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The assessment of tree species and irrigation techniques for afforestation of degraded agricultural landscapes in Khorezm, Uzbekistan, Aral Sea Basin

Khorezm, Uzbekistan, is an irrigated agricultural area in the Aral Sea Basin, suffering from land degradation caused by rising groundwater tables and soil salinization. Afforestation, as an option for rehabilitating degraded landscapes, needs the judicious selection of multipurpose tree species (MPTS) to increase land productivity while providing ecological benefits. In this study, a biological, physiological and socio-economic assessment of 13 local MPTS revealed the most suitable ones. Further evaluation showed excellent productive and biodrainage potential of these species on degraded land. The study confirms that afforestation can be part of the strategies to mitigate land degradation in the region.