

## Neurotoxicity within the Natural Sources in India

Ashutosh Samuel\*

Professor, VIT University, Vellore, India

The present investigates on the ritual ceremony impact monitoring the ecological indicator and pathogenic microorganism diversity in pilgrimage places beach sand on Bay of Bengal coast. Samples were collected from the three location four different site and were analyzed by following standard methods. The results indicated, ritual activities highly contaminated the beach sand qualities and exceeded with the Who, Uspea, EU and CPCB beach sand recreational and other contacts activity followed standard permissible limit such as, pH (11%), TBC (100%), TCB (97%), FCB (88%), TEB (75%), *E. coli* (75%), disease-causing possible level of *Klebsiella* (84%), *Shigella* (75%), *Salmonella* (63%) and *Vibrio* (56%). Statistical tools were employed to find the strong evidences were denoted. Current pointed out the major effects on the diffusion of potentially pathogenic microorganisms along the shoreline, providing useful information for the setup of measures for public health protection in Bay of Bengal coast. Beaches mass level of the peoples spending of recreation, sports and spiritual activities places are highly focused on the environmental indicator and the pathogen level monitoring crucial role for the prevent and control the marine borne disease and infections of the beach users health. The state that approximately 50% to 70% of the world population lives within 60 km of the coast, and they are intense of unregulated urbanisation, industries, aquaculture, tourism, recreation and transportation activities tremendous affect the beach natural structure and qualities. They are disposal of the solid waste and wastewater contain a high density of the toxic materials and several pathogenic microorganism of the bacteria such as, *Pseudomonas sp.*, *Salmonella sp.*, *Shigella sp.*, *Campylobacter sp.*, *Staphylococcus sp.*, *Vibriosp.*; viruses (*Adenovirus*, *Norovirus*, *Enterovirus*, *Coxsackievirus types A16, B1, and B5*, *Echovirus type 1*, *Poliovirus type 2*, *Hepatitis A virus*); fungi (*Candida albicans* and *Dermatophytic*) and parasitic nematodes increased in the beach sands. The microbial contamination affected the sunlight, temperature, nutrient availability, osmotic condition, biofilm development, moisture and organic contents in the beaches. The contamination effect is a deterioration of the beach sand qualities and disappearance of the biotic communities of surfer zone phytoplankton productivity, suspension-feeders, scavengers and detritivorous macro invertebrates and their predator intertidal macro invertebrates important pray to fish and shorebirds populations levels of the shoreline environment. The virulent nature of bacterial diversity contamination can cause

serious adverse effects on the gastroenteritis, typhoid fever, dysentery, hepatitis, cholera, upper respiratory tract infections and fever, and potential sites of infections of the oral route, ears, eyes, nasal cavity and skin in the beach users. The microbial contaminated most economical beaches were less €800/m<sup>2</sup> to €2500/m<sup>2</sup>, particularly microbial standard violations, loss of millions of dollars in around the world. The contamination impact foreigners and nearby dweller avoid the beach recreational activities effects decreases the \$27 billion earning level in the India. The beach quality monitoring with the health warning indicators of the total coliform bacteria, fecal coliform bacteria, *Enterococcus* bacteria and *E. coli* standard prescribed levels routinely monitoring help to narratives linked to the indicators (perception of the problem), the external reference (context), and the measurement system in the beaches. In India, above 7000 km of the long coastline covered by the 28 states and islands, and shoreline region situated the numbers of hotspot pilgrimage places unregulated anthropogenic activity impacts are nowadays an undeniable reality in several parts of the nation. In the present study is to assess the devotees performing the unregulated ritual ceremony activities impacts on the beach sand physico-chemical parameter, heterotrophic microbes, pollution indicator and pathogenic microbial diversity in the foremost hotspot pilgrimage place beaches of Bay of Bengal coast region of Tamilnadu, India. The study area was conduct selected the unregulated ritual ceremonies performing the four important pilgrimage place beaches of the Bay of Bengal coast. The site I. Basilica our Lady of good health church (10°40' 48"N; 79°51'0"E), site II. Sri Ramanatha Swamy temple (09°17'17.16"N; 79°19'2.28"E), site III. Subramanian Swamy temple (08°29'45.24"N; 78°7'44.76"E) and site IV. Kanyakumari Bhagavathi Amman temple (08°9'47.16"N; 77°16'48.36"E). Every day, the pilgrimage places people performing the different types of the ritual ceremonies, particularly they are offering various types of the degradable and non-degradable ritual materials like flowers, fruits, milk, curd, ghee, oils, vegetables, grains, rice, coconut, camphor, leaf, coins, cloth, limbs made of silver, idols, ashes of departed ones, body hairs and mass holy bath in the beach and coastal environment. It is estimated to be visited by above thousand and a million of people, respectively, on each day and during festival seasons. In general, this coastal zone is a richest biological resource of the Gulf of Manner region major marine biosphere places of the Asian countries.

\*Corresponding author: Ashutosh Samuel, Professor, VIT University, Vellore, India, Email: [ashutosh@vit.ac.in](mailto:ashutosh@vit.ac.in)

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