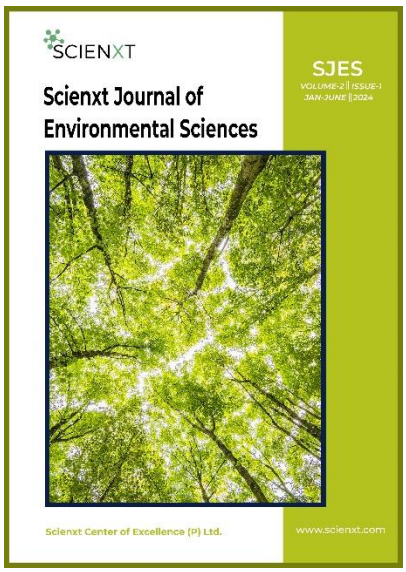

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Algal toxins and their impact on human health

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Abstract:

Cyanobacterial blooms have been increasing in frequency and intensity but are often considered an issue restricted to temperate and tropical lakes. Large accumulations of phytoplankton, macroalgae and occasionally, colorless heterotrophic protists are increasingly reported throughout the coastal areas of all continents. Aggregations of these organisms can discolor the water giving rise to red, mahogany, brown or green tides, can float on the surface in scums, cover beaches with biomass or exudates (foam), and deplete oxygen levels through excessive respiration or decomposition. Alternatively, certain species in harmful algal blooms (HABs) can exert their effects through the synthesis of compounds (e.g., toxins) that can alter cellular process of other organisms from plankton to humans. Different species of fresh water Blue Green Algae namely Anabaena sp., Aphanizomenon sp., Coleosphaerium sp., Gloeotrichia sp, Lyngbea sp., Microcystis sp.and Nodularia sp. are capable of producing a number of toxins. These cyanobacterial toxins are secondary metabolites which are highly toxic to human beings and other animals.

Keywords:

Blue Green Algae; Cyanobacteria; Toxins; Human Health