**How to measure our ecological limits – a carrying capacity approach.**

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Abstract

A resource-constrained future suggests the necessity for increased local self-reliance but how can this be measured let alone achieved? The determination of whether we live within or beyond our carrying capacity is scalar, with national, regional and local assessments dependent not only on the choices of the population but the capability of a landscape - at scale. The Carrying Capacity Dashboard, an openly accessible online modelling interface, has been developed for Australian conditions, facilitating analysis at various scales. Like ecological footprint analysis it allows users to test a variety of societal behaviours such as diet, consumption patterns, farming systems and ecological protection practices; but unlike the footprint approach, the results are uniquely tailored to place. The essential processes and parameters for Australian conditions in carrying capacity assessment will be discussed and resultant findings explored. For example, why is the parameter of water implicit but that of food explicit? Which regions in Australia are currently estimated to be over their population carrying capacity? Findings imply that changes are needed in what we eat, where we live and how we use the landscape to reach a sustainable population so modelling our carrying capacity can help inform these important future decisions.

Speaker Biography

Murray Lane teaches architecture at QUT, focusing on sustainability and design and recently completed his PhD on human carrying capacity. His research brings a practical application to the population debate with the development of an online tool – the Carrying Capacity Dashboard (<http://dashboard.carryingcapacity.com.au/><<http://www.dashboard.carryingcapacity.com.au/>>). This innovative application allows users to test the self-sufficiency of any region in Australia. He has been engaged as a consultant to the Redland City and Sunshine Coast Councils on population matters. His recent presentations on this topic include community forums such as the national AGM for Sustainable Population Australia, as well as conferences and workshops from Germany to Helsinki to Nambour.