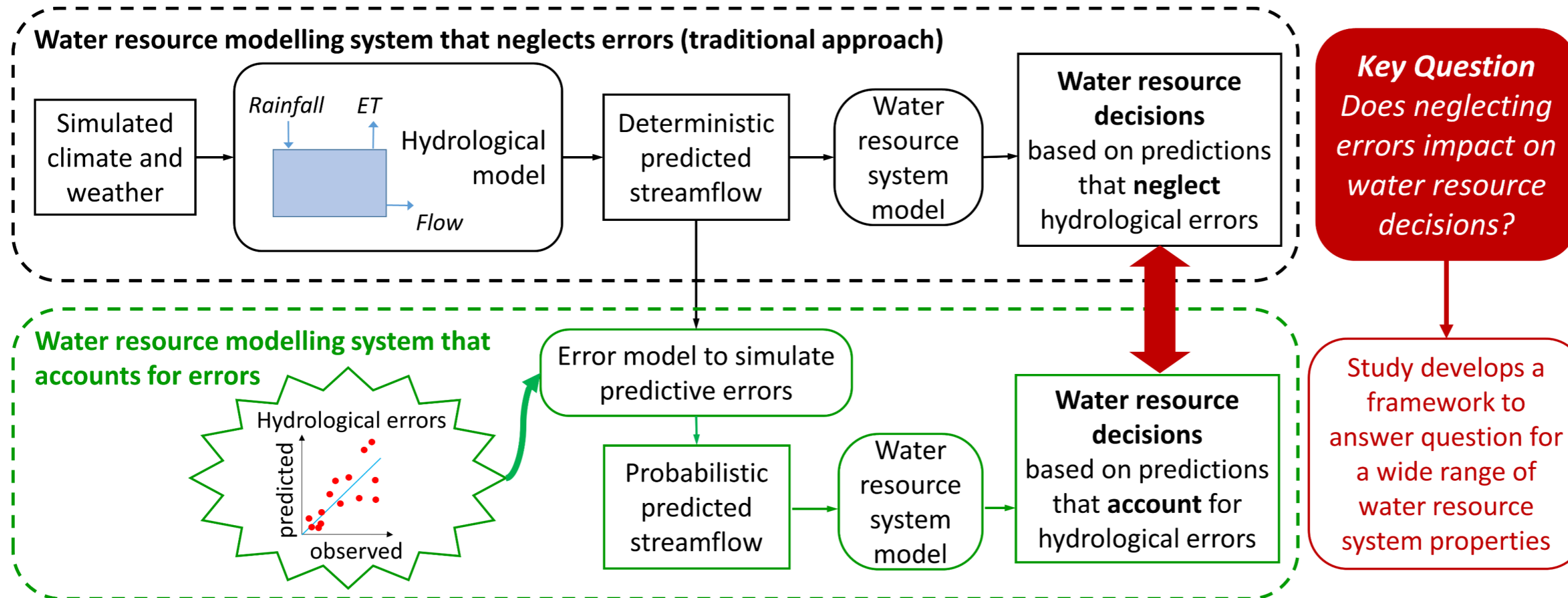


Neglecting hydrological errors can severely impact predictions of water resource system performance



Further Info:

Conference Presentation Video:

Thyer et al (2024):
<https://doi.org/mrg8>

Open Access Journal Paper:

McInerney et al (2024):

<https://doi.org/mrdg>

Results

- Neglecting hydrological errors can significantly impact on water resource decisions, including:
- Over-estimating yield by 15%-55%
 - Design risk under-estimating actual risk by ~2-30 times
- Magnitude of impact of errors on water resource decisions
- Varies by catchment
 - Increases for smaller water resource storage
 - Increases for more extreme design risk

Practical Impacts

- Traditional approach of neglecting hydrological errors leads to over confidence in water resource decisions
- Risk-based water resource decisions need to account for errors to avoid over confidence
- Traditional streamflow-only performance metrics (e.g. NSE) provide little indication of impact of neglecting errors