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National Centre for Sustainable Coastal Management
(Ministry of Environment, Forest & Climate Change, Govt. of India)

EXPRESSION OF INTEREST (EOI)

FOR

BATHYMETRY SURVEY AND PREPARATION OF CHART

EOI No. REV/3/3/2016/C/EOI/2016-01

Koodal Building, Anna University Campus, Chennai 600025



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1. INTRODUCTION

- a) National Centre for Sustainable Coastal Management (NCSCM) is an institution under the Ministry of Environment Forest and Climate Change Government of India. NCSCM is located at Anna University Campus, Chennai-600025. NCSCM is involved in research activities along the coastal areas of India.
- b) The NCSCM has been assigned the task to prepare a Comprehensive and Integrated Conservation Plan for Mangroves and Associated Creeks in Adani Port SEZ Region, Mundra, Gujarat.
- c) The purpose of this Expression of Interest is to seek the services of a reputed organization to undertake a bathymetry survey in creeks and rivulets that feed water to the mangrove and adjoining mud flat areas (that have potential to grow mangrove in terms of substratum and water supply) at Mundra area of Adani Port Special Zone (APSEZ).
- d) The objective of this document is to provide indicative information about the scope and objective of this activity.

2. NOTICE INVITING EOI

- a) The NCSCM invites expression of interest from Consultants/ Firms desirous of and having proven track record of having conducted similar survey work.
- b) Interested Consultants/ Firms who meet the criteria may furnish their Expression of Interest with all the necessary documents in a sealed cover along with the covering letter duly signed by an authorized signatory.
- c) The Expression of Interest may be submitted on or before **25th November, 2016 by 4 P.M.** at the following address:

**Office of The Director,
National Centre for Sustainable Coastal Management,
Koodal Building, Anna University, Chennai-600025, Tamilnadu**

- d) The EOI submitted by telegram/ fax/ e-mail, etc shall not be considered.
- e) NCSCM shall not be responsible for any postal delay or non-receipt/ non-delivery of the documents. No further correspondence on the subject will be entertained.



3. CRITICAL INFORMATION

Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.

Sl. No.	Information	Details
1.	EOI No. and Date	
2.	Last Date and Time for submission of EOI	25 th November, 2016, 4 P.M.
3.	Address at which proposal in response to EOI is to be submitted	Office of The Director National Centre for Sustainable Coastal Management Koodal Building, Anna University, Chennai-600025, Tamilnadu
6.	Date and Time of opening of EOIs	25 th November, 2016, 4.30 P.M.

4. ELIGIBILITY CRITERIA

The interested Consultants/ Firms shall have to comply to the following criteria to participate in the tendering process -

- a) Should have at least 10 years of experience in bathymetry survey of rivers, creeks, coastal areas including mangrove areas.
- b) Should have carried out a minimum of 3 projects on field measurement of bathymetry with a minimum line km of 100 km in at least 2 projects using echosounders in the last 10 years i.e. 2006-07 to 2015-16.
- c) Should have experience in processing bathymetry data with tide correction using software like Hypack and preparation of bathymetry charts in various scales.
- d) Should have completed at least one project on field measurement of bathymetry, data processing and chart preparation for a field area involving bathymetry measurement for 10 km in the creeks in mangrove/similar areas using echo sounders/tide poles and also RTK/total station measurement at least 2 sq km of mangrove/mud flat area.



5. TERMS OF REFERENCE

NCSCM has proposed to undertake a bathymetry and elevation survey in creeks and rivulets that feed water to the mangrove and adjoining mud flat areas (that have potential to grow mangrove in terms of substratum and water supply) at Mundra area of Adani Port Special Economic Zone (APSEZ). While the main creeks have depths ranging from 0.5 to 10m, the rivulets are shallow and some of them are exposed during the low tide period. Numerous creeks are present in the mangrove and adjoining mud flat areas. Fig.1. shows the mangrove area and creeks and rivulets that feed the mangroves. There are more rivulets inside the mangrove areas.

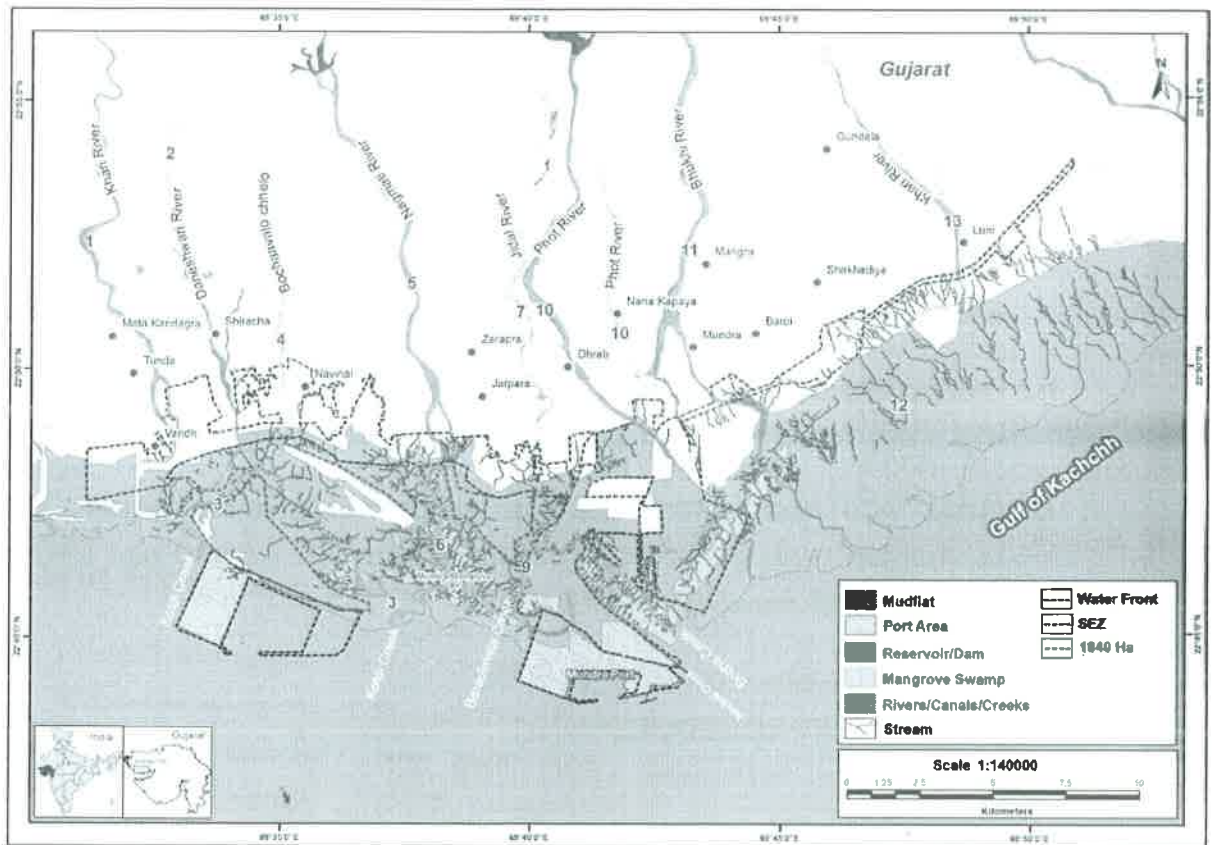


Fig.1. Map showing APSEZ area with rivers and mangroves

Methodology

Measurement of bathymetry with tide correction needs to be conducted using echosounder/ tide pole and also using RTK/total station depending on the depth of the creek/river (up to 5 ppt levels), rivulet, mangrove and mudflat areas. Measurements have to be made for all inner creeks and rivulets in the mangrove and mudflat areas. While the echosounder



mounted on a boat will make continuous measurements, tide poles need to be used for measurement in shallow areas. For RTK measurements it should be done during low tide period till the end wet part of the rivers/creeks, mud flat and mangrove areas. For tide corrections, appropriate number of tide gauges should be deployed.

Besides bathymetry measurements data on elevation surrounding mud flat areas should be collected using RTK.

The eligible consultant may be awarded the work either in full or part or sectional.

6. PERIOD OF WORK

10 weeks for survey and 4 weeks for processing data starting from the date of engagement.

7. DELIVERABLES

- a. Raw data on bathymetry as recorded by echosounder, depth measurements made using tide pole, data as recorded by tide gauges and measurements made using RTK. All data are to be given with co-ordinates.
- b. Processed digital geo-coded bathymetry data with tide correction, RTK data for dry areas
- c. Maps with bathymetry and topographic (elevation) details with contour intervals of 0.5 m or as appropriate in 1:5000 and 1:10000 scales in GIS formats.

8. SELECTION PROCEDURE

The Consultant/ Firm scoring 75 marks and above in the technical proposal will be considered as a shortlisted firm eligible to submit the Request for Proposal (RFP) on invitation.

Break-up of Technical Score –

The short listing criteria and break up of Technical Score used for short listing of firms is as follows:



Category	Score
Firms experience in terms of number of years in bathymetry measures	10
Organization and staffing	10
Technical approach, methodology and bathymetry chart preparation	10
No of projects completed within 3-4 months for a line km 500 km/5 sq km mangrove/similar area	10
Essential manpower	
Project Manager	25
Scientist/Engineer	20
Field Surveyor	15
Total	100

The number of points to be assigned to each of the above positions or disciplines shall be determined considering the following three sub-criteria and relevant percentage weights:

- 1) General qualifications [20%]
 - 2) Adequacy for the assignment [40%]
 - 3) Experience [40%]
- Total weight: 100%

(v) List of key position whose CV and experience would be evaluated.

1. Project Manager (Team Leader). Post Graduate with 10 years of experience in coastal oceanography including in measurement of tides and coastal/creek bathymetry and data analysis including chart preparation
2. Scientist/Engineer. Graduate with 5 years of experience in coastal oceanography including in measurement of tides and coastal/creek bathymetry using echosounders, tide pole etc and data analysis including chart preparation
3. Field Surveyor: Graduate/diploma with 5 years experience in field survey of elevation using equipment such as DGPS, RTK, Total station in coastal areas, mangroves

(Handwritten mark)

Non-key staff whose CV and experience will not be evaluated



Field Assistants: Experience in collecting field data on bathymetry, elevation etc

Submission of Expression of Interest

The Expression of Interest to be submitted by a firm/institute should have above details

Selection Procedure

The firm scoring 75 marks and above in the technical proposal will be considered as a shortlisted firm eligible to submit the Request for Proposal on invitation.

The NCSCM reserves the right to reject any or all proposals.

9. SUBMISSION OF EOI

The Eoi shall be submitted in a single sealed envelope and superscribed as "Eoi for Bathymetry Survey and Preparation of Chart" and **EOI-REV/3/3/2016/C/EOI/2016-01 dated 11th NOVEMBER 2016**. This envelope should contain signed hard copy of Eoi proposal and other necessary documents mentioned below.

The Consultants/ Firms shall enclose supporting proofs and documents as specified in Para 4 above.

10. EOI PREPARATION COSTS AND RELATED ISSUES

The Consultant/ Firm is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in preparation of Eoi, participation in meetings/ discussions. The NCSCM in no case will be responsible or liable for these costs, regardless of the conduct or outcome of the Eoi process.

This Eoi does not commit NCSCM to award a contract or to engage in negotiations. Further, no reimbursable cost may be incurred in anticipation of award or for preparing this Eoi.

All materials submitted by the Consultants/ Firms will become the property of NCSCM.




DIRECTOR
NSCCSM
