The Chinese University of Hong Kong
Earth System Science Programme

Co-organized by: IEES

Global Nutrient Limitation on Terrestrial Biosphere and its Implications

Dr. Ying-Ping Wang

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Date: 1 June 2015 (Monday)
Time: 4:30 pm
Venue: Conference Room, 3/F, Mong Man Wai Building
Registration: Click Here

Abstract Globally, N limitation commonly dominates temperate and boreal areas, while much of the tropical forests and savannah ecosystems are P limited. There is also strong field evidence that nutrient limitation reduces the carbon uptake by different land ecosystems. Previous studies using earth system models found that N limitation reduced the global carbon uptake by the land biosphere from 2000 to 2100 by up to 40%. In this talk I will describe the Australian community land surface model (CABLE) that includes C, N and P cycles in terrestrial biosphere and its implementation into a simple earth system model (COAL). I will discuss the studies using CABLE or COAL for analysing effect of nutrient limitation on land C uptake over the historical and future periods, and the implication on the projected future climate change if nutrient limitation is not accounted for.

Speaker Dr Ying-Ping Wang completed his PhD in plant ecophysiology from the Department of Forestry and Natural Resources, University of Edinburgh in 1988, and moved to CSIRO, Australia in 1990. He currently is a chief research scientist and team leader of land surface modelling in CSIRO. He is one of key scientists for developing the Australian community land surface model (CABLE) that is being used by over 30 different institutions outside Australia. He has published 6 papers in Nature, Nature Climate Change, Science and PNAS. His main research interests are land surface modelling, biogeochemical cycles, land-atmosphere interaction and model-data fusion.

~ All are Welcome! ~

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