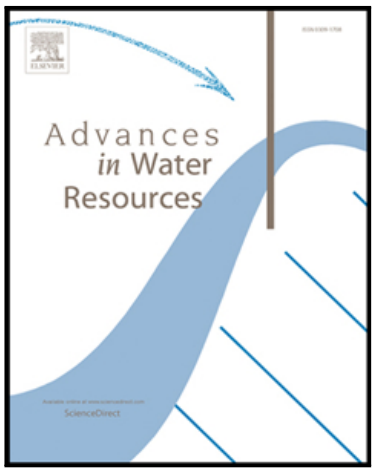

The effect of year-to-year variability of leaf area index on Variable Infiltration Capacity model performance and simulation of runoff

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Highlights

- The study assesses the impact of using year-to-year variable monthly LAI to calibrate VIC model and its performance.
- VIC model efficiency can be improved when the year-to-year variable monthly LAI is used to calibrate the model.
- Leaf area index elasticity of runoff is strongly related with catchment characteristics.
- Uses of long-term mean monthly LAI in VIC model tend to underestimate simulate runoff in dry period and overestimate in wet period.