Winter School training Programme on:
Structure and Function of the Marine Ecosystem: Fisheries
1st to 21st December 2017

Fishery Resources Assessment Division
ICAR-Central Marine Fisheries Research Institute
Post Box No. 1603, Ernakulam North P.O., Kochi-682 018
Kerala, India

Host Institution

The Central Marine Fisheries Research Institute (CMFRI) was established by Government of Indian on 3rd February 1947 under the Ministry of Agriculture and Farmers Welfare and later it joined the ICAR family in 1967. During the course of over 70 years the Institute has emerged as a leading tropical marine fisheries research institute in the world with its multidisciplinary approach to research in marine capture and culture fisheries. Human resource development by organizing training courses is one of the mandates of the Institute to upgrade the knowledge base of scientists, teachers and researchers engaged in the area of marine fisheries in the country. The Institute has the best library in the Asian region for fisheries and a national referral museum for marine organisms.

Background

In the field of fisheries management, conventional population dynamics pays little or no attention to the structure and function of the ecosystem in which the exploited populations live. But to exercise ecosystem-based management of fisheries requires
that we understand the ecosystem in the context of the physical dynamics, as well as the biogeochemistry. We should see fishery as one component of the ocean’s carbon cycle, and assess the limitations imposed by the ocean’s nitrogen cycle. This training programme will provide the oceanographic and biogeochemical background required for such an approach. It will also introduce remote sensing as a key tool in the characterization of the ecosystem at regional scales. The materials will be valuable for fishery scientists and also for any others interested in the planetary carbon cycle.

**Themes**

- Marine Ecosystem - Energy and Material Flow
- Marine Optics
- Fundamentals of Ocean-Colour Remote Sensing
- Regional Oceanography of Northern Indian Ocean
- Physical Forcing in Northern Indian Ocean
- Biogeography of the Arabian Sea and Bay of Bengal
- Marine Primary productivity
- Phytoplankton Functional Types
- Regional and Seasonal Distribution of Phytoplankton
- Phytoplankton Phenology
- New Production and Fisheries
- Fisheries of Northern Indian Ocean
- Modelling the Pelagic Ecosystem of the Arabian Sea and Bay of Bengal
- Implication of Fisheries in Indian Waters

**Eligibility**

The ICAR sponsored winter school is open for participants from ICAR institutes/State AUs/CAU/Agricultural faculty of AMU, BHU, Vishwa Bharti and Nagaland University in the cadre of Assistant Professors or equivalent and above. The applicants should possess Master’s degree in Science from any of the recognized university in Fisheries/Statistics subjects, working in the relevant fields. A maximum of 25 participants will be selected based on their experience and area of working.

**How to Apply**

The eligible candidates may apply online at [http://cbp.icar.gov.in/applyDetails.aspx](http://cbp.icar.gov.in/applyDetails.aspx) and also send their applications through proper channel in the prescribed format to frad.cmfrl@icar.gov.in or send it by post to Dr. Grinson George, Winter School Director, Fishery Resources Assessment Division, ICAR-Central Marine Fisheries Research
Institute, Post Box No. 1603, Ernakulam North P.O., Kochi-682 018, Kerala, India. The last date for the receipt of the application is 15th September 2017. Selected participants will be intimated on or before 1st October 2017.

**Registration fee**

The participants are required to pay a sum of Rs.50/- (Rupees Fifty only) as registration fee (Non-refundable) along with the fulfilled application in the form of an Indian Postal Order in favour of Director, CMFRI, payable at Kochi.

**For more information**

Dr. Grinson George  
Course Director &  
Senior Scientist  
Fishery Resources Assessment Division  
ICAR - Central Marine Fisheries Research Institute  
Post Box No. 1603, Ernakulam North P.O., Kochi-682 018.  
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Ph. No. 0484 – 2394312 (275 extn)  
E-mail: grinsongeorge@gmail.com

More information on the winter school training programme will be updated soon in the following web link: [http://cbp.icar.gov.in](http://cbp.icar.gov.in)
Application format for Winter School on
*Structure and Function of the Marine Ecosystem: Fisheries*
1 to 21 December 2017

Full name (in Block letters):
Designation:
Present Employer and Address:

Address for communication:

E-mail Address:
Mobile No.:
Date of Birth:
Gender (Male/Female):

Educational qualification:

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Teaching/Research/Professional experience
(Mention posts held during last 5 years and number of publications):

Mention if you have participated in any Training programme, Seminar/Summer/Winter School, Short Course, etc. during the previous years under ICAR/ Other organizations:

Postal Order drawn in favour of ICAR Unit-CMFRI
(No. Dated: )
For Rs. 50/- (Non Refundable) as registration fee, payable at Ernakulam

Date:
Place:

(Signature of the Applicant)

Countersigned
Authority (Director/Dean/Head of Regional Station) etc.