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Effect of Urbanization and Industrialization on Coast of Mumbai (Bombay West coast of India) - A case Study

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Maharashtra one of the coastal states in India located on west coast of India is endowed with a coastline of 720 km with the continental shelf area of 1.12 sq. km. Four major cities are situated on the coast of Maharashtra. Among these cities Mumbai is one of the metropolitan of India located on western sea coast of India at 180 53' north to 190 16' north latitude and from 720 E to 720 59 E longitude. Mumbai known as Bombay in past was a cluster of seven tiny islands. It now forms a collected mass of islands, trapezoid in shape and occupies an area of 437 sq km., which is about 0.14% of the total area of Maharashtra state. Its maximum width is 17 l km (east to west) and length if 42 km (north to south) Mumbai city has rich natural resources of lakes, coastal water forests, wetlands and mangroves. Mumbai is the industrial hub of everything from textiles to petrochemicals with total 36048 industries/factories. About 11,494 industries are located in the city and 24,554 industries are located in suburbs. Mumbai is blessed with a coastline of 26 km along its western edge. The coastline in indented with large and small creeks. Although majority of the population in Mumbai is provided with houses and sanitary facilities yet almost half of the city's 12 million residents are either slum dwellers or homeless without any access to sewage and sanitation facilities and use coastal area in and around city as a natural toilet with the result huge amount of sewage releasing directly into Arabian sea. As a result of voluminous amount of industrial and domestic effluent intake, coastal water in and around Mumbai is under the grip of pollution. Mahim estuary and adjacent area of Mahim coast is the eyeopening example of human impact on coastal ecosystem. Water of Mahim estuary and near by areas shows high level of nitrate, phosphate and hydrogen sulphide and sometime zero oxygen level. General trend of elevation of nutrients is recorded in Mumbai coastal waters. Moreover, a drastic depletion in faunal and floral diversity of it was also noted. Mangrove species has been reduced from 14 to only two species at present. The present paper describes details of human impact on coastal ecosystem in and around Mumbai and throws light on responses of coastal resources to anthropogenic pressure.