

Training Course on Marine Biotech and Marine Biodiversity for Developing Countries

Project Description

Full Name	Training Course on Marine Biotech and Marine Biodiversity for Developing Countries		
Organizer	Fujian Institute of Oceanography		
Holding Time	May 5 to May 25, 2022	Language	English
Invited countries	Developing Countries	Planned Number of Participants	25
Training objectives	The training contents will be involved with the fundamental theory of marine biodiversity protection, fisheries resources management as well as the construction and management patterns of China’s marine protected areas, etc. The training course is going to introduce advanced marine biotechnology and its application in related industries to the participants in a systematic and comprehensive way with the activities combining lectures, discussion & communication as well as virtual field trips. The training course is aimed at improving participants’ theoretical level and practical application capacity in Marine Biotech and Marine Biodiversity so as to enlarge Marine Biotech and Marine Biodiversity research and protection talent pool of recipient countries, moreover, to promote the communication and cooperation in Marine Biotech and Marine Biodiversity protection between China and the recipient countries.		
Requirements for trainee	Professional background	-Field or specialty: governmental officials, technicians, enterprise supervisors and professional personnel engaging in the areas related to marine biology and marine ecology and environmental research and protection such as marine fishery, environment, planning, transport and tourism, etc. - Years of working in related fields: no less than one year - Others: None	
	Age	Not higher than the legal retirement age in the recipient country	
	Physical Health	Ability to attend online training course activities on time	
	Language Ability	Fluency in listening, speaking, reading, and writing in English	
	Others	Able to use the Bizconf Video platform to complete the project schedule	
Training Course Content	1. Main training courses and content introduction (1) Introduction of China’s National Conditions: mainly introduces China's history, geography, ethnicity, politics, society, economy, lifestyle, culture, education, media and poverty alleviation. It seeks to contextualize changes that have taken place in the last 40 years of reform and opening up with personal stories, pictures and words. On top of that, the course uses videos from Chinese mainstream media and social media to help audiences understand the real China. (2) Protection of Marine Biodiversity and Sustainable Utilization of Fisheries Resources: this course will focus on the marine biodiversity status, and the technologies on the protection and management of marine biodiversity in typical ecosystems (coral reef, mangroves, sea grass/weed bed, wetland and estuaries, Antarctic), ecological function of marine biodiversity and its support to fisheries resources, the influences of marine fisheries on the protection of biodiversity and their countermeasures. (3) Advanced Marine Biotechnology and Its Application in Related Industries: this course will explain the connotation, principles and advantages of cutting-edge marine biotechnology, and give examples to show and illustrate the application of these technologies in biological related industries such as marine biological genetic trait improvement, biological breeding, biomedicine, aquaculture disease prevention and control, ecological restoration and environmental protection, highlighting the important role of these advanced technologies in promoting industrial technological innovation and high-quality industrial development.		

	(4) Conservation and Governance of Marine Biodiversity and Ecosystems: Biodiversity consists of genetic diversity, species diversity and ecosystem diversity. Marine ecosystems have provided the world with provision, regulation, culture and support services and products. Conservation and governance of marine ecosystems and biodiversity is a global issue and mission in the 21 century and calls for international cooperation in the areas of marine spatial planning, marine ecological restoration, the development of marine protected area and integrated coastal and oceanic management for sustainable development. (5) Frontier Theory and Technology of Breeding in Marine Organisms: This course will focus on the breeding theory and technology for marine aquatic animals, such as selective breeding, crossbreeding, polyploidy, markers assistant selection (MAS), genome selection and gene editing. Through the case analyses, the participants will acknowledge the trends and industry status on genetic breeding on marine organisms in the world. (6) Technology Development and Application of Marine Biological Resources: introduces the application of food processing technology and biotechnology in the development of marine biological resources, such as processing technology of sea foods including frozen food, dried products, canned products, salted products, surimi-based products, fish meal, fish oil, etc., the newest research on marine biotechnology including marine bio-enzyme technology, fermentation technology, cell engineering technology, protein engineering, genetic technology and so on, as well as the future development trend. (7) High-Valued Biotechnology of Processed Aquatic By-products: introduces the biotechnology to produce gelatin and collagen peptide with fish extracts; biotechnology to prepare edible films with fish processing by-products, and the application of edible films; biological preparation offish sauce and its nutrition; biotechnology of extracting function foods from abalone processed by-products, and the application of extracts from abalone viscera. (8) Status and Countermeasures of Marine Biodiversity Conservation in China: introduces the significance, threats and causes of marine biodiversity; marine biodiversity status and its conservation in China; environmentally friendly strategy and thoughts of marine biodiversity conservation; construction and management of marine natural reserve in China; Contributions and roles changing of China in the framework of the <i>Convention on Biological Diversity</i>. (9) Artificial Propagation and Cross-breeding Technology of Grouper: introduces biology of grouper, state of the global grouper industry, artificial propagation and larval rearing technology of grouper, cross-breeding technology of grouper, health-culture of grouper and disease prevention and control technology. (10) Coastal Wetland Ecosystems: Biodiversity and Blue Carbon: In this course, lecturer will focus on the structure and function of coastal wetland ecosystems. Especially, lecturer will introduce the biodiversity of coastal wetland ecosystem, blue carbon sink, and their role in mitigating climate change. Lecturer will also introduce the techniques for assessing and monitoring the blue carbon sink. The establishment, status and development of blue carbon trading systems based on coastal ecosystem restoration will also be shown. (11) Fight Against COVID-19 Together for a Shared Future: introduces global latest updates about COVID-19, shares China's successful experience in fighting against COVID-19, moving stories about heroes who fight against COVID-19, multiple measures taken by Xiamen to combat COVID-19 and China's wisdoms and answers in the post-COVID-19. 2. Virtual field trip introduction Investigation and visits on Xiamen marine rare species conserve of Chinese white dolphin and lancelet in east coastal sea area of Xiamen City & Xiamen Marine Ecosystem and Biodiversity Research and Science Knowledge Promotion Base--Xia Tanwei Coastal Wetland Ecological Park. 3. Materials to be prepared by participants In order to have better communication with Chinese professionals, please prepare communication materials related to training theme, for example, 1. Basic national condition: administrative organs and managerial methods of governmental maritime sectors; fundamental profile of sea areas and marine resources; 2. Development situation of the coastal management,
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	biodiversity protection and marine protected zone; 3. Marine-related policies, laws and regulations;4. International cooperation: the main cooperative countries, present cooperation methods and management modes in marine-related industries		
Host City	Xiamen City, Fujian Province	Cities to visit	Xiamen City, Fujian Province
Notes	1. This program uses the Bizconf Video platform for online training. 2. During the training course, participating officials are invited to observe training course sessions time and ensure attendance. 3. Testing sessions will be arranged by the organizer. Participants are expected to contact the organizer for the test sessions 10 days before the training course begins. 4. Preparation before the training course: Enter the Bizconf Video classroom 15 minutes in advance. Change personal title to First name/Last name-Country style. 5. Disciplinary requirements: Please strictly abide by the training course schedule. 6. Participants are required to prepare relevant materials for the training course according to the schedule, and submit relevant electronic materials as required. 7. Training course activities are equipped with professional English translation.		
About the Organizer	Fujian Institute of Oceanography (FJIO), located in Xiamen city – a special economic zone lying in the southeastern coast of China, is a full-funding public institution affiliated to Fujian Provincial Department of Science & Technology, as well as a non-profit comprehensive maritime research and development institution. Its scientific research building (also the administration building) covers a building area of 3,671 m² with fine-equipped laboratories and scientific research facilities. In addition, FJIO owns “Yan Ping No.2” oceanographic research vessel with a displacement of 800 tons. In the process of offering the main service to the governmental marine management and social marine development, FJIO has accumulated rich technology and professional experience in the fields of Mariculture, Integrated Coastal Management, Marine Fisheries Management as well as Marine Economic Sustainable Development. Since 2005 when FJIO started to undertake the China-Aid training programs sponsored by the Ministry of Commerce, PRC, FJIO has successfully organized more than 122 bilateral or multilateral training courses/ seminars/ workshops of China-Aid training programs, including 4 online training programs held in 2021, accumulating important experience for online training. The programs organized by FJIO focus on the following program topics - Mariculture Technology, Integrated Coastal Management, Marine Fisheries Management, Marine Management and Blue Economic Development, Marine-related Industries, Marine New Technology and Marine Spatial Planning. The working languages include English, Portuguese, French, Spanish, Arabic, Thai and so far. There are more than 3311 ministerial or director-general level officials and technical personnel (including 8 ministerial level and 26 vice-ministerial level officials) from 108 developing countries along with Portugal and 1 regional international organization (League of Arab States) of 5 continents worldwide, participating FJIO’s training programs. The above programs organized by FJIO have been all popular with the participants and received high reputation.		
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