

**MINUTES OF 10TH MEETING
OF
COASTAL PROTECTION & DEVELOPMENT ADVISORY COMMITTEE (CPDAC)**

The 10th meeting of the Coastal Protection & Development Advisory Committee (CPDAC) was held at Visakhapatnam (Andhra Pradesh) during 18-19th January, 2007, under the Chairmanship of Shri S.K. Agrawal, Member (River Management), CWC, & ex-officio Additional Secretary to the Govt. of India. List of participants is enclosed at Annexure-I.

After presentation of bouquets and lighting of the lamp, Sri M. K. Rehaman, Engineer-in-Chief, Irrigation, Andhra Pradesh, welcomed the Chairman and the delegates of the CPDAC on behalf of Govt. of Andhra Pradesh. In his welcome address, he said that the nature has blessed the State with vast resources and also put some challenges to the States which is prone to frequent floods and cyclones. It has experienced many cyclones and more recently tsunami attack. After the recent tsunami, the State has taken up the coastal protection works at vulnerable reaches. Shri S. K. Agrawal, Member (RM), CWC, & Chairman, CPDAC, in his address informed the participants that almost all the maritime States/UTs are facing coastal erosion problem in various magnitudes. Protection of coastal areas requires careful planning which should be on the long-term basis using non-structural, structural and semi-structural measures. Proper investigations and the data are required for planning the remedial measures. Model studies, both mathematical as well as physical models, have been found to be very suitable for planning and designing of the structural measures. He informed the members that Asian Development Bank has shown keen interest in taking up and providing assistance for the coastal protection works. He informed that it is expected that schemes under National Coastal Protection Project (NCP) may come up during the first year itself of 11th Five Year Plan, partly with ADB assistance and partly with central assistance. The inaugural session concluded with a vote of thanks proposed by Shri K.B.R. Prasada Reddy, Executive Engineer, Irrigation, Visakhapatnam, A.P.

10.1 CONFIRMATION OF THE MINUTES OF 9th MEETING

The comments received from CWPRS on the minutes of 9th CPDAC meeting were deliberated upon and it was decided that the manual for execution of coastal works would be prepared jointly by CWC and CWPRS. The minutes of 9th CPDAC meeting were confirmed.

10.2 STATEWISE COASTAL LENGTHS

Lt. Cdr. Nishkam Sharma, INS Sandhayak, Visakhapatnam, who attended the meeting on behalf of National Hydrographic Office, Dehradun, informed the CPDAC that NHO is taking State limits from Survey of India. Total coastal line as per larger scale charts can be divided State-wise according to the limits of the States/UTs. The coastal States/UTs, who are yet to reconcile their States/UTs coast length with National Hydrographic Office (NHO), were requested to approach NHO, Dehradun.

Secretary (Irrigation), West Bengal, informed that the West Bengal had agreed to the coastline length of 157.50 km as adopted by NHO. Other States also said that they would accept the figures given by NHO, who agreed to give lengths based on 1:50,000 maps of SOI and large scale charts prepared by them.

(Action: NHO, Coastal States/UTs)

10.3 DATA COLLECTION, COMPILATION, ANALYSIS AND PUBLICATION

During the meeting, the need and importance of collection of coastal data were discussed. It was observed that the sufficient data are not available for formulation of anti-erosion schemes and schemes are formulated on ad hoc basis. Shri M.D. Kudale, CRO, CW&PRS, informed the Committee that the data of 251 coastal sites is available with CW&PRS and the same had already been computerized. The data of the already implemented and ongoing projects in respect of beach profiles, water levels, wave conditions, etc., have been collected by the project authorities and passed on to CW&PRS for the design of protective measures. These data are being compiled in appropriate format at CW&PRS. Further, whenever some new project would be referred to CW&PRS, that data would be stored in the coastal data bank. It was informed that coastal data is also being collected by the other agencies, like Centre for Earth Science Studies (CESS) and Integrated Coastal and Marine Area Management (ICMAM), for various projects. The representatives of these institutions agreed to submit inventory of these data to CPDAC/CW&PRS. It was discussed in the meeting that the data for the vulnerable sites may be collected by the respective State authorities which would be useful for the design of protection measures as well as the same can be added to the coastal data bank being maintained at CW&PRS. Prof Sunder, IIT, Chennai, non-official member, CPDAC, who could not attend the meeting, sent a list of agencies, educational institutions, universities, govt. departments who are engaged in the work of data collection. Chairman, CPDAC, asked various agencies to share data available with them and pass on to the CPDAC Secretariat for putting inventory of coastal data along with agency on CPDAC Website. Chief Engineer (Orissa) requested that a presentation be made on coastal data collection, methodology, agencies involved, etc., during the next meeting.

(Action: Agencies involved in data collection and analysis, CPDAC Secretariat)

10.4 RESEARCH AND DEVELOPMENT

10.4.1 RESEARCH PROPOSALS

During the meeting, all member States were requested to submit research proposals to MoWR/INCH for funding under intimation to CPDAC Secretariat who would pursue with the concerned officials. Sri P.K. Suresh, Asstt. Director, PWD, Tamil Nadu, informed that they had already obtained funds from INCH for their research proposal. However, the State Govt. had asked them to revalidate the scheme through INCH since they could not utilize the funds within the stipulated time. The revalidation of the scheme was awaited.

It was informed by the CPDAC Secretariat that a research proposal titled %Hydraulic Research Studies of Overflow type Rockfill Barriers+ was submitted by the Govt. of Gujarat to INCH. However, the new procedure for processing of the research scheme was under finalization and the research proposal would be considered and approved by the INCH as soon as the new procedure was approved by the Ministry of Water Resources.

CPDAC members were informed that the CPDAC website had been launched. The address of CPDAC website is <http://cwc.gov.in/CPDAC/index.html>. Members were requested to regularly enrich the website by sending the material to CPDAC Secretariat. Chairman directed to put state wise status of coastal erosion on CPDAC website.

(Action: Coastal States/UTs, CPDAC Secretariat)

10.4.2 COASTAL ATLAS

CPDAC Secretariat informed that a proposal to prepare Coastal Atlas, estimated to cost Rs. 2.23 crores, was recommended to the Ministry of Water Resources for approval of the estimate and permission to pay CWC share of Rs. 1.10 crore in advance to Space Application Centre (SAC), Ahmedabad under the Centrally Sponsored Scheme, %Critical anti erosion works in coastal and other than Ganga basin States+. However, some financial complication has arisen due to shifting of the Centrally Sponsored Scheme to State Sector Scheme and it has not been possible to release the funds to SAC. It was informed that CWC has put up a proposal to the Ministry of Water Resources for releasing the requisite funds from other plan schemes being operated by CWC under flood sector, the response of which was awaited. Chairman asked CPDAC Secretariat to pursue vigorously and make funds available for preparation of coastal atlas during the current financial year.

(Action: CPDAC Secretariat)

10.4.3 INSTITUTIONAL STRENGTHENING

10.4.3.1 ORGANISATIONS

During the meeting, coastal States were asked to provide dedicated organizations for planning and development of coastal protection works in order to retain experience and develop expertise. Sri P.K. Suresh, Asstt. Director, PWD, Tamil Nadu, informed that Tamil Nadu State had one division near Chennai for execution of anti sea erosion works. Coastal Engineer, PWD, Maharashtra, informed that Maharashtra State had exclusive divisions for planning and execution of coastal protection works. Shri A.D. Kanani, S.E., Gujarat, informed the Committee that the coastal protection works were being looked after by the respective Divisions under Irrigation Department in the coastal districts and the officers working in these coastal districts had sufficient experience in coastal engineering through the training provided by the CW&PRS and the projects implemented by them at various sites. He further pointed out that it might be difficult to have a separate organization in the State to look after the coastal works. Shri N. Sasi, Chief Engineer, Inv. & Design, Kerala informed that they had a separate division, namely, harbour engineering

division which looks after the harbours as well as coastal protection works along with the Irrigation Department. West Bengal also had a division who was entrusted with execution of anti-sea erosion works in addition to other works.

10.4.3.2 TRAINING AND STUDY TOURS

Shri M.D. Kudale, CRO, CW&PRS, informed the members that a training course for the engineers from Kerala and Andhra Pradesh was conducted at CW&PRS during November, 2006. 10 engineers each from these two states participated in the training course. Further in consultation with Chief Engineer, Goa, it had been decided to arrange a training course for the Goa officers at Goa during February, 2007. As suggested by Shri Kanani, SE, Gujarat, Chairman asked CPDAC Secretariat and CWPRS to plan study tours for senior officers covering different type of coastal protection structures starting with Gujarat and Maharashtra States.

(Action: Coastal States/CWPRS/ CPDAC Secretariat)

10.4.3.3 WORKSHOPS AND SEMINARS

The workshops and seminars are required to be conducted at regular interval for dissemination of knowledge and sharing of experience gained by indigenous efforts. CPDAC members were requested to inform about the workshops to be arranged in future, so that they could sponsor delegates for attending the same. CPDAC Secretariat could act as modal officer for collecting this information and dissemination of the same through CPDAC's website. Chairman also asked Chief Engineer (P&D), CWC, & Member-Secretary, CPDAC, to make provision for organizing Workshops/Seminars under the Central sector during XI plan.

(Action: Coastal States/CPDAC Secretariat)

10.5 MANUAL ON CONSTRUCTION TECHNIQUES OF COASTAL PROTECTION WORKS

Shri M.D. Kudale, CRO, CW&PRS, informed the Committee that it was decided to prepare this manual for execution of coastal protection works on construction techniques in collaboration with CWC. Chairman, CPDAC, indicated that the CW&PRS and CWC officers may discuss matter early and decide about the respective chapters to be prepared by these two organizations. As decided earlier, the printing of 100 copies of the manual will be done by NIO, Goa.

(Action: CW&PRS/CWC)

10.6 REVIEW OF THE EXISTING WORKS

Director, Beach Erosion, CWC, Cochin, informed the Committee that the site visit for performance evaluation of existing coastal protection works could not be taken up since 9th meeting of the CPDAC. Chairman desired that at least one meeting for evaluation be made every six months.

(Action: C.E., C&SRO/ Director, Beach Erosion Dte, CWC)

10.7 PREPARATION OF INDIAN SHORE PROTECTION MANUAL

Dr. Y. Sadhuram, Deputy Director, NIO, Regional Centre, Visakhapatnam, informed the CPDAC that the final draft on the shore protection manual was under preparation and would be submitted to the Committee formed for this purpose by the end of July, 2007. Chairman asked to club agenda items 10.5 and 10.7 in the next meeting.

(Action: NIO, CPDAC Secretariat)

10.8 NATIONAL COASTAL PROTECTION PROJECT (NCPP)

It was informed by the CPDAC Secretariat that the proposals of Karnataka, Kerala, Maharashtra, Orissa, Tamilnadu, West Bengal and UT of Pondicherry have been found acceptable for inclusion in the Project, while; the compliance to CWC comments is awaited from the coastal States of Andhra Pradesh, Goa, Gujarat and UT of Lakshadweep. The UT of Andaman & Nicobar Islands has not submitted any proposal so far.

Chairman, CPDAC, requested the States/UTs, whose proposals have not yet been included in the NCPP, to expedite the submission of their proposals. He asked to include Andhra Pradesh proposal in NCPP without waiting for State TAC approval, which can be done before implementation of the project. Since the A&N Islands has not yet submitted its proposal in spite of many reminders and Lakshadweep was yet to submit revised proposal, Chairman, CPDAC, directed that a tentative allocation for the same could be made in the report. Similarly, Goa State was requested to submit estimate cost on the basis of tentative design, and other formalities of approval by State's TAC could be completed before execution of the works. Gujarat representative was asked to furnish compliance of CWC comments, mainly on Benefit Coast ratio. If certain schemes were not techno-economically viable (B.C. ratio less than 1.0), the same could be excluded and the proposal be revised to include only techno-economically viable schemes.

Director, Coastal Erosion Dte, CWC, informed the members that there are bright chances of funding of NCPP through Asian Development Bank, therefore, coastal States, which are yet to submit compliance/new proposal, were requested to expedite the action.

(Action: Coastal States/CWC)

10.9 NEW TECHNOLOGIES IN COASTAL PROTECTION WORKS

A brief presentation was made by the CW&PRS officers on the recent developments in the coastal protection in the country. He mentioned that the use of concrete blocks in gabions and use of geo-tubes as revetment and groins had been used successfully in recent works. Director, CESS, as well as Director, ICMAM, also made presentations on the technologies being adopted for the coastal protection works. Director, CESS, emphasized that the coastal protection works and the coastal zone management should go together since one had impact on the other. Also, the states

should not think only of the sea walls as a protection measure to protect the shoreline but also adopt other new technologies which preserve the beaches and ecology as well.

10.10 MASTER PLAN FOR COASTAL PROTECTION

The maritime States/UTs were requested to interact with the concerned State Coastal Zone Management Authority for obtaining the coastal zone management plans even in draft stage and convey their views on the proposal. The Master Plan for Coastal Protection should be consistent with such Management Plans. Coastal Engineer, PWD, Maharashtra, informed that a master plan for Mumbai region had been prepared by them. He also informed that the consent of the state coastal zone management authority is obtained whenever coastal protection scheme is implemented. Director, CESS, informed that all the states had the coastal zone management authorities. Chairman, CPDAC asked that the representatives of state coastal zone management authorities may be invited in the State TACs meetings who are responsible for clearing the coastal protection schemes.

10.11 COMPOSITION OF CPDAC

It was unanimously decided by the CPDAC that the Project Director, Integrated Coastal and Marine Area Management (ICMAM), Chennai and Director, Centre for Earth Science Studies (CESS), Kerala, may be included as permanent invitees of CPDAC.

(Action: CPDAC Sectt)

10.12 STATUS OF COASTAL PROTECTION WORKS IN MARITIME STATES

All maritime States/UTs were requested to forward the latest status of coastal protection works as per the prescribed format, once in a year, preferably in June. A copy of format was circulated with the agenda note.

(Action: Coastal States/UTs)

10.13 SCOPE FOR MANGROVE PLANTATION

CPDAC Sectt informed the members that information on mangroves in India+ received from CWPRS, Pune, has been inserted in the website on CPDAC (<http://cwc.gov.in/CPDAC/index.html>). Any other information on mangroves would be appended in the CPDAC website as and when received. Chairman asked to approach MoEF to supply more information on mangrove or other material which could be inserted in CPDAC website.

(Action: MoEF, CPDAC Secretariat)

10.14 REVIEW OF PROGRESS OF PILOT SCHEME

The progress of the Centrally Sponsored Scheme (now shifted to State Sector) critical anti-erosion works in coastal and other than Ganga basin States+ was

discussed during the meeting. The concerned States were asked to submit utilization certificate/ completion reports. A brief presentation on monitoring of the scheme of Tamilnadu was made by Director, Beach erosion Directorate, CWC.

(Action: Coastal States/UTs)

10.15 VENUE OF THE NEXT MEETING

It was agreed to hold next meeting of CPDAC in October, 2007. The venue for the next CPDAC meeting would be decided in due course after consultation with the States.

(Action: CPDAC Secretariat)

Presentation by Garware Wall Ropes Ltd.

A brief presentation was made by Mr. V. Ravikanth, Geosynthetics Division, Chennai. Benefits of geo-textile systems were explained to the members. He mentioned that geotextile containers, textile tubes in jetties are very useful in dissipating wave energy and that they had been successfully used at Haldia port. Geobags had also been used at Digha, West Bengal.

The meeting ended with a vote of thanks to the Chair.

SITE VISIT

Following sites were visited by the CPDAC on 19-1-2007:

A site visit of Visakhapatnam Port Trust was arranged by the Irrigation department, Andhra Pradesh. Officers of Visakhapatnam Port Trust accompanied the team. Sand trap has been provided at the port to accumulate the sand from the Southern side. The sand from sand trap is dredged and dumped on the Northern beach (Ramakrishna beach) to artificially nourish the Northern beach.

Inner and outer port facilities were shown to the members of CPDAC.

After site visit of Visakhapatnam Port Trust, the members of the CPDAC were taken to visit the Visakhapatnam Steel Plant which is the only shore based integrated steel plant in the country. This plant produce a wide range of grades in diverse shapes like the TMT bars, wire rod coils, angles, channels, beams, rounds, squares and billets. Important departments such as coke ovens, blast furnaces, etc., were shown to the CPDAC members.

Annexure-I**Participants of 10th CPDAC Meeting**

Sl. No.	Name & Designation
1.	S/Shri S.K. Agarwal, Member (RM), CWC & Chairman, CPDAC.
2.	R. K. Khanna, Chief Engineer (P&D), CWC & Member-Secretary, CPDAC.
3.	M. Sivadas, Chief Engineer, CWC, Coimbatore.
4.	A.K. Kharya, Director, Coastal Erosion, CWC, New Delhi.
5.	K.A. Ouseph, Director, Beach Erosion, CWC, Kochi.
6.	Bhupesh Kumar, Dy. Director, CWC, New Delhi.
7.	Sridhar Behera, Chief Engineer & Basin Manager, Lower Mahanadi Basin, Orissa
8.	M. K. Rehaman, Eng-in-Chief (Irr.) A.P.
9.	K. Damodara Rao, S.E., Irrigation, A.P., Visakhapatnam.
10.	M. Viswanath, Dy. Chief Engineer, A.P., Hyderabad.
11.	K.B.R. Prasada Reddy, E.E., Irrigation, A.P., Visakhapatnam.
12.	R. Mohan, Director (Ports), Karnataka.
13.	S. P. Datta, Secretary (Irrigation), West Bengal.
14.	Smt. A. Komalavalli Amma, CE (Retd.), Kerala.
15.	M. D. Kudale, Chief Research Officer, CW&PRS, Pune.
16.	S.P. Kulkarni, Sr. Research Officer, CW&PRS, Pune.
17.	A. S. Salelkar, Superintending Engineer, Goa.
18.	Pramod Badami, Executive Engineer, Works Division-I, Goa.
19.	A.D. Kanani, S.E., Daman Ganga Project Circle, Gujarat.
20.	N. Sasi, Chief Engineer, Inv.& Design, Kerala.
21.	K. Divakaran, Chief Engineer, Irr, Kerala.
22.	Dr. M. Baba, Director, CESS, Kerala.
23.	M. Ziauddin, Coastal Engineer, Maharashtra.
24.	R.S. Kamble, Harbour Div, Maharashtra.
25.	Dr. B.R. Subramanian, Project Director, ICMAM, Ministry of Earth Sciences, Chennai.
26.	Lt. Cdr. N. Sharma, INS Sandhayak, C/O FMO, Visakhapatnam, A.P.
27.	Dr. Y. Sadhuram, Dy. Director, NIO, Regional Centre, Visakhapatnam.
28.	Panner Selvam, Asstt. Director, Tamil Nadu.
29.	P. K. Suresh, Asstt. Director, IHH, Poondi, Tamil Nadu.