

## **Modelling of the Xenon and Caesium Release from Fukushima**

Methodology and results of two different estimates of the releases from the Fukushima disaster are presented. The first method aims at reconstructing the detailed time series of the emission of xenon-133 and caesium-137 using CTBTO/IMS and Ro5 measurements over the Northern hemisphere plus additional measurements, including deposition data, from Japan. It was published in 2012 in Atmospheric Chemistry and Physics (<http://www.atmos-chem-phys.net/12/2313/>) and yielded a total of 15.3 (12.2-18.3 EBq) of Xe-133 and 36.6 (20.1-53.1) PBq Cs-137. The second approach, for xenon-133 only, is based on an estimate of the atmospheric inventory of this nuclide from the CTBTO/IMS data over several weeks. It gave values between 14 and 19 EBq. The difference to the estimated inventory is explained by decay of iodine-133. This study has been published in Journal of Environmental Radioactivity (<http://dx.doi.org/10.1016/j.jenvrad.2012.06.001>).

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