Contamination of Groundwater Resources by Pit Latrines in Kwale District, Kenya.

Jason M. Mzuga, Mwakio P. Tole, Elias K. Ucakuwun


Abstract

Waters from springs, wells and boreholes were analysed for chemical and biological quality. Although most of the waters were found to be chemically suitable for drinking, 69% of the wells, 30% of the springs and 13% of the boreholes were found to be contaminated with E. Coli. The contamination was greater in the more densely populated areas of Diani, Ukunda, Waa and Tiwi which are areas of coral limestone. At Shimba Hills, there was relatively less contamination and Msambweni having intermediate magnitudes of contamination. It is proposed that boreholes should not be sited within 150 m from a pit latrine, particularly in areas of coral limestone. Organisations concerned with community water projects should either devise remedial measures to bacteria contamination or abandon the concept of community hand pump projects in favour of deeper sources that cannot be contaminated by near-surface sources, or get water from more distant water sources that originate from environmentally cleaner areas. This is because in densely populated areas, it is impracticable to expect to have the desirable distance of 150 m between boreholes and pit latrines.