

No. 4/5/2012-CED/164-98  
भारत सरकार /Government of India  
केन्द्रीय जल आयोग /Central Water Commission  
तटीय अपरदन निदेशालय/Coastal Erosion Directorate

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कक्ष संख्या 906 (द०), सेवा भवन,  
राम कृष्ण पुरम, नई दिल्ली 110606  
Room No.906 (S), Sewa Bhawan,  
R.K. Puram, New Delhi-110606  
दिनांक/dated 27<sup>th</sup> February, 2012

To

As per list

**Subject:** 13<sup>th</sup> meeting of Coastal Protection and Development Advisory Committee (CPDAC) –  
Forwarding of Minutes- reg.

Please find enclosed a copy of the minutes of 13<sup>th</sup> meeting of Coastal Protection and Development Advisory Committee (CPDAC) held at Mangalore, Karnataka during 9-10<sup>th</sup> February, 2012. Your comments, if any, may kindly be communicated at the earliest.

It is also requested to take follow-up action on the items concerning your State/Department and send a report in this regard to this office.

**Encl: As above**

Yours faithfully,

  
(म० सि० ढिल्लों)/ (M.S. Dhillon)  
निदेशक/Director  
टेलीफोन/Tel. 011-26195513  
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**Copy for kind information to:**

- (i) PPS to Member (RM), CWC & Chairman, CPDAC

## List of CPDAC Members/Invitees

- |   |  |
|---|--|
| <p>1 Commissioner (Ganga),<br/>Ministry of Water Resources,<br/>8<sup>th</sup> Floor, Block -11<br/>CGO Complex, Lodhi Road,<br/>New Delhi-111003.</p>  | <p>2 Joint Secretary/ Advisor<br/>(Impact Assessment)<br/>Ministry of Environment &amp; Forests,<br/>6<sup>th</sup> Floor, Paryavaran Bhawan,<br/>CGO Complex, Lodhi Road,<br/>New Delhi-111003.</p> |
| <p>3 Engineer-in-Chief (Irrigation)<br/>Irrigation &amp; CAD Department,<br/>Errum Manzil,<br/>Hyderabad - 500 082<br/>(Andhra Pradesh)</p>   | <p>4 Advisor (WR),<br/>Planning Commission,<br/>Yojna Bhawan, Sansad Marg,<br/>New Delhi-111001.</p>   |
| <p>5 Development Advisor (Ports),<br/>537, Transport Bhawan,<br/>Ministry of Shipping,<br/>1, Parliament Street,<br/>New Delhi- 111001.</p>   | <p>6 Member (Agriculture)<br/>State Planning Commission,<br/>Govt. of Tamil Nadu,<br/>Ezhilagam, Chepauk,<br/>Chennai - 600005.</p>  |
| <p>7 Chief Engineer (C&amp;SR),<br/>Central Water Commission,<br/>Sangamam,<br/>Gandhimaanagar, Peelamedu P.O.,<br/>Coimbatore – 641 004</p>  | <p>8 Chief Engineer (Irrigation)/WR,<br/>2<sup>nd</sup> Floor, Junta House,<br/>Annexe, Panaji- 403001.<br/>(Goa).</p>   |
| <p>9 Director,<br/>National Institute of Oceanography,<br/>Dauna-Paula,<br/>Goa- 403001.</p>  | <p>10 Secretary,<br/>Narmada, Water Resources &amp;<br/>Water Supply Department,<br/>Govt. of Gujarat,<br/>Block No. 9, Sardar Bhawan,<br/>Sachivalaya, Gandhinagar- 382011.</p>                     |
| <p>11 Chief Engineer,<br/>Irrigation&amp;Admn.,<br/>Govt. of Kerala,<br/>Thiruvananthapuram- 695033</p>   | <p>12 Director,<br/>Central Water &amp; Power Research Station<br/>(CWPRS),<br/>P.O. Khadakwasla, Pune - 411124.</p>   |
| <p>13 Chief Executive Officer, (Commissioner, Water<br/>Transport)<br/>Maharashtra Maritime Board,<br/>Indian Mercantile Chamber (3<sup>rd</sup> Floor)<br/>Ramajibhai Kamani Marg,<br/>Ballard Estate, Mumbai - 400 001.</p> | <p>14 Engineer-in-Chief (Water Resources),<br/>Secha Sadan, Govt. of Orissa,<br/>Bhubaneshwar - 751101.<br/>(Orissa)</p>   |
| <p>15 Chief Engineer (FM) ,<br/>Central Water Commission,<br/>901(S), Sewa Bhawan,<br/>R.K. Puram, New Delhi-66.</p>  | <p>16 Deputy Director General,<br/>Geological Survey of India,<br/>Marine Wing,<br/>Bhu Vigyan Bhavan, DK-6, Sector-2,<br/>Salt Lake City, Kolkata - 700091</p>                                      |
| <p>17 Secretary,<br/>Irrigation &amp; Waterways Deptt.,<br/>Govt. of West Bengal,<br/>Jalsampad Bhawan, Salt Lake,<br/>Kolkata- 700091.</p>   | <p>18 Head, Marine and Water Resources Division,<br/>Space Application Center,<br/>Ambawadi Vistar P.O.,<br/>Ahmedabad –380015</p>   |

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| <p>19 Chief Hydrographer to the Govt. of India,<br/>Directorate of Hydrography<br/>West Block IV, Wing -5, R.K. Puram, Sec-1<br/>New Delhi-110 066</p> <p>21 Superintending Engineer,<br/>Lakshadweep, PWD,<br/>Kavaratti, Lakshadweep-682555</p> <p>23 Member (Planning),<br/>Ganga Flood Control Commission,<br/>Sinchai Bhawan 3<sup>rd</sup> Floor,<br/>Patna – 800015.</p> <p>25 Shri M.M. Kamath<br/>Chief Engineer (Retd.)<br/>Chairman, T.E.C. Anti-sea Erosion Works in Karnataka<br/>Mizar, Ramakrishna Pai Compound<br/>Mannagudda, Mangalore-575 003</p> <p>27 Shri D.K. Maiti<br/>BJ-95, 2nd Floor<br/>Sector-2, Salt Lake<br/>Kolkata-700091</p> | <p>20 Chief Engineer, APWD,<br/>Andaman &amp; Nicobar Administration,<br/>Port Blair-744111</p> <p>22 Chief Engineer, PWD,<br/>34, Lal Bahadur Shastri Street,<br/>Pondicherry-605001</p> <p>24 Director (Ports &amp; I.W.T.),<br/>Baithkol, Uttara Kannada,<br/>Karwar – 581302<br/>Karnataka.</p> <p>26 Dr. Vallam Sundar<br/>Professor, IIT Madras<br/>Ocean Engineering Department<br/>C-6-13, Second Link Road, IIT Madras,<br/>Chennai - 600 036</p> |
|--|--|

**Permanent /Special Invitees:**

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|---|--|
| <p>28 Economic Adviser<br/>Ministry of Water Resources<br/>Room No. 7, B Wing<br/>Shashtri Bhawan<br/>New Delhi – 110001</p> <p>30 Director,<br/>Centre for Earth Science Studies,<br/>Akkulam,<br/>Thiruvananthapuram - 695 031<br/>(Kerala)</p> <p>32 Director,<br/>Beach Erosion Directorate,CWC<br/>"Jaladhara", 27/1927-A,<br/>Kasturba Nagar, Kochu-Kadavanthra,<br/>P.O.Kadavanthra, Kochi - 682 020.</p> <p>34 Director,<br/>National Institute of Ocean Technology (NIOT)<br/>Velachery-Tambaram Main Road,<br/>Pallikaranai,<br/>Chennai – 600100</p> | <p>29 Chief Engineer,<br/>Design Research and Construction Support,<br/>Water Resources Organization,<br/>Public Works Department<br/>Cheppakkam, Chennai - 600 005</p> <p>31 Project Director &amp; Sci G<br/>ICMAM Project Directorate<br/>NIOT Campus,<br/>Velachery-Tambaram Main Road,<br/>Pallikaranai,<br/>Chennai – 600100</p> <p>33 Director,<br/>Indian National Centre for Ocean Information<br/>Services(INCOIS),<br/>"Ocean Valley" Pragathi Nagar (BO),<br/>Nizampet (SO) ,Hyderabad - 500 090</p> |
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**MINUTES OF 13<sup>TH</sup> MEETING  
OF  
COASTAL PROTECTION & DEVELOPMENT ADVISORY COMMITTEE (CPDAC)**

The 13<sup>th</sup> meeting of the Coastal Protection & Development Advisory Committee (CPDAC) held at Mangalore, Karnataka during 9-10<sup>th</sup> February 2012, under the Chairmanship of Shri S.P. Kakran, Member (River Management), Central Water Commission, & ex-officio Additional Secretary to the Government of India. List of participants is enclosed at **Annexure-I**.

After presentation of bouquets and lighting of the lamp, Capt. R.Mohan, Director of Ports and Inland Water Transport Department, Government of Karnataka, in his welcome address emphasized the importance and sensitiveness of the problems associated with the coastal erosion and stated that the CPDAC is an important forum where various issues associated with coastal erosion are discussed. He also mentioned that Karnataka has a coastal length of 300 km out of which 250 km is susceptible to sea erosion. Since sea wall cannot be built all along, soft solutions which are eco-friendly, have to be found. He referred to the ADB assisted Project at Ullal, in which ADB has come out with soft solutions consisting of offshore reefs, berms and modifications to breakwaters with the help of model study.

Shri S.P.Kakran, Chairman (CPDAC), in his inaugural address stated that the Coastline of Country extending from West Bengal to Tamil Nadu in the Bay of Bengal and Kerala to Gujarat in the Arabian Sea is perpetually exposed to vagaries of sea. The cumulative damages caused by the ravages of the sea are enormous. The valuable property and developmental infrastructure are irreversibly destroyed causing miseries to the population nearby. He further stated that the coastal erosion is a phenomenon experienced all over the world and Indian Coast is also not an exception. A major portion of the Indian coastline is facing constant erosion due to various reasons, natural as well as man-made. Therefore, it is of utmost importance that the coastline is protected and safeguarded from sea erosion. As far as the history of the coastal erosion is concerned, he said that the first anti-sea erosion measure was initiated by the French as early as in 1920's, when a 1.75 km long retaining wall was constructed along the urban coastline in Puducherry. Furthermore, there have been several measures adopted in India to counter the problem of erosion in the form of Sea Wall, revetments, Groynes etc. Their suitability and adverse effects are debatable. However, it is now increasingly felt world over that non-structural measures such as Beach Nourishment etc. should be employed in conjunction with traditional measures while dealing with coastal erosion problem.

He also informed that the Govt. of India had been providing Central Loan Assistance to the Kerala State for anti sea erosion works since 1970-71. The Central Loan Assistance was discontinued beyond 1991-92 as a process of decentralization as per the decision taken in the 43rd meeting of National Development Council held in December, 1991. Realizing the setback received in the progress of coastal protection works in the maritime States, the Beach Erosion Board, in its 23rd meeting, held in July, 1994, requested the maritime States to formulate the proposals for a consolidated National Coastal Protection Project (NCPP) for posing the same for external assistance. NCPP was initiated with a view to explore the possibility of funding coastal protection works through external assistance.

As far as domestic funding is concerned, he stated that Specific Anti-Sea Erosion schemes are covered under **Flood Management Programme** of Govt. of India. However, during appraisal of the schemes submitted by states, it was observed that there is lack of coastal field data required for formulation of such projects in co-ordinated manner with proper justification. It is highly advisable that any endeavor in data collection related to coastal processes should be shared and co-ordinated at common platform at national level such as CPDAC to avoid duplication of effort.

Shri K.N. Keshri, Chief Engineer, (Flood Management), Central Water Commission in his introductory speech stated that MoWR, Govt. of India, realizing the necessity of the comprehensive study of the coastal processes and the measures required to tackle the problem in scientific manner, had constituted **Beach Erosion Board (BEB)** as early as 1966 for the state of Kerala. The same was reconstituted in 1971 to cover the entire maritime states. Considering the vast potential of the activities involved in the protection of coastal zone, the Beach Erosion Board was re-constituted as CPDAC in 1995 and made more broad based to address the issues of coastal protection and identification and development of various resource potential available behind the protected areas. He further stated that India's mainland has a coastline of about 5400 km and including A&N and Lakshadweep islands, the total coastline is about 7500 km. Indian Coastline has been experiencing erosion problem and as per information received from various maritime State/UT of India, it has been found that around **22 percent** of our coastline is affected by it in varying magnitude. While almost all the maritime states are facing the problem that of Kerala and Karnataka states is chronic in nature.

He informed that to assess the exact problem in more systematic manner, preparation of Shoreline Change Atlas has been taken up through SAC, Ahmedabad, which is scheduled to be completed by April, 2012. One of the requirements of the Atlas is to display the already protected reaches along the coastline which has to be furnished by the maritime states/UT. He urged that all the member states should actively come forward and make available the required information so as to meet the deadline for the project as the atlas would be helpful at all levels of coastal protection and management.

He further stated that coastal related data are being collected by different agencies as per their mandate and requirement and hence co-ordinated approach is lacking. Common platform, such as, CPDAC can play a major role in integrating the data which can be utilized for various purposes including design of economical and long-term solution to coastal erosion problem.

Thereafter, the Chairman (CPDAC) requested the members to introduce themselves and then to proceed with the Agenda items of the 13<sup>th</sup> CPDAC Meeting.

### **13.1 CONFIRMATION OF THE MINUTES OF 12<sup>TH</sup> MEETING**

The minutes of 12<sup>th</sup> CPDAC Meeting held in Bhubaneswar was circulated among CPDAC members vide letter no. 4/5/2011-CED/ 213-46 dated 1st April, 2011. Comments received thereupon from Development Adviser (Ports), Ministry of Shipping, Joint Director, CW&PRS and Chief Engineer and Basin Manager, Water

Resources Department, Government of Odisha were deliberated and accepted with slight modification, in the light of the comment of Joint Director, CW&PRS that “reference manual” as “reference” in line 3 of his comments.

Thereafter, the minutes of the 12<sup>th</sup> meeting were confirmed and it has been decided that the updated minutes will be uploaded on the CPDAC Website after issuing necessary corrigendum.

## **13.2 STATE WISE COASTAL LENGTHS AND COASTAL ATLAS**

### **13.2.1 STATE WISE COASTAL LENGTH**

National Hydrographic Office (NHO) had informed the CPDAC during its 11<sup>th</sup> meeting that a comprehensive exercise of revaluating coastal length is being taken up in the wake of methodological changes based on Survey of India maps. NHO was requested to document the standardized procedure for evaluating/ determining the costal length and the methodology adopted. Progress on this aspect was presented by NHO representative, Commander J. Gurumani during the meeting. As per the data presented, the total length of coast line has now been arrived at **11,084.51 Km**. He stated that while evaluating length of coast line, the mouth of creeks were closed along the general direction of the coast. The state boundaries were extracted from available information at NHO. He mentioned that the above data is provisional and member states may provide feedback after their verification. The CPDAC secretariat shall circulate the maps to maritime states and UT's and obtain the feedback. After incorporating modifications by NHO, if any, the CPDAC shall accept the coast line length and notify. Chairman (CPDAC) desired that if there are variations in the coastal length from the earlier figures beyond 10% in case of any state, it may be explained in the footnotes.

Sh. K.N. Keshri, Chief Engineer(FM), CWC also stated that the difference between shoreline and coastline need to be clearly defined and any data regarding coastal length should accompany a short note describing the assumptions, year of base data and the line i.e. high or low tide line which has been considered. It was also decided that NHO would finalize the lengths upto 2 decimals from the present accuracy of 3 decimals.

### **13.2.2 SHORELINE CHANGE ATLAS OF INDIA**

As one of the proposed outcomes of shore line change atlas of India, will be to display the already existing coastal protection works, therefore, the respective members from maritime states/ UT's were requested to provide the information on existing coastal protection work in spatial domain giving latitude and longitude at the earliest. It was noted by CPDAC that while Information in respect of Goa, Gujarat, Lakshadweep, Kerala, Andhra Pradesh and Tamil Nadu has been received (and forwarded to SAC Ahmedabad for incorporation in the atlas), no information has been received from West Bengal, Odisha, Karnataka, Puducherry and A & N Islands. The information received from Maharashtra is insufficient as it is not in spatial domain and is incomplete. Chairman (CPDAC) desired that all those states/UT's which have not submitted the information should submit the same positively by 29<sup>th</sup> February, 2012. Sh. B. Panda Chief Engineer, Water Resources Department of Odisha informed that the data has already been sent a few days back. Chairman, CPDAC also urged Director (Beach erosion), CWC and CPDAC secretariat to get the data expedited from the remaining States and Union

Territories. While evaluating the progress of the project, Chairman, CPDAC decided that following time schedule be adhered to:

1. Maps which have been already prepared be circulated by SAC as draft to the state governments/UTs for their comments/suggestions to be conveyed latest by 31<sup>st</sup> March, 2012, failing which the maps circulated would be taken as final.
2. Incorporating changes, if any, by 15<sup>th</sup> April, 2012 by SAC
3. Sending the maps to State Governments/UTs by 30<sup>th</sup> April, 2012 for their comments.
4. Preparation of final draft atlas by SAC by 31<sup>st</sup> May, 2012.
5. Finalization and publishing the Atlas by SAC by 30<sup>th</sup> June, 2012.

### 13.3 DATA COLLECTION, COMPILATION, ANALYSIS AND PUBLICATION

In pursuance of decision taken during the 12<sup>th</sup> CPDAC meeting, a meeting of concerned agencies was organized on 16/12/2011 at CWC Head Quarter. Representatives from CWC, Centre for Earth Sciences Studies (CESS), ICMAM-PD, National Hydrographic Office (NHO), Institute of Hydraulics and Hydrology (IHH), Poondi and Indian National Centre for Ocean Information System (INCOIS) participated in the meeting. Based upon interaction during this meeting, it has been proposed to constitute a **Sub-committee of CPDAC on Coastal Data Collection and Compilation** with the following composition :

- |  |                   |
|--|-------------------|
| 1. Chief Engineer(FM), CWC                                 | Chairman          |
| 2. Representatives from INCOIS, NIO, NHO, MoEF, CESS, NIOT | Member            |
| 3. Project Director (ICMAM)                                | Member            |
| 4. Director(Beach Erosion), CWC                            | Member            |
| 5. Joint Director, CW&PRS Member                           | Member            |
| 6. One state/UT each from East Coast & West Coast of India | Member            |
| 7. Director (Coastal Erosion), CWC                         | Member –Secretary |

The proposal was accepted by CPDAC with following addition who volunteered/have been nominated by the CPDAC, as members:

1. IHH Poondi, Tamil Nadu
2. Government of Kerala
3. SAC/ ISRO, Ahmedabad
4. River Research Institute of West Bengal
5. Kolkata Port Trust
6. A SE level officer from Govt of Odisha
7. Chilka Development Authority
8. Director, Karnataka Engineering Research Institute (KERI)
9. Government of Puducherry

Thereafter, the terms of reference of the sub-committee were also discussed and adopted with slight modifications, as given below:

To prepare a report and submit to CPDAC containing following:

1. Status of the coastal data being collected at national **and state** level by various agencies and its inventory,
2. Uniform format for data collection to be followed by each agency,
3. Plan for data collection and requirement, including instrumentation for entire coastline of the country addressing the priority areas,
4. Utility of such data for planning of coastal protection and shoreline management initiatives,
5. Future strategy/Guidelines for coastal data collection, compilation and publication in the prescribed format

Representatives from CWPRS informed that there is already a prescribed format for collection of field data. However, Shri K. N. Keshri , Chief Engineer (FM), CWC stated that during the meeting of the concerned agencies on 16<sup>th</sup> December,2012, some of the agencies were not satisfied with the CWPRS format so a new format has to be devised. The new format is to be finalized by the aforesaid sub-committee which may look into the CWPRS format also. Regarding National status report on data collection, the Chairman (CPDAC) enquired as to what should be the periodicity of its publication and when the first report may be published. On an enquiry from Development Advisor (Ports), Ministry of Shipping regarding availability of funds for such publications, Chairman (CPDAC) indicated that there would not be any problem of funds and such publications may be brought out once in three years. Prof. V Sundar , IIT Madras, Chennai clarified that the data requirement for the purpose of formulating the coastal protection schemes, as being referred by the Chairman (CPDAC) would be a micro scale data and that the format being used internationally could be adopted . Sh. K.N. Keshri, Chief Engineer (FM), CWC stated that the first publication would be brought out by March, 2013, which will set the tune of data collection, compilation and publication.

Chairman (CPDAC) informed that during 12<sup>th</sup> plan, Planning Commission, New Delhi has agreed to provide requisite funds for data collection & compilation. Hence, this activity should be considered on priority as there is no dearth of funds. States should look into the infrastructure available and required, deficiencies in the present data and formulate their action plans with respect to data collection for micro planning of coastal protection works so as to reach to CWC by 1<sup>st</sup> April, 2012. CWC could consider and include their requirement in plan schemes of MoWR. Sh. Kamlesh Rabadia, Superintending Engineer, Government of Gujarat stated that the formulation of any such plan would take time. Chairman, CPDAC pointed out that such proposals may be sent for the purpose of preparation of EFC Memorandum only and need not be very detailed one. He further stated that in the 11<sup>th</sup> plan, coastal protection works were treated at par with river bank protection works and therefore, included in FMP, but most of the states could not utilize the funds due to lack of data and deficiency in micro level planning .



## **13.4 RESEARCH AND DEVELOPMENT**

### **13.4.1 RESEARCH PROPOSALS**

Regarding the four research proposals submitted by Tamilnadu to INCH Secretariat, the CWPRS representative informed that the proposals can be considered by INCH when funds allocated earlier to Tamilnadu in another project which were not utilized are refunded by Government of Tamil Nadu. Chairman, CPDAC desired that since INCH has to submit its recommendations to R&D Division of MoWR, it may decide on the proposals early and the status may be submitted to R&D Division of MoWR by 29<sup>th</sup> February, 2012. Representative from IHH Poondi, TN enquired whether the funding will include only the one-time cost or also the recurring cost like, salaries, etc. Chairman (CPDAC) stated that monthly stipends to the research scholars could be included in the proposals.

### **13.4.2 INSTITUTIONAL STRENGTHENING**

#### **13.4.2.1 ORGANIZATIONS**

Issues under this para have been covered under para 13.3.

#### **13.4.2.2 TRAINING AND STUDY TOURS**

Sh. K. N. Keshri Chief Engineer (FM), CWC informed that as a part of annual training calendar of National Water Academy, one week training programme on "Coastal Erosion Protection and Coastal Zone Management" was jointly organized by National Water Academy and CW&PRS, Pune during 6-10<sup>th</sup> June, 2011. Additionally, NWA has been requested to extend the scope of the training programme using expertise of other institutes, such as, NIOT, ICMAM, IIT, Chennai, NHO, NIO etc. and also to conduct more number of such training programmes. Above mentioned institutes may also indicate the specialized training programmes being organized by them and share with other participants for utilization in future. States/UTs may discuss and request for specialized training programmes from these institutes. The States/UT's should depute adequate number of officers for such trainings, organized in the related fields.

## **13.5 COASTAL MANUAL**

### **13.5.1 PREPARATION OF INDIAN SHORE PROTECTION MANUAL**

CPDAC desired that CPDAC secretariat pursue the matter with NIO and the concerned Ministry with a request to complete the manual urgently.

### 13.5.2 MANUAL ON CONSTRUCTION TECHNIQUE OF COASTAL PROTECTION WORKS

The manual on Construction Technique of Coastal Protection works prepared by CWPRS was accepted by the Committee.

### 13.6 REVIEW OF THE EXISTING WORKS

In pursuance of the decision taken in the 12<sup>th</sup> CPDAC meeting, the sub-committee of CPDAC on “**Performance Evaluation of Coastal Protection Works**” was reconstituted earlier consisting of the following:-

1. Chief Engineer (C&SRO), CWC, Coimbatore	Convenor
2. Joint Director, CW&PRS, Pune	Member
3. Representative of SAC, Ahmedabad	Member
4. Representative of concerned State/UT	Member
5. Representative of NIO, Goa	Member
6. Director, Beach Erosion Directorate, CWC, Kochi	Member-Secretary

The committee accepted the proposal with remarks that the sub-committee may also include Director (Coastal Erosion), CWC, New Delhi as special invitee.

Director (Beach Erosion), CWC and Member-Secretary of the Sub-committee informed the outcome of evaluation studies conducted by the sub-committee along with future programme in the presentation session in the afternoon, which was noted.

Terms of References (ToR) of the sub-committee was also revised as under:

- i. To review the performance of the works carried out by States and evolve improved design techniques based on such experience from time to time.
- ii. To arrange effective and timely monitoring of the coastal protection & development projects.

### 13.7 NATIONAL COASTAL PROTECTION PROJECT (NCP)

Representatives from Karnataka and Maharashtra informed about the status of **Ullal Coastal Erosion & Inlet Improvement Project & Mirya Bay Coastal Erosion and Protection Project** respectively, which have been taken up as the pilot projects with the assistance of Asian Development Bank under NCP.

#### **Ullal Coastal Erosion & Inlet Improvement Project**

Assistance from Asian Development Bank to Karnataka consists of three tranches and the first tranche focusses mainly on Ullal **Coastal Erosion & Inlet Improvement Project** for which Advisory Committee – MoWR accorded clearance in July, 2011. The project consists of four components-

- (1) Two offshore reefs
- (2) Four nearshore berms

- (3) Break water realignment
- (4) Beach nourishment.

M/s. Euroconsult Mott Macdonald, The Nether Lands has been engaged as Project Management and Design Consultant (PMDC) by the Government of Karnataka at an estimated cost of USD 4,526,852 (INR 20.47 crore). The consultant gave a presentation regarding the project.

It has been informed that tender for civil works through International Competitive Bidding (ICB) was called for on 5<sup>th</sup> December 2011. The last date for submission of completed Bid Document was 13<sup>th</sup> February 2012. However, ADB has recommended for cancellation of tender and to invite the bids afresh after having conducted a detailed investigation of Kovalam reef.

Sh. K.N. Keshri, Chief Engineer (FM) , CWC enquired regarding about the time limit of the first tranche of ADB loan to which Sh. Shanth Kumar, Joint Director, Ports and IWT Department , Government of Karnataka reported that the first tranche shall be utilized by 2014.

### **Mirya Bay Coastal Erosion and Protection Project**

Pilot Project of Mirya Bay Coastal Erosion and Protection Project consists of following two components:-

#### **Construction of Offshore submerged cup shaped Geotextile reef at Mirya Bay:**

It has been informed that after completion of International Competitive Bidding process, the work has been awarded to M/s. Maccaferri Environmental Solutions Pvt. Ltd. and the contract agreement was signed on 5<sup>th</sup> October 2011. Initial Bathymetric Survey was conducted by contractor in November, 2011 and the progress report was sent to ADB to confirm any design/location change, if required. However, considering performance issues with Kovalam Multipurpose reef in Kerala, which is made up same material, design and construction methodology that is being proposed for Mirya Bay reef, ADB in December, 2011 has directed to carry out design review of Mirya bay by February, 2012. The contractor has been asked to review the design of Mirya bay reef.

#### **Beach Nourishment of Mirya Bay**

As informed by the Maharashtra Government, this work will be undertaken after appointment of Project Management and Design consultant (PMDC).

It was also informed that procurement of Geo-membrane is under progress and the specifications are being finalized.

Sh. S.P. Kakran, Chairman (CPDAC) enquired as to why the material with requisite specifications cannot be procured from the Indian firms. Prof. V Sundar, IIT Madras, Chennai also responded that Geosynthetics have been used in India e.g. Geotubes were used in Digha beach (West Bengal) using material from M/s. Garware Wall Ropes Ltd. and there are enough firms in India in this field . Chairman (CPDAC) also enquired about how

the project was formulated and got approved by TAC if the technical specifications are still being finalized. He conveyed his concern that if there is change in the scope due to materials, the estimated cost approved by TAC-MoWR may not hold good. He also emphasized that while making such changes in specification by consultants at this stage, the benefit cost ratio of the project should always be kept in mind, before taking any final decision by the State Government.

### **13.8 MASTER PLAN FOR COASTAL PROTECTION**

It was informed by the Kerala Govt. representative, that Master Plan for coastal protection has been prepared by Kerala for the vulnerable reaches. Chairman (CPDAC) desired that the other states should also ensure that for coastal lengths which are vulnerable, DPRs are prepared and submitted to the Government of India for appraisal. FMP is an equally attractive scheme, wherein 75% grant is being provided to the State Governments for coastal protection works. Sh. K.V. Thomas, Head Marine Sciences Division, CESS, Kerala stated that CRZ clearance for the projects be taken well in advance, while preparing the DPR's.

### **13.9 COMPOSITION OF CPDAC**

It was decided to include the representatives of INCOIS and NIOT as special invitees in CPDAC.

### **13.10 STATUS OF COSTAL PROTECTION WORKS IN MARITIME STATES/UT's**

A report, namely, "Status Report on Coastal Protection and Development in India" has been prepared by CPDAC Secretariat. The draft report would be circulated among members for suggestions, if any, within two months of its circulation; so that it could be finalized in next CPDAC meeting.

### **13.11 ANTI SEA EROSION MEASURES IN LAKSHADWEEP- EXAMINATION OF MALDIVIAN MODEL FOR SHORE PROTECTION**

CWPRS representative informed the Committee about the request of Lakshadweep administration and stated that the problem may be looked into by an expert committee.

Chairman, CPDAC decided that the above issue may be referred to the sub-committee mentioned in para 13.3 and the following may also be included as members of the sub-committee.

1. Representative from Central Marine Fisheries Research Institute, Cochin.
2. Sh. Saleem Ali, Environmentalist and Ecologist from Coimbatore from Ministry of Environment & Forests.

### **13.12 ANY OTHER ITEM --- NIL ---**

### 13.13 VENUE OF THE NEXT MEETING

It was decided that the venue of the next meeting may be considered in the Lakshadweep since its problems are different from the main-land and require a different approach.

The deliberations of the meeting was followed by presentations by the following agencies:

1. Performance Evaluation of Coastal Protection Works by Sh. S.P. Abraham, Director (Beach Erosion), CWC, Kochi.
2. Shoreline Change Atlas of India by Dr. A.S. Rajawat , Head, Geo Sciences Division, Space Application Centre, Indian Space Research Organization, Ahmedabad.
3. ADB Assisted Karnataka Shoreline Management Project by Dr. James Wark, Consultant, M/s. Euroconsult Mott Macdonald, The Nether Lands.
4. Use of Geotextiles in Coastal Protection Works by M/s. Maccaferri Environmental Solutions Pvt. Ltd.
5. Geotextiles Tubes and Flexible Gabions for Coastal Protection works by M/s.Garware Wall Ropes Ltd., Chennai.
6. Diving Services and Underwater Diving by M/s. Sea Lion Diving Services , Vishakhapatnam.

The Ullal Coastal Erosion & Inlet Improvement Project and Paduvari coastal protection works were also visited next day viz. 10<sup>th</sup> February, 2012.

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

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**List of Participants of 13th CPDAC Meeting held at Mangalore, Karnataka during 9-10th February 2012**

<b>S.N</b>	<b>Name &amp; Designation</b>
<b>CWC</b>	
<b>1.</b>	Sh. S.P. Kakran, Member (RM), CWC & Chairman, CPDAC
<b>2.</b>	Sh. K.N. Keshri, Chief Engineer (FM), CWC
<b>3.</b>	Sh. M.S. Dhillon, Director (Coastal Erosion) CWC, New Delhi.
<b>4.</b>	Sh. S.P. Abraham, Director(Beach Erosion),CWC, Cochin, Permanent/Special Invitee
<b>Members</b>	
<b>5.</b>	Sh. B. Poiyaamozhi, Development Adviser (Ports), Ministry of Shipping, New Delhi
<b>6.</b>	Sh. N.M. Abdulla, Director, Geological Survey of India, Mangalore representing Deputy Director General
<b>7.</b>	Sh. Ravi Bhushan Kumar, Director(MP-I), Ganga Flood Control Commission, Patna representing Member (Planning)
<b>8.</b>	Sh. A.S. Rajawat, Head, Geo-sciences Division, SAC, Ahmedabad representing Head, Marine and Water Resources Division
<b>9.</b>	Commander J. Gurumani, Joint Director, National Hydrographic Office, Dehradun representing Chief Hydrographer to the Government of India, Directorate of Hydrography, New Delhi
<b>10.</b>	Sh. A.V. Mahalingaiah, SRO, CWPRS, Pune representing Director, CWPRS, Pune
<b>11.</b>	Sh. Baidhar Panda, Chief Engineer & Basin Manager, Lower Mahanadi Basin, Dept. of Water Resources, Govt. of Odisha representing Engineer-in Chief
<b>12.</b>	Sh. K.Ramasamy, Member( Agriculture & Irrigation), State Planning Commission, Chennai , Government of Tamil Nadu
<b>13.</b>	Sh. Ahammed Basheer, SE, Irrigation North Circle, Kozhikkod, Kerala representing Chief Engineer, Irrigation and Administration , Government of Kerala
<b>14.</b>	Capt. R. Mohan, Director (Ports & I.W.T.), Govt. of Karnataka
<b>15.</b>	Sh. S.T. Nadkarni, Chief Engineer , Water Resources Department , Govt. of Goa
<b>16.</b>	Sh. S.G. Dahiwade, SE, Maharashtra Maritime Board, Govt. of Maharashtra representing Chief Executive Officer
<b>17.</b>	Sh. K.B. Rabadia, SE, Surat Irrigation Circle, Gujarat representing Secretary, Narmada Water Resources and Water Supply Department
<b>Non-official members</b>	
<b>18.</b>	Prof. V. Sundar, Dept. of Ocean Engineering , IITM, Chennai

Contd...

19.	Shri D.K. Maiti, Ex-Secretary to Govt. of West Bengal, Kolkata
20.	Shri M.M. Kamath, Retired Chief Engineer, Govt. of Karnataka
<b>Permanent / Special invitees</b>	
21.	Sh. D. Khaleel Ahmed, DD, IHH, Poondi, Chennai representing Chief Engineer (DR&CS), Water Resources Organization, PWD, Chennai
22.	Sh. K.V. Thomas, Head Marine Sciences Division, CESS, Kerala representing Director, CESS, Thiruvananthapuram
<b>Others</b>	
23	Sh. B.R. Tyade, Research Officer, CWPRS, Pune
24	Sh. Nilachal Panigrahi, Director, Hydrology & Water Planning (OWPO), Dept. of Water Resources, Govt. of Odisha
25	Sh. D. Gopakumar, EE, Irrigation Division, Kozhikkod, Kerala
26	Sh. Shanth Kumar, Joint Director, Ports & I.W.T. Dept., Govt. of Karnataka
27	Sh. S. Natesh, Director, Karnataka Engineering Research Station (KERS)
28	Sh. B.S. Prakash, CRO, KERS
29	Sh. M.V. Srinivasa, RO, KERS
30	Sh. S.V. Prabhavalkar, SE, Water Resources Department , Govt. of Goa
31	Sh. A.S. Salelkar, SE, Water Resources Department , Govt. of Goa
32	Sh. H.M. Rangaraju, EE, Water Resources Department , Govt. of Goa

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