RISK 5

Comparative risk analysis for priority ranking of environmental problems in Seoul

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In Korea, there is no CRA studies and has not well known CRA and not well established their methodologies. Therefore, objectives of this study is to establish the framework of CRA consisting of health risk, economic risk and perceived risk and the detail methodologies of three main component of estimating and comparing those risks for on the three environmental problems of air pollution, indoor air pollution and drinking water contamination which being subjective to the eight sub-problems of hazardous air pollutants (HAPs), regulated pollutants (representative as PM10) and Dioxins (PCDDs/ PCDFs) in air pollution, and indoor air pollutants (IAPs) and Radon in indoor air pollution, and drinking water pollutants (DWPs), disinfection-by- products(DBPs) and radionuclides in drinking water contamination in Seoul, Korea. And then, their problems set priorities by individual and integrated risk. As a results, ranking of health risk were the following order of indoor air pollution, air pollution and then drinking water contamination, in three environmental problems and of radon, PM10, IAPs, HAPs, DWPs, Dioxins, DBPs, and then radionuclides in eight sub-problems. And that of economic risk were the same order. In the contrary, ranking of perceived risk were the following order of air pollution, drinking water contamination, and then indoor air pollution, and of HAPs, Dioxins, radionuclides, PM10, DWPs, IAPs, Radon and then DBPs.