

Atmospheric Deposition of Trace Elements and Radionuclides in Europe, Asia and the Pacific Region Based on Moss Analysis

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The application of mosses as biomonitors of trace elements and radionuclides in selected rural and urban areas affected by intense anthropogenic activity is reviewed. This technique is widely used in many countries in Europe (<https://icpvegetation.ceh.ac.uk/>), whereas it is scarcely used in Asia. The aim of the UNECE International Cooperative Program (ICP) Vegetation in the framework of the United Nations Convention on Long-Range Transboundary Air Pollution (CLRTAP) is to identify the main polluted areas of Europe, produce regional maps and further develop the understanding of the long-range transboundary pollution [1, 2]. The idea of transferring this technology to the countries of Asia and the Pacific region is being discussed. In addition to terrestrial passive moss biomonitoring, potentialities of applying active moss biomonitoring (moss bags technique) are demonstrated. The results obtained at a local scale in the areas experiencing environmental stress can be used to establish levels of pollutant emissions and provide information to public health authorities.

Keywords: Moss biomonitoring, trace elements, radionuclides, anthropogenic impact

References:

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2. Frontasyeva M., Harmens H., Uzhinskiy A., Chaligava O. and participants of the moss survey. Mosses as biomonitors of air pollution: 2015/2016 survey on heavy metals, nitrogen and POPs in Europe and beyond. Report of the ICP Vegetation Moss Survey Coordination Centre, Joint Institute for Nuclear Research, Dubna, Russian Federation, pp. 136. ISBN 978-5-9530-0508-1. http://www1.jinr.ru/Books/Books_rus.html

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