



Supplement of

Skill of large-scale seasonal drought impact forecasts

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Supplement

The study area is Germany, which is divided into the German NUTS-1 regions that corresponds with the federal states. The NUTS regions are geo-coded standard regions introduced by the European Union. The German NUTS-1 regions and their acronyms are shown in Figure S1.





The importance of each predictor in the developed drought impact forecasting functions is presented in Figure S2 using both machine learning approaches, LG and RF, for different impact groups.



Figure S2. Predictor importance in the developed drought impact functions using Log Regression for impact Group 1 (A), Group 2 (B), Group 3 (C), and Group 4 (D). The colored boxes show the predictor importance for each NUTS-1 region in Germany. Red colors indicate highly-related predictors and yellow colors indicate less-related predictors for the selected drought impact Group. A summary that presents the average over all counties is given as histograms at top of each figure. For the acronym of NUTS-1 regions in Germany, see Fig. S1.



Figure S3. Predictor importance in the developed drought impact functions using Random Forest for impact Group 1 (A), Group 2 (B), Group 3 (C), and Group 4 (D). The colored boxes show the predictor importance for each NUTS-1 region in Germany. Red colors indicate highly-related predictors and yellow colors indicate less-related predictors for the selected drought impact Group. A summary that presents the average over all counties is given as histograms at top of each figure. For the acronym of NUTS-1 regions in Germany, see Fig. S1.

Figure S4 shows the number of reported impacts, i.e. months with impact occurrence, as these are stored in the EDII for each German NUTS-1 region for the period 1990 to 2017.



Figure S4. Number of reported impacts in months with an impact occurrence for each German NUTS-1 region in the period from 1990 to 2017 obtained from the EDII. For the acronym of NUTS-1 regions in Germany, see Fig. S1.