

Title

The current title, particularly the phrase “*weakening correlation of WUE to drought*”, is grammatically awkward and unclear.

Abstract and short summary

The abstract is currently too lengthy, which makes the key findings and main storyline difficult to identify. In contrast, the short summary is too brief and does not provide sufficient context for readers to understand the overall significance of the study.

Study period

Since this study investigates temporal variations in WUE–drought relationships, the study period should ideally be extended to the most recent years, provided that the datasets used in the analysis have been updated. This would improve the timeliness and relevance of the results.

Significance testing

Statistical significance tests should be included in both the analysis and the interpretation of the results. For example, when discussing temporal trends, changes in correlations, or spatial patterns, the authors should clearly indicate whether these changes are statistically significant.

Focus on meteorological drought

The study focuses mainly on meteorological drought, but soil moisture drought may be more directly relevant to vegetation water use and ecosystem water-use efficiency. The authors should justify why meteorological drought was selected as the primary drought indicator, or consider including soil moisture drought to provide a more mechanistic understanding of vegetation responses.

“Significant threshold effects”

The meaning of “*significant threshold effects*” is not sufficiently clear. The authors should define this term more explicitly and explain how the thresholds were identified, tested, and interpreted in the context of WUE responses to drought.

Novelty and knowledge gap

The novelty of the study is not clearly articulated. The authors should better clarify the current knowledge gap regarding WUE responses to drought. For example, it would be helpful to explain what remains uncertain about the temporal evolution, response time, threshold behavior, or causality of WUE–drought relationships, and how this study advances beyond previous work.

Importance of response time

The manuscript should better explain why the response time of WUE to drought is scientifically important. For instance, does response time provide insight into ecosystem sensitivity, drought resistance, recovery capacity, or early-warning signals of vegetation stress? Clarifying this point would strengthen the motivation of the study.

Causality diagnosis framework

The causality diagnosis framework should be clearly stated in the abstract. Since this appears to be an important methodological component of the study, the authors should briefly describe what causal method was used, what variables were included, and how this framework helps distinguish causal relationships from simple correlations.