The question is: When, where and why?

**Starting point**
A large dataset of precipitation streamflow records (N=187) with and without human influences

**Goal**
- Identify streamflow records with drought characteristics that deviate from those expected under natural conditions
- Relate these deviations to various human influences, indicated by:
  - Factor Affecting Runoff codes
  - Station thumbnail descriptions

**Methods (concept)**
We screen for deviations in:
1) Relation between BFHOST and average drought duration
2) Correlation between streamflow and meteorological drought indices
3) Temporal drought occurrence distribution

**Results**
1) Relation between BFHOST and average drought duration

Prolonged average drought duration for part of the catchments for which groundwater abstractions have been indicated

2) Correlation between streamflow and meteorological drought indices

Lower correlation in summer months – likely caused by water transfer schemes

3) Temporal drought occurrence distribution

Less drought months towards the end of record – likely caused by changes in reservoir operations

Discussion / Conclusions
- First order screening based approach successful in identifying some of the catchments with drought characteristics that deviate from those expected under near-natural conditions → easily applied in other geographical settings
- Hard to generalize the impact of a particular human influence (e.g. GW-abstraction) as they can vary in, type, degree, overall impact and are susceptible for changes over time
- More detailed metadata is needed — how to collect? For each and every catchment or focus on the smaller subset of catchments with deviating drought characteristics?
- Towards attribution: catchments with deviating drought characteristics as detailed case studies? → Feed into a dataset of impact catchments