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Environmental effects of silver iodide emitted by hail suppression systems in Aragón (Spain)

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Weather modification by means of cloud seeding techniques is widely implemented across the world. In areas where hail suppression systems are installed, silver iodide (AgI) particles are used.

Silver particles fall back to the surface thank to atmospheric deposition. In this research we follow a holistic approach to analyse silver accumulation in water, soils and sediments of Aragón (North-East Spain), where AgI emissions have been released for the last fifty years. We have also assessed silver bioaccumulation in plants and biota, and we have tested its effects in plant growth.

Our results show that silver concentrations in water and soils of areas covered by hail suppression networks are higher than in further areas, although concentrations are below legal thresholds. We have also observed that silver seems to be absorbed by plants and biota, which would act as a silver outflow and it may help to remove silver from the ecosystems.

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