ENCONTROS SCIENTIA

Safeguarding water availability for food and ecosystems - the role of environmental flows in integrated assessments

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In a context of future population increase and intensification of water cycle by climate change, water demand for irrigation is projected to double. However, freshwater resources have been degraded the last decades especially in rivers via fragmentation, dam contraction and pollution. Flow alteration and degradation lead to 80% of freshwater ecosystem species loss. In this work, a robust and reliable Environmental Flow (EF) method was developed for global scale: the Variable Monthly Flow (VMF) method. This method allowed estimating EF deficit at global scale including its origin, timing, frequency and magnitude. By setting EFRs as priority user in a global vegetation and hydrological model (LPJmL), irrigation loss due to EFRs implementation were assessed at 30% leading to 5% global calorie loss. To maintain water allocation to humans and ecosystems under global change, food imports would require to increase by 15% especially from Latin America to South of Asia.

Thursday, October 26, 2017

FCUL (Building C2), 12h00-13h00, room 2.2.14

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