



An Ignored Environmental Problem; the Problems Stemming from Cement Used in the Constructions of Aquatic Buildings and Their Effects on Fishes[#]

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Abstract: Cement, which is commonly used in the construction of bridge, water courses, reservoirs and hydroelectric power plants in internal waters, consists of limestone and clay and it has alkaline elements such as CaO, MgO. Limestone rocks, the most important component of cement, contain CaCO₃ (calcium carbonate) with 90 percent. The cement, which is used in the construction of aquatic buildings, contaminates into water and causes an acute increase in its pH level which in turn affects aquatic creatures especially fishes. Fishes, which cannot tolerate acute increase of pH level of water, experience impairment of acid/base balance and high rates of mortalities occur as well as alkalosis. In this study, the causes of massive fish deaths (*Barbus plebejus*, *Capoeta tinca* and *Leuciscus cephalus*) of Civil stream in Ordu city is investigated; and on conducting on-site water analyses and gill studies of fish samples, it is determined that fish deaths result from alkalosis which is caused by fresh concrete used in an aquatic construction. Other cases of alkalosis which caused massive fish deaths in surrounding farms and streams due to fresh concrete have also been discussed.

Keywords: *Fish, Alkalosis, Environment, Cement.*

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