



UFZ-Seminar „Wasser and Environment“



22nd June 2015, 3pm

Saal, Brückstr. 3a, Magdeburg

Xiangzhen Kong

Netherlands Institute of Ecology Wageningen (NIOO-KNAW), Department of Aquatic Ecology

gives a talk on:

Regime shifts in a large shallow lake: integrating paleolimnological and modelling evidences

Regime shifts in shallow lake ecosystems driven by anthropogenic activities are well-documented, for which nutrient loading is generally considered as the major stressor. Synergetic effects of hydrological regulation with eutrophication on the long-term dynamics of shallow lake ecosystem are, however, often overlooked and largely underestimated. Here we quantitatively show that hydrological regulation caused a catastrophic collapse of submerged vegetation and aggravated the impact of eutrophication by accelerating the regime shift in a decadal scale, in a large shallow lake which is located along one of the most densely populated areas - lower Yangtze River floodplain - in China. We apply a new methodology that integrates consistent evidence from both paleolimnological records and ecosystem modelling for evaluation of potential mechanisms in long-term ecosystem dynamics. Our study highlights the urgency and importance of implementing multi-objective hydrological regulation projects with ecological sustainability perspectives for aquatic ecosystems management around the globe.

If you are interested to join via Video-Conference to UFZ Halle or UFZ Leipzig, please send a note to nina.baumbach@ufz.de by Friday, 19.6.15., 12am.