**Emerging planetary boundaries: from saving the Amazon rainforest through securing energy futures**

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Abstract:

Human activities are causing unprecedented global environmental changes. These are threatening not only human development but the Earth’s systems broadly. A framework based on planetary boundaries has been proposed to create safe operating spaces to support ongoing and future viability of the planet’s systems. According to this framework, crossing critical biophysical thresholds would have disastrous consequences to humanity and stress the interconnectedness of the Earth’s systems. However, maintaining safe thresholds will require a great deal of collaboration across national and international borders. In this paper, I use the example provided by the Belo Monte Dam being constructed in the Brazilian Amazon region to discuss the challenges of maintaining safe thresholds in complex and contested socio-ecological systems. Specifically, I focus on national level cross-border governance issues associated with the conservation of biodiversity in parts of the Amazon rainforest, rights and autonomy of Indigenous populations, secure access to energy sources to sustain livelihoods and economic activity, and national sovereignty. Further consideration is given to cascading trans-boundary impacts this case might have on other nations seeking further development at the expense of their social and environmental resources and the need for stronger international cooperation.

Speaker Biography:

Dr Silvia Serrao-Neumann (PhD, MUrEnvP Hon, MEd, BSci Bio, LSci Bio) works as a research fellow for “Water Sensitive Urbanism” program for the new Cooperative Research Centre for Water Sensitive Cities researching catchment scale landscape planning for water sensitive cities in an age of climate change. From 2009-2012 she successfully led the Urban Planning and Management component of the South East Queensland Climate Adaptation Research Initiative (SEQ-CARI). The SEQCARI project comprised a 3-year multi-sectoral study of climate change adaptation in South East Queensland, focusing on the sectors of urban planning and management, coastal management, physical infrastructure, emergency management and human health. She is also researching climate change adaptation in the natural resource management sector and recovery from natural hazards in coastal communities.