**Meteorology**
- Precipitation
- Air temperature
- Global radiation
- Humidity
- Wind speed
- Air pressure

**External forcing**
- Snow storage
- Interception
- Evapotranspiration
- Soil component
- Saturated area
- Lateral drainage
- Deep percolation

**Simulation**
- Runoff concentration
  - Water temperature = \( f(T_{air}) \)
  - Direct runoff
  - Interflow
  - Ground water

**Local sources**
- Discharge \( (Q, T_w) \)
- Withdrawal \( (Q) \)
- Heat loading \( (T_w) \)

**River component**
- Flood routing
- Storage basins, retention in lakes
- Transport of the heat content
- Heat exchange processes

**Discharge**
- Water temperature