ICAR Sponsored Short Course
on
AQUATIC POLLUTION AND ABATEMENT

06 to 15 November, 2017

Sponsored by:

Education Division
Indian Council of Agricultural Research
(CBP), New Delhi - 110 012

Course Director:
Dr. Gangadhara Gowda

Course Co-ordinators:
Dr. Lakshmipathi M.T.
Dr. A.T. Ramachandra Naik
Dr. Shivakumar M.

Organiser:

College of Fisheries, Mangaluru – 575 002
Karnataka Veterinary, Animal and Fisheries Sciences University

APPLICATION FORM

ICAR Sponsored Short Course on

Aquatic Pollution and Abatement

06 to 15 November, 2017

Institute _____ at_____

1. Full name (In block letters): _____
2. Designation: _____
3. Employers address : _____
4. Postal address: _____
   _____

E-mail :_____ Mobile: _____

5. Date of Birth : _____
6. Sex (Male/Female): _____
7. Marital status: _____
8. Research/ Teaching/ Professional experiences :_____
9. Education qualification:

Qualification	Examination passed	Subject	Year of passing	University/Institution	Class/ Rank
Bachelor					
Master					
Ph.D.					
Others					

10. Mention whether you have participated in any Summer/ Winter School/ Short Course *etc*. during previous years under : _____
11. Accommodation required : Yes/No
12. Registration fee of Rs. 50/- in the form of DD/ Postal Order No. _____ dated: _____ (in favour of Assistant Comptroller, College of Fisheries, Mangaluru)

Date:
Place:

Signature of Applicant

13. Recommendation of forwarding Authority:

This is certified that information furnished by the candidate has been verified and found correct.

Signature of nominating Authority with seal

HOW TO APPLY?

Interested candidates should apply online by registering at CBP portal (http://cbp.icar.gov.in) through "Capacity Building Programme" latest by 15.09.2017. Hard copy of online submitted form duly signed and recommended by the competent authority along with demand draft or Indian Postal Order of Rs. 50/- (non-refundable), drawn in favour of the Assistant Comptroller, College of Fisheries, Mangaluru should be sent to the Course Director, Short Course, Department of AEM, College of Fisheries, Mangaluru by post.

Important dates

Last date receipt of application	September 15, 2017
Intimation of selection	September 16, 2017
Confirmation of participation by candidates	September 20, 2017

Contact Address

Course Director:
Dr. Gangadhara Gowda
Professor and Head Dept. of AEM &
Head of Division (Fisheries Science)
Cell: +91 97414 79589
E-mail: ggaem25@gmail.com

Course Co-ordinators:

Dr. H.R.V. Reddy
Professor
Cell: +91 9448147335
hrvreddy@yahoo.co.in

Dr. Lakshmipathi M.T.
Associate Professor
Cell: +91 99451 45452
drlakshmipathi@gmail.com

Dr. Shivakumar M.
Professor
Cell: +91 99457 83906
shivakumarmagada@gmail.com

Dr. A.T. Ramachandra Naik
Associate Professor
Cell: +91 99169 24084
atrnaik@gmail.com

College of Fisheries, Mangaluru–575002
Karnataka Veterinary Animal and Fisheries Sciences University

Introduction

Water is one of the fundamental natural resources on which the sustenance of life depends. The economic and industrial growths have resulted in lifestyles that increase the pressure on water resources lead to increased water pollution. The availability and the quality of both freshwater and marine water resources are the most pressing environmental challenges in India. On the other hand, wastewater is one of the main causes of irreversible ecosystem degradation in India.

Rapid industrial growth and urbanisation has led to elevated discharges of toxic chemicals and nutrients in water bodies. The pollutant discharge contributes greatly to soil, sediment, air, and water pollution problems. Some of the chemicals are not biodegradable and therefore tend to accumulate in tissues and bio-accumulate in the food chain. This results in health problems in human beings, death of aquatic organisms and leads to aquatic environment degradation.

Physical, chemical or biological change in the water qualities that adversely affect the living organisms or makes water unsuitable for desired uses. The presence of nitrogen and phosphorus increases the production of biomass in aquatic systems, thereby impairing the water quality and threatening the natural balance of aquatic ecosystems. From the regulatory perspective it is necessary to develop new or optimize the existing wastewater treatment technologies for compliance with the latest discharge standards.

Pollution abatement involves source reduction, in-process recycling, in-plant recycling, design modifications, off-site recycling, and treatment to make the waste less hazardous. The demand for the use of sustainable and eco-friendly environmental processes is rapidly growing subjected to economic, public, and legislation pressure. Biotechnology provides a plethora of opportunities for effectively addressing issues pertaining to the monitoring, assessment, modelling, and treatment of contaminated soil, sediment, air and water.

Future research should address crucial issues pertaining to: i) Nano-biomatrices for environmental remediation; ii) Development of biosensors for environmental monitoring; iii) Development of new biocatalysts (bacteria, fungi, and algae) for environmental applications; iv) Clean practices and development of technologies for pollution prevention, and v) Studies on life cycle assessment (LCA), risk assessment, health, and safety impact assessment.

Objectives

To create awareness among the Scientist/ Researchers/ Managers/ Policy makers to protect, conserve and develop the aquatic resources for future.

About the Institute

College of Fisheries, Mangaluru established in the year 1969. It is the first Fisheries College in India and second in South-east Asia (after Japan) by the then University of Agricultural Sciences, Bengaluru. Currently is a constituent college under Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar (Since 2004). It is a well established academic institution involved actively in teaching, research and extension. Institution possesses good training facilities, experienced faculty and adequate infrastructure (Labs, swimming pool, sports complex, multi-gym, auditorium, bus, boat *etc.*) to carryout research, technology development and capacity building programs for different cadres.

Mangaluru is a coastal and temple city of Karnataka known for education and banking services. It is well connected by road, water, rail and air. Participants can take the blessing of Mangala Devi at Mangaluru, Manjunatha Swami at Dharmasthala, Kukke Subramanya, Mookambike at Kolluru, Sri Krishana at Udupi, Durgaparameshwari at Kateel, Allah at Ullal Darga, Milagrese Church at Mangaluru and may visit St. Mary's Island near Malpe.

Course contents

- An overview of aquatic pollution
- Current status of rivers pollution in India
- National and International standards for water quality in India
- Impact of climate change on aquatic ecosystem and biodiversity
- Ground water contamination and its impact
- Use and abuse of antibiotic s in aquaculture
- Chemical contamination and its standards in fish and fishery products
- Standard methodology for collection and analysis of water and sediment samples
- Fate and effect of oil in marine environment
- Heavy metals and pesticides pollution in aquatic ecosystems
- Sewage pollution and treatment methods
- Reclamation of alkaline and saline soils
- Bio-indicator in pollution monitoring
- Environmental toxicology and toxicity assessment
- Concept of bio manipulation for restoration of lakes
- Bioaccumulation and bio magnification of pollutants in aquatic ecosystem

Eligibility

The short course is open for participants to the rank of Assistant Professors/ Scientists/ Researchers working in ICAR/ SAUs/ KVKs/ CAUs/ Fisheries Departments/ Deemed Universities/ Administrators/ Managers may apply for this training programme.

Boarding and Lodging:

Free boarding and lodging will be provided by the organizers in campus/ students' hostels/ guest house/ farmers' hostel.

Travel allowances:

Travel allowances will be paid by the organizers but restricted to III tier AC train or bus from your centre to training destination by the shortest route. TA will be paid on production of ticket. Boarding and lodging facility is not provided for accompanying persons.

Interested candidates can send their entries through e-mail after approval of competent authority and hard copy through proper channel in the prescribed format.