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Research on Eco-hydrological Effects of Compound Erosion Control in Feldspathic Sandstone Area of China

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Feldspathic sandstone is one kind of interbedded rock, which made up of severely efflorescent shales, sandstones and argillaceous sandstones. It concentrically distributed in the Ordos plateau in the Yellow River basin, which is the main source area of coarse sediments in the Yellow River. Water erosion, wind erosion and freeze-thaw erosion occurred alternately in feldspathic sandstone area that has caused severe soil erosion and therefore the ecological environment is extremely adverse. Compound erosion control in feldspathic sandstone area has been paid much attention, however, little attention paid to the eco-hydrological effects of compound erosion control. This paper studied the ecological and hydrological effects of compound erosion control in feldspathic sandstone area in terms of its effects on vegetation, runoff and sediments, soil moisture and nutrients, and evapotranspiration. Future research emphasis have been put forward, which should focus on the study of the interaction between compound erosion and vegetation, and the development of eco-hydrological effects simulation models for compound erosion control.

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