

Water Pollution...! A Serious Civic Issue of Karachi

Short Communication

Water pollution in Karachi is a major and serious problem of its 16 million peoples whose dependency and survival now is in great danger [1]. The present situation is worsen and alarming when the damage of pollution is rising and widespread and raise questions on silence of concern authorities when formally heavy discharge of untreated wastewater from all sources into the sea has endanger marine biodiversity and livelihood of local costal fishermen [2]. This article demonstrates the contamination of sea-water with discharged of domestic sewage and animal dung, industrial untreated effluents and scattered disposal of municipal solid waste on undesirable scale in the city-streets and on sea-sites of Karachi [3-5]. While, highlighting impacts of water pollution on humans, sea birds and fish species along with mangrove forest and suggesting control measures can bring significant socio-economic and environmental benefits to the community [6,7]. Such benefits consist largely of damage costs avoided. This includes benefits resulting from the restoration of sustainable yields from natural ecosystems, such as aquaculture and fisheries, as well as improvements in environmental amenity values of tourism and recreation activities [8].

It is said water is life and for survival. Our entire life revolves around consuming water i.e. drinking, eating food prepared from water, bathing, washing and irrigating etc. But unfortunately; our uncommon waters are contaminated and rich with chemicals and toxins and such contaminated waters are being utilized intentionally or unintentionally throughout our daily routines. Karachi, the largest and most populated city of Pakistan is now facing an acute challenge of water pollution, a major environmental threat and serious civic problem for its residents. In the very recent years, it has proven country's worsen disaster for humans, aquatic life and sea birds [9-12]. The dependency and survival of 16.62 million people, totally on risk of water pollution, a new debatable question rises in civil society for present ruling elites to answer it [13].

Karachi is the largest industrial setup where are 6 industrial sites accommodates 10000 industrial units including 700 tanneries. About 3000 industries have been functionally operating at Korangi industrial area just beside the Karachi coast. The total estimated waste of metropolitan is 20000 tons of solid waste/garbage and 500 million gallons of sewerage and wastewater per day produced from domestic, municipal and industrial sources [14,15]. This entire waste directly dumped into the sea without its recycling or treatment which is absolutely environmental exploitation and resulted disaster to marine ecology and national economy.

The disposal of solid waste/garbage (plastic bags, bottles, glasses, lathers, rubbers, papers goods, cardboard, metal and wasted food, fruit and vegetables etc) absolutely problematic for fish movement, unexpectedly affects fish growth and hurdles in fishing, netting and anchoring of vessels [16]. Beside the sea, some amount of such solid waste being dumped in the rain nallas of Karachi which chock



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the rain-nallas and cause routine flooding in city and proving bad drain system. Finally, these rain-nallas drained into the sea. The City District Government Karachi is among the biggest cause of polluting the sea by throwing its waste of five tones in it on a daily basis. Added to this, waste of animal dung from cattle colony directly drained into the sea, another additional contribution to more pollution [17,18]. Finally, including all domestic sewage, industrial effluents and cattle colony waste causes eutrophication of sea water [increase excessive nutrients in water which increases biomass of algal bloom which float and farm a mat on water surface to block light penetration (affect photosynthetic activity), prevent oxygen dissolution in water (mortality of plants, fishes and mangrove seedlings) and increase bacteria population that consume all available oxygen from water and finally disrupt aquatic food chain and imbalance ecosystem] [19-22].

Moreover, yearly 90000 tons of oil spillage from ships, tankers, deep sea trawlers, fishing boats, Karachi harbor and offshore oil refineries (KPT, Bin Qasim port and PARCO) which all devastates hydrocarbon and crude/black oil into offshore waters which floats on water surface and promote eutrophication [23-25]. The impact of oil spillage severely affects humans and directly kills the fishes and sticks to the feathers of sea-birds and loses their ability to fly. The greater impact of water pollution can be seen that the green turtles and other cetaceans died because of dumping solid waste especially disposal of plastic and rubber items [26]. Due to industrial waste, several species of fishes and sea birds have been disappeared from our ocean. The increased cases of water-food borne diseases are commonly reported in local clinics and hospitals situated in the polluted industrial areas of Korangi and Landhi [27,28].

Rehri creek is the heavily polluted sea-site of Karachi coast where effluents from Korangi, Landhi, Karachi export processing zone, Bin Qasim industrial area and Pakistan steel mill are directly discharged into its water [29,30]. About 23 toxic heavy metals of industries (such as antimony, arsenic, bismuth, cadmium, cerium, chromium, cobalt, copper, gallium, gold, iron, lead, manganese, mercury, nickel, platinum, silver, tellurium, thallium, tin, uranium, vanadium, and zinc) have been documented from Rehri creek to

reach at mangrove area [31]. Even the resting mangrove forests which serve as a spawning and nursery ground for sea-birds and seedlings of commercially important marine fishes and shrimps, protect from oceanic disasters and from sea erosion and provides fuel and fodder for local fishermen, now in great danger because of heavy load of toxic chemical compounds [32-34]. If these deadly substances accumulated in fishes and sea-birds then immediately die. Infected seafood from the area if regularly consumed by humans almost complaint for anemia, heart attack, kidney failure and brain damage [35-38].

The heavy load of water contamination has disrupted fishing activities, paralyzed economic growth and development and drastically impacted local fishing communities by depriving them from their forefather's livelihood. Unfortunately, our civil society actors especially public, private sector, media and state has neglected the issue and turned their eyes on this worsening situation ultimately, the waste of Karachi is on rise and the situation is alarming. It is threat to lives, livelihood and natural environment and resources [39]. Therefore, if we not awake yet, then of course we shall loss our natural treasure very soon and lead to more unemployment, poverty, starvation and crime. Therefore, it is our prime responsibility to highlight the issue and advocate it on every public forum for creating awareness among masses and mobilizing civil society to add mutual contribution for saving our waters from further destruction [40-43]. I urge to provincial and federal government to take the notice of this issue and put up necessary actions for the preventions and provide remedies for the civilians of Karachi.

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