



iah
Australian National
Chapter
NSW Branch

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Tuesday 11 March 2014
5:30 pm to 8 pm

Parsons Brinckerhoff offices

Ernst & Young Centre
Level 26, 680 George Street, Sydney CBD

****For late arrivals, please phone Ellen Kwantes on 0434 996 372 for access****

*IAH NSW proudly presents a talk by **Dr Sarah Bennett**, a researcher at the University of Sydney*

The impact of climate change on deep drainage in space and time including uncertainty: a case study from northern NSW'

Deep drainage is considered as the main cause of secondary salinity in Australia. A stochastic modelling approach is presented for estimating spatial-temporal deep drainage for the future. This method is applied to the Cox's Creek catchment in northern NSW, Australia.

Climate sequences were developed based on the SRES A2 scenario for a climate period 2041-2060 from the outputs of 20 Global Climate Models. The results indicated that future deep drainage would increase significantly with average annual rainfall changes by only 6.7 % after comparison to a current climate (1982-2001), yet average annual AET slightly decreased compared to current AET due to use current land use parameters mismatching in the SWAP model. Deep drainages under dry land crops were predicted to increase significantly. For native vegetation monthly average deep drainage was simulated to decrease due to the high temperature resulting in high ET.

The results show potential for climate change to increase deep drainage risk significantly, which may require associated policy responses, particularly in the agricultural sector. Further integrated research of the climate change impact on deep drainage incorporating change of land use and soil properties is needed; especially the former. Future climate change will increase the extreme temperatures, which would make crops suffer heat stress in some stages of development and in some areas of current cropping regions.

Please RSVP to:

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