

Spatial variations of ^{137}Cs and ^{90}Sr concentrations in coastal waters of Japan

N. Inatomi

Y. Nagaya

F. Kasamatsu

The artificial radionuclides concentrations (^{137}Cs and ^{90}Sr) in sea waters and sediments in coastal waters of Japan has been monitoring since 1984 as a part of the marine environmental radioactive monitoring program sponsored by the Science and Technology Agency of Japan. The spatial and temporal variations of ^{137}Cs and ^{90}Sr concentration in seawaters and the factors affecting the variations have been investigated. The concentrations in cold water currents (Oyashio currents system) are lower than those in warm water currents (Kuroshio currents system). The concentrations of ^{137}Cs and ^{90}Sr in coastal waters of northeast Japan have been substantially influenced by the occurrence and strength of the Kuroshio currents system/Oyashio currents system. Relatively constant concentrations of ^{137}Cs and ^{90}Sr were observed in waters above 200m depth with sharp gradient below 200m depth. We also discuss the characteristics of the vertical distribution of $^{239+240}\text{Pu}$ in coastal waters of Japan.