



**Government of India**  
**Ministry of Earth Sciences**  
**Integrated Coastal and Marine Area Management Project Directorate (ICMAM-PD)**  
**NIOT Campus, Velachery - Tambaram Main Road, Pallikaranai, Chennai - 600 100**

**RECRUITMENT NOTICE**

**Advertisement No.MoES/ICMAM-PD/Rectt.PS/34/2017**

Integrated Coastal and Marine Area Management - Project Directorate, (ICMAM-PD), Chennai an attached office of the Ministry of Earth Sciences (MoES), established in 1998, has been implementing various projects in coastal research to provide systematic information, solutions and services for effective management of coastal areas.

Applications are invited for filling up of temporary project positions for various activities such as "Sea Water Quality Monitoring", "Ecosystem Services and Management", "Seawater Quality Criteria and Ecological Risk Assessment", "Prediction of Water Quality", "Coastal Processes, Shoreline Mapping & Management", "Coastal Vulnerability & Capacity building" and "Coastal Resource Assessment and Management" at ICMAM-PD, Chennai, initially for a period of one year extendable till 31.03.2020 based on performance.

The details of project positions, emoluments and number of vacancies are given below:

| <b>Name of Post</b>        | <b>Monthly Emoluments</b> | <b>No. of vacancies</b> |
|----------------------------|---------------------------|-------------------------|
| Project Scientist D (PS-D) | Rs.50000 (consolidated)*  | 1                       |
| Project Scientist C (PS-C) | Rs.46000 (consolidated)*  | 17                      |
| Project Scientist B (PS-B) | Rs.43000 (consolidated)*  | 33                      |
| Technical Assistant (TA)   | Rs.27000 (consolidated)   | 3                       |
| Field Assistant (FA)       | Rs.25000 (consolidated)   | 8                       |
| Total number of Posts      |                           | 62                      |

\* Subject to revision by Ministry of Earth Sciences, Govt. of India

Details on number of posts, essential qualification, experience and nature of work along with the link for ONLINE application form are available in the website page:

[www.icmam.gov.in/rect1.htm](http://www.icmam.gov.in/rect1.htm)

Last date for submission of online applications : **14.03.2018 5:00 pm**

Last date for receipt of applications (hardcopy) : **21.03.2018 5:00 pm**

Last date for receipt of applications (hard copy) for North East States, Jammu and Kashmir and Andaman and Nicobar Islands and the Union Territory of Lakshadweep : **28.03.2018 5:00 pm**

**HEAD OF OFFICE**

| S.N | Post Name  | Reference    | Essential Qualification  | Desirable   | Nature of work   |
|-----|--|--------------|--|---|--|
| 1   | <b>Project Scientist-D</b><br><b>1 Post</b><br><b>(Coastal Oceanography)</b> | <b>PS-D1</b> | <p>i. Master's Degree in Oceanography / Marine Science / Physics / Mathematics or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> <p>(OR)</p> <p>Bachelor's Degree in Civil Engineering or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> <p>ii. Candidates must have seven years R&amp;D experience in coastal processes studies, field measurements and numerical modeling.</p> | <p>i. Ph.D. in the relevant area related to coastal processes and shoreline management.</p> <p>(OR)</p> <p>Master's Degree in Civil/Ocean Engineering or equivalent from a recognized University / Institute.</p> <p>ii. Must have strong computer and data analysis skills, preferably with some level of experience in field data collection / instrumentation, shoreline and coastal process modelling.</p> <p>iii. Good overall knowledge of coastal dynamics and numerical modelling using ROMS / MIKE-21/ LITPACK/ Delft-3D / SWAN / WAVE WATCH-III, etc.</p> | <p>To carry out R&amp;D studies related to coastal zone / shoreline management. Data processing, interpretation, analysis and preparation of technical reports, etc.</p> <p>Planning and execution of field works related to coastal survey and measurement in nearshore environment.</p>  |
| 2   | <b>Project Scientist-C</b><br><b>8 Posts</b><br><b>(Marine Biology)</b>      | <b>PS-C1</b> | <p>i. Master's Degree in Marine Biology/ Zoology / Botany / Marine Sciences/ Life Sciences / Environmental sciences / Microbiology or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> <p>ii. Minimum 3 years of research experience in marine benthic ecology / planktonology / microbiology, biomarker enzyme assays, genotoxicity and histopathological studies.</p>  | <p>i. Ph. D. in Marine Biology / Zoology/ Botany / Marine Sciences / Life Sciences/ Environmental Sciences/ Microbiology or equivalent from a recognized University / Institute.</p> <p>ii. Good working knowledge on the taxonomic identification of plankton/ benthos / microbes.</p> <p>iii. Experience in phytoplankton and zooplankton culture methods and conduct of toxicity studies.</p> <p>iv. Extensive working knowledge in the biochemical assays and histopathology techniques.</p>  | <p>Field data collection &amp; analysis of plankton / benthic / microbial samples by participating in cruises onboard sea going vessels.</p> <p>Execution of laboratory and field experiments on marine food chain organisms for deriving model coefficients / constants, toxicity bioassay experiments for enzyme assay &amp; histopathology studies.</p> |

|   |   |               |   |  |   |
|---|---|---------------|---|--|---|
| 3 | <b>Project Scientist-C<br/>1 Post<br/>(Physical Oceanography)</b>                       | <b>PS- C2</b> | <p>i. Master's Degree in Oceanography / Marine Science / Mathematics / Physics or equivalent from a recognized University / Institute with at least first class not less than 60% marks.<br/>(OR)<br/>Bachelor's Degree in Civil Engineering or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> <p>ii. Minimum 3 years of research experience in ocean science and technology.</p> | <p>i. Ph.D. in Marine Science / Oceanography or related fields.</p> <p>ii. Experience in field measurements and numerical modelling of coastal processes and nearshore dynamics using tools like HYCOM / ROMS / MIKE-21 / Delft-3D/ WAVEWATCH-III, etc.</p>  | <p>Deployment / retrieval of oceanographic instruments.<br/>Analysis of oceanographic data, coastal numerical modelling for short and long-term forecasts and data assimilation.</p>  |
| 4 | <b>Project Scientist-C<br/>4 Posts<br/>(Coastal Geomorphology/<br/>Hazard modeling)</b> | <b>PS-C3</b>  | <p>i. Master's Degree in Geology / Applied Geology/Remote Sensing / Geoinformatics or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> <p>ii. Three years of research experience in interpretation of coastal geomorphic and shoreline change studies, product development related to coastal zone management using Remote sensing and GIS applications.</p>                        | <p>i. Ph.D. in the relevant area related to coastal processes and shoreline mapping</p> <p>ii. Experience in shoreline mapping and coastal zone management studies.</p> <p>iii. Mapping and generation of coastal hazards specifically to coastal erosion/ accretion/ sea level rise / tsunamis.</p> <p>iv. Research publications in peer-reviewed journals.</p> | <p>To undertake studies related to coastal hazards, shoreline vulnerability assessment using various geospatial tools and techniques. Data processing, image, interpretation, analysis and preparation of technical reports.</p>  |
| 5 | <b>Project Scientist-C<br/>1 Post<br/>(Marine Chemistry)</b>                            | <b>PS-C4</b>  | <p>i. Master's Degree in Chemistry/ Marine Chemistry/Marine Science / Analytical Chemistry / Oceanography / Environmental Sciences or equivalent from a recognized University/Institute with at least first class not less than 60% marks.</p>  | <p>i. Research experience in collection and analysis of chemical oceanographic parameters.</p> <p>ii. Should have adequate experience in handling of analytical instruments like GCs, coulometer, auto-analyzer, UHPLC, etc.</p>   | <p>Field data collection &amp; analysis of various chemical parameters such as nutrients, dissolved gases (CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, DMS), DIC, DOC, pigments, etc. by participating in cruises onboard sea going vessels.<br/><br/>Execution of laboratory and field</p> |

|   |   |              |   |   |   |
|---|---|--------------|---|---|---|
|   |   |              | ii. Three years of research experience in the analysis of chemical oceanographic parameters.  |   | experiments for deriving model coefficients / constants to be used in ecosystem models.   |
| 6 | <b>Project Scientist-C<br/>2 Posts<br/>(Computer Science)</b>     | <b>PS-C5</b> | <p>i. Master's Degree in Computer Science / Computer Applications or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> <p>ii. Three years R&amp;D experience in handling oceanographic data, database management, customized tools, Web and GIS application development for coastal zone management aspects.</p> | <p>i. Work experience / good knowledge in the development of web applications for coastal environment using .NET and Database (SQL Server, POST GIS, MySQL).</p> <p>ii. Knowledge in Arc Engine, Arc GIS Server, GEO-SERVER, Java Script API including open source GIS tools.</p> <p>iii. Programming skills using MATLAB/PYTHON for oceanographic data analysis and knowledge in numerical modeling.</p> <p>iv. Research publications in peer-reviewed journals.</p> | <p>To maintain a geospatial database related to shoreline management and development of Web GIS application related to coastal change system.</p> <p>To design, develop and implement programming languages or other GIS tools to create custom applications on coastal hazards, maintain databases, develop customized geospatial tools for web portals.</p> |
| 7 | <b>Project Scientist-C<br/>1 Post<br/>(Coastal Hydrodynamics)</b> | <b>PS-C6</b> | <p>i. Bachelor's Degree in Civil Engineering or equivalent from a recognized University/ Institute with at least first class not less than 60% marks.</p> <p>ii. Three years R&amp;D experience in coastal processes, numerical flood modeling and field measurements.</p>  | <p>i. Master's Degree in Civil / Ocean / hydraulic Engineering or equivalent from a recognized university.</p> <p>ii. Experience in Numerical modeling of free surface flows and coastal processes using tools like MIKE-21/ HEC-HMS / HEC-RAS / Delft-3D and field measurements.</p>   | <p>To carry out R&amp;D studies related to various coastal processes, flood modeling, data processing, analysis and preparation of technical reports.</p> <p>Planning and execution of field surveys.</p>   |
| 8 | <b>Project Scientist-B<br/>2 Posts<br/>(Fisheries)</b>            | <b>PS-B1</b> | <p>i. Master's Degree in Marine Biology/ Fisheries/ Zoology.</p> <p>ii. Open water diving or SCUBA diving license.</p>  | <p>i. Ph.D. in Marine Biology / Fisheries</p> <p>ii. Experience in coral reef studies and also in hatchery operation/grow out culture of fin &amp; shell fishes including ornamental fishes.</p>  | <p>Monitoring, restoration and transplantation of coral reefs.</p> <p>Hatchery operation and grow out culture of fin &amp; shell fishes.</p>  |

|    |  |              |  |   |   |
|----|--|--------------|--|---|---|
| 9  | <b>Project Scientist-B<br/>6 Posts<br/>(Marine Biology)</b>        | <b>PS-B2</b> | i. Master's Degree in Marine Biology/ Zoology / Botany / Marine Sciences/ Life Sciences/ Microbiology / Biotechnology/ Environmental Sciences or equivalent from a recognized University / Institute with at least first class not less than 60% marks.  | i. Experience in the collection and identification of marine plankton/benthos / microbes.<br>ii. Culture of phytoplankton and zooplankton in the laboratory and conduct of toxicity bioassay experiments.   | Field data collection & analysis of plankton/benthic / microbial samples by participating in cruises onboard sea going vessels. Execution of laboratory and field experiments. Establish facilities for <i>in situ</i> toxicity bioassay experiments. Maintenance of marine food chain organisms in the laboratory.   |
| 10 | <b>Project Scientist-B<br/>6 Posts<br/>(Physical Oceanography)</b> | <b>PS-B3</b> | i. Master's Degree in Oceanography/ Marine Sciences / Physics/ Mathematics or equivalent from a recognized University / Institute with at least first class not less than 60% marks.<br><br>(OR)<br><br>Bachelor's Degree in Civil Engineering or equivalent from a recognized University / Institute with at least first class not less than 60% marks. | i. Research experience, related to oceanographic data collection, ocean dynamics, shoreline morphology, coastal water quality modeling and related studies.<br>ii. Experience in application of analytical / numerical tools like HYCOM / ROMS / MIKE-21 / LITPACK/SWAN/ Delft-3D/ WAVE WATCH-III, etc. | Planning and execution of field works related to coastal survey, measurement in near-shore environment, deployment / retrieval of oceanographic instruments.<br><br>To carry out R&D studies related to various ocean and coastal processes and shoreline management related aspects, coastal water quality modelling, data processing, analysis and preparation of technical reports |
| 11 | <b>Project Scientist-B<br/>5 Posts<br/>(Marine Chemistry)</b>      | <b>PS-B4</b> | i. Master's Degree in Marine Chemistry / Marine Science / Analytical Chemistry / Chemical Oceanography / Environmental Sciences or equivalent from a recognized University/Institute with at least first class not less than 60% marks.  | i. Research experience in collection and analysis of chemical oceanographic parameters.<br>ii. Should have adequate experience in handling of analytical instruments like, GC, AAS, ICPMS, Coulometer, Auto-analyzer, UHPLC etc.  | Field data collection & analysis of various chemical parameters such as nutrients, dissolved gases (CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub> , DMS), DIC, DOC, pigments, etc. by participating in cruises onboard sea going vessels. Analysis of experimental and field samples for metals, and organic pollutants such as TPHs, PAHs, etc.                                |
| 12 | <b>Project Scientist-B<br/>1 Post<br/>(Computer Science)</b>       | <b>PS-B5</b> | i. Master's Degree in Computer Science / Computer Applications or equivalent from a recognized University / Institute with at least first class not less than 60% marks.   | i. User Interface Designer-experience in .Net technologies, Oracle, SQL, web development and web services, CSS,HTML5, user controls,Themes-design, content management, software handling and Photoshop.   | Design, development and testing of the web application services for data exchange under SWQM programme including maintenance of servers for the SWQM data reception and publishing.   |

|    |   |              |  |   |  |
|----|---|--------------|--|---|--|
| 13 | <b>Project Scientist-B<br/>9 Posts<br/>(Coastal Hazards/Geomorphology / Remote Sensing)</b> | <b>PS-B6</b> | <p>i. Master's Degree in Geology/ Remote Sensing / Applied Geology/ Geoinformatics / Geomatics / Marine Sciences or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> <p>(OR)</p> <p>B.E / B.Tech in Civil / Geomatics / Geoinformatics or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p> | <p>i. Research experience in satellite image processing, GIS related to coastal applications.</p> <p>ii. Mapping and generation of coastal hazard maps specifically for coastal erosion/accretion/ sea level rise / tsunamis.</p> <p>iii. GIS Database development for shoreline change studies/ sediment analysis.</p> <p>iv. Research publications in peer-reviewed journals.</p> | <p>To carry out shoreline change studies using various tools and techniques, data processing, analysis and preparation of technical reports.</p> <p>Operation of radiometer, CTD onboard sea going vessels for collection of water column optical properties. Satellite data processing and preparation of GIS maps.</p> |
| 14 | <b>Project Scientist-B<br/>3 Posts<br/>(Coastal Hydrodynamics)</b>                          | <b>PS-B7</b> | <p>i. B.E / B.Tech in Civil or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p>  | <p>i. Master's Degree in Civil / Ocean / Hydrology/ hydraulic Engineering or equivalent from a recognized university.</p> <p>ii. Experience in field measurements and numerical modeling of free surface flows and coastal processes using tools like MIKE-21/ HEC-HMS / HEC-RAS / Delft-3D/ ADCIRC.</p>  | <p>To carry out R&amp;D studies related to various coastal processes, flood modeling, data processing, analysis and preparation of technical reports.</p> <p>Planning and execution of field surveys.</p>  |
| 15 | <b>Project Scientist-B<br/>1 Post<br/>(Instrumentation)</b>                                 | <b>PS-B8</b> | <p>i. Bachelor's Degree in Engineering or Technology in Electronics &amp; Communication / Electronics &amp; Instrumentation or equivalent from a recognized University / Institute with at least first class not less than 60% marks.</p>  | <p>i. Experience in ocean and coastal observation.</p> <p>ii. Strong technical knowledge in handling oceanographic and meteorological instruments such as ADCP, ADV, DWR, RCM, RTK GPS and other related instruments.</p>   | <p>Assist in oceanographic data collection, deployment, retrieval and maintenance of data buoys and other oceanographic instruments.</p>   |
| 16 | <b>Technical Assistant<br/>1 Post<br/>(Chemistry)</b>                                       | <b>TA1</b>   | <p>i. Bachelor's Degree in Chemistry from a recognized University.</p>   | <p>i. Work experience in field data collection and laboratory analysis of marine samples.</p>   | <p>Assisting the scientists in the field data collection and laboratory analysis of marine samples.</p>  |

|    |  |            |   |   |  |
|----|--|------------|---|---|--|
| 17 | <b>Technical Assistant<br/>2 Posts<br/>(Instrumentation)</b> | <b>TA2</b> | i. Degree or Diploma in Electrical Engineering / Electrical & Electronics Engineering or equivalent from a recognized University / Institute with at least first class not less than 60% marks. | i. Work experience in coastal and marine field surveys for oceanographic data collection and analysis. Good knowledge on the operation of oceanographic equipment.  | Field data collection by deploying various physical oceanographic instruments/sensors in the coastal waters onboard fishing vessels/research vessels etc. Operation and maintenance of oceanographic instruments.                                  |
| 18 | <b>Field Assistant<br/>8 Posts</b>                           | <b>FA</b>  | i. 10 <sup>th</sup> Standard Pass (SSLC or Matriculation) from a recognized Board.  | i. Candidates should know swimming and physically fit for marine condition.<br>ii. One year working experience in the collection of water, sediment and biological samples.<br>iii. Capable of handling and maintaining marine organisms. | To assist the scientists in the field work for monitoring, restoration and transplantation of coral reefs. Cleaning of glass/lab ware in the laboratory and field. Assist in the collection and maintenance of marine organisms in the laboratory. |

## General Conditions:

1. Candidate must be a citizen of India.
2. Maximum Age Limit :

| Post Name                   | Maximum Age (Years) |
|-----------------------------|---------------------|
| Project Scientist –D (PS-D) | 45                  |
| Project Scientist –C (PS-C) | 40                  |
| Project Scientist –B (PS-B) | 35                  |
| Technical Assistant (TA)    | 28                  |
| Field Assistant (FA)        | 28                  |

The candidates should not have exceeded the maximum age limit specified above as on 01.02.2018. A maximum age relaxation of 5 years is applicable to the candidates belonging to SC/ST category, 3 Years for OBC candidates, 10 Years for persons with disability. Age relaxation for Ex-servicemen will be considered as per Govt. of India rules.

3. Date of birth as recorded in the 10<sup>th</sup> standard (SSLC/Matriculation) Mark sheet / Transfer Certificate / Certificate of Domicile / Birth Certificate issued by competent authority will be accepted as proof of age.
4. The appointment / extension of service of the project positions will be for a period of 1year and, thereafter, it may likely to be extended.
5. The place of posting will be Chennai or at any other location in India including Andaman & Nicobar, Lakshadweep Islands.
6. Applicant should be willing to undertake field data collection programs, participation in small boats/ fishing trawlers/research vessels for oceanographic survey.
7. A panel of candidates will be maintained for any vacancies that may arise in future.
8. The link for online Application is available at <http://www.icmam.gov.in/rect1.htm>. Applicant has to fill the online application and upon submission, each application will be assigned a system generated reference number. Applicant has to take printout of the submitted application, **duly signed** and send to ICMAM- PD, with the requisite self attested copies of certificates and documents. Also, ensure that the **system generated Reference number is printed in the hard copy application form**, before sending the application.
9. If there is any difficulties in the process of submitting online application, send email to [rect@icmam.gov.in](mailto:rect@icmam.gov.in) with sufficient details.
10. Number of years of experience will be counted after the year of award of qualifying degree as evidenced from the experience certificates.
11. The application without the following enclosures shall summarily be rejected. **Candidates shall enclose self-attested photocopies of the following documents along with the print out of the online submitted / completed Application Form:**
  - i. A recent passport size color photograph may be enclosed along with the application form, if the photo is not uploaded online.
  - ii. 10<sup>th</sup> standard certificate or equivalent in support of Date of Birth.
  - iii. 12<sup>th</sup> standard or equivalent mark sheet.
  - iv. All diploma /degree certificates along with mark sheets of each year and consolidated mark sheet.
  - v. Community certificate for SC/ST and OBC.
  - vi. Experience certificate.
  - vii. Other documents, as applicable, relevant to the post applied for.



Application should be sent to **The Head, ICMAM Project Directorate, Ministry of Earth Sciences, 2<sup>nd</sup> Floor, NIOT Campus, Velachery-Tambaram Main Road, Pallikaranai, Chennai 600 100** in a cover superscribed as "Application for *<mention post name>*, *<mention Reference>* (For example, for applying the post at SI.No.2, the cover should be superscribed as "Application for **Project Scientist–C(Marine Biology), PS-C1**").

12. Applications without the requisite certificates, passport size photograph and signature of the applicant will be summarily rejected. Passport size color photo may be affixed in the hard copy application, if the photo is not uploaded online. Original certificates should not be sent with the application form.
13. In case a particular University / Institution does not have any criteria of first class or equivalence, 60% will be taken as equivalent to first class. In case of non-availability of conversion formula, CGPA/CPU of 6.75 (on 10 point scale) will be taken as equivalent to 60% as per AICTE guidelines. For any other point scale of CGPA/CPI, the equivalence may vary proportionally.
14. Candidates serving in Central / State Governments / Public Sector Undertaking / Autonomous bodies etc. should apply through proper channel. If candidates apply directly their selection will be subject to clearance from their Departments/ Organizations / Institutions.
15. The prescribed essential qualifications are minimum and mere possession of the same does not entitle candidates to be called for interview.
16. Depending upon the number of candidates applied for the posts, and the vacancies available, the Screening Committee may restrict the number of candidates for interview by fixing suitable norms, as deem fit.
17. Separate applications should be submitted for each post, if the applicant wants to apply for more than one post.
18. Incomplete applications or applications received after the prescribed time limit will not be considered.
19. No Traveling Allowance will be paid for attending the interview.
20. The advertisement document can also be downloaded from the **website page [www.icmam.gov.in/rect1.htm](http://www.icmam.gov.in/rect1.htm)**

**Link for Online application URL: <http://www.icmam.gov.in/rect1.htm>**

|   |   |                                  |
|---|---|----------------------------------|
| Last date for submission of online applications   | : | <b><u>14.03.2018 5:00 pm</u></b> |
| Last date for receipt of applications (hard copy)   | : | <b><u>21.03.2018 5:00 pm</u></b> |
| Last date for receipt of applications (hard copy) from North Eastern States, Jammu & Kashmir, Andaman and Nicobar Islands and Lakshadweep | : | <b><u>28.03.2018 5:00 pm</u></b> |