





Special Issue Reprint

Improvement of Forest Ecosystem Functions in Karst Desertification Control

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In the past 20 years, karst desertification control has produced remarkable results, and the South China karst has been a global hotspot for greening. However, in the new stage of karst desertification control, the functional lag of forest ecosystems and the insufficient supply capacity of ecosystem services are gradually becoming prominent. We not only lack systematic research on vulnerability and resilience, structure and stability, ecological assets and services, carrying capacity and ecological security, and service trade-offs/synergies and optimization in controlled ecosystems. There is still a lack of research on the ecological processes of newly constructed forests in improving ecosystem functions and services. Therefore, this reprint mainly focuses on the research improvement of forest ecosystem functions in karst desertification control. This includes the improvement mechanism of ecosystem structure, function, and services, the mechanism of ecosystem service tradeoff/synergy, and function optimization. An optimization model of ecosystem function and an improvement path for eco-product supply are introduced. The role of functional traits in the maintenance of ecological function and services is also established, and social-ecological responses to afforestation in karst desertification control are discussed.





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