Supplementary Material S1

Authors: Jiří Landa, Milan Hokr

Paper title: Contaminant transport from the deep geological repository: lumped parameters derived from 3D hydrogeological model

Journal: Energies (ISSN 1996-1073)
September 2022

Example model surface data

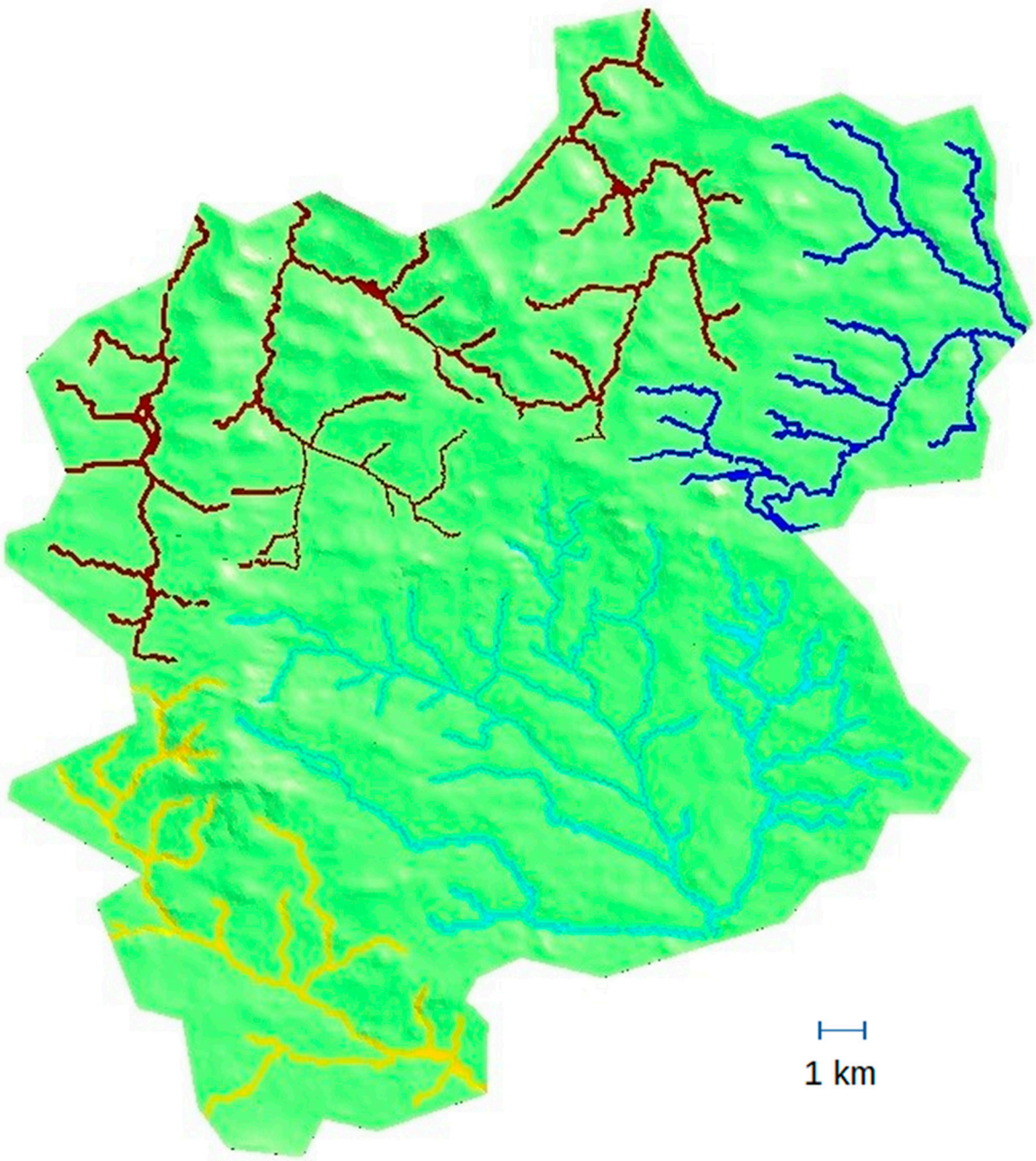

Figure S1: Top surface boundary condition for an example site model (the number is not shown to keep the site anonymization) shown on the discretisation mesh (edges are not displayed due to their density). With yellow, brown, pale blue and blue, the "river" boundary conditions (drainage zone with fixed head) distinguishing the four river basins are displayed. The recharge boundary condition is displayed by green (for values, see Figure S2).

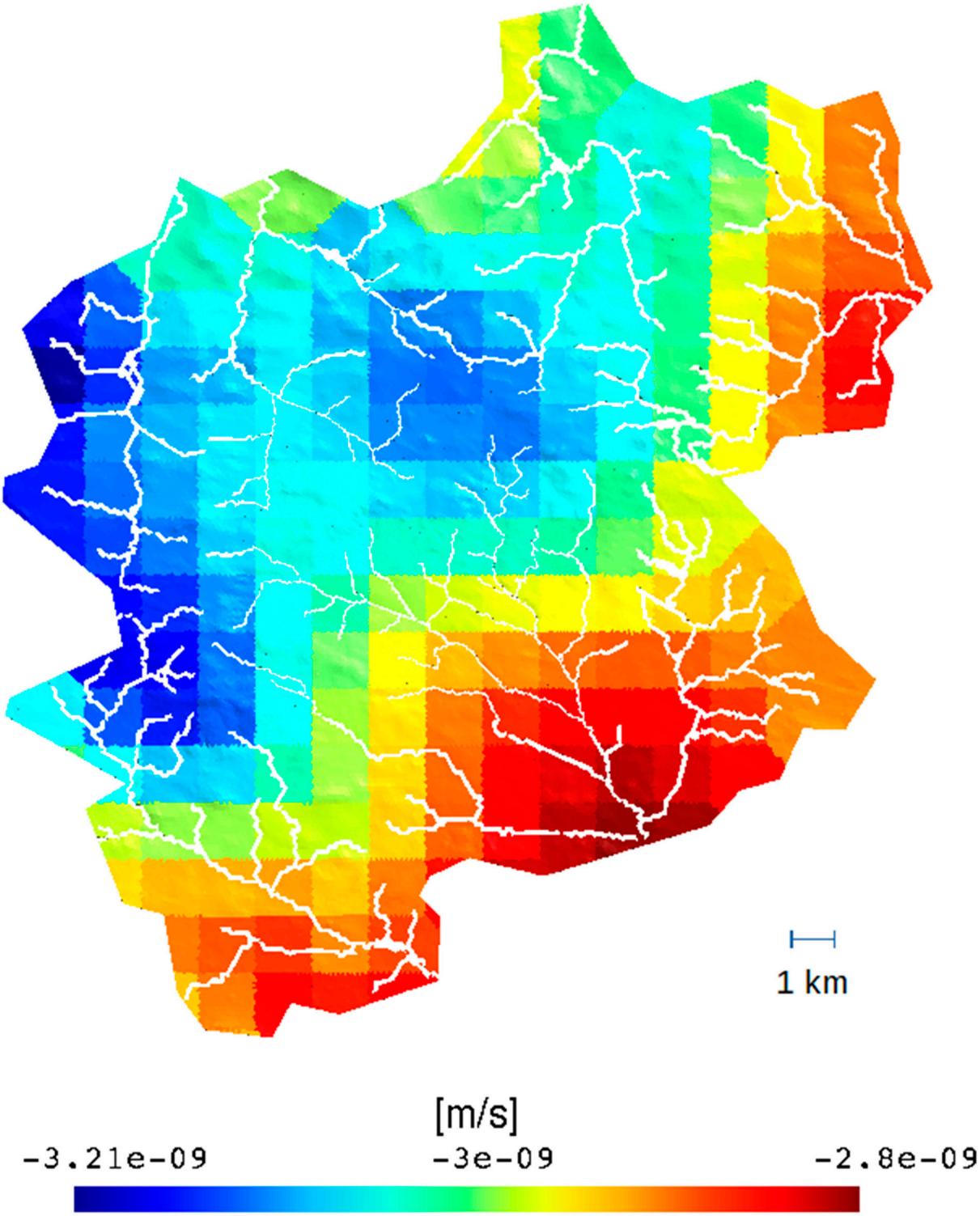

Figure S2: Flow rate values of the infiltration boundary condition of the model. The rate is a fixed fraction of precipitation which is elevation-dependent and prescribed using a coarsened rectangular grid of the digital terrain model.

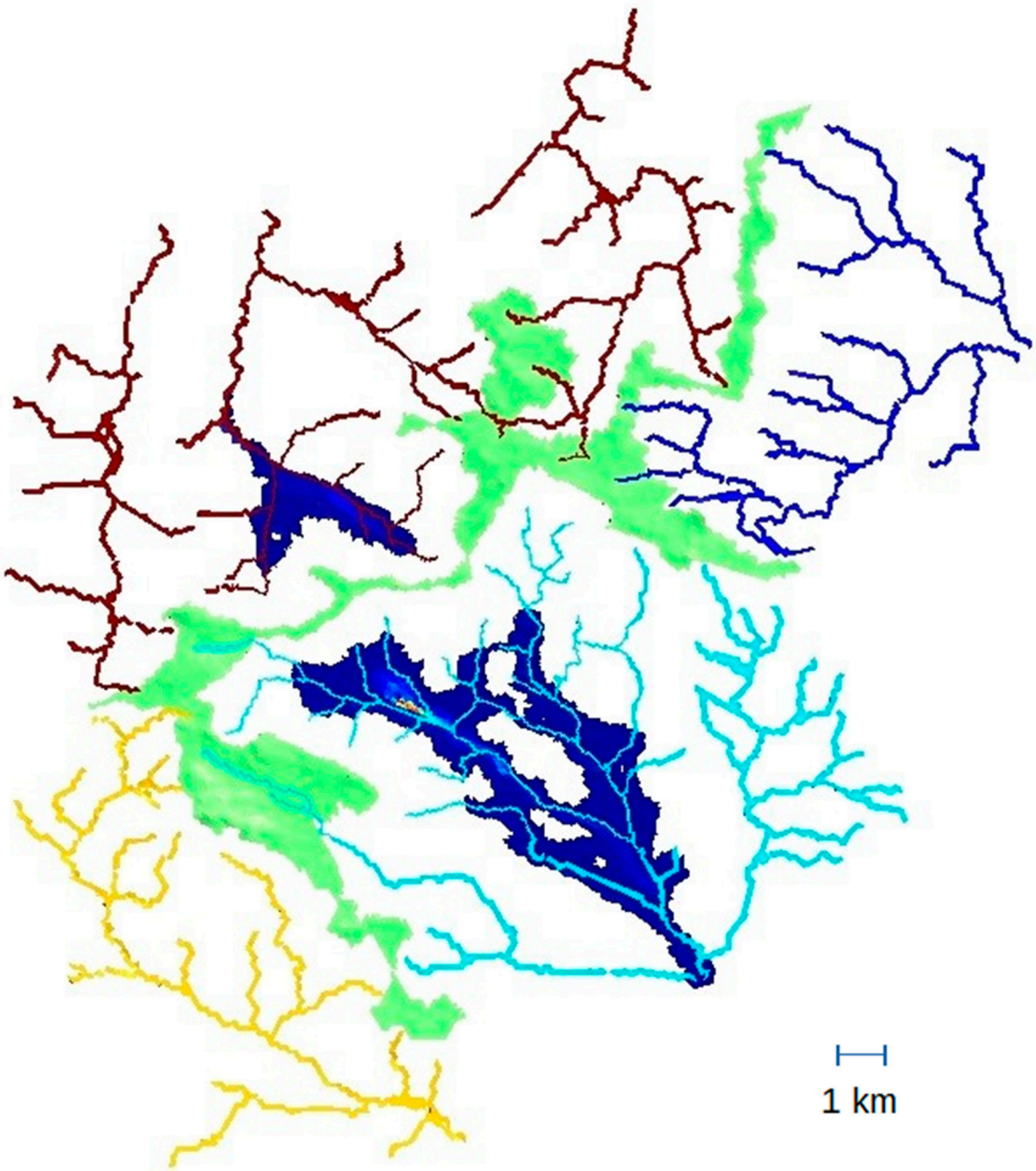

Figure S3: Contaminated surface areas shown in blue (non-zero concentration in the final time of simulation – quasi steady state). Two of the four river basins are contaminated in this case. Additionally, the drainage divide, i.e. the surface from which infiltration water comes into two or more basins, is shown as the green area.