

**NATIONAL TECHNOLOGY CENTRE FOR PORTS, WATERWAYS, COASTS (NTCPWC)**  
**DEPARTMENT OF OCEAN ENGINEERING**  
**IIT MADRAS, CHENNAI – 600 036.**

**PROJECT MANAGEMENT COMMITTEE - MINUTES OF MEETING**

Date: 24.04.2018


Venue: OEC Conference Hall

Members Present:-

- |   |                                   |
|---|-----------------------------------|
| 1. Prof. R.Sundaravadivelu, Dept. of Ocean Engineering, | Chairman                          |
| 2. Prof. B.S. Murty, Dept. of Civil Engineering         | Member                            |
| 3. Prof. G. Ravindra Gettu, Dean (IC & SR)              | Member                            |
| 4. Prof. K. Murali , Dept. of Ocean Engineering         | Member Secretary<br>& Team Leader |
| 5. Prof. V.Sundar, Dept. of Ocean Engineering           | Invitee                           |
| 6. Prof. S.A.Sannasiraj, Dept. of Ocean Engineering     | Invitee                           |

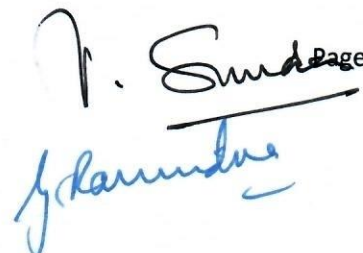
Chairman, Project Management Committee welcomed the members for this inaugural meeting and the following points discussed during the meeting.

1. The requirement of maintaining separate accounts for all projects has been discussed. Dean (IC &SR) has agreed to do the needful for the same and enable providing separate utilization certificates for each of the funding sources.
2. Further, PMC advised Project Team to operate the overall activities as 13 sub projects under one main project. These include one CAPEX project, one Common project and 11 centre projects. The over heads will be distributed for all sub projects proportionately.
3. The request of Project Team to waive the IC & SR overheads for CAPEX and the equipments is recommended in the PMC and the same has been agreed by Dean(IC & SR).
4. The Project Team has been asked to prepare the detailed budget breakup under 12 projects (except CAPEX) and circulate for approval.
5. Project Team presented the requirement of manpower as below.
  - a. One senior most official with more than 15 years of experience Ph.D with relevant R&D experience.

  
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- b. Two technical manpower with Ph.D qualification and preferably / R&D experience.
- c. One technical manpower each for information technology or Computer science, instrumentation or Electronics Engineering, Civil and Mechanical.
- d. One senior most manpower with excellent administrative record.
- e. Two Additional manpower for accounts / stores / administration / recruitment etc.
- f. one helper
- g. Any additional manpower requirement based on the needs of the projects coming under this centre

PMC asked Project Team to work out the title of above manpower and budget requirement in line with IC & SR norms including scale of pay and circulate to the members.


Chairman concluded the meeting with vote of thanks.



Prof. K. Murali




Prof. S.A. Sannasiraj



Prof. V. Sundar



Prof. B.S. Murty



Prof. G. Ravindra Gettu



Prof. R. Sundaravivelu




## Details of Budget breakup

1. The budget break-up considering the common expenditure and the funding for the 11<sup>th</sup> project is provided as below, the same is approved by PMC. A detailed budget break-up is appended below.
2. Continuous monitoring of the project budget will be carried out by the Project Team on half-yearly basis. Any unspent allocation funds may be returned back to the common project account for further utilization / re-appropriation to other activities.
3. Conversely, any additional requirements for individual projects shall be topped up from common project as and when deemed necessary with the approval of the PMC.
4. Re-appropriation of allocation within the various heads may be allowed with the permission of the PMC except the head equipment.

**Project Number 1** : Development of a customizable 3D numerical Hydrodynamics and siltation tool.

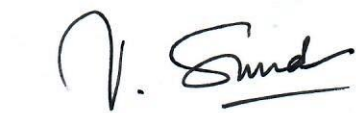

**Investigator** : Prof. K. Murali, Department of Ocean Engineering.

Particulars	Y1	Y2	Y3.	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Boat Hiring / Survey</b>	400000	400000	200000	<b>1000000</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	900000	900000	0	<b>1800000</b>
<b>Institutional overheads</b>	252867	252867	252866	<b>758600</b>
<b>Subtotal</b>	<b>2457867</b>	<b>2457867</b>	<b>1435866</b>	<b>6351600</b>

  
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**Project Number 2** : Inlet dynamics and Shoal Process- a complete numerical, laboratory and field study.

**InvestigatorName** : Prof. V. Sundar , Department of Ocean Engineering.

**Co-Investigator Name** : Prof. K. Murali , Department of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Field trials / Survey</b>	400000	400000	200000	<b>1000000</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	900000	900000	0	<b>1800000</b>
<b>Institutional overheads</b>	252867	252867	252866	<b>758600</b>
<b>Subtotal</b>	<b>2457867</b>	<b>2457867</b>	<b>1435866</b>	<b>6351600</b>

**Project Number 3** : Development of Autonomous Surface Vehicle (ASVs) for Mapping Marine Environment And Water Quality

**InvestigatorName** : Dr. PrabhuRajagopal , Department of Mechanical Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Field trials / Survey</b>	250000	250000	250000	<b>750000</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	1000000	500000	0	<b>1500000</b>
<b>Institutional overheads</b>	236200	236200	236200	<b>708600</b>
<b>Subtotal</b>	<b>11391200</b>	<b>6391200</b>	<b>1469200</b>	<b>19251600</b>

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B. S. Murali

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Sundar

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K. Murali



**Project Number 4** : Assessment tool for assessing the impact of ship/ Boat Wake Waves on the banks and protection measures for Inland Waterways

**InvestigatorName** : Dr. V. Sriram , Department of Ocean Engineering.

**Co-Investigator Name** : Prof. K. Murali, Dept. of Ocean Engineering.

Prof. V. Sundar, Dept. of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Boat Hiring/ Survey</b>	200000	200000	100000	<b>500000</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	2000000	1000000	0	<b>3000000</b>
<b>Institutional overheads</b>	219533	219533	219534	<b>658600</b>
<b>Subtotal</b>	<b>3324533</b>	<b>2324533</b>	<b>1302534</b>	<b>6951600</b>

**Project Number 5** : Demonstration of Dragflow Dredger for Silt trap & Shoal Dredging

**Investigator Name** : Dr. R. Sundaravadivelu , Dept. of Ocean Engineering.

**Co-Investigator Name** : Prof. K. Murali, Department of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	802000	802000	960200	<b>2564200</b>
<b>Resident Project Engineer (1)</b>				
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Boat Hiring/ Survey</b>	200000	200000	100000	<b>500000</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	25000000	25000000	0	<b>50000000</b>
<b>Institutional overheads</b>	229280	229280	229280	<b>687840</b>
<b>Subtotal</b>	<b>26356280</b>	<b>26356280</b>	<b>1414480</b>	<b>54127040</b>

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V. Sundar  
R. Sundar

**Project Number 6** : Impact of Navigation on Flow and Sediment Transport at River Confluences: An Experiment Study

**Investigator Name** : Dr. Venu Chandra, Department of Civil Engineering.

**Co-Investigator Name** : Prof. B.S. Murty, Department of Civil Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Boat Hiring/ Survey</b>	0	0	0	<b>0</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments*</b>	500000	0	0	<b>500000</b>
<b>Institutional overheads</b>	186200	186200	186200	<b>558600</b>
<b>Subtotal</b>	1591200	1091200	1169200	<b>3851600</b>

\*All equipments will be purchased from Centres' funds

**Project Number 7** : New Concepts of pile Supported Breakwater with Berthing Facility

**Investigator Name** : Dr. Sannasiraj , Department of Ocean Engineering.

**Co-Investigator Name** : Prof. V. Sundar , Department of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>	780000	780000	858000	<b>2418000</b>
<b>b. Project Associate (1)</b>				
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Boat Hiring/ Survey</b>	0	0	0	<b>0</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Model Fabrication</b>	500000	300000	0	<b>800000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	800000	800000	0	<b>1600000</b>
<b>Institutional overheads</b>	239533	239533	239534	<b>718600</b>
<b>Subtotal</b>	2444533	2E+06	1222534	<b>5911600</b>

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**Project Number 8** : Controllability of Ships in Harbour and Navigational Channels.

**Investigator Name** : Dr. P. Krishnakutty, Department of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Boat Hiring/ Survey</b>	0	0	0	<b>0</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	8000000	0	0	<b>8000000</b>
<b>Institutional overheads</b>	186200	186200	186200	<b>558600</b>
<b>Subtotal</b>	<b>9091200</b>	<b>1091200</b>	<b>1169200</b>	<b>11351600</b>

\*Propeller dynamometer & Multi-component load cell

**Project Number 9** : Technology Development and Demonstration of Micro Bubble Drag Reduction (MBDR) and Manoeuvring of Vessels in inland Water Transportation

**Investigator Name** : Dr. R. Vijay Kumar, Department of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Model Fabrication</b>	1000000	300000	100000	<b>1400000</b>
<b>Boat Hiring/ Survey</b>	0	0	0	<b>0</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	2500000	1500000	1000000	<b>5000000</b>
<b>Institutional overheads</b>	279533	279534	279533	<b>838600</b>
<b>Subtotal</b>	<b>4684533</b>	<b>2984534</b>	<b>2362533</b>	<b>10031600</b>



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**Project Number 10 :** Hydrodynamics study and simulation of Multiple Ship Interactions in inland Waterways and Shallow Waters

**Investigator Name :** Dr. P. Anantha Krishnan, Department of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	50000	50000	50000	<b>150000</b>
<b>Model Fabrication</b>	200000	200000	0	<b>400000</b>
<b>Boat Hiring/ Survey</b>	0	0	0	<b>0</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	200000	200000	0	<b>400000</b>
<b>Institutional overheads</b>	212867	212867	212866	<b>638600</b>
<b>Subtotal</b>	<b>1517867</b>	<b>1517867</b>	<b>1195866</b>	<b>4231600</b>

**Project Number 11 :** Comprehensive study of the maintenance dredging requirements of all major ports and national waterways and strategies and technical solutions to reduce the cost in short term and long term.

**Investigator Name :** Prof. K. Murali, Department of Ocean Engineering.

Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>a. Project Officer (1)</b>				
<b>b. Project Associate (1)</b>	780000	780000	858000	<b>2418000</b>
<b>Travel</b>	500000	500000	500000	<b>1500000</b>
<b>Boat Hiring/ Survey</b>	500000	500000	500000	<b>1500000</b>
<b>Consumables</b>	50000	50000	50000	<b>150000</b>
<b>Other costs/Contingencies</b>	25000	25000	25000	<b>75000</b>
<b>Equipments</b>	5000000	5000000	0	<b>10000000</b>
<b>Institutional overheads</b>	376200	376200	376200	<b>1128600</b>
<b>Subtotal</b>	<b>7231200</b>	<b>7231200</b>	<b>2309200</b>	<b>16771600</b>

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N. Sundar  
S. Prasad




Project Number 12 : Common Project

Investigator Name : Prof. K. Murali, Department of Ocean Engineering.


Particulars	Y1	Y2	Y3	Total
<b>Manpower</b>				
<b>Officer(Technical)</b>				
<b>Associate(Technical)</b>	6964233	6964233	7420234	<b>21348700</b>
<b>Officer(Adminstration)</b>				
<b>Extra manpower</b>				
<b>Travel</b>	2000000	2000000	2021500	<b>6021500</b>
<b>Boat Hiring/ Survey</b>	700000	700000	600000	<b>2000000</b>
<b>Consumables</b>	7753333	7753333	7753334	<b>23260000</b>
<b>Other costs/Contingencies</b>	2058333	2058333	2058334	<b>6175000</b>
<b>Equipments</b>	13915000	13915000	13915000	<b>41745000</b>
<b>Institutional overheads</b>	3920347	3920347	3920346	<b>11761040</b>
<b>Subtotal</b>	<b>37311246</b>	<b>37311246</b>	<b>37688748</b>	<b>112311240</b>

1. Capital expenditure for this centre = Rs.44, 79, 00,000/-
2. Total of 11 Sub projects expenditure = Rs.14, 51, 83,040/-
3. Common Project expenditure = Rs.11, 23, 11,240/-

TOTAL = Rs.70, 53, 94,280/-

  
Prof. K. Murali

  
Prof. S.A. Sannasiraj

  
Prof. V. Sundar

  
Prof. B.S. Murty

  
Prof. G. Ravindra Gettu

  
Prof. R. Sundaravadivelu

S.No	Manpower	Consumable	New boat hiring	Fabrication	Contingency	TADA	Equipment	Overheads	Total
1	2	3	4	5	6	7	8	9	10
1	2418000	150000	1000000	0	75000	150000	1800000	758600	6351600
2	2418000	150000	1000000	0	75000	150000	1800000	758600	6351600
3	2418000	150000	750000	0	75000	150000	15000000	708600	19251600
4	2418000	150000	500000	0	75000	150000	3000000	658600	6951600
5	2564200	150000	500000	0	75000	150000	50000000	687840	54127040
6	2418000	150000	0	0	75000	150000	500000	558600	3851600
7	2418000	150000	0	800000	75000	150000	1600000	718600	5911600
8	2418000	150000	0	0	75000	150000	8000000	558600	11351600
9	2418000	150000	0	1400000	75000	150000	5000000	838600	10031600
10	2418000	150000	0	400000	75000	150000	400000	638600	4231600
11	2418000	150000	1500000	0	75000	1500000	10000000	1128600	16771600
	<b>26744200</b>	<b>1650000</b>	<b>5250000</b>	<b>2600000</b>	<b>825000</b>	<b>3000000</b>	<b>97100000</b>	<b>8013840</b>	<b>145183040</b>
CP	21348700	<b>23260000</b>	2000000	0	6175000	6021500	41745000	11761040	112311240
		24910000	7250000	2600000					
	<b>48092900</b>		<b>34760000</b>		<b>7000000</b>	<b>9021500</b>	<b>138845000</b>	<b>19774880</b>	<b>257494280</b>

V. Sunde

S.M.

J. Ramdas

Bhandari