



Creation of Task force for  
Costal erosion works of South Gujarat.

Government of Gujarat  
Narmada, Water Resources, Water Supply & Kalpsar Department  
Resolution No. SIC/2011/2200/ (64)/J  
Sachivalaya, Gandhinagar

Dt. 12 AUG 2011

**Preamble:-**

Gujarat has a coastline of 1600 Km. the longest among the maritime states, out of the 310 Km is in South Gujarat, covering four districts. The coastline especially in Surat, Navsa and Valsad districts is the most vulnerable and has been experiencing extensive erosion for the last 10 years, as it receives direct wave attacks from the Arabian Sea during the Southwesterly Monsoon. The coastal belt of this area is formed of sand, clay sand, or silty sand, which is not tolerant to waves and heavy tidal currents. A significantly high tidal range with 8 to 9 m characterizes tidal and wave actions in Gujarat, which brings difficulties in coastal protection. The Irrigation Department has constructed erosion protection works, such as gabion seawalls, in consultation with CWPRS, but some of completed structures have been damaged. Around 120 out of the 200 Km of coastline is vulnerable, but only 28 Km has completed or ongoing protection works. Protection works for an additional 19 Km. have been proposed. About 6 Km of seawalls have been damaged, and the remaining 72 Km of vulnerable stretches have no protection. Given serious damages on polypropylene gabion seawalls, the department in consultation with CWPRS, has modified designs of seawall using tetra pod/heavy stones. However, necessity of tetra pod structures required to be judged.

Valsad, Navsari, Surat & Bharuch districts of Gujarat State have its western boundary as Arabian Sea Coastal belt of these four districts is suffering gradual erosion every year, causing heavy losses to fertile land, Public Property, residential building, cattle and human lives.

To provide natural defense against erosion it is necessary to create adequate beach causing waves to loose their energy. Adequate beach is not available at coastline boundary. Under such circumstances the problem of erosion is acute and required immediate protection to residential lands, cultivable land, valuable properties, sea side resorts, historical places, religious places etc on priority basis.

For protection of urgently required length, the efforts are made by the Govt. of Gujarat to restrict further ingress of sea towards landside but are not enough and requires huge amount of funds and financial assistance to have sustainable and permanent solution against sea erosion. People of coastal area are demanding protection at earliest.

Coastal protection works require specialize efforts in design, construction and maintenance. The sea characteristics are changing very fast. Hence the period between

Handwritten notes on the left margin:  
Hob...  
15/8  
OSD/...

Ms call (IT)

Handwritten initials/signature

investigation and execution should be minimum. Also instead of applying normal practice award the work to the lowest bidder, a system should be framed that competent contractor could be entrusted the works. This requires special policy decision.

In past CWPRS has given designs using rock filled polypropylene gabions. Life of polypropylene gabions against ultraviolet rays is a big question and some of schemes were totally damaged due to high tide during July 2009. Gabion technology is not found successful for anti sea erosion works. Looking to the severity of tides during Monsoon CWPRS, Pune has given revised design using tetra pod of 1.0 to 2.5 T or 1.5 to 3.5 T stones. Cost of tetra pod type structure comes around 1.5 lacs to 2.5 lacs per meter. Now as per new CRZ act, CRZ clearance is mandatory for sea erosion works.

Looking to complexity and nature of anti sea erosion works, it is necessary to form a task force.

**Resolution:-**

(A) After careful consideration, Task force of following members is hereby formed.

- |                                                                                                         |                  |
|---------------------------------------------------------------------------------------------------------|------------------|
| 1) Dr.B.Nagendrakumar,<br>Harbour and Hydraulics Engineer                                               | Chairman         |
| 2) Shri Rajesh Pravinchandra Doshi,<br>Professional Member of Marine Engineer (India)                   | Member           |
| 3) Kum.Pankti D.Jog<br>N.G.O. / RTI experience                                                          | Member           |
| 4) Shri J.K.Vyas<br>Director, Forest and Environment Department, Gandhinagar.                           | Member           |
| 5) Shri Atul Sharma<br>Environment Engineer, Gujarat Maritime Board, Gandhinagar                        | Member           |
| 6) Shri U.K.Sarvaiya<br>Chief Engineer (S.G.) & Addl. Secretary,<br>N.W.R.W.S. & K. Deptt., Gandhinagar | Member           |
| 7) Shri K.B.Rabadia<br>Surat Irrigation Circle, Surat.                                                  | Member Secretary |


**(B) TOR for Task Group.**

- 1) To review the available collected shore line data and setup an organization for collection/analysis of data
- 2) To suggest short term and immediate measure to counter act the coastal erosion.

- 3) To suggest the types of design to be adopted for coastal protection works at different locations.
- 4) To finalize implementation schedule for various locations depending upon severity of erosion.
- 5) To review performance of coastal protection works.
- 6) To suggest soft / hard solution for prevention of erosion as per severity of the problem.
- 7) To suggest for engaging consultant, if required.
- 8) To suggest / modification or guidance for works during construction.
- 9) To suggest long term measures for coastal protection and collection of costal data.
- 10) To suggest & implement special norms for life of structure & awarding works after tendering in a different manner than the current practice by taking policy decision.
- 11) To interact with agencies engaged in the work of coastal protection.
- 12) To frame out extensive training programme for R & D in coastal works.
- 13) To step forward to prepare Gujarat shore protection manual.
- 14) To prepare master plan for coastal protection.
- 15) The details regarding remuneration and various facilities to be provided to non Govt. members will be communicated separately.
- 16) The headquarter of the Task Group will be at Gandhinagar/Surat.

The payment of the above expenditure will be made by the Superintending Engineer, Surat Irrigation Circle, Surat

By order and in the name of The Governor of Gujarat.

  
(A.D. Parmar)  
Under Secretary (S.G.)

To

- (1) Dr.B.Nagendrakumar,  
H16/G3, Sea Breeze Apartments, Thiruvalluvar Nagar, Thiruvanniyur, Chennai- 600041
- (2) Shri Rajesh Pravinchandra Doshi,  
9, Matru Chhaya, 70, Marine Drive, Mumbai - 400020
- (3) Kum.Pankti D.Jog  
B-3, Sahajanand Towers, Jivraj Park cross road, Ahmedabad, Gujarat - 380051
- (4) Shri J.K.Vyas  
Director (Environment) & Member Secretary  
Forest and Environment Department, Block no. 14/8, Sachivalaya, Gandhinagar - 382010
- (5) Shri Atul Sharma  
Environment Engineer,  
O/o the Chief Executive Officer, Gujarat Maritime Board, Sector - 10-A, Chha road,  
Gandhinagar - 382010

(6) Shri U.K.Sarvaiya  
Chief Engineer (S.G.) & Addl. Secretary,  
N. W.R.W.S. & K. Deptt., Block 9/1, Sachivalaya, Gandhinagar-382010

(7) Shri K.B.Rabadia  
Superintending Engineer,  
Surat Irrigation Circle, Near M.T.B. Collage, Athwalines, Surat – 395001

Copy Submitted to:

- (1) Shri B.N.Navlavala, Adviser to Hon. C.M.(W.R.),Block- 1,Sachivalaya,Gandhinagar.
- (2) Secretary (WR), Narmada, Water Resources, Water Supply & Kalpsar Department,  
Sachivalaya Gandhinagar.
- (3) Superintending Engineer, Surat Irrigation Circle, Surat – 395001
- (4) Superintending Engineer, Damanganga Project Circle, Valsad
- (5) Superintending Engineer, Central Designs Organization, Gandhinagar
- (6) Superintending Engineer (Hydro), Central Designs Organization, Gandhinagar
- (8) Select file
- (9) Assft. Select file