

Islands: balancing development and sustainability?

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Date submitted: 9 August 2017; Date accepted: 29 December 2017; First published online 15 February 2018

THEMATIC SECTION

Humans and Island
Environments

SUMMARY

This overview explores sustainable development in island contexts. More subtle and complex concepts of sustainable development have become manifest in the Sustainable Development Goals, with tensions between social, economic and environmental objectives at different scales as livelihoods acquire greater flexibility and islands face multiple challenges to development. Islands are part of rapidly changing and wider worlds, while sustainability is complicated by global change, as debates over strategies and time periods are accentuated in constrained island contexts. Development and sustainability have repeatedly acquired new meanings, hence requiring new analytical techniques, planning objectives and effective governance and management. Progress towards sustainable development in islands and island states is hampered by multi-scalar challenges, including limited biodiversity, migration, external interventions and directives, scarce human resources, weak management, inadequate data (and problems of interpretation), social divisions and tensions and simultaneous quests for modernity and conservation. The tourism sector emphasizes how sustainable development is particularly difficult to achieve in small islands where access to adequate livelihoods is important and limited change is possible.

Keywords: islands, sustainability, development, migration, knowledge, tourism, governance, scale

INTRODUCTION

Sustainable development (SD) is a much overworked phrase, used in a wide variety of contexts as a means of legitimizing a plan or practice and an ideology, rather than as a strategic, analytical or explanatory device. It is a process for meeting human development goals, as natural systems provide society's resources, and also its ever-changing outcome. Likewise, it is both a holistic science-based approach, linked to systems, networks and ecology, and a more normative agenda, linked to values, beliefs, power and politics (Fabinyi *et al.* 2014, Walker 2017), with the latter being of particular concern here. SD, as identified by the Brundtland Commission, is 'development that meets the needs of the present, without compromising the

ability of future generations to meet their own needs' (WCED 1987). That vision gradually took on wider social, economic and political perspectives towards a 'political ecology' beyond its biophysical origins (Borowy 2014, Olsson *et al.* 2014). Achievement of SD is both complicated and simplified by 'sustainability' being infrequently defined or conceptualized holistically, being clouded by epistemological and practical issues and often being attached to a particular sector, such as tourism or energy, or a place, often an island, rather than relations between places and sectors at different scales. Further complicating definitions and analysis is that the process of SD is sometimes seen as being diametrically opposed to sustainability, and a threat to it, by being linked to economic growth (Springett 2013). Islands appear to offer particular attractions, both as key sites in the development of ecology and as seemingly bounded entities offering 'islands of sustainability' that may provide a hierarchy of solutions at ever greater scales (Towle 1985, Wallner *et al.* 1996, Deschenes & Chertow 2004). This overview examines the complex relationships between sustainability, development and islands, with a particular focus on tourism, and queries whether SD is possible for islands.

This century is witnessing unprecedented rates of change involving complex human–nature interactions: 'Landscapes have become complex social–ecological systems in which anthropogenic activities and biophysical factors interact across multiple scales' requiring 'deep understanding of the interactions between human activities and natural processes' (Junker *et al.* 2015: 27; emphasis added). That creates complex challenges for movement towards SD, epitomized in parallel characterizations of climate change as a 'super wicked' problem, where time is running out; those who cause the problem seek to provide solutions; the central authority needed to address it is weak or non-existent; and, partly consequently, policy responses discount the future irrationally (Levin *et al.* 2012). Familiar analytical techniques and policy solutions are inadequate, even when it is recognized that actions must take place soon. This is particularly true of islands with scarce human and other resources. This paper therefore takes a broad political ecology approach to SD, focusing on power and governance (and thus on some aspects of management), reflecting the participation of multiple stakeholders, at different scales, in general and with particular reference to tourism (Bramwell & Lane 2011). That involves a comprehensive review of the extensive literature on islands, sustainability and tourism.

Analytical problems are accentuated by relationships between islands and scale, which are a function of two

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dominant factors: firstly, the governance of islands and their colonial and postcolonial history and, specifically, whether they are isolated states (like Nauru or Niue) or part of a much larger state (like Skye or Aldabra); and secondly, the geography of islands, in terms of their size, structure, resource base and location (isolated, marginal and impoverished atolls are quite different from large, higher, productive islands near mainlands). Vulnerability and resilience, themselves both contested concepts (Gillard 2016, Newton 2016), to external shocks, whether hazards or economics, vary enormously according to the nature of the shock and governance capacity to respond (Duit & Galaz 2008). Social divisions and tensions exist between social groups (such as lineages, clans, genders and classes) and spatial groups. Islands are far from synonymous with community; they involve diverse and contested interests and contain hierarchies, conflicts, tensions and resistance to ‘outsiders’, both people and projects, even when hazards necessitate nearby resettlement (Foale 2001, Baldwin 2005, Baldacchino 2012, Connell 2012, Fabinyi *et al.* 2014, Buggy & McNamara 2016, Connell & Lutkehaus 2017). Concepts of sustainability cannot easily be applied to small islands (Kerr 2005, Polido *et al.* 2014), which often confront the ‘classic contradiction’ between economic growth and environmental degradation, emphasized by limited resources and vulnerability (Sjöstedt & Povitkina 2017) and where political, social and geographical circumstances have contributed to diverse development paths and strategies.

SUSTAINABILITY AND THE SUSTAINABLE DEVELOPMENT GOALS

A growing focus on SD resulted in the development of indicators to measure global progress, consolidated in the Millennium Development Goals (MDGs) (UNDP 2003), but these do not reflect local reality or understandings of sustainability, resulting in alternative indices attaching greater weight to the environment and local values and ever more subtle, subjective and complex sustainability indicators (Bell & Morse 2008, Petrosillo *et al.* 2013). Complexity increased because of the ambiguity of SD, diverse rationales for defining and moving towards it and confusion over terminology and methodology.

With achievement of the MDGs still incomplete, they gave way to the Sustainable Development Goals (SDGs) in 2015: an elaborate, comprehensive, detailed and universal set of 17 goals (with 169 specific targets). A broad consensus emerged that the MDGs were too vague and narrow, ignored both causes of poverty and local cultural diversity, overlooked gender inequality, human rights and the holistic nature of development and were partly unquantifiable (Holden *et al.* 2017). Holism was threatened by the need for ‘trade-offs’ and demands for ‘more responsible consumption’, suggesting problems and difficulties in ‘mainstreaming’ and implementation (Griggs *et al.* 2014). However, all policy changes entail trade-offs between the interests of different

groups and individuals (Coulthard *et al.* 2011, Lauer 2014, Fernandes *et al.* 2015), and poverty, equity and entitlements may legitimize environmentally destructive practices (Redcliff 2005, Morse 2008, Brown 2013, Neudert *et al.* 2017). Power relations, where political ecology and economy are evident (e.g. Hirsch 2017), emphasized the challenges.

The shift towards SDGs accompanied a livelihoods approach to development that left more scope for recognition of agency, participation and ‘capability’. Debates ensued over what were critical capabilities, how they might be linked to sustainability and how ecosystem services might be valued (Pelenc & Ballet 2015). Livelihoods were sustainable when they could adapt to stresses, hazards and shocks. This emphasized that ‘development’ had negative ecological impacts, stimulating an approach to livelihoods and poverty reduction that was holistic, people-centred and focused on the ‘five capitals’ of people (natural, social, human, financial and physical). This approach was still criticized for failure ‘to engage with processes of economic globalisation, debates about politics and governance, the challenges of environmental sustainability and fundamental shifts in rural economies’ (Scoones 2009: 182). Its value and challenge lay in considering the distinctiveness of localities, the complexity of social life and social processes and the role of power and values (Fabinyi *et al.* 2014, Scoones 2016). Society is never homogeneous; hence, firstly, ‘discourses and arguments that play out in disputes over community resources . . . reflect people’s social relationships as well as their everyday interactions with the biophysical environment’ (Moran & Rau 2016: 344). Secondly, ‘challenges in natural resource and environmental management are multifaceted and multidimensional, involving issues at local, national, regional and international levels’ (Lal 2008: 41), so demanding integrated planning and management and ‘scale jumping’ (Jones & Ross 2016). Any analysis of development and sustainability requires a multi-scalar perspective, where interactions of power and agency are increasingly complex and are particularly relevant to environmental governance (Gruby & Campbell 2013, Lauer *et al.* 2013, Paavola 2016, Aswani *et al.* 2017) and wherever policies, practices and circumstances, whether socio-economic-political or biophysical, fluctuate unevenly (Young 2006, Neumann 2015). Various processes complicate even temporarily and tentatively fixed scales, including devolved decision-making, a rise in community-level organizations and thus transformations from ‘government’ to ‘governance’ (Penning-Rowsell & Johnson 2015). The struggle to define the appropriate scale of governance and management is closely bound into debates about the role of science and local participation and is inseparable from contestation over who should define, inform, conduct and participate in the governance process (Sievanen *et al.* 2013).

Few studies have sought to develop (and model) sustainability indicators in island contexts, even with reference to a single sector, such as tourism (Bunce 2009, Boonchai & Beeton 2015, Banos-Gonzalez *et al.* 2016, Blancas *et al.* 2016, Pizzitutti *et al.* 2017). Modelling of change for

Rodrigues concluded that ‘we did not fully account for the complexity [hence] the policy usefulness of models may be limited’ (Bunce *et al.* 2009: 223–224; Sieck *et al.* 2011). Models have been so complex that relationships are difficult to comprehend, and models cannot capture the endless complexity of multidimensional networks, let alone be operationalized (van der Ploeg & Marsden 2008, Carlsen 2015, Horlings & Kanemasu 2015, Banos-Gonzalez *et al.* 2016, Ginard-Bosch & Ramos-Martin 2016), and are further thwarted by missing data. Multiple variables did not necessarily enhance analytical clarity, sometimes bringing only obvious or tautological conclusions, such as that tourism puts pressure on energy and water resources or that climate change affects multiple variables.

This paper reviews the challenges of balancing SD on islands. Given the vast number of relevant studies in diverse islands, a comprehensive, systematic overview is impossible and selectivity is problematic where the juxtaposition of development and sustainability has long been seen as an oxymoron, both generally and for particular sectors (Redclift 2005, Springett 2013, Borowy 2014), and where debates centre on relationships between society, politics, economy and environment. This paper examines how SD has been conceptualized and practiced on islands, and the constraints to success, with some focus on small Pacific islands and island states, where issues of sustainability are frequently debated and islands are most exposed to risk (Beller *et al.* 1990, Connell 2013, Polido *et al.* 2014), and on tourism, which is widely perceived as a central element of development in islands.

STRUCTURAL DISADVANTAGES AND SUSTAINABLE LIVELIHOODS

The SDGs provide a wide-ranging and subtle approach to the multiple factors involved in SD. Islands present particular challenges. Hazards may affect entire islands. Limited opportunities, isolation and distance have ensured that subsistence-based economies have survived longer than elsewhere in response to hazards and infrequent communications (Kuhlken 2007, Mertz *et al.* 2010), yet subsistence agriculture has been threatened by shifting work preferences, migration, food imports and pressure on land, resulting in reduced diversity and food security (Connell 2013, 2015b, McCubbin *et al.* 2017). Islands traditionally specialized in a narrow range of exports while seeking to develop niche economies as comparative advantage declined (Grynberg & Razzaque 2004). Many inshore fisheries have experienced unsustainable pressures, especially where coastal populations increased, local knowledge declined, new technologies proved too efficient (or destructive) and management ineffective. Agricultural work has lost prestige, hence retaining agroecology and biodiversity becomes difficult and even unwelcome, following market demands and migration (Christensen 2011, Connell 2013, Hair *et al.* 2016). Ecosystems have become more impoverished and fragile, indigenous technical knowledge weakened and marginalized

and environmental degradation more common, with islands such as Rapanui (Easter Island) eventually becoming the locus of (disputed) environmental morality tales (Diamond 2005). In many places, cultural continuity has been as much the outcome of an externally imposed political economy, rather than of conscious resistance, and sustainable production has only been retained on isolated islands.

Disappointment with conventional development has resulted in some small-island states seeking distinctive strategies, including stamp sales, tax havens and the negotiated sovereignty of military and refugee presences. As economies have shifted from production, with small islands going from subsistence to subsidy, workforces have concentrated in the public sector, which, except where tourism is dominant, dominates formal economic activity, despite external pressures for privatization. Islands face multiple challenges because of scarce resources (physical and human), isolation, limited biodiversity, hazards, open economies and absent economies of scale, which are not otherwise compensated for.

All islands are part of global socio-economic-political systems. Islands were rarely isolated, yet culture and the environment shaped difference, design and destiny. Politics and economics played a belated part. Islands were battered back and forth: a ‘shuttlecock history’ (Semple 1911) despite their own agency. Even remote islands are part of a ‘world system’, like Tikopia was for most of its 3000-year history (Kirch 1986). Expectations have risen over what constitutes satisfactory lifestyles, desirable employment and accessible services. Changes in values following expanded education and formal employment have stimulated migration, as islanders have sought superior, flexible and diverse livelihoods, better employment and services, with increasing population concentrations in growing island towns, leading to migration to flood- and hazard-prone coastal areas and occasional extremes of environmental degradation (Storey & Hunter 2010, Ratter *et al.* 2016). The rise of urban poverty, settlements and the informal sector has been marked by repressions of the marginalized, rather than by positive welfare and employment policies. Global margins are fading; peripheral ‘outer’ islands have lost population (Connell 2015a). As youths emigrate, services are inadequately provided, incentives to remain decline and downward spirals ensue.

International migration became significant in the 1960s with the global economic ‘long boom’, rising metropolitan demand for labour and cheaper fares. Migration became an integral strand in household and national concepts of livelihoods and development, a safety valve for weak island economies and one outcome of preference for the regular ‘fast money’ of wages (Finney 1967). A culture of migration is long-established, accepted and normative (Connell 2008), with migrants leaving to meet family expectations. Migration is selective by skills and education, leaving islands with less wisdom, authority and power. Remittances have massive significance, with their relative economic contributions to island states like Cape Verde and Samoa being some of the greatest in the world.

They constitute a significant, often primary, source of income to many small islands, ensuring their survival, being invaluable after hazards and enabling poverty reduction, food security, health, education and economic growth, but also leading to the emergence, in Melanesia, of a request or ‘*singaut*’ economy (Connell & Conway 2000, Rasmussen 2015, Petrou & Connell 2017). Migration has deferred and mitigated, but not resolved, development issues, constituting a bottom-up globalization that, paradoxically, has enabled some resurgence of self-reliance and cultural continuity. Life courses of islanders are increasingly embedded in international ties, as island states have become deterritorialized (Connell & Corbett 2016). Migration can be both support for, and a form of, SD.

Islanders have limited access to both traditional and modern knowledge. Progress towards SD depends on evidence-based planning, but evidence is often absent or unavailable, especially on livelihoods. Versions of knowledge come from multiple national and international organizations, including non-governmental organizations (NGOs), churches and government agencies, often with distinct perspectives and variable access to knowledge, hence producing diversity in external advice, funding strategies and policy outcomes, a complexity of voices and choices, some degree of false consciousness and dissent over (unpalatable) facts. Experience, emotion and memory are important. Debates over how and why changes in structures of production, distribution and allocation have occurred, or might be remedied, are rare. Uneven distribution of knowledge marks divisions within islands and island ‘communities’. Aspirations, opportunities and activities are not evenly shared. There is often a ‘gap in understanding between top-level executives and “field” practitioners’ (Boonchai & Beeton 2016: 121).

Divisions exist between church (usually churches), state and traditional leaders, with fragmentation of power, authority and responsibilities. In many islands, a history of adversarial relationships exists between the state and its component regions. Social organization on some islands was never egalitarian or without leadership structures and some autocratic and accompanying marked stratification; power, privilege, authority and access to resources were usually gendered. Land tenure, crucial to livelihoods, is rarely equitable. Emotions must be tempered and, even in larger, relatively developed contexts, people do not always oppose ‘bad practice’ because of the need to maintain good neighbourly relations (Moran & Rau 2016). Equity is not an abstract concept and cannot effectively exist without growth, but improved circumstances for some may create disadvantages for others. Several small-island dependencies, like Bermuda and Tokelau, have rejected movement to independence through a preference for the stability and certainty of dependence (and external support) alongside forebodings that their own frailty and intense local social divisions would deteriorate (as they have done on Nauru and Solomon Islands) without external regulation.

Islands have shaped their own relationships with wider worlds in a multiplicity of ways, yet are still compromised by

globalization, evident in the exploitative incursions of distant nations into highly mobile Pacific fishing stocks in oceans where responsibilities are poorly defined and ‘ocean grabbing’ is rife (Read 2006, Bennett *et al.* 2015, van Tatenhove 2016). International aspirations and goals of companies, banks, NGOs and aid donors have shaped development and change in islands. Such relationships may be intendedly benevolent, yet frustration over external transgressions emphasizes that movement towards SD requires ‘psychological capital’ (Boonchai & Beeton 2016) or simply trust. Beyond the entanglements of exploitative capitalism, and absent corporate social responsibility (CSR), ‘lack of trust in experts reflects social conventions that may not be easy to change’ (Moran & Rau 2016: 356), a gently understated conclusion.

DEVELOPMENT PLANS: THE PLACE OF POLITICS, POLICY AND KNOWLEDGE

By the 1980s, migration and remittances were so important that small Pacific island states became conceptualized as MIRAB states, where MIgration, Remittances, Aid and resultant Bureaucracy were central to socio-economic systems, with particular islands perceived in the same way (Bertram & Watters 1985, Hayes 1993). Island states are the most heavily aid-assisted places per capita. Formal development plans exist (or have existed) where islands are parts of states. After the 1994 United Nations (UN) Global Conference on the Sustainable Development of Small Island Developing States (SIDS) in Barbados, such plans emphasized environmental and sustainable components and were accompanied by National Environmental Management Strategies and, rather later, by climate change adaptation plans – National Adaptation Programmes of Action. Despite SIDS being at the forefront of SD activities, plans tended to be standardized and to have conventional aims, and they were encouraged and formulated by outside agencies (Connell 2013, Baldacchino & Kelman 2014). No single approach fitted all islands and island states, and ‘challenges remain in fully integrating sustainable development priorities into national development planning and moving from strategy development to strategy implementation [and] horizontal coherence across sectoral policies’ (Hirano 2008: 7). The will and capacity to implement plans and policies is constrained by finance, weak management, human resources, factions, short project cycles, ineffective institutional arrangements, government capacity and political will (Hirano 2008, Buggy & McNamara 2016, Remling & Veiteyaki 2016, Jupiter *et al.* 2017). Capacity constraints emphasized a ‘tyranny of participation’ and planning (Cooke & Kothari 2001) that could distort local priorities. Environment departments rarely have high-priority, adequate budgets or appropriate human resources.

Many development plans and strategies are ‘theoretical’ rather than real, requiring a sense of ownership (will and capital) to implement. That may require ‘reconfiguring power relationships’, but power is always asymmetrical and

self-interested, generating repeated calls for more effective and equitable management and governance. Where immediate livelihoods are of real concern, focusing on long-term strategies is a challenge: 'one of the key obstacles to sustainable development . . . is institutional and governance structures, and decision-making processes at all levels . . . key constraints relate institutional issues such as the lack of coordinated policies, strategies and lack of an integrated planning system that encourages the mainstreaming of environmental and social considerations in economic decision making' (Lal 2008: 41). Organizational arrangements are fragmented across different government agencies and with multiple stakeholders, and they overlap, compete and operate at different scales (e.g. Keppel *et al.* 2012, Andréfouët *et al.* 2017). Beyond them are 'rights holders' and gatekeepers, where processes of consultation are non-existent, denying progress towards 'adaptive governance' and a 'collaborative learning society' to build 'individual knowledge, collective insights, effective governance and civil society systems'. That, too, is problematic where interpretations of SD 'reveal multiple desires and needs of the local population rather than generic guidelines dictated by official reports and international policy statements' (Lu *et al.* 2013, Boonchai & Beeton 2016: 119). There is simply no consensus over what SD is and hence over what policies might enhance or enable it, in place and over time.

Human resource shortages encapsulate planning and management problems in islands (and expectations of external agencies) in the face of other activities and priorities, but have not deterred external agencies from making grand assertions about the restructuring required for success. Plans are rarely domestically inspired, being 'driven by political interests rather than national priorities': movement towards ecosystem-based management has been minimal, with neither 'eco', 'system' nor 'intergenerational' issues having much leverage (Lal 2008: 33). A local scientific base to policy formation and 'evidence-based planning' is largely absent, in a context where complexity of choice and disjunctures between belief (ideology), intent and action are considerable. Debates over development, and sustainability, are enmeshed with considerations of what is necessary and achievable, with time (and many meetings) needed to convert attitudes into convictions and action through necessarily 'adaptive governance' (Folke *et al.* 2005).

Underpinning much of development practice, by governments, companies and international agencies, are broadly 'developmentalist' ideas that assume a universal system and pattern of development. Sustainability requires revised notions of equality and equity, but themes of 'redistribution [even] with growth' have been unwelcome. That the well-off should forgo is improbable, hence inequality is increasing. The 'hegemony of techno-optimistic and rationalist sustainability thinking' (Moran & Rau 2016: 355) is widespread, alongside a powerful neo-capitalist faith in geo-technology and geo-engineering and a decoupling of economic growth from its ecological impact (Fletcher & Rammelt 2017).

Plans for development have relied on neo-colonial models of development that assumed a linear evolution centred on economic growth. Top-down, interventionist, techno-centric and ethnocentric plans accommodated few alternatives of process or endpoint. Moreover, the planning era has been accompanied by highly visible external interventions, from incursions of various kinds into Grenada, the Comoros, Bougainville (Papua New Guinea (PNG)) and the Solomon Islands that suggested island divisiveness, fragility and incapacity to manage effectively embedded in a politics of hierarchies, factions, nepotism and corruption.

Power and authority thus moved away from islands as they became institutionalized in wider economic, political and social worlds and as islanders migrated. Local disputes were less easily resolved, sometimes in the absence of traditional leaders (themselves migrants). Social control over activities like reef management and fishing seasons was contested or simply disappeared. The new world of choices and opportunities – even opportunism – contributed to the destruction of the old order of certainty, security and stability, but also of hazards and feuds. Typically, a greater degree of materialism, competitiveness and individualism resulted in labour and land becoming more like commodities (with new tensions over land tenure) and a decline in cooperative activities, whether productive or ceremonial. Uneven access to education and health posed frustrations, with local knowledge downplayed. Disillusionment brought recognition that 'progress' and modernity were problematic, uneven, disruptive of the social order, and environmentally damaging. New forms of hybridity and syncretism sometimes emerged, even in the face of national exhortations favouring change and 'progress', where 'good citizens' embraced capitalism, autonomy, entrepreneurialism and personal achievement and eschewed the shackles of localism and tradition (Connell 2007). Excursions into capitalism neither contested nor rejected its expansion, but simply sought more complex, more successful and more culturally sensitive forms of accommodation to it. Island cultures and economies became in effect entangled objects and ideologies (Thomas 1991). Islanders, like everyone else, have diverse perceptions of what might constitute development in the midst of 'a shifting and multiple horizon of patterns, expectations and disappointments' (Strathern & Stewart 2004). Perceptions vary between groups (Lauer 2014), while individuals can simultaneously hold multiple ideals (Bulloch 2014). Thus, many Kairiru islanders in PNG are 'plainly confused about the specifics of where they wanted to go and how to get there' (Smith 2002: 9–10). What was true for households was true for islands and island states, and harder to achieve. Aspirations and strategies varied according to the contradictory and complex characteristics of emerging modernity (Brison 2003, Bogadóttir & Olsen 2017), but hybridity and continuity made sense, even if islanders, somewhat prosaically, were tied into the ambit of a sometimes inaccessible and unpredictable outside world.

Sustainability is centred on a complex politics of 'mutual recognition', where reciprocity is at stake, especially as

technology confronts rather than cooperates with local people in societies based on sharing and exchange (Foukona & Timmer 2016, Remling & Veiteyaki 2016, Jupiter *et al.* 2017). Development, change and sustainability are interpreted in quite different ways and over different time periods, evident in disagreements at the Panguna copper mine on Bougainville Island (PNG) that emphasized imbalances over time and scale between environmental degradation and economic benefits, and so over power and authority, culminating in one local reaction to a mining company scientific analysis that ‘logic is a capitalist cover-up’ (Connell 1992). Invariably, ‘complex adaptive systems are characterised by uncertainty and surprise ... the effects of human actions can never be fully anticipated or predicted and will have unexpected and unintended consequences’ (Duit & Galaz 2008, Olsson *et al.* 2014), hence different preferences and perspectives over such ongoing matters as climate change (or genetically modified seeds) have resulted in multiple viewpoints, no consensus on policy solutions, conflicting perspectives on the role of the state, divergent management practices and divisions between politicians, bureaucrats, technocrats and various publics (Dornan 2015, Ratter *et al.* 2016, Yusuf *et al.* 2016). Change is rarely without uncertainty and tension.

Scepticism of ‘outside experts’ and ‘placeless’ knowledge exists, where local expertise comes from connections to a place and experience of it, evident in Bougainville and in variable Marshall Islander perceptions of, and explanations for, climate change that balanced complex and ever-changing perceptions and direct experience of physical landscape changes (‘visibilism’) with (poorly understood) scientific data and predictions, biblical prophecies and indigenous knowledge (Rudiak-Gould 2014, Yeh 2016). Policy-makers and especially international agencies draw on more ‘conventional’ discourses of scientific knowledge, with such perspectives often attributed supposed objectivity, independence and rationality (Moran & Rau 2016). Government and international policy, supported by mainstream science, thus tends to envisage a positive future of ‘ecological modernization’ where capitalist economic growth can be sustained through technical solutions. To dismiss local difference or resistance as backward, uninformed, localist and even NIMBY (‘not in my backyard’) ignores the future-orientated, place-based nature of local perspectives (Moran & Rau 2016), although these perspectives inevitably vary (according to education, gender, experience, ability to profit, etc.). In every context, superior yet partial knowledge is claimed by different people, politicians, policy-makers, clans, citizen-scientists and economists, amongst others.

While external agencies may be generally committed to a scientific and technical perspective on change, this rarely means consensus on what policy and management practices to recommend and finance and over what time period. Islands have experienced multiple agencies whose orientations, priorities and interests diverge and whose advice can be contradictory (Wrighton & Overton 2012, Corbett & Connell 2015, Remling & Veiteyaki 2016). Moreover, no

necessary scientific consensus exists on many issues, hence the diffusion of knowledge to islands proceeds at variable rates and intensities, especially where there are few local planners and bureaucrats, a shortage of information and media that are invisible, tendentious or biased. What appear as grand failures to achieve ‘appropriate’ change may simply mark state failure (Scott 1998) and/or the clash of ideas across scales and cultures and fluctuating (often inchoate) power dynamics and asymmetries that regard islanders as simply (even stubbornly) rejecting change. All of this can now be examined in the context of one significant sector.

TOURISM: INCREMENTALISM, GOVERNANCE AND MANAGEMENT

Movement to SD involves ‘multilevel, multiphase, and across scale processes [with] different points of departure and theoretical focuses’ (Olsson *et al.* 2014: 1). Multiple examples exist of successes in particular places and sectors, where advances have proved relatively easy and perhaps economically ‘necessary’ (such as tourism) or symbolically visible, as in the promotion of home gardens, recycling, marine protected areas (MPAs), solar energy, conservation and ecotourism, but are piecemeal, spasmodic and sporadic: versions of ‘weak sustainability’ (Kousis 2000) or ‘sustainability lite’ (Walker 2017). Coordinating and linking these advances and sectoral achievements within multi-scalar approaches to ensure they cohere and coincide in more broadly based SD requires much greater comprehensiveness, otherwise sustainability is merely co-opted within neoliberal modes of governance (Hajer 1995). Through exigencies of space, a lone sectoral approach – that of tourism – is reviewed below. Tourism on islands is by far the best documented ‘sector’, as well as the most probable source of growth and development in many islands, and thus particularly appropriate for any discussion of SD.

Tourism offers a ‘classic’ example in one sector of scalar tensions between society, ecology, environment and economics (e.g. Conrad & Cassar 2014), yet ‘the quest for sustainable forms of tourism remain oddly separated from the debate on sustainable development of which it should be part’ (Creaney & Niewiadomski 2016). It increases pressures on energy, water, land and environmental features such as coral reefs (that are all also key areas of productivity). Tourists usually consume more than local people, but the overall impact is a function of numbers and tourist ‘carrying capacity’, both bio-physical and socio-cultural, as well as the form it takes, and it is often greatest on small islands and coastal systems. Luxury resorts and golf courses attract higher-spending tourists, consume more resources than traditional sun, sea and sand tourism and generate more waste (Gössling 2003, Connell 2013), whereas ecotourism is assumed to be the converse. A correlation between tourist numbers and environmental degradation usually exists, alongside a widely recognized tourist life cycle marked by onward movement from degraded places (Baldwin 2005, Hampton 2013, Lange

2015, Mai & Smith 2015, Boonchai & Beeton 2016), a function of 'conflict between the development of the tourism industry and its sustainability over time' (Gonzalez-Morales *et al.* 2016: 562). Conservation (including heritage), tourism and development are constantly in tension on islands (Mathis & Rose 2016, Povilanskas *et al.* 2016, Thompson *et al.* 2017).

Under the guise of sustainability, many islands have adopted a range of policies and practices relating to tourism numbers (for the entire island or particularly sensitive sites), vehicle hire, restrictions on some (mainly marine) activities, waste management, (re)planting, beach nourishment, coral restoration, protected areas, moratoria on construction and engagement with local workers and villagers. However, the ability to advertise green credentials and 'sustainability' results in the 'marketization of environmental responsibility' (Grydehøj & Kelman 2017), effectively 'lowering the bar for what sustainability should mean if business [became] more responsible and ethical' (Springett 2013: 80).

Pressures on water supply have led to shortages (e.g. Brewington 2013), inadequate solid waste and urban waste water management (e.g. Storey & Hunter 2010), congested transport systems (Martin-Cejas & Sanchez 2010, Chen *et al.* 2017), dysfunctional MPAs and depleted coastal fisheries, marine and terrestrial biodiversity, ecosystems and ecosystem services (Chen *et al.* 2017), hence sustaining viable long-term tourist economies requires effective management, which is often found wanting in small islands with scarce human resources (e.g. Figueroa & Rotarou 2016). Moreover, where economic development has hitherto been limited, islanders are often anxious for immediate gains from tourism rather than slower, more sustainable strategies (e.g. Figueroa & Rotarou 2016, Mathis & Rose 2016, Rockett & Ramsey 2016) and may initially welcome external proposals. Local culture may be lost or commodified (Picard 1996, Mackenzie 1998, Connell & Rugendyke 2008, Macleod 2013), but, here as elsewhere, losses may be compensated for by economic growth.

Island tourism creates few agricultural linkages and sometimes a decline in local production as land and labour move into tourism (Connell & Rugendyke 2008). Local people have been displaced from valuable sites without effective means of engagement with the tourist economy (e.g. Walpole & Goodwin 2001, Bianchi 2004, Wortman *et al.* 2016, Kothari & Arnall 2017), ignored and not consulted over developments that marginalize them (e.g. Towner 2016, Del Chiappa *et al.* 2017, Towner & Milne 2017), lack the knowledge, experience and financial and management skills to engage in or benefit from tourism (e.g. Porter *et al.* 2017) or belatedly recognize sustainability problems (Gössling 2017).

Islanders may distrust venal entrepreneurs and distant (and elusive) governments whose policies and practices vary (Bianchi 2004), or simply experience an information deficiency (on what is planned and what outcomes might follow). Government decision-makers often focus on individual development proposals rather than cumulative impacts (Higgins-Desbiolles 2011). Broadly, lack of collaboration occurs between public and private, local and distant

stakeholders (Bianchi 2004, Canavan 2017), where political strategies vary and consensus is unusual, emphasizing that tourism is part of a larger global system where critical decisions may be taken far from 'recipient' islands and islanders (Moscardo & Murphy 2014). Employment and income may be generated, but unevenly, at the expense of local ecosystems and conservation areas (Ng *et al.* 2017, Pizzitutti *et al.* 2017, Thompson *et al.* 2017), while expenditure disproportionately 'leaks' from small islands. Even where policy innovations have offset and remediated the problems of tourist development, the need to tackle climate change alone means that policy adjustments are required on building construction, water resources management, sewage treatment, land and coastal zone management and physical planning, calling 'for stakeholder input informed by an awareness of the philosophy of equity, economic efficiency, and environmental sustainability' (Mycoo 2014: 56).

At different scales, the economic and infrastructure gains from tourism may favour distant rather than local people, simultaneously with the emergence of new local inequalities between those who have been able to benefit from tourism and those excluded (Connell & Rugendyke 2008, Gezon 2014, Mathis & Rose 2016, Naidoo & Sharples 2016), sometimes exacerbated by an influx of outsiders. Power infuses all relationships and tourism emphasizes asymmetrical political power within and beyond islands, with supply chains firmly coordinated by actors elsewhere (Cheer *et al.* 2017). As tourism grows, it acquires increasingly distant stakeholders with their own views of sustainability, sometimes not merely parallel or complementary, but contradictory (Kothari & Arnall 2017), which further disempowers other stakeholders (especially local residents), ignores the cultural context and nature of sustainability and fails to address justice issues (Lee & Jamal 2008, Gezon 2014, Moscardo & Murphy 2014), indicating a need to reclaim political agency from external actors.

Almost all such issues emphasize conflicts at different scales and distances from particular sites and islands, raising questions of sovereignty, participation, trust, inclusion, ownership and identity that, in most cases, reflect the centralization of power and authority at the expense of small islands especially. As in the Canary Islands, even under the guise of SD, this is often 'complicated by the legacy of a weak civil society, clientelist interests, political intransigence, the profit-driven interests of developers and tour operators [and] constant changes to the administrative structure of the state' (Bianchi 2004: 507–508). Path dependence entrenches such problems. At every scale, multiple factors, including geography, education and demography, account for why some people and places are better placed to benefit from any change, pointing to both governance and management issues in achieving consensus on balancing economy and environment over several place and time scales to counter the marginalization of islands (Abdulai 2017, Weaver 2017), which are sometimes on the margins of state reach or interest.

Ecotourism has been widely promoted, but criticisms emphasize the usually discounted but considerable carbon

footprint of transport (including of food and other inputs), weak planning of water and energy use, waste disposal, the ‘environmental amnesia’ and disinterest of tourists and the exclusion of local people (Carrier & Macleod 2005, Dodds 2010, Baldacchino & Kelman 2014, Ginard-Bosch & Ramos-Martin 2016). Even ‘ecotourists’ have limited environmental consciousness and few seek out ‘authentic’ experiences (MacCarthy 2016, Force *et al.* 2017, Gössling 2017). Ecotourism can disregard and commodify local cultures that may be invaluable for SD. For the Galapagos, ecotourism has been seen as ‘in many ways a type of balancing act between conservation and development interests’ (Hoyman & McCall 2013: 43; Mathis & Rose 2016), a conclusion that is valid elsewhere, where the private sector and small-scale entrepreneurialism are more dominant and CSR weak (Dodds 2010, Scheyvens & Hughes 2015, Diedrich & Aswani 2016, Thompson *et al.* 2017). Simultaneously, while some local people ‘feel conservation and tourism have smothered their traditional ways of life, others eagerly explore the opportunities these industries present’ (Mathis & Rose 2016: 74). Concerns and challenges are thus broadly similar to those of ‘conventional’ tourism.

Achieving SD is usually complicated by several levels of government, alongside multiple external private sector interests (Benitez-Capistros *et al.* 2016), hence tourism (like, and alongside, other sectors) must be part of a more holistic approach to SD. The economic sector that may have most to gain by being sustainable, but requires market success and external interests and orientation, demonstrates the many problems attached to achieving SD in one sector for islands with diverse interests. Changes in one sector can take islands towards greater, but localized, sustainability, without real impact on the central dynamics of island sustainability: ‘sustainability lite’ revisited.

Other sectors experience similar problems. Most islands do not have energy resources other than biofuels, but import fossil fuels over considerable distances, at some cost, hence any movement towards solar energy, with potentially reduced economic and environmental costs, represents a shift towards SD (Dornan 2015). Transport has become more dependent on expensive fossil fuels and increasingly is vehicular, occurs over longer distances and is private rather than public. Numerous barriers preventing new energy and transport technologies on small islands are regulatory and legal, including high initial capital costs, lack of technical and maintenance skills, lack of knowledge by policy-makers of viable options (since they are external to the island) and unfamiliarity with available options. Island fisheries have shifted towards more open-access commons, with fishers becoming more rapacious, individualistic and competitive (Oles 2007), and neoliberal principles of market governance, commodification of natural resources and profit maximization are at odds with local rights, values, sense of place and institutions of knowledge, tenure and practice (Davis & Ruddle 2012, Lalancette 2017). Management is more difficult when indigenous ecological knowledge varies and local people cannot easily

comprehend the scale, direction and causes of change in marine environments (Lauer & Aswani 2010, O’Garra 2012). Many interventions are technical and managerial, within a framework of ‘ecological modernization’ (Gössling 2003), raising questions about efficiency, economics, ethics, affect and aesthetics, and wider questions about governance, commitment, involvement, comprehension and scale. New projects can never be unequivocally successful at all scales and to all people. A single project can meet some SD targets and not others, and holistic approaches must account for the natural endowments of particular islands, as well as contemporaneous, and future, changes in all sectors. Negotiation of protected areas of any kind can create conflicts and dissent as places are quarantined from use, often reflecting scale problems where regional conservation conflicts with local expectations and various alternative uses (Walpole & Goodwin 2000, Thaman *et al.* 2016) or where local costs conflict with regional and national benefits (Fisher *et al.* 2008, Neudert *et al.* 2017). Ecology and economics are opposed, often with moral and aesthetic overtones. Tourism alone, as in any other economic sector, cannot satisfy the broader objectives of SD (Creaney & Niewiadomski 2016). In a profusion of books, reports and papers, ‘sustainability’ remains an uninterrogated buzzword, suggesting only an optimistic progression of sensitive and evolving strategies towards an always distant broader SD.

CONCLUSION

Three global generalizations – the impossibility of consensus on a definition of SD, governance and management challenges to its implementation and the complexity attached to attainment – are at least as evident for islands as elsewhere. Competing concepts of SD reflect power differentials, (mis)interpretations of data and information, inadequate monitoring and recording and diverse objectives, accentuated as equity and gender have acquired significance. Greater complexity, subtlety and sensitivity account for the expanded numbers of SDGs. SD demands a shared goal, alongside trust, empowerment, engagement and participation, none of which are easily implemented, and a multi-scalar (even polycentric) approach. Development is ultimately a local phenomenon (yet ‘local’ itself is indefinable); no consensus exists, and environmental justice issues and ‘ecological distribution conflicts’ (Martinez-Alier 1995) are related to economic growth, population density, land and water scarcity or such institutional dimensions as the particular behaviour of (inter)national corporations, financial speculation, political regimes and so on, which in turn shape the always diverse perceptions of past, present and future change.

Values and virtues that have enabled localized autonomy and self-reliance are not easily transferable into a more globalized world (McDougall 2005), nor readily abandoned in islands where embracing modern economic development has proved particularly difficult. Rules do not exist and change is an experiential activity involving tension, conflict and contestation (Lauer 2016). Islands are poorly placed to

achieve SD, where critical decisions are made at scales beyond them. Residents of small islands and island states thus exhibit a complex and fluctuating orientation to the world system – on the one hand, seeking development in a capitalist mode (that favours resource exploitation and tourism) alongside migration to more advanced capitalist countries; and on the other hand, seeking a series of more inchoate, fragmented and local attempts to translate the uncertainties of global capitalism into a more satisfying and culturally appropriate development. Neither necessarily places SD near the centre. In a globalized world, where shocks occur, ‘think global, act local’ translates poorly into practice. It makes only limited sense to consider SD for a single island or island state, let alone a particular sector.

The possibilities of SD seem unusually attractive for islands – small, discrete entities, often visibly enticing mini-worlds – seemingly apart from global trends. However, most residents crave some version and some components of ‘modernity’. Some islands have engaged in a ‘conspicuous sustainability’, particularly evident in renewable energy and other SD initiatives, capitalizing on their symbolic value and visibility. A few symbolic victories may simply distract from more urgent social and economic concerns (Connell 2013, Grydehøj & Kelman 2017) where sustainability is marginal to deep structural impediments and more pressing needs. Trade-offs between development and sustainability are inevitable.

Increasingly complex adaptive systems are characterized by uncertainty and surprise, where human actions (and hazards, including climate change) can never be fully anticipated or predicted and their outcomes never completely known, hence ideologies and adaptive strategies have regularly changed, even over short time periods, at household, local and national levels (Gudynas 2016, McNamara & Buggy 2017). Constant change and cultural distinctions deter any single SD definition or outcome (a shadow of earlier debates over MDGs and basic needs) and definitions are contested, dynamic and diversely constructed (Mackenzie 1998, Bianchi 2004, Springett 2013), ideological and inherently incomplete. Immediate development issues (such as food security) and the quest for flexible livelihoods (often offshore), social lives and social processes all challenge forward planning and conservation (Keppel *et al.* 2012). Despite the impossibility of implementation, SD remains a valuable, even irreplaceable, concept, yet the massive global focus on SD is at least partly a function of the difficulty of achieving it, while wishful thinking and optimism over the preconditions often replace ‘realpolitik’, as sustainability founders on path dependence, governance and scarce resources. Lal (2008: 41), after listing multiple constraints to SD, still concluded that ‘Through sustainable development, countries can expect in the long run to achieve their national development goals of poverty alleviation, equitable distribution of economic wealth, and minimising local conflict and threats to national security.’ However, a ‘sustainability revolution will need to happen on an extraordinarily short time scale, draw on the best anticipatory planning and science, demonstrate a renewed empathy for

and identification with all life, and muster groundbreaking global collaboration’ (Glasser 2016: 63; emphasis added). The main value of the SDGs lies less in their ability to be achieved and more in their reaffirming people’s rights to self-determination (Easterly 2015, Salleh 2016). Sustainability is thus usually attached both to a particular place or sector, rather than to an island (or island state) as a whole, and to ‘movements towards’ that concept. Yet SD must be holistic and global. It remains crucial, indeed a moral imperative, that islands (and everywhere else) do move towards sustainability, however that may locally be seen, but reconciling ecology, politics and economics and making ‘tricky trade-offs’ in islands and beyond them are not easy tasks in a rapidly changing yet uncertain global context. Balancing sustainability and development remains one of the grand challenges of political ecology. In islands that is particularly true.

ACKNOWLEDGEMENTS

I would like to thank Bob Fisher and Phil McManus for comments on an earlier draft.

FINANCIAL SUPPORT

None.

CONFLICT OF INTEREST

None.

ETHICAL STANDARDS

None.

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