

AUSTRALASIAN GROUNDWATER CONFERENCE



GROUNDWATER FUTURES SCIENCE TO PRACTICE
11-13TH JULY 2017 UNSW, SYDNEY

Panellist: Climate Change and Groundwater Resource Challenge

Professor Derek Eamus

Professor of Environmental Sciences and Associate – UTS



Derek Eamus is a plant physiologist, ecophysiologicalist and ecohydrologist who has worked mostly on tree species for the past 25 years. For the decade 1990-2000 he worked on savanna ecophysiology, through the CRC for Tropical Savannas and the Northern Territory University, with an emphasis on carbon and water relations of savanna trees.

Following his appointment as Professor of Environmental Sciences at UTS in 2000, he has undertaken projects that integrate measurements over several spatial scales, from leaf-scale processes (e.g. photosynthesis and transpiration) and leaf-scale attributes (specific leaf area, foliar Nitrogen content), to tree-scale processes and attributes (whole tree water-use; hydraulic architecture and xylem embolism), to stand –scale processes and attributes (canopy exchange of water and CO₂; leaf area index) and catchment scale processes (vegetation and groundwater interactions).

Most recently he has started using remotely sensed information (for example MODIS LAI and ET) to examine larger-scale patterns and processes. In the past 5 years Derek has undertaken ecophysiological and ecohydrological studies of two distinct groundwater dependent ecosystems; one in arid central Australia (The TI Tree Basin) and one in mesic NSW (the Kangaloon borefield).

Derek leads the Terrestrial Ecohydrology Research Group within the School of Life Sciences, at UTS and has recently co-authored a textbook entitled “Vegetation Dynamics: A Synthesis of Plant Ecophysiology, Remote Sensing and Modelling”, published by Cambridge University Press.