



The Impact of Sewage-Polluted Coastal Waters on Air Quality and Human Health

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DESCRIPTION

Sewage pollution is a widespread and worsening problem that affects both the health of the oceans and the people who depend on them. Sewage pollution comes from various sources, such as inadequate sanitation, industrial waste, agricultural runoff, and stormwater. It contains a complex mix of toxins, such as mercury, plastic, chemicals, pathogens, and biotoxins, that can harm marine life and ecosystems [1].

Sewage pollution also poses a threat to human health through exposure to contaminated seafood and water. However, a recent study has revealed another way that sewage pollution can affect people: by becoming airborne in sea spray aerosol. Sea spray aerosol is created by breaking waves and bursting bubbles at the ocean surface. It consists of tiny droplets of seawater that carry chemical substances, viruses, and microorganisms into the air [2,3].

The study, led by researchers from Scripps Institution of Oceanography at UC San Diego, sampled sea spray aerosol from sewage-polluted coastal waters in Southern California. They found that the aerosol contained fecal indicator bacteria, antibiotic resistance genes, and human-associated microbes that indicate the presence of sewage contamination. They also detected traces of pharmaceuticals, personal care products, and pesticides that are commonly found in wastewater [3,4].

The researchers estimated that people who spend time near the coast can inhale up to 10 million bacterial cells per day from sea spray aerosol. They also calculated that the aerosol can travel up to 10 kilometers (6 miles) inland, potentially exposing people who are not directly in contact with polluted water. The health effects of inhaling sea spray aerosol are not well understood, but previous studies have suggested that it can cause respiratory infections, inflammation, and allergic reactions [5].

The study highlights the need for more research on the impacts of sewage pollution on air quality and human health. It also calls for more action to prevent and mitigate sewage pollution in

coastal waters. The authors suggest that improving sanitation infrastructure, enforcing wastewater regulations, implementing best management practices for stormwater runoff, and promoting water conservation and reuse are some of the possible solutions [6,7].

Sewage pollution is a global problem that requires urgent and immediate attention. It is not only a threat to the oceans and their biodiversity, but also to the people who rely on them for food, livelihoods, recreation, and culture. By reducing sewage pollution in coastal waters, we can protect both our health and our environment [8,9].

Coastal water is the term used to describe the water that lies near the shore of a landmass, where it interacts with both terrestrial and marine environments. Coastal water covers about 10% of the ocean surface and 0.5% of its volume, but it is home to many unique habitats and provides important ecological services for humans and other living beings [10].

Some of the coastal habitats include estuaries, coastal wetlands, seagrass meadows, coral reefs, mangrove forests, kelp forests, and upwelling areas. These habitats support a high diversity of life forms, from microscopic plankton to large mammals, and offer various benefits such as food production, nutrient cycling, carbon sequestration, erosion control, water purification, recreation, and tourism.

CONCLUSION

However, coastal water is also facing many threats from human activities on land and at sea. Some of the major sources of pollution that affect coastal water quality are agricultural runoff, industrial and municipal waste, sewage, oil spills, plastic debris, and chemical contaminants. These pollutants can cause harmful effects on marine organisms, such as reduced growth, reproduction, immunity, and survival, as well as bioaccumulation and bio magnification in the food web. Pollution can also lead to eutrophication, hypoxia, acidification, and invasive species in coastal water.

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REFERENCES

1. Nagelkerken I, Blaber SJM, Bouillon S, Green P, Haywood M. The habitat function of mangroves for terrestrial and marine fauna: A review. *Aquatic Botany*. 2008; 89 (2): 155-185.
2. Waltham NJ, Elliott M, Colin KC, Barletta M. UN Decade on Ecosystem Restoration 2021-2030-What Chance for Success in Restoring Coastal Ecosystems?. *Front Marine Sci*. 2020; 7: 71.
3. Steinhaus H. Length, shape and area. *Colloq Math*. 1954;3 (1): 1-13.
4. Vulpiani A. Lewis Fry Richardson: scientist, visionary and pacifist. *Lett Math*. 2014; 2 (3): 121-128.
5. Richardson LF. The problem of contiguity: An appendix to statistics of deadly quarrels. *Gen Sys Year*. 1961; 6:139-187.
6. Fendall LS, Sewell MA. Contributing to marine pollution by washing your face: Microplastics in facial cleansers. *Mar Pollut Bull*. 2009;58 (8): 1225-1228.
7. Mandelbrot B. How Long is the Coast of Britain? Statistical Self-Similarity and Fractional Dimension. *Science*. 1967; 156 (3775): 636-638.
8. Mandelbrot, Benoit. *The Fractal Geometry of Nature*. *Gen Sys Sci*. 1983; 10(9): 25-33.
9. Blatt H, Middleton G, Murray R. *Origin of sedimentary rocks* (2d ed.) in Englewood cliffs. Prentice-Hall. 1980; 656-659.
10. Goudarzi, Sara. Flocking to the Coast: World's Population Migrating into Danger. *Live Sci*. 2006; 10(5):12-14.