

Nationwide Environmental Gamma Radiation Monitoring using TLDs (Aug.2014 – Jan.2016)

As part of Nationwide Environmental Gamma Radiation Monitoring, Our department got an opportunity to monitored Environmental gamma radiation across Kerala state. The back ground external gamma radiation exposure is very low hence long exposure time is required to monitor it. This project was started during August 2014. The study area is entire Kerala with an area of approximately 38883 km² including 14 districts and Outdoor and Indoor monitoring were done. TLDs(Thermo Luminescence Dosimeters) for Outdoor survey (Area wise-One TLD per 625 km²) and Indoor survey (population wise, One TLD per 1000000). The identified location are spread over all 14 district Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha, Kottayam, Idukki, Ernakulam, Thrissur, Plakkad, Malappuram, Kozhikode, Wayanad, Kannur, Kasaragod districts. In case of Outdoor monitoring TLDs batches were deployed for three month period in the open environment at different locations and the same were collected back and send to BARC for analysis. Indoor monitoring also done by deploying TLDs indoor for 3 months. In every 3 months old TLDs will be replaced with new ones. Total 7 batches of TLDs were deployed. Project completed in 2016.



Figure1: An outdoor TLD deployment for Environmental Gamma Radiation Monitoring