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[Abstract]: This poster outlines the key research questions and methodologies used in a project investigating the relative roles of landscape-scale (land- and water-use regimes), patch-scale (management regimes) and population-scale (interspecies competitive regimes) change on the health and function of *Eucalyptus tereticornis* / *E. camaldulensis* riparian woodland communities of the Condamine floodplain (eastern Darling Downs, southern Queensland), and presents preliminary analyses of the floristic composition and condition of these communities. The Upper Condamine River is a regulated river system whose regulated flow regime is significantly altered from natural flows in terms of the volume, frequency and duration of in-stream and flooding flows; additional harvesting of groundwater and overland flows, coupled with high inherent regional climatic variability and potential climate change, indicate that water availability may be a key limiting factor in the long-term persistence of these ecosystems. A key hypothesis of the research is that widespread tree decline within these woodlands may indicate that water availability in these water-dependent habitats is approaching critical levels, exacerbated by significant infestation by the introduced weed *Lippia canescens*, a highly-efficient competitor. The study takes a multi-dimensional approach (including time series streamflow and GIS-based spatial and temporal analysis, assessments of current community composition and condition, experimental manipulation to investigate mechanisms contributing to the competitive success of *Lippia*, and an investigation of landholder responses to both eucalypt dieback and *Lippia* infestation) aimed at developing an integrated understanding of the drivers and mechanisms of ecosystem decline and at deriving empirical information which will contribute to future land and water management decision-making.