Explaining high dioxin levels in large grazers

Level: Bachelor
Duration: 12 weeks
Start: March 2022 - ongoing
Project form: Literature review, data compilation & analysis, GIS (optional)
Supervision: Ad Ragas
Contact: ad.ragas@ru.nl

Measurements have demonstrated that dioxins levels in the meat of large grazers grazing in nature areas throughout the Netherlands exceed food consumption standards. This has been demonstrated for areas such as the floodplains in the province of Gelderland, the Oostvaardersplassen and the Lauwersmeergebied. This indicates that the dioxin contamination originates from diffuse sources which are homogeneously spread like a blanket over the Netherlands. One hypothesis is that these dioxins originate from the burning of (contaminated) wood by households.

The aim of the current project is to compile spatial data on dioxins levels in the meat of large grazers in the Netherlands and to link these to data on diffuse sources like the burning of wood by households. The study will initially focus on compiling and analyzing literature data, but the study may be expanded to the collection and analysis of location-specific data. One option is to perform spatial analysis of the data in GIS or R.

Literature:

News Today, 2020. Meat from horses Oostvaardersplassen contaminated with dioxin.

Hoogenbooma, R.L.A.P., ten Dam, G., van Leeuwen, S.P.J., van Egmond, H., Nicolin, J., Dwarkasing, A.J.S., 2021. High levels of dioxins and PCBs in meat, fat and livers of free ranging pigs, goats, sheep and cows from the island of Curaçao. Chemosphere 263: 128057. https://doi.org/10.1016/j.chemosphere.2020.128057