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Sommario/riassunto

This reprint highlights the current understanding of the soil hydrological processes in desert regions, as well as the plant responses to soil water. Likewise, this reprint will not present all the aspects, such as the challenges of soil hydrological process research and its opportunities in the desert regions. It only provides notable highlights to help understand the soil hydrological processes and their application in desertification control, particularly regarding the ecological engineering approach. In this context, we especially hope this reprint will enrich soil hydrology in the desert regions for advancing Critical Zone science in the Anthropocene.
