

## Radioactive measurement at the fallow field that was polluted by the Fukushima Daiichi Nuclear Power Station Disaster.

Kazuya.KIMURA.<sup>1</sup>, Hisahi.NIREI.<sup>1,2</sup>, Kunio.FURUNO.<sup>2</sup>, Tomoyo.HIYAMA.<sup>3</sup>, Shoichi.UESUNA.<sup>4</sup>

1: Medical Geology Research Institute (MGRI). Japan. E-mail: kk21571@gmail.com

2: Japan branch of GEM IUGS. Japan.

3: Kanto Construction Co., Ltd. Japan.

4: The Geo-pollution Control Agency. Japan.

---

The Great East Japan Earthquake occurred on March 11, 2011. After that, Fukushima Daiichi Nuclear Power Station Disaster occurred as a second accident. As a result, radioactive materials (mainly Cesium-137 and Cesium-134) were released into the atmosphere which caused emissive geo-pollution in east Japan.

In the current study, we describe results of the survey at one field site that has been contaminated with radiological matter from the Disaster. In the survey, we collected samples using the geostratigraphical units, and measured their radioactivity concentration that revealed certain patterns: For example concentration is the higher in topsoil than other units in most cases. This is because clay minerals in topsoil trap the radiogenic isotopes. Concentration was found to be lower the lower units, decreasing with depth. And the most important conclusion is that geo-pollution caused by the radioactive material also validates to geostratigraphical unit sampling and analyses protocol. Thus for any study of sites polluted by radioactive materials, we should use the “Geo-Stratigraphical Unit Investigation Method” [1].

### *References:*

[1] Hisashi Nirei et al. (2012) Episodes 35(2): 333-336

