

JOINT EVENT

5th World Conference on **Climate Change**

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16th Annual Meeting onOctober 04-06, 2018
London, UK**Environmental Toxicology and Biological Systems****Dioxins and furans emissions: Characteristics and strength**Anahit V Aleksandryan¹ and Artak V Khachatryan²¹Ministry of Nature Protection of the Republic of Armenia, Armenia²Environmental Monitoring and Information Center—SNCO, Armenia

Open burning of waste at dumpsites is considered to be the easiest mode for wastes disposal, but is also a source of evident pollution and threat for human and environmental health. Polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDDs/PCDFs, or dioxins/furans) are unwanted by-products of combustion processes. Dioxins belong to persistent environmental pollutants (POPs) and they arise concerns because of highly toxic potential. The known toxicity and persistence of some congeners in the environment has emphasized the necessity to assess releases of those supertoxicants at open burning of wastes in some areas of Armenia. Dioxins formation upon wastes burning depends on composition and combustion conditions. In order to identify characteristics and strength of emission sources of POPs from wastes open burning in different *marzes* (provinces) of Armenia and to calculate dioxins emissions to air and soil UNEP methodological guidance was used. To quantify emissions the "emission factor" describing dioxins and furans entry into environment/media per unit of activity was used, such as toxic equivalent quotient (TEQ). TEQ indicates the potential toxicity of the particular substance itself as related to the most powerful poison among all dioxins—2,3,7,8- tetrachlorodibenzo-p-dioxin (TCDD). The sum of emission factors allows estimation of the total "dioxin" toxicity of the given source. The key research findings were as follows: emissions in air varied from 1.749 gTEQ/year (Ararat *marz*) to 9.382 gTEQ/year (Shirak *marz*), while emissions on land ranged from 0.061 gTEQ/year (Armavir *marz*) to 0.3128 gTEQ/year. Hence, efforts are required to reduce the current exposure.

Biography

Anahit V Aleksandryan, graduated from Yerevan State University in 1978 with a Diploma in Biophysics. She defended her PhD thesis in Biology at St. Petersburg Institute of Continuing Medical Education in 1985 and then Doctoral Dissertation in Biology in 2011. Her main areas of expertise involve Industrial Toxicology, Ecology, and Hygiene. Since 1996, she is an Employee at the Ministry of Nature Protection of Republic of Armenia. Currently she is Head of Hazardous Substances and Waste Policy Division. She is the focal point of UNEP Stockholm Convention on POPs; UNEP Rotterdam Convention on PIC; Minamata Convention on Mercury; UNECE Convention on Transboundary Effects of Industrial Accidents; Strategic Approach to International Chemicals Management (SAICM) and Environment and Health Process (WHO).

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