**Course No. 1: Remote Sensing Applications on the Coastal Zone Management**

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| Institute Name | : | CSIR-National Institute of Oceanography (CSIR-NIO) |
| Course (1) Name | : | Remote sensing applications on the coastal zone management |
| Course Brief | : | A specially designed training program for the officials concerned to learn (i) how to access (“mine”) this free data, and then develop the requisite analytical tools / models to process it for various policy making purposes [e.g. useful applications using open source remote sensing data includes mapping potential mineral resources in coastal and Exclusive Economic Zone (EEZ) waters, mapping of fishing grounds, study of coastal currents, water front management (erosion/siltation)]. *Course details at Annexure -1* |
| Duration in Weeks | : | 2 Weeks (14 days) |
| Proposed Dates | : | Sep 24 –Oct 05, 2018; Jan 21 - Feb 01, 2019 |
| Venue | : | CSIR-NIO, Goa |
| Batch size | : | 10-20 participants |
| Eligibility Criteria | : | Age: 25-45 years.  Qualification- Basic knowledge of Science (Physics, Chemistry, Geology) at Bachelor’s level / Diploma in Civil Engineering  Desirable Experience: Work Experience in Oceanography, Remote Sensing; Basic computer knowledge.  Junior or Middle level professionals or officers (early or mid-carrier) with degree in Science |

**Course No.2: Port Environment and Engineering Studies**

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| Institute Name | : | CSIR-National Institute of Oceanography (CSIR-NIO) |
| Course Name | : | Port Environment and Engineering Studies |
| Course Brief | : | Ports are one of the most important gateways for SIDS’s interaction with the world. Developing and improving the port and allied facilities require thorough knowledge of the ocean and coastal processes including natural hazards and their impacts around the SIDS. Managing the port facilities requires knowledge on prevailing bathymetry, siltation rates, dredging requirements, shoreline changes, etc. Health of waters around the ports is an important aspect in the field of environment management. Implementation of regulations is of utmost importance to maintain the sustainable environment and development of SIDS. This course enables the trainees to develop advanced capabilities in various fields related to development of Ports and management of coastal environment. *Course details at Annexure -2.* |
| Duration in Weeks | : | 2 Weeks (14 days) |
| Proposed Dates | : | 8 Oct – 19 Oct, 2018; 4 Feb – 15 Feb,2019 |
| Venue |  | CSIR-NIO, Goa |
| Batch size | : | 10-20 participants |
| Eligibility Criteria | : | Age: 25-40 years.  Qualification- Basic knowledge of Science (Physics, Chemistry, Biology, Geology) at Bachelor’s level / Diploma in Civil Engineering  Desirable Experience: Work Experience in Oceanography, Remote Sensing; Basic computer knowledge.  Junior or Middle level professionals or officers (early or mid-carrier) with degree in Science or engineering |

**Course No.3: Multibeam Survey Training**

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| Institute Name | : | CSIR-National Institute of Oceanography (CSIR-NIO) |
| Course Name | : | Multibeam Survey Training |
| Course Brief | : | Any development around SIDS require through information on the seabed within the EEZ. A cutting edge method to create one of the most accurate mappings of the sea bed is based on multibeam surveys. Under this module hands on training will be provided on the survey equipment, technique, data processing, data interpretation and generation of maps. The two week training program covers both the classroom based theory sessions as well as field excursions on survey launch for hands on hydrographic survey. This course is very intensive and fast paced, hence the course work have been designed in this particular manner with sufficient breaks in between. The course covers theoretical and software aspects of Multibeam technology and GPS; as well as, practice in data acquisition, sonar positioning, water column, SVP measurement, calibration of equipments, patch test, data processing and visualization. *Course details at Annexure -3.* |
| Duration in Weeks | : | 2 Weeks (14 days) |
| Proposed Dates | : | Oct 22–Nov 2, 2018; Feb 18–Mar 1, 2019 |
| Venue |  | CSIR-NIO, Goa |
| Batch size | : | 10-15 participants |
| Eligibility Criteria | : | Age: 25-40 years.  Qualification- Basic knowledge of Science (Geology, Geophysics or Physics) at Bachelor’s level / Diploma in Civil Engineering  Desirable Experience: Work Experience in Oceanography, Remote Sensing; Basic computer knowledge.  Junior or Middle level professionals or officers (early or mid-career) with degree in Science or Diploma/degree Engineering |

**Course No.4: Ballast Water Management**

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| Institute Name | : | CSIR-National Institute of Oceanography (CSIR-NIO) |
| Course Name | : | Ballast Water Management |
| Course Brief | : | Invasive aquatic species are one of the four greatest threats to the world’s oceans, and can cause extremely severe environmental, economic and public health impacts. The training module is aimed at undertaking port biological baseline surveys and preparing Ballast Water Management Plan. *Course details at Annexure 4.* |
| Duration in Weeks | : | 2 Weeks (14 days) |
| Proposed Dates | : | Nov 5 –Nov 16, 2018; Mar 4 –Mar 15, 2019 |
| Venue | : | CSIR-NIO, Goa |
| Batch size | : | 10-20 participants |
| Eligibility Criteria | : | Age: 25-40 years.  Qualification- Basic knowledge of Science (Chemistry, Biology) at Bachelor’s level  Desirable Experience: Work Experience in Oceanography,; Basic computer knowledge.  Junior or Middle level professionals or officers (early and mid-career) with degree in Science. |