The Impact of Anthropogenic Environmental Influences on Freshwater Snails and the Implications for Snail-borne Disease Transmission Risks in Kenya.

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Abstract

Anthropogenic environmental influences are currently one of the most critical challenges facing humanity. This is mainly because anthropogenic influences are affecting vital aspects of human life creating major concerns. Among the human life aspects affected of concern is health. This is mainly due to the emerging patterns of vector organisms of vector-borne diseases portraying potential increase in risks for vector-borne disease transmission risks. Owing to these trends, recently some investigation have been carried out to understand the proceedings implications of anthropogenic environmental influences on vector organisms and the associated risks for transmission of vector-borne diseases. This paper provides a description of findings of such recent studies to investigate the impact of anthropogenic environmental influences on freshwater snails and implications on risks for transmission of potential snail-borne diseases in Kenya. The studies which were carried out between 2002 and 2007 at Lake Victoria, Lake Jipe and two rivers from Eastern Kenya. The studies in rather similar patterns tended to show decline in snail biodiversity at areas/sites with anthropogenic influences compared to sites without anthropogenic influences. Further, the studies appeared to show tendency for the recorded snails vectors of parasites that cause snail-borne diseases in humans to build high population levels at sites with anthropogenic influences. The study then seems to convey two important messages; First anthropogenic influences tend to potentially cause decline or disappearance of some snail species among other biodiversity in freshwater habitats. Secondly anthropogenic influences tend to cause domination of freshwater habitats by vector snails populations thereby creating opportunity for increased risks for snail-borne disease transmissions. Therefore, environmental conservation is recommended for vector-borne control in sustainable and integrated parasitic disease control.

Keywords: Anthropogenic influences, Freshwater snails, snail-borne diseases, Environment conservation, Control