

Public Awareness Programme on Prevention of Coastal Marine Pollution

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Nearly three quarters of the world population lives along the coast. The coast line in India is 8129 km long, with many sprawling and rapidly growing coastal cities. The coastal zone, is a dynamic area with many cyclic and random processes owing to a variety of resources and habitats. The coastal region is a place of robust human activity, followed by intense urbanisation, resulting in human interference with the environment because of rapid development. In recent years, pollution in the coastal waters has become a problem world over because of its impact on living organisms, impairment of water quality for use, hindrance to aquaculture, fishery resources and human health. The coastal marine ecosystems are now highly disturbed and threatened, encountering problems of pollution due to ever-expanding human settlement. A variety of pollutants which are produced by man reach the coastal waters either directly or indirectly.

Pollution or any other man made modifications to the environment can be considered as additional stress imposed on the ecosystem and will tend to eliminate the more sensitive organisms. The pollutants of greatest concern in the coastal marine and estuarine ecosystems are those which are resistant to decay and persist in the environment for a long time, such as toxic industrial heavy metals and agricultural pesticides coming under the category of chlorinated hydrocarbons. Petroleum hydrocarbons are intermediate in their persistence and sometimes their products of decomposition are more toxic than the crude form. For all the persistent pollutants, the coastal regions are the ultimate sink where they accumulate in the water, within the tissues of marine organisms and in the sea bottom sediments.

Discharge and disposal of untreated and partially treated domestic and industrial wastes, discharge of industrial coolant waters, harbour activities such as dredging, dumping of ship wastes, cargo handling (spilling of chemicals and metal ores, oil transport), activities, mechanised fishing vessels movement (draining of used oil), painting of fishing vessels, scrapping of metal linings of fishing boats, dumping of waste and trash fishes, oil exploration and oil refining activities, recreation and tourism activities, salt production etc. are the most common forms of pollution. The most widely known pollutants according to the nature and source are sewage (domestic & municipal), industrial heavy metals, agricultural wastes (pesticides), detergents, oil and dispersant, radioactive materials, thermal effluents and other solid wastes.

Oceans are the life blood of planet earth, and approximately three fourths of planet earth is surrounded by oceans. Oceans produce 50-70% of oxygen required for the living organisms and absorb most of carbon-dioxide from the atmosphere acting as the major carbon sink thereby regulate our climate and harbour the greatest abundance of life on earth. More than 50% of world's population lives near the sea coasts and 90% of world's inter-country trade is carried out through the oceans. To combat problems associated with the world oceans, and to preserve the coastal of 75% trade is taking place through the sea and it has been estimated that

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zone for future generations, the concept of coastal zone management has been developed by many countries around the world.

Awareness creation is one of the most effective ways to combat any common problem. Through collective action, in this case those who are dependant on an activity which is being affected by oceanic pollution would lead to favourable outcomes.

The Network for Fish Quality Management and Sustainable Fishing (NETFISH-MPEDA) in collaboration with Central Institute of Fisheries Nautical And Engineering Training (CIFNET), GAIA International Organisation (GIO) Chennai and the Tamil monthly magazine for fisheries 'Kadalar', Chennai organised the public "Awareness programme on prevention of coastal marine pollution for the conservation of sustainable fishery resources" on 16th October 2015 at Central Institute of Fisheries Nautical and Engineering Training (CIFNET) campus, Royapuram, Chennai. In this event several dignitaries and experts including Dr. P.Nammalwar, Mr. A.K.Choudhury, Mr. Vijayakumar, Dr. R.Balasubramanian, Dr. Androse, Dr. R.P.Sinha, Mr. 'Kadalar' Velayutham participated.

Mr. S.Rajapakiyam, the Former Technical Officer, Central Marine Fisheries Research Institute, ICAR and Programme Officer, GAIA International Organisation (NGO), Chennai introduced all the speakers to the participants. Mr. Panner selvam, the former Assistant Director, Department of Fisheries, Government of Tamil Nadu, Chennai delivered the welcome address in which he emphasised the need to protect the coastal marine environment.

Dr. P.Nammalwar, Former Principal Scientist, Central Marine Research Institute(CMFRI), Indian Council of Agricultural Research (ICAR) and Chairman, GAIA International Organisation (NGO) in his inaugural address explained the importance of oceans in the coastal zone economy and said that hundreds of millions

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Photo Captions: 1) Delegates on dias-Mr. AK Choudhury, Dr. P. Nammalwar, Mr. Vajayakumar, Dr. R. Balasubramanian, Dr. S. Anrose, Dr. R.P. Sinha and Mr. Kadalar Velayutham; 2) Dr. P. Nammalwar delivering his talk; 3) Dr. AK Choudhury delivering his talk; 4) Mr. Kadalar Velayutham greeting Dr. P. Nammalwar and Mr. Vijayakumar 5) A view of the participants.

above 80,000 ships are involved in the transport of goods and are releasing large quantities of gases and oils into the sea. Ships function at 1.1 lakh horse power, which leads to increase in pollution. In India, shipping transport is growing phenomenally therefore there is every possibility increase in pollution in the coastal marine areas.

Mr. Vijayakumar, Deputy Director, Regional Office, MPEDA, Chennai said that industrial, agricultural and domestic sewage wastes from various sources have posed a threat for the survival of fish and other aquatic organisms of the coastal marine ecosystems. Some organic materials are composed of normal biological process, but others such as chlorinated hydrocarbon pesticides are resistant to decay and persist for long time in the aquatic environment, he said adding that for the persistent pollutants, the ocean is the ultimate sink where they accumulate in the water, within the tissues of marine organisms or in the bottom sediments.

Dr. R. Balasubramanian, State co-ordinator, NETFISH-MPEDA, Chennai discussed and interacted with school students and requested the students to disseminate the message on prevention of coastal marine pollution. Dr. R. P. Sinha, Scientist, Fishery Survey of India, (Ministry of Agriculture, Govt. of India) Chennai, discussed about the major activities responsible for coastal marine pollution. He said that discharge and disposal of untreated and partially treated domestic and industrial wastes, discharge of industrial coolant waters harbour activities such as dredging, dumping of ship wastes, cargo handling (spilling of chemicals and metal ores, oil transport) fishing activities (mechanised fishing vessels movement (draining of waste oil), painting of fishing vessels, scrapping of metal linings of fishing boats, dumping of waste and trash fishes and aquaculture) oil exploration and oil refining activities, recreation and tourism activities, salt production etc. are the major causes of pollution. Similar to the Clean India programme, clean coastal marine environment projects are important for the future, he stated.

After the tea break, Dr. A. Ravichandran, Scientist, Central Institute Fisheries Nautical and Engineering Training (CIFNET), Chennai gave a talk on "Marine pollution, emission control methods used in marine diesel engines and effects of pollution". This was well received by the audience. Thereafter, Dr. P. Nammalwar Former Principal Scientist, ICAR - Central Marine Research Institute delivered the presentation on "Environmental pollution in the coastal marine ecosystems and its management in India".

Dr. S. Androse, Former Zonal Director, Fishery Survey of India, (Ministry of Agriculture, Govt. of India) Chennai, stated that during the trawling operations, for up to one kilometer distance in the deep waters, 5kg of plastic wastes are caught by the trawl net. Fishes caught from the coastal areas, contain heavy metals such as mercury and cadmium when compared to clean coastal environment, therefore, awareness among fishing community is important he said. The fishermen are to be sensitised that they should not carry plastic items when they go for fishing.

"Kadalar" monthly magazine, Chennai, as part of the awareness programme, and on the eve of the 29th Anniversary of the magazine, conducted an essay writing and drawing competition for school students from the coastal villages and trainees of CIFNET. Mr. Kadalar Velayutham, Editor of Kadalar distributed prizes to the winning students in the above competitions.

Dr. J. Gopinath, Programme Officer, GAIA International organisation, Chennai proposed the vote of thanks. He thanked all the speakers, school students, teachers, fishing community, public & staff members of NETFISH-MPEDA, Central Institute Fisheries Nautical and Engineering Training (CIFNET), GAIA International organisation, Chennai and Kadalar Monthly Magazine, Chennai. He especially thanked Mr. A. K. Choudhury, Head of Office, CIFNET for providing all the infrastructure facilities at the CIFNET Campus, Royapuram, Chennai for the successful conduct of the awareness programme on the prevention of coastal marine pollution and for the conservation of sustainable fishery resources in India. ■

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