

Endemic Fluorosis, An Environmental Hazard - A Case Study

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Groundwater contamination has been a major environmental hazard in the developing countries. This may be due either to natural or anthropogenic cause. These have caused imbalance in geo-chemistry of water and has disturbed the geochemical environment which in turn has led to certain diseases in consumers of such water. Among many contaminants, fluoride is one such if present in water in excess would cause health hazard to consumers. Prevalence of fluorosis and allied diseases has been reported from many developing countries. More than half of Indian States are affected by fluorosis. The Doddahalla Micro basin of Gadag District of Karnataka State, the area of investigation, has three major lithounits viz; Granitic gneiss, quartzite and metavolcanics. Groundwaters from granitic gneiss at many places have higher fluoride concentration. The reconnaissance population sample survey of the villages having higher fluoride concentration in groundwater has revealed that people of all age group have been affected either by dental hypoplasia/skeletal fluorosis/non-skeletal manifestation of fluorosis. Severity becomes less with decrease in fluoride concentration. The causes for enrichment of fluoride, severity of fluorosis in human beings and remedial measures are discussed in the paper.