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Modelling the regional application of land management strategies in areas of present and future water scarcity

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Long term global climate data sets offer the potential to characterise intra- and inter-annual variability and assess drought vulnerability. This has been done by assessing annual water budgets and their reliability from year to year, using historic records and synthesised time series for both current and future scenario conditions. These data are combined with population data and trends, modelled potential semi-natural biomass or rain-fed crop yield and local scale land management strategies to set the drought mitigation debate in a broad regional context.

The DESIRE project is trialling a series sustainable land management (SLM) technologies identified by local stakeholders across a range of semi-arid study sites. This paper considers the characterisation of variability and vulnerability and looks at the potential for applying locally successful SLM technologies across a wider range of climate and environmental conditions, and for changing areal patterns of future suitability.