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Baseline ^{137}Cs levels of soil and grass in three selected sites in Sri Lanka

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^{137} Cs is a man made radionuclide released to the environment as a result of nuclear reactor accidents and Nuclear Weapon Testing. Once released to the atmosphere ^{137} Cs settles down on earth surface and get attached to the soil particles. Because of the relatively long half life and high affinity to fine soil particles ^{137} Cs remain in soil for long periods of time.

In this study an attempt was made to set up baseline radioactivity concentration of ^{137} Cs in soil and grass using gamma ray spectrometry. Baseline information over a period of time allows any increase in radioactivity from man made source to be identified. Continuous soil and grass sampling was done at two sites in Colombo and one site in Ranpokunagama over a period of six months. The minimum activity concentration measured in both types of samples is below the detection limit. The maximum activity concentration of 5.5 Bq.kg^{-1} of was measured in soil while in grass the maximum activity concentration was measured as 6.0 Bq.kg^{-1} of dry weight. It was also observed that one site in Colombo showed higher values for ^{137} Cs concentrations than the other two sites studied.

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