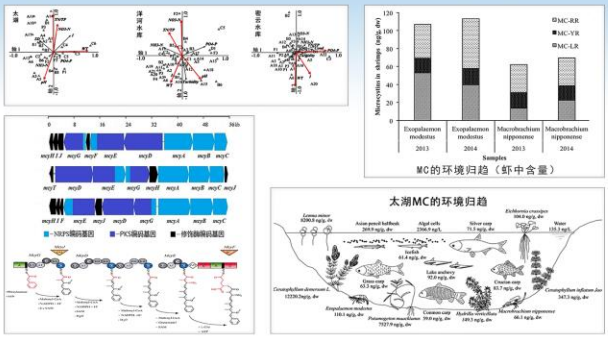
湖库富营养化

Eutrophication of Lakes and Reservoirs

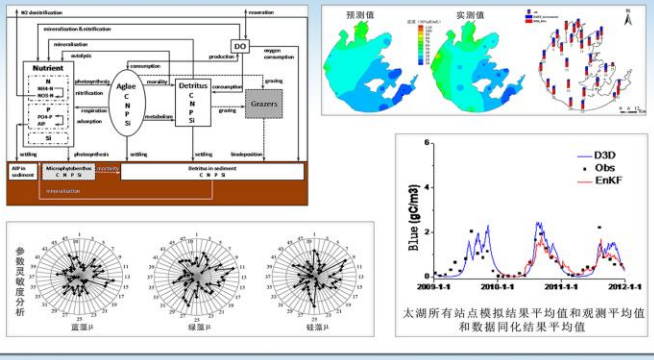
NHRI Since 1935
南京水利科学研究院

研究方向及内容： 湖库水华爆发驱动机制研究；湖库水生态动力学模型；湖库水华在线监测和预警；湖库水华藻毒素风险管理；湖库水华应急处置技术；退化湖库生态修复治理技术；入湖污染负荷削减技术；湖库水环境水力调控技术； 湖库富营养化适应性管理。

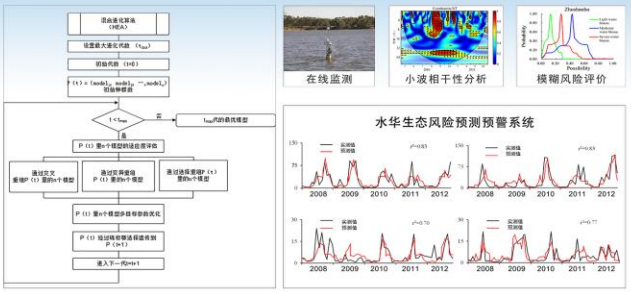
水华爆发驱动机制及藻毒素健康风险



湖库水生态动力学模型



湖库水华在线监测和预警



湖库型水源地避藻取水技术

◎巢湖市饮用水取水口优化 （“十二五”水专项子课题， 180万）

◎生物操纵修复大型浅水湖泊生态系统的机理及数值模拟（面上基金， 84万）

◎元胞自动机和多源数据同化模拟湖库藻类时空动态的原理与方法（青年基金，20万）

◎Chen, Q.*, Han, R., Li, W., Zhang, Y. 2014. Analysis of algal bloom risk with uncertainties in lakes by integrating self-organizing map and fuzzy information theory. Science of the Total Environment. s 482–483(1):318-324

◎Chen, Q.*, Guan, T., Liu, Y., Li, R., Recknagel, F. 2015. Online forecasting chlorophyll a concentrations by an auto-regressive integrated moving average model: feasibilities and potentials. Harmful Algae. 43: 58-65

◎Zhang, X., Recknagel, F., Chen, Q.*, Cao, H., Li, R. 2015. Spatially-explicit modelling and forecasting of cyanobacteria growth in Lake Taihu by evolutionary computation. Ecological Modelling. 306：216-225

◎Li, Z., Chen Q.*, Xu, Q. 2015. Modeling algae dynamics in Meiliang Bay of Taihu Lake and parameter sensitivity analysis. Journal of Hydro-Environmental Research. 9:216-225

◎Jia, J., Chen, Q.*, Lauridsen, T., 2016. A systematic investigation on the Environmental fate of microcystins and the associated risk: study in Lake Taihu. Toxins, 8(6): 170

生态环境研究中心

Center for Eco-Environmental Research