

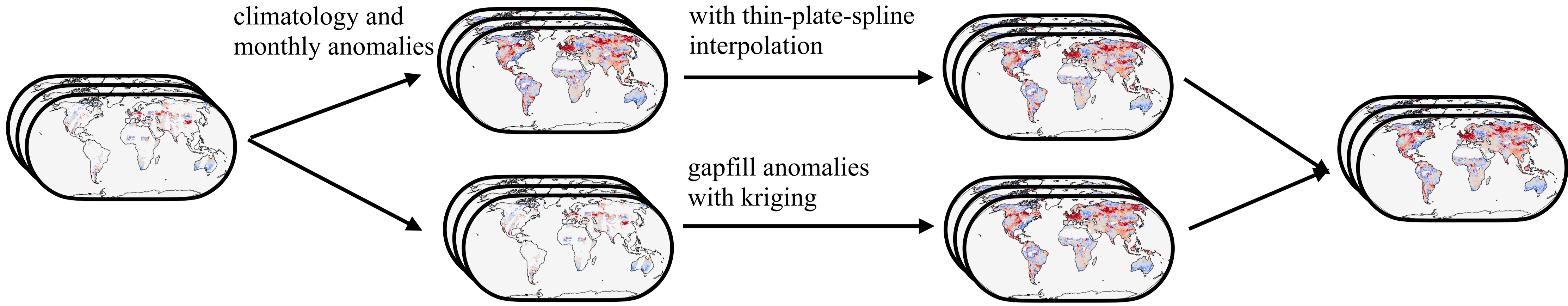
(1) interpolation step: create initial estimates by sophisticated spatial interpolation

for all variables:

divide signal into climatology and monthly anomalies

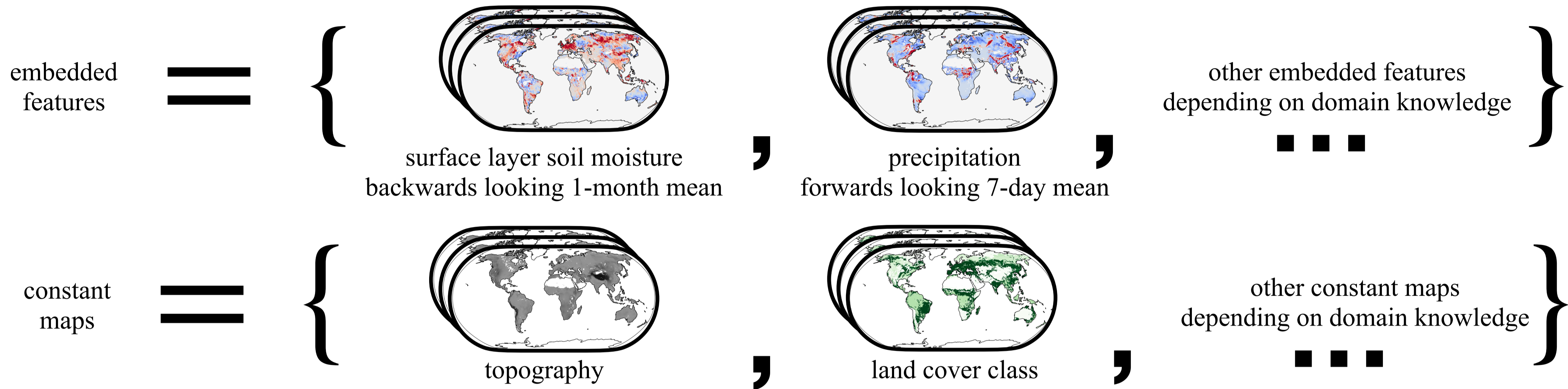
gapfill climatology with thin-plate-spline interpolation

gapfill anomalies with kriging

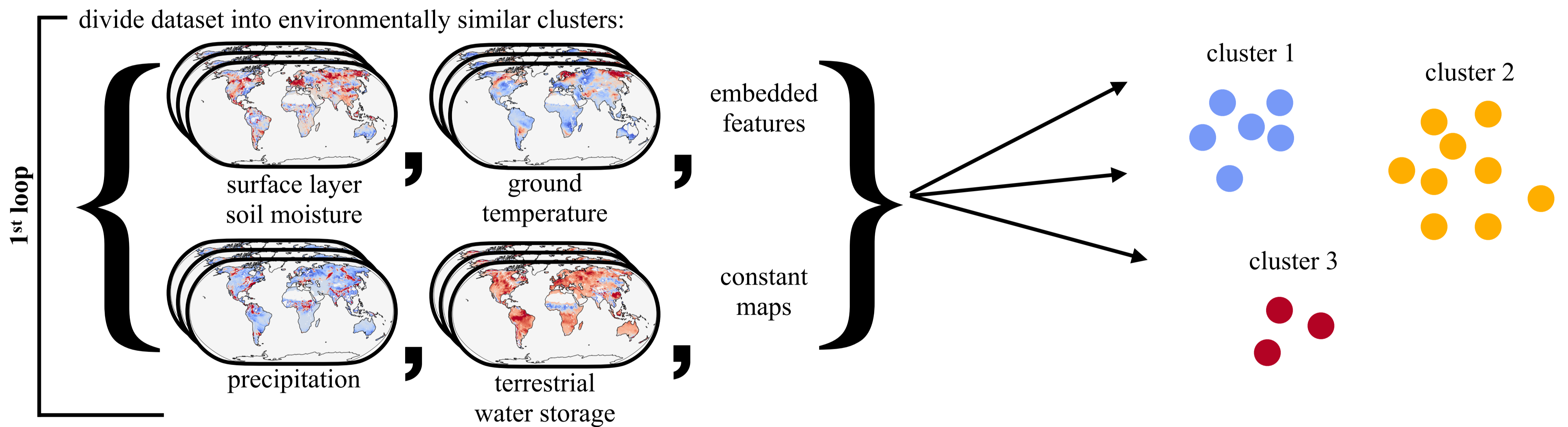


(2) feature engineering: create additional descriptive variables

Create backwards and forwards looking running means of different window sizes and temporal lags to account for seasonal processes and prevailing weather patterns. Add constant maps describing the environmental conditions. For example:



(3) clustering step: divide data into environmentally similar clusters



(4) regression step: update estimates with information from cross-covariance of variables, created features and constant maps

