

TWENTY-FIVE YEARS OF EFFECTS RESEARCH FOR THE CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION

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Concerns on the harmful effects of air pollutants in 1970s prompted international collaboration to combat air pollutants at their sources. The Convention on Long-range Transboundary Air Pollution (LRTAP) was established in 1979, with subsequent setup of its working bodies. They included the Working Group on Effects, which laid the basis for the cooperative monitoring and research of air pollution effects. This group comprises several international cooperative programmes and task forces. They cover a variety of receptors from ecosystems (forests, surface waters, vegetation) to materials and human health, including mapping activities and integrated monitoring. The research addresses many interlinking environmental problems and causative pollutants: acidification, terrestrial eutrophication, health effects, corrosion, ozone, particulate matter, contamination by heavy metals and persistent organic pollutants. The observational and modelling results embody the geographical area United Nations Economic Commission for Europe (UNECE) and the recorded trends span more than 15 years. The effect-oriented work has initiated and supported the development of several air pollutant emission reduction protocols under the Convention, some having a basis on effects-based model calculations. The cooperation has created a nexus of observational networks and interdisciplinary policy-linked research unique in the world.