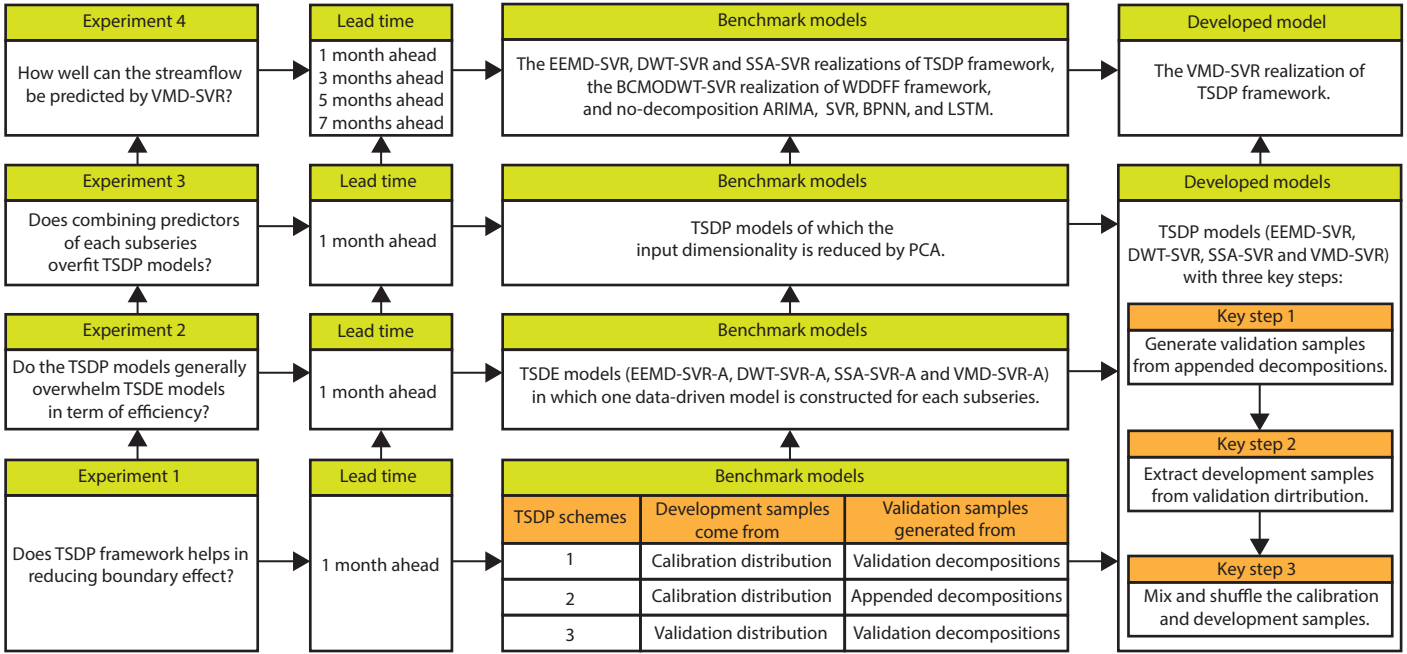
Experiment 4
How well can the streamflow be predicted by VMD-SVR?
Lead time
1 month ahead
3 months ahead
5 months ahead
7 months ahead
Benchmark models
The EEMD-SVR, DWT-SVR and SSA-SVR realizations of TSDP framework, the BCMODWT-SVR realization of WDDFF framework, and no-decomposition ARIMA, SVR, BPNN, and LSTM.
Developed model
The VMD-SVR realization of TSDP framework.
Experiment 3
Does combining predictors of each subseries overfit TSDP models?
Lead time
1 month ahead
Benchmark models
TSDP models of which the input dimensionality is reduced by PCA.
Developed models
TSDP models (EEMD-SVR, DWT-SVR, SSA-SVR and VMD-SVR) with three key steps:
Key step 1
Generate validation samples from appended decompositions.
Key step 2
Extract development samples from validation dirtribution.
Key step 3
Mix and shuffle the calibration and development samples.
Experiment 2
Do the TSDP models generally overwhelm TSDE models in term of efficiency?
Lead time
1 month ahead
Benchmark models
TSDE models (EEMD-SVR-A, DWT-SVR-A, SSA-SVR-A and VMD-SVR-A) in which one data-driven model is constructed for each subseries.
Experiment 1
Does TSDP framework helps in reducing boundary effect?
Lead time
1 month ahead
Benchmark models
TSDP schemes | Development samples come from | Validation samples generated from
1 | Calibration distribution | Validation decompositions
2 | Calibration distribution | Appended decompositions
3 | Validation distribution | Validation decompositions