

## Assessment of health risk from radioelements in marine food items

M. Feroz Khan and S.G. Wesley

Scott Christian College, India

Marine food production is very significant for global food trade and food security, as they provide more than 15-20% of total animal protein supplies. About 38% of world fish production enters international trade and around 50% (in value terms) of this trade originates in developing countries. Recent growth in the demand for seafood throughout the world has led to a considerable increase in interest in the safety of marine organisms as food sources. Concentrations of natural radionuclides  $^{238}\text{U}$ ,  $^{208}\text{Tl}$  ( $^{232}\text{Th}$ ),  $^{226}\text{Ra}$ ,  $^{210}\text{Po}$ ,  $^{210}\text{Pb}$  and  $^{40}\text{K}$ , and fallout  $^{137}\text{Cs}$  were determined in crustaceans, mollusks and fishes which are of economic importance. Pelagic fishes concentrated more radionuclides in the muscle tissue when compared to benthic species. Similarly, teleosts registered more activity than elasmobranchs. Based on the activity levels in muscle, the intake, effective dose and lifetime risks to humans were estimated. The internal radiation doses received by fishes and human beings seem to be mainly due to  $^{210}\text{Po}$  and  $^{40}\text{K}$ . The seafoods were found to be safe for consumption

### Biography

M. Feroz Khan has graduated his Master Course at the age of 22 years from Scott Christian College (Autonomous), Nagercoil affiliated to Manonmaniam Sundaranar University and completed his Ph.D. at 28 years from Manonmaniam Sundaranar University, Tirunelveli. He obtained 3<sup>rd</sup> rank in UG and 2<sup>nd</sup> rank in PG at university level. He worked for his doctorate in the same college and awarded Ph.D (specialization Radiation Ecology) by the same university (2010). He has qualified SLET during 2006. He is currently Assistant Professor of Advanced Zoology and Biotechnology in the Department of Biology at Sadakathullah Appa College (Autonomous), Tirunelveli. He completed the P.G.Diploma in Nanobiotechnology from LSFI, India. However, His areas of research interest include biodiversity, environmental impact assessment, pollution monitoring, risk assessment and radiobiology. He worked as JRF and SRF for a period of five years in BRNS funded project on Kudankulam baseline Studies. He is a member of Health physics Society, USA, Marine Biological Association of India, Kochi and International union of Radioecology, France. To his credit, he has published more than 20 international papers in reputed journals and his article published in Journal of Environmental Monitoring is considered as HOT article in 2011. He was been an invited editor of the journal Marine Pollution Bulletin and Environmental Monitoring and Assessment. He was born in 1981 in Kerala.

ferozmerlin@yahoo.co.in