

- ✓ Rainfall-runoff response of the Sabari sub-basin was studied in two different spatial and temporal scales.
- ✓ Streamflow events were identified based on the Andrews et al., 2011 scheme.
- ✓ In the event based modeling, model was performing good at both the scales in the calibration phase and lumped model performed better in the validation phase. Optimized parameters were used in continuous modeling.
- ✓ In the continuous modeling, lumped and semi-distributed schemes worked well in the calibration phase, whereas lumped model performing better in the validation phase.
- ✓ Optimized parameters compared to different hydrograph characteristics and further investigations were made to establish the various relationships to forecast the future scenarios.