CENTRAL WATER AND POWER RESEARCH STATION

DESK STUDIES FOR THE DESIGN OF COASTAL PROTECTION MEASURE FOR FISHERMAN COLONY NEAR SHIVSHASTRI NAGAR AT CUFF PARADE, COLABA, MUMBAI, MAHARASHTRA

APPROACH

- To determine optimal designsevolving through desk studies for the design of cross-sections for coastal protection measure in the form of rubble mound seawall for fisherman colony near Shivshastri Nagar at cuff parade, Colaba, Mumbai, Maharashtra.
- The breaking wave height (H_b) of 2.60 m and Design Water Level (DWL) of +5.20 m were considered for design cross sections of coastal protection measure in the form of rubble mound seawall.
- The proposed rubble-mound seawall cross section consists of 1.5 to 2 t stones (double layer) in armour layer, crest and toe-berm.

KEY FINDINGS

- CWPRS has designed the cross-section of rubble mound seawall for fisherman colony near Shivshastri Nagar at cuff parade, Colaba, Mumbai, Maharashtrabased on the data such as wave height, design water level, beach profiles, and the existing site conditions.
- The proposed rubble-mound seawall cross section consists of 1.5 to 2 t stones (double layer) in armour layer, crest and toe-berm. A 3.0 m wide toe-berm consists of 1.5 to 2 t stones with side slope of 1:2 is proposed to be fixed at el. +4.0 m. The seaside slope of 1:2 for armour layer from el. +4.0 m to el. +7.0 m and for toe-berm at el. +2.2 m to el. +4.0 m have been proposed.

IMPACT/SIGNIFICANCE/OUTCOME

The research facilitates optimal design of the cross-section of coastal protection measures in the form of rubble mound seawallto ensurefisherman colony safetyfrom severe action of waves during monsoon season on landward side.