

# COMMONS FORUM *Commentary*

## Exploring New Approaches to Community Governance

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‘Commons’ researchers, historical experience and literature have a lot to offer the considerable challenge of global resource management and environmental degradation. Researchers and policy makers not only need a more seamless dialogue and understanding, we also need to be willing to be bold and innovative in using the available knowledge to address community governance issues in operational and practical ways. In turn, these become ‘learning laboratories’ building new, practical knowledge and adaptive capacity.

This *Commons Forum* is, hopefully, a conversation piece aimed at stimulating thoughts and discussion. I must declare up front however, where I am coming from – my biases. As a landscape ecologist interested in resource governance issues and therefore society, community and collaborative mechanisms, I am interested in innovation and knowledge building towards “integrative” resource governance that build resilience and sustainability capacity within and across landscapes and regions.

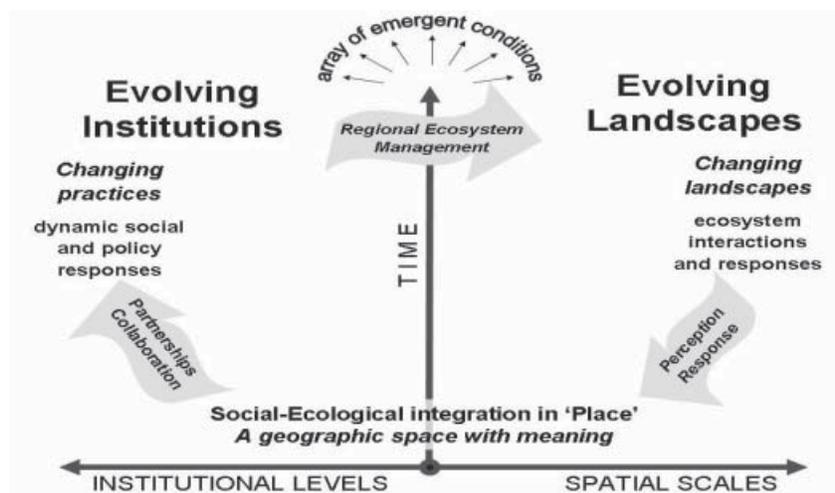
Landscapes are social-ecological constructs. Landscapes synthesise human interactions with ecological processes at various scales, and in doing so provide socially and ecologically defined operational contexts in which to integrate cross-scale interactions of resource use, property rights, agency jurisdictions and ecological patterns and processes. Understanding local systems and their interactions in the context of larger systems allows us to see processes that materialize at broader landscape scales that can not be seen at a local scale. The emphasis is on practical applications for adaptive management – community governance with flexibility to evolve. Well considered theory and research needs to lead innovation in ‘on-ground’ practice and applications, break down ‘command-control’ policy barriers, and provide new understandings towards future adaptive capacity. This is approached from a multi-level, multiscale view, but based in complex systems theory and landscape ecology; the latter, provides cross-scale context/s for evolving institutions and resource governance.

The landscape internalizes the interactions amongst the ecosystem and institutional elements. Local to regional landscapes do a reasonable job of summarising interdependencies of social-ecological systems interactions in various patterns and processes that materialize over time. Tine DeMoor in the June 2007 *The Commons Digest* made the salient point that many negative impacts of human resource use do not become apparent for some time. History, including policy history, is very important, indeed one reason for time lags and ‘surprises’ are the different rates and scales of operation and interaction of systems variables. In Australia for example, vegetation clearing started in the early 1900s, for the purpose of increasing production of farms, began the slow inexorable rise of water tables and finally, some 70-80 years later, “outbreaks” of salinised soils suddenly devoid of productive capacity. Feedback and feed forward loops, responses and

re-organisation influence landscape patterns and processes (at various scales) along with institutions (at various levels), which collectively shape geographies of ‘place’ attachment and community engagement along with other emergent conditions – a context or two! The following, albeit simplistic, diagram attempts to encapsulate some of those dynamic systems elements from a landscape ecologist’s perspective.

Social-ecological systems interactions and interdependencies operating across spatial and institutional scales influence co-evolution of future landscapes and institutions. Feed-back and feed-forward loops of interactions and responses effect change, but also create social-ecological contexts of meaning, valuable for cross-scale integration towards sustainability.

To a landscape ecologist, property and policy institutions can seem contrary and contradictory. Clearly, many property concepts and applications and many policies can play a significant role in community governance in protecting or regulating resource access and use. But they can also play a significant role in adversely fragmenting resource management, biodiversity conservation, interrupting ecosystem services, or externalising environmental degradation. Perhaps not surprisingly, I greatly appreciated Walter Coward’s key note address to the last IASCP meeting in Bali, “Property Landscapes in Motion” (see *The Commons Digest*, September 2006). Several readings of Walter’s piece have been helpful as I grapple with the role of landscape ecology research in terms of the huge drivers of change on landscapes in contemporary times. Visualising ‘Landscapes in Motion’ reminds us that applications of property and policy are considerable forces in systems dynamics influencing resilience and sustainability (e.g. land clearing and salinity). Human society ignores such at its peril. Since the industrial revolution, the tools at hand for human alteration of ecosystem services and resource bases have escalated. Such landscape change has often been supported, if not promoted by, land development or ‘management’ policy decrees on a variety of land and resource tenure types; or alternatively, the lack of achievable policies and policing in open access situations, notably the oceans and atmosphere. Concepts and applications of property and policy are influential drivers within social-ecological systems interactions and emerging futures for landscapes and regions. Nested and networked systems of people, place and environment interactions – including institutional levels, biogeographic scales of ecological process and pattern, and community identity with landscape and resources – are all important in providing context and understanding towards sustainable resource governance.



There is ‘context’ and ‘context’, of course. The quantity and complexity of externalities that must be resolved by resource governance is constantly increasing for at least two reasons. Firstly, population growth leads to increasing interdependence between citizens and an increasing potential for externalities from resource use decisions and private consumption. The second relates to spatial proximity. The impacts of modern technology and the overloaded assimilative capacity of ecosystems results in the constant emergence of new externality problems that span distances from the local to the global. With the increasing complexity of social-ecological interdependencies operating at various scales, the task of deciding who will be represented or will participate in what level of community governance and collective decision-making is a formidable one. Local resource issues need a local forum and regional issues need a regional forum, but where should the boundaries be drawn to define the constituencies for each forum? Resource management decisions made without adequate representation of stakeholder interests are likely to be ignored or actively resisted. There is a continuum of ‘local’ and ‘regional’ landscapes through which we need to try to understand bounded and crossboundary dynamics of social-ecological interactions to build capacity to explore novel, appropriate community governance arrangements.

Despite a growing body of theory that emphasizes the importance of socio-spatial aspects in the representation of community interests (particularly for participative resource management), regionalisation for natural resource governance remains dominated by river catchments. Sociologists and social geographers suggest that river catchments rarely represent the area of interest to resident communities (unless very small and contained for other reasons). From a landscape ecologist’s point of view, rivers and their tributaries represent water flow connections, but rarely represent the combined manifestation of biophysical or land use variables which change considerably throughout a catchment or river basin (e.g., elevation, topography, soils, geology, climate) and also affect what is transported, added or assimilated at different points. So, what is a “region” for resource governance? How do we approach the problem of a delineating a meaningful region to engage community governance and their shared natural resource base? One approach, called “eco-civic regionalization” is based on three basic requirements for efficient and effective natural resource governance. The first principle is that the nature and reach of environmental externalities of resource use should determine the size and nesting of resource management regions. Secondly, that the boundaries of resource governance regions should enclose areas of greatest shared interest and importance to local residents – or in other words, the boundaries of community governance regions should pass through areas of minimum collective interest to local people. Thirdly, the biophysical characteristics of a resource governance region should be as homogenous as possible. The latter, multi-variable ecological landscapes or ecoregions will tend to reflect land use and provide resource management efficiencies. These three principles have been translated into spatial social survey and social-ecological GIS modeling techniques to derive nested hierarchies of ‘eco-civic’ resource governance regions for the state of New South Wales in Australia. The technique is of interest to the EU Commission to assist understanding of community and resource governance regions that span multiple nation-state jurisdictions.

Implementation and operation of new approaches to community governance, which might be multi-level, across traditional agency jurisdictions, and/or include cross-property resource management of private and public lands or resources, requires a clear understanding of

incentives, benefits and responsibilities coupled with an understanding of the ecological landscape linkages, and characteristics of place attachment, trust and reciprocity amongst the community of owners and managers. Some ‘on-ground’, learning laboratory experiences are contributing insights. A local landscape model, the ‘Tilbuster Commons’, involved rotational grazing of a single herd of cattle across multiple individual private landholdings. The cattle were collectively owned by the landholders who set up a company to manage the resource enterprises across their properties, with profits distributed through proportional share holdings. Multiple benefits included: setting aside of conservation areas; stream restoration; risk management; improved biodiversity, land and pasture; drought resilience; improved carrying capacity and financial returns; and (the most highly valued), ‘freeing’ up of time for farm families. A large regional scale ‘Biosphere Reserve’ model established in the salt ravaged, endangered Mallee ecosystems of South Australia has grown to include an area of more than 9,000 square kilometres, across more than 30 properties representing 9 different tenure types of public and private land. A community trust sets the over-arching policy framework and coordinated cross-property and cross-agency jurisdictional management across State and Federal government agencies, private landholders, and 4 local government municipalities.

Knowledge building and practice for community governance must be embedded, or ‘integrated’, with holistic approaches towards ecological sustainability. Local to regional landscapes provide useful lenses to examine and understand social-ecological systems interactions. The landscape view focused upon is that of ‘theatres’ of actors and dramas of emerging patterns of relationships amongst each other and nature. As we approach the next IASC Conference in Gloucestershire, England, summer 2008, “Governing shared resources: connecting local experience to global challenges”, it is important to reinforce the value of understanding contextual elements for local to regional resource governance through more holistic, perhaps landscape, analyses of interdependent social-ecological systems interdependencies.

### **Further reading suggestions:**

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