National Institute for Public Health and the Environment
Ministry of Health, Welfare and Sport

Chernobyl Wildfires, April 2020

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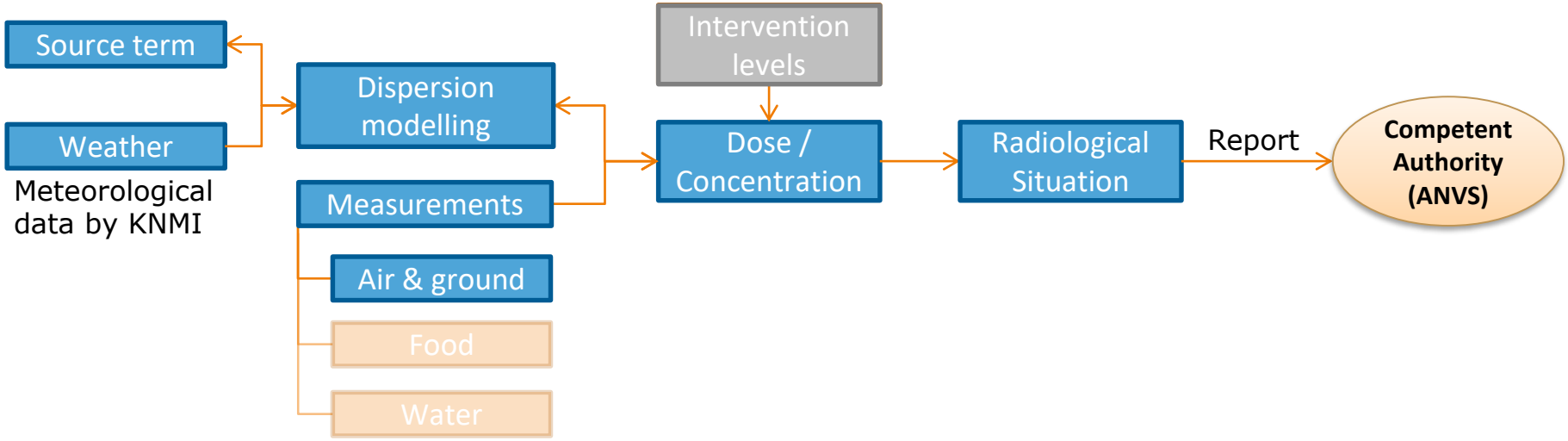
RIVM commissioned by Authority (ANVS)

Tasks: monitor developments and assess radiological situation for the Netherlands



What did we do?

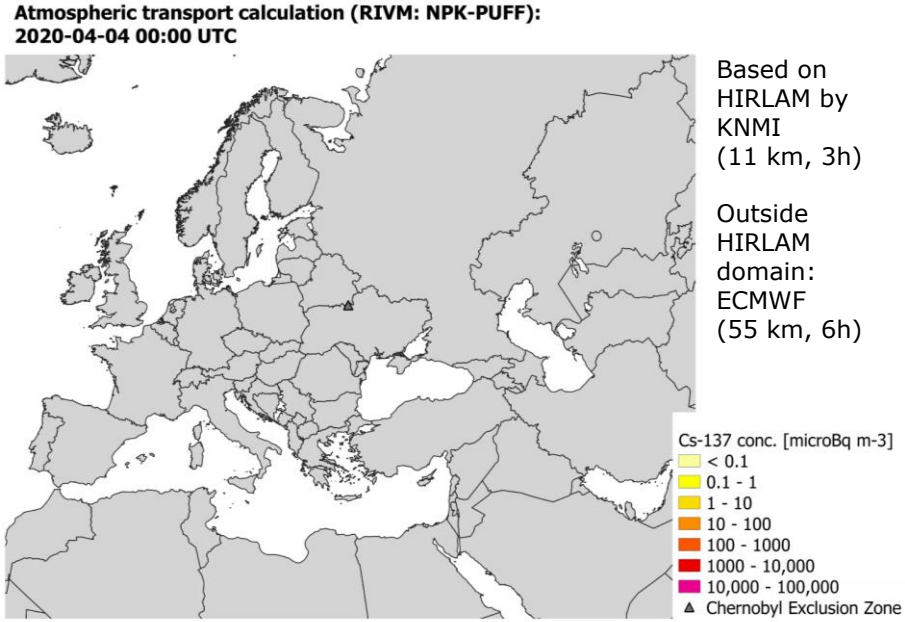
- Monitor reports on developments
  - USIE, Ro5, media
- Collect measurement data
  - nuclear: HVS, EURDEP, Ro5, USIE, IMS
  - fires: FIRMS (NASA)
- Estimate source term
  - literature
  - model <-> measurements
- Provide diagnoses & prognoses of radiological situation: source term and consequences
- Report to competent authority (ANVS)
  4 reports in 3 weeks

RIVM news: https://www.rivm.nl/nieuws/zeer-kleine-hoeveelheid-cesium-137-in-lucht-boven-west-europa (Dutch)

What did we find?

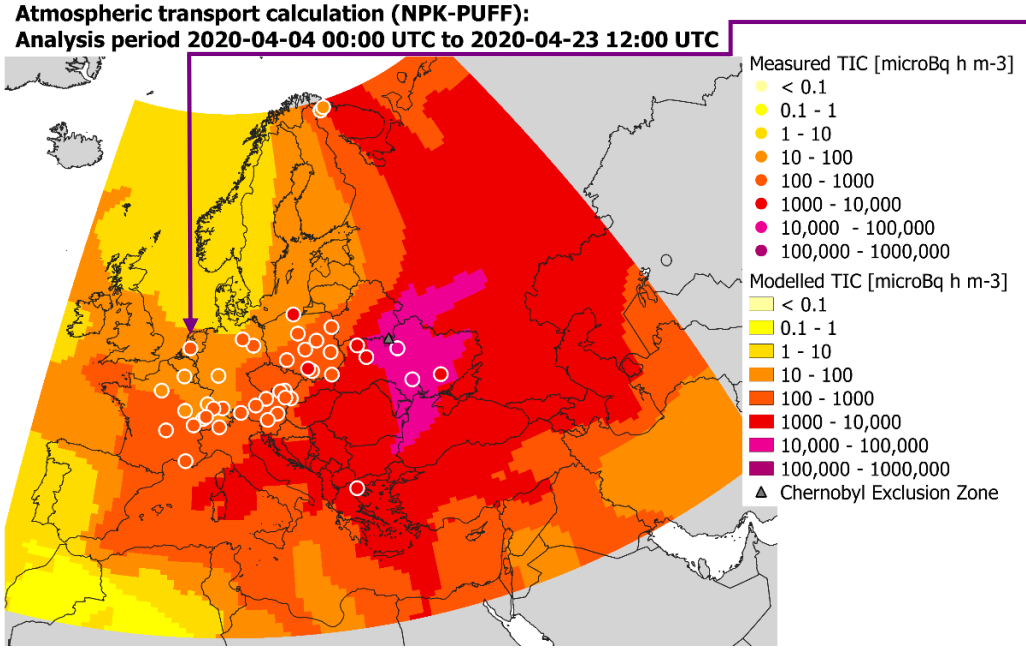
Source term based on measurements at 6 Ukraine stations from 4 -17 April:

2.9 GBq/h Cs-137 (0.9TBq)

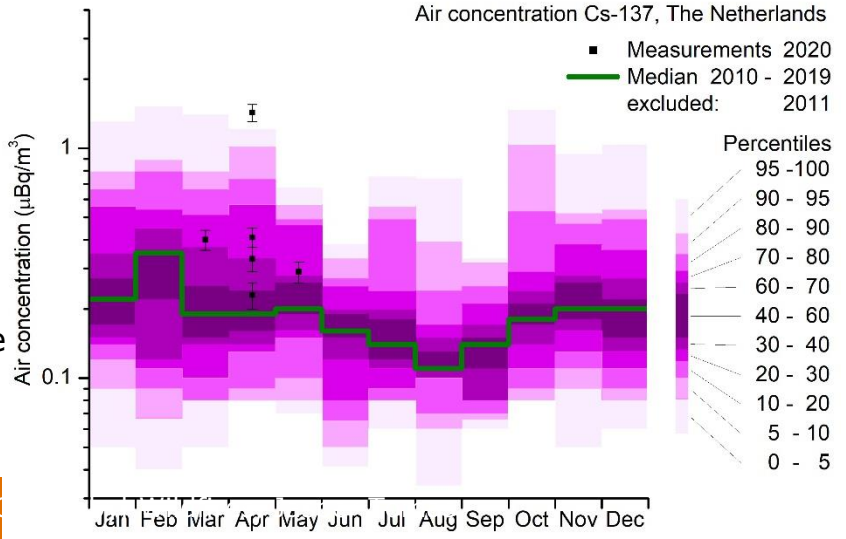


Video: prognosis with continuation of fires until April 26

What did we conclude?



Start 1-week sample	Average Conc. [µBq/m³]
26-03	0.40 ± 0.04
02-04	0.23 ± 0.03
09-04	0.33 ± 0.04
16-04	1.43 ± 0.12
23-04	0.41 ± 0.04
30-04	0.29 ± 0.03



- Modelled and measured time-integrated concentrations agree
- Prognoses predicted passage over the Netherlands
- Measurements in NL likely contain contribution from wildfires
- Local resuspension (drought) may have contributed as well