



## **Possible consequences of severe accidents at the Lubiatowo site, Poland**

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The construction of a nuclear power plant is under consideration in Poland. One of the sites under discussion is near Lubiatowo, located on the coast of the Baltic Sea northwest of Gdansk. An assessment of possible environmental consequences is carried out for 88 real meteorological cases with the Lagrangian particle dispersion model FLEXPART. Based on literature research, three reactor designs (ABWR, EPR, AP 1000) were identified as being under discussion in Poland. For each of the designs, a set of accident scenarios was evaluated and two source terms per reactor design were selected for analysis. One of the selected source terms was a relatively large release while the second one was a severe accident with an intact containment. Considered endpoints of the calculations are ground contamination with Cs-137 and time-integrated concentrations of I-131 in air as well as committed doses. They are evaluated on a grid of ca. 3 km mesh size covering eastern Central Europe.