OUTLAY 2022-23	OUTPUTS 2022-23			OUTCOMES 2022-23			
	2022-23	Output	Indicators	Targets 2022-23	Outcome	Indicators	Targets 2022-23
1	1.	Use of high strength self-compacting alkali activated slag concrete in Ports, Harbours and Offshore structures	1.1 No. of project to be completed for development of high strength self-compacting alkali slag concrete for marine construction	01 (100%)	1.	Enhancement in load carrying capacity of structural members	1.1. % increase in load carrying capacity of structural members  20%
	2.	Ameliorate Dredged Sediments	2.1 % completion of the study on ameliorate dredged sediments for their bulk utilization to make it techno-commercially feasible option by various treatments and to minimize the dredging cost	50%	2.	To make the dredged material suitable for infrastructural development available during dredging at Major Ports.	2.1 Recommendations provided to stakeholders on cost reduction of dredging cost of Major Ports  Yes

FINANCIAL OUTLAY 2022-23	OUTPUTS 2022-23			OUTCOMES 2022-23			
	2022-23	Output	Indicators	Targets 2022-23	Outcome	Indicators	Targets 2022-23
	3.	Submerged vanes for river training and sediment management in streams and their field application	3.1 % completion of the study on the flow pattern due to submerged vanes in rivers and to fix optimal size and shape of submerged vanes.	33%	3. Optimize the shape and size of the vane and to recommend the design to be used in field for river training measure	3.1 Recommendations provided to stakeholders on minimizing erosion of banks of rivers	Yes

## 2. Sagarmala (CS)

FINANCIAL OUTLAY 2022-23	OUTPUTS 2022-23			OUTCOMES 2022-23			
	2022-23	Output	Indicators	Targets 2022-23	Outcome	Indicators	Target 2022-23
412.79	1.	Enhancement of road and rail connectivity to ports - connectivity to ports	1.1 No. of Rail Projects completed 1.2 No. of Road Projects completed	Targets not amenable <sup>1</sup> 02	1. Improvement in evacuation infrastructure at ports	1.1 Reduction in transit time (%)	50%

<sup>1</sup> Since projects are long term in nature, targets will be added in the future once projects near completion.

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	2022-23	Output	Indicators	Targets 2022-23	Outcome	Indicators	Target 2022-23
	2.	Creation of Infrastructure at ports and undertaking modernization of ports	2.1 No. of Capital Dredging Projects completed	01	2. Enhancement in cargo handling capacity of ports to handle bigger vessels and enhancement of tourism	2.1 Total cargo traffic volume (MMT)	0.35
			2.2 No. of Coastal berth projects completed	Targets not amenable <sup>1</sup>		2.2 Number of tourists	50,000
			2.3 No. of Ro-Ro / Passenger Jetties projects completed	06		2.3 Increase in number of cruise ship calling	500
			2.4 No of Cruise Terminal projects completed	01			
	3.	Skill development and research in maritime sector	3.1 No. of skill development courses	10	3. Skill development and research in maritime sector	3.1 Number of people certified	600
			3.2 No. of labs established	Targets not amenable <sup>2</sup>			
	4.	Support for infrastructure and other support for minor ports in Andaman & Nicobar and Lakshadweep islands.	4.1 Development of Sea Port Terminal at Swaraj Dweep in A&N Island.	50%	4. Enhancement of cargo and passenger traffic at minor ports of Andaman & Nicobar islands and Lakshadweep	4.1 Cargo traffic volume handled at minor ports of A&N islands (in lakh tones)	23.50
			4.2 Extension of Jetty by 150m x 20m and 8 Navigational aids at Long Island in Andaman & Nicobar Island.	10%		4.2 Passenger traffic at minor port of A&N island (in lakhs)	46.3

<sup>2</sup> There are no immediate plans to establish new labs during 2022-23. One lab has already been established in 2021-22.

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	2022-23	Output	Indicators	Targets 2022-23	Outcome	Indicators	Target 2022-23
		4.3	Providing floating Jetty with RCC floats at Ross & smith Island , Diglipur in Andaman & Nicobar Islands.	10%		4.3 Cargo traffic volume handled at minor ports of Lakshadweep islands(in lakh tones)	0.748
		4.4	Construction of Sea Port Terminal at Shaheed Dweep ( Neil Island) in Andaman & Nicobar Islands.	10%		4.4 Passenger traffic at minor port of Lakshadweep islands (in lakhs)	4.73
		4.5	% of breakwater project completed	75%			

### 3. Assistance to Ship Building, Research & Development (CS)

FINANCIAL OUTLAY 2022-23	OUTPUTS 2022-23			OUTCOMES 2022-23			
	2022-23	Output	Indicators	Targets 2022-23	Outcome	Indicators	Targets 2022-23
112	a.	<b>Financial Assistance/subsidy to All India Shipyards</b>					
	1.	Finance for construction and delivery of vessels by Indian shipyards	1.1. No. of vessels financed	56	1. Promotion of ship building in domestic shipyards to generate employment and business opportunities	1.1. Amount of business generated (Rs. Crores)	550
						1.2. Employment generated (Man Days)	1000000

FINANCIAL OUTLAY 2022-23	OUTPUTS 2022-23			OUTCOMES 2022-23		
	Output	Indicators	Targets 2022-23	Outcome	Indicators	Targets 2022-23
	<b>b. Research &amp; Development (Shipping Sector)</b>					
	1. Modelling and laboratory prototype testing of battery-operated short endurance marine vessels	1.1. Development and optimization of designs - % completed		1. Reduction in CO2 emission in short endurance vessels in Vishakhapatnam Port	1.1. Drop in consumption of diesel in short endurance vessels in Vishakhapatnam Port	
		1.2. Preparation of prototypes - % completed			1.2. Expected drop in diesel consumption at Visakhapatnam port, if the technology developed in the project is used	33.16%
					1.3. Expected drop in CO <sub>2</sub> at Visakhapatnam Port, if the technology developed in the project is used	32.95%