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EPHEMERAL WETLANDS: THEIR ECOLOGICAL FUNCTION & RESILIENCE AND CLIMATE CHANGE

KATH Jarrod¹, LE BROCQUE Andy¹, MILLER Craig²

Faculty of Sciences/Australian Centre for Sustainable Catchments, University of Southern Queensland¹, CSIRO Sustainable Ecosystems²

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Ephemeral systems dominate the landscape in Australia, although they are often undervalued both intrinsically, and in terms of their contribution of ecosystem services to the broader landscape compared to other wetland systems. In the face of climate change, a lack of understanding of how ephemeral systems function and their ecological resilience, the ability of the system to adapt to significant (directional) change, represent significant knowledge gaps. Ephemeral systems in inland Queensland are highly dynamic, with species generally well adapted to relatively unpredictable climates. However, ecosystem degradation through the direct impacts of land use such as eutrophication, grazing, salinity, erosion, and indirect interferences on flow rates and hydroperiod has greatly simplified these systems and reduced their resilience and hence their ability to adapt to climate change. Decreased resilience in ephemeral wetlands coupled with inadequate knowledge of how these systems function, could have serious implications for the future sustainability of agricultural landscapes. In order to address these issues a sound understanding of the ecological and social factors important for maintaining these systems resilience to degradation and climate change needs to be developed. This presentation describes a proposed study examining aspects of ephemeral wetland ecological function and resilience to climate change.