CRITIQUING THE PURSUIT OF ISLAND SUSTAINABILITY

Blue and Green, with hardly a colour in between

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Abstract

This article critiques a focus on 'sustainable development' which highlights a liveable 'future' without paying adequate attention to what, we argue, are more pressing issues for a liveable present. We contend that, while inherently commendable, the thrust of many current initiatives related to sustainable development, especially those associated with climate change, promote an ethos which crowds out other pressing policy pursuits with more immediate relevance – although often also associated with sustainable development – such as health, basic education, poverty reduction, and productive employment and livelihoods. Small Island Developing States (SIDS) are at the forefront of these initiatives, given their prominence in discussions on sustainable development, but especially climate change, alongside the basic challenges that they face in maintaining viable economies. Long-term thinking and planning is needed and welcomed; but we may now have gone too far in the opposite direction in terms of aiming for sustainable development in, and for, a distant future that emphasises climate change, without better balancing of that concern with the pressing needs of the moment.

Keywords

Climate change, sustainable development, small island developing states

Introduction: the zeal of sustainable development

A long war proceeds in the early years of the 21st Century: a war for sustainable development. There are many sides and factions; but the battle-lines are stereotypically drawn between environmental groups and green parties on one hand and big and greedy corporate interests (with governments in their pockets?) on the other —notwithstanding huge disparities and often conflicts within all these groups. Armed with the knowledge of science, and the visible consequences of current lifestyles, often projected into a future of stark scenarios based on climate change, many are gripped by the zeal of sustainable development. Champions range from Gro Harlem Brundtland, the Norwegian politician and lead author of *Our Common* Future (WCED, 1987) that popularised the term 'sustainable development'; to US 2000 presidential candidate Al Gore, whose climate change film An Inconvenient Truth (directed by David Guggenheim) won two Oscars; and to the scientists on the Intergovernmental Panel on Climate Change (IPCC, 2007) who are now in the midst of releasing their next assessment. The battle-lines repeatedly coalesce around the logics of preservation and conservation (but note the tensions between these) versus those of economic growth and prosperity (again note the tensions between these). Fortified by the ardour to save the world and render it habitable to never-ending future generations, the pro-sustainable development lobby also benefits from the promise of corporate, NGO, state and multilateral funding to pursue their iconic quest: dealing with climate change, covering both mitigation and adaptation in tandem.

This article does not engage with the merits or otherwise of sustainable development initiatives looking far into the future. After all, these emphasise and seek to promote a particular aspect of human well-being, and one that we wholeheartedly support. Rather, this article considers the implications of this thrust for sustainable development, as it might crowd out other pressing policy pursuits, with more

immediate relevance (although often also associated with sustainable development),

such as the drive to promote health, secure basic education, reduce poverty, and

create productive employment and livelihoods.

We flesh these out in the particular context of Small Island Developing States (SIDS):

not just because we have a professional interest in island affairs; but also because

many SIDS are especially challenged by some specific implications of climate change

(eg Huang, 1997; Yamamoto and Esteban, 2010), as well as by the nature of their

economies that may render the pursuit of sustainable development as somewhat

futile and shambolic, contradicting basic economic imperatives (eg Angelucci and

Conforti, 2010; Fielding, 2010).

1. The sustainable development trend

We seek to broach and disambiguate these ideas after we have been led to face

them in the unfolding of our own professional practice. We are both scholars

interested in the study of islands. For a decade, Baldacchino was a Canada Research

Chair in Island Studies in a Canadian university. Kelman has spent most of his career

as an applied researcher, joining research and practice, focusing on islands, even though not having lived on islands for extensive periods of time. In recent years, we

have independently witnessed an agenda of sustainable development focused on

climate change that creeps into, and now dominates, much policy and practice work

involving islands.

Baldacchino has a wide-ranging interest in various aspects of island life ranging from

migration to tourism, from food to song, from literature to language;. He has seen a

similar range of diversity in the background and research interests of students who have been following the MA (Island Studies) program at the University of Prince

Trave been following the first (Island Studies) program at the officerstly of Frince

Edward Island (UPEI) – Canada's smallest province – since its inception in 2003. Of

late, however, the students taking up this program are increasingly coming with an environmental studies background and are keen to pursue climate change related

projects and research themes. The research agenda of the Institute of Island Studies,

also at UPEI but currently under threat of closure, is also now largely driven by similar

themes.

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Kelman comes from a sustainable development background and his publications have

focused on a wide range of such perspectives, including disaster response, disaster

 $\label{eq:risk} \mbox{reduction including climate change adaptation,} \mbox{1 tourism and environmental}$

education. In doing so, he has learned about the rich contributions available from millennia of human endeavours in terms of livelihoods, culture, and wisdom. While

his focus has tended to be learning from the past in order to build more sustainable

island futures, it is becoming increasingly clear that an agenda focused on the

contemporary environment, often dominated by climate change, is displacing the

much wider variety of island knowledge sources and research topics available.

While we commend the efforts to highlight island sustainable development, especially

for SIDS, we are disappointed that such efforts appear exclusively driven by some, very specific, environmental concerns focusing on contemporary knowledge and

interests, namely climate change. That occurs to the extent that we now feel added

pressure to channel our more generic interests in the study of islands to only

particular pursuits, often dealing with 'capacity building' and 'climate risk

management'. The challenge is not to denigrate or reduce this work; we believe that

it is needed and should be continued with high prominence. Instead, the challenge is

to place that work in wider and more critical contexts to ensure that a single-minded focus for islands, especially SIDS, does not cause more problems than it solves

through losing touch with the rich tapestries of history, knowledge, wisdom and

political sensibility.

2. The case of SIDS: more than meets the eye?

This choice of focus is easy: SIDS have long championed 'sustainable development'

from their formal recognition as a UN category in 1994 (UN, 1994) and continuing

into many regional and international fora today (eg Natural Resources Forum, 2007;

Strachan and Vigilance, 2008; Sustainable Development, 2006; UN, 2005; UNISDR,

2005) where climate change is particularly highlighted. SIDS have been fairly visible of

late on the international stage precisely because of the iconic implications of climate

change on their territories, as especially emphasised by the low-lying atolls but not

forgetting that climate change severely affects all SIDS in multitudinous ways.

Since the Alliance of Small and Island States (AOSIS) was created in 1990, the SIDS community has been championing reductions in greenhouse gas emissions in order to limit global temperature rise which, amongst other effects, will lead to the thermal expansion of ocean water and the melting of ice caps, these two factors being the main likely contributors to sea level rise over the next century. With some SIDS being entirely low-lying atolls which are just metres above sea level at high tide, even a minimal sea-level rise can have catastrophic implications on food, water, and inhabitable land. Four SIDS - Kiribati, Maldives, Marshall Islands and Tuvalu - are amongst the most threatened by sea-level rise. Their combined populations amount to just less than half a million residents.

But climate change is not a matter for low-lying SIDS only, since the effects of climate change extend beyond sea-level rise. They may be 52 separate jurisdictions around the world (of which 38 are member states of the UN) (UNOHRLLS, 2012), but SIDS by definition do not command large populations. The poignancy of their plight arises from the "proportional impact" of their small, scattered and low-lying land areas, and how even a small change or a relatively minor hazard could affect 100% of an entire country and its resident population (Lewis, 1979, 1999). Each island component of a SIDS (whether a single island state or an archipelago) has high proportional vulnerability; whereas megacities threatened by sea level rise – as are Jakarta, New York and Shanghai – even with many millions of residents each, contain only a small per cent of the area and population of their respective countries; as well as the fact that significant parts of each city are still likely to remain above sea level. This means that each city has the infrastructure, resources and political weight of a large country behind its adaptation challenges. The high proportional impact on SIDS obliterates similar circumstances for the SIDS.

But high proportional vulnerability is not restricted to SIDS. By 2030, millions of people in the coastal zone of Bangladesh, one of the world's poorest and most densely populated states, will be amongst the most vulnerable to a 1.5 metre rise in sea-level. The Bangladeshi population of 161 million is still growing at 1.7% per annum (CIA, 2012) and 45% of the population remains engaged in agriculture. It will not be easy for the many progressively displaced from coastal regions to move inland and settle. The possibility that India and Burma would close their borders to try and

control immigration from Bangladesh would further restrict mobility options. SIDS and Bangladesh have numerous similarities in terms of proportional vulnerability, in terms of the challenges they face from climate change, and the difficulties faced for potential migrants.

The SIDS and Bangladesh may differ in the political and jurisdictional opportunities available that may facilitate the mobility of some of their citizens to other countries; even if that movement is largely involuntary and comes at a high cultural and personal price. Certainly, no intimation is made that such movement would be desirable or simple. While some SIDS citizens have the resources and inclination to move—and migration has, in fact, long been a mainstay of most SIDS' economies—others have such a strong attachment to their land and place-based identity that they might not choose to move even if their entire island were threatened.

But if SIDS people accept—or are forced to accept—migration as an option, then some of them have options available which provide unusual choice amongst all countries threatened by climate change including Bangladesh. The Marshallese benefit from a compact of free association with the US, which allows them to work "indefinitely" in the US and to have an easier immigration route to that country (USCIS, 2011). Kiribati has a long-standing tradition of providing trained seamen to the world's ocean-going fleets; its 'migration with dignity' policy has been encouraging locals to develop additional skills that will be useful to land jobs in potential immigration countries (foremost amongst which are Australia and New Zealand); and from which remittances would be generated and then sent to support those family members left behind (Maclellan, 2011). The interim government of Fiji has signalled its willingness to adopt a policy that will allow I-Kiribati and Tuvaluans to move to Fiji from islands that are becoming unproductive and, in the longer-term, uninhabitable, because of environmental changes linked to global warming (Bedford and Bedford, 2010: 90-1). In 2012, talks started between Kiribati and Fiji regarding Kiribati purchasing land from Fiji for resettlement, with the Natoavatu Estate on Vanua Levu being approved for sale by Fiji's government in August 2013. Meanwhile, the Maldives has built Hulhumalé, a reclaimed artificial island absorbing the current and forecast residential, commercial and industrial development needs of the Malé (capital) region (eg Füssel, 2012).

Yet despite these real and present debates, and the migration choices which SIDS peoples are likely face in the near future, it would be wrong to classify, and condemn, these SIDS as 'disappearing', 'drowning' or 'sinking' (Farbotko, 2005; 2010), thus justifying interventionist environmental and development policies replete with discussion of wholesale outmigration. SIDS peoples should not be mistakenly dubbed as 'climate change victims', helpless and vulnerable to the whims of the outside world, waiting and wanting to be rescued. The islanders themselves frequently resent and dispute the victimhood appellation; they want to, and can, control their own affairs (McNamara and Gibson, 2009).

Moreover, physical science data do not necessarily provide incontrovertible evidence for such disappearing, drowning or sinking. Webb and Kench (2010) investigated changes over past decades across 27 atoll islands in Kiribati, Tuvalu and the Federated States of Micronesia, finding a variety of changes, but few examples of an overall decrease in land area despite documented sea-level rise. Similarly, Ballu et al (2012) demonstrated that geological subsidence dominated sea level rise for various islands in Vanuatu where one village was moved in 2002-2004, its inhabitants being portrayed by the media as climate change refugees. Meanwhile, Rankey (2011) investigated shoreline changes to 17 atolls of Kiribati, documenting an acceleration of change in recent years in some cases, along with a mix of both erosion and accretion processes. These evidence-based observations provide a complex picture, and the attribution or otherwise of the observed changes to climate change or sea-level rise is neither self-evident nor straightforward. Nevertheless, despite a lack of systematic, long-term data, the thrust of international diplomacy from AOSIS and SIDS-from all SIDS, not just the low-lying ones—regarding climate change undermining their sustainable development has certainly helped to put these places on the global radar, generating significant foreign interest and intervention to promote long-term sustainable development initiatives, most notably for climate change adaptation. Indeed, the status of all SIDS citizens as 'climate change victims' and expected 'climate refugees' is also the result of the media campaigns of the most threatened SIDS and of their citizens: some voluntarily appear in the international media as such, and their elites and general public may argue that it is better for them to be visible as victims of climate change than not be visible at all, a moot point. In this way, they have discovered an international relevance similar to the security discourse that

dominated during the Cold War and which then kept some SIDS in the international

eye (eg Campling and Rosalie, 2006; Shibuya, 1996-1997).

3. The Blue/Green emphasis: examples from SIDS

Within this debate, particularly the shift towards climate change as the greatest threat

facing humanity (eg King, 2004), what has happened to wider pursuits of other important pressing social indicators of well-being, health and livelihood? The media,

research and policy spotlights have been thrust firmly on the plight of all SIDS with a

discourse of the desperate attempts of their citizens to fight beach erosion at home,

while developing exit options elsewhere. With this dominant international script for

their residents – a script encouraged by the most threatened SIDS governments –

there appears to be much less interest (and investment) by the international

community, and by some SIDS authorities, in such immediate matters as health,

employment/livelihoods, education and other day-to-day topics, unless they are

somehow seen, or packaged, as sustainable development and climate change related.

For The <u>Seychelles</u>, Campling and Rosalie (2006) express concern that the intense

focus on economic and environmental vulnerabilities within the context of sustainable development has left social vulnerability aspects lagging behind. While the Seychelles

is overall seen as a good practice case study of balancing environmental conservation

and tourism, some authors still express concern about lingering social problems (eq

Quanz et al, 2009; Shah, 1995). The Seychelles may be faring better than most SIDS;

but solutions to its social problems lag behind solving its environmental problems,

even though the two are inextricably linked.

Timor-Leste is another case. Mercer et al (2013) explore the relationship amongst

nation- and state-building, disaster risk reduction and climate change adaptation using Timor-Leste, which gained independence in 2002, as an example. A major

challenge is that neither disaster risk reduction nor climate change adaptation has

been made to align to address immediate development needs. The country still

suffers from the after-effects of the Indonesian occupation and associated violence.

Natural resources are a dilemma, in terms of needing the money from fossil fuel

reserves for immediate development, yet being aware of the long-term environmental

implications of exploiting those reserves (Steele, 2002). Immediate development needs amongst the population include adequate health and education, gender equity, good governance, and avoiding corruption and aid dependency due to the large donor presence. Achieving a balance between short-term and long-term needs, or more appropriately ensuring that long-term sustainable development is created through addressing short-term needs, is neither simple nor easy. It seems clear from Mercer et al's (2013) analysis that the integration between short-term and long-term sustainable development processes has not been achieved for Timor-Leste.

Papua New Guinea (PNG) is a SIDS that provides a poignant example in terms of a significant contrast between the ostensible interest in long-term sustainable development goals compared with present needs clearly remaining unaddressed. In terms of long-term sustainable development endeavours, PNG has an 'Office of Climate and Development' that is "tasked with ensuring Papua New Guinea follows a path of climate-compatible growth: that its economy develops while simultaneously mitigating greenhouse gas emissions and reducing vulnerability to climate change related risk" (PNG-OCCD, 2013). Not being classified as a Least Developed Country, PNG did not need to produce a National Adaptation Programme of Action (NAPA); but nonetheless spends resources on needed, official communications to the United Nations Framework Convention on Climate Change (UNFCCC) (eg PNG, 2000). Meanwhile, short-term development challenges continue. In 2012, PNG ranked 150th out of 176 countries in the Corruption Perceptions Index (Transparency International, 2012) that indicates an extremely high expectation of corruption in the country. For 2013, PNG is ranked 156th on the Human Development Index (UNDP, 2013a), attesting to severe immediate development problems. As UNDP in PNG acknowledges:

Only about 40 percent of Papua New Guineans enrol in school, 5.5 percent of babies born will die before they are two years old and the average life expectancy is just 57 years at birth... Thirty-seven percent of PNG's population lives below the national poverty line and PNG is one of the poorest countries in Asia and indeed the world. (UNDP, 2013b)

Short-term, day-to-day development challenges are not being suitably addressed, let alone solved, in PNG.

Haiti is notorious for being one of the poorest and least developed SIDS, having suffered centuries of abuse and exploitation by colonial and post-colonial powers, as well as a suite of environmental calamities (eg Dubois, 2012). Hurricane Jeanne in 2004 killing over 3,000 people, and the four hurricanes of 2008 killing over 1,000 people and causing more than US\$1 billion in damages (eg Goldenberg, 2009) were apparently not enough to expose a situation of chronic weakness and underdevelopment such that it would be addressed adequately. Instead, on 12 January 2010, the region of the capital city Port-au-Prince was rocked by a powerful, shallow earthquake. The ensuing disaster was not so much in the earth shaking, but in the collapse of shoddy constructions, limited local capacity for dealing with the disaster, and an appalling international response which not only re-introduced cholera into the country, but which also perpetuated many of the underdevelopment and vulnerability challenges which caused the disaster in the first place (Schuller and Morales, 2012). Mora (2010) expresses frustration at a pre-January 2010 focus on climate change in Haiti, compared to other hazards, possibly spurred by the earlier cyclone disasters. In fact, Haiti spent time preparing a NAPA for UNFCCC (Haiti Ministry of the Environment, 2006). Shaw (2011) describes how, in December 2009, just before the earthquake, Haiti "set up a climate change division within its environment ministry"—was any similar effort put into a risk division for earthquakes (or other hazards, for that matter)? Brick (2013, np) admits that:

the impacts of climate change are exacerbated in Haiti by other factors. Poverty, plus political instability, complicated land tenure policy, and a lack of government regulation, have driven poor rural farmers to cut trees for charcoal production, or to replace them with annual crops that offer less environmental protection.

Focusing on the long-term challenge of climate change is necessarily impacted by dealing with the everyday realities of current underdevelopment. Returning to <u>Kiribati</u>, Gaillard (2012) suggests that climate change funding and action has overturned the need to address day-to-day development concerns. It may be a dispersed and fragmented (archipelagic) state with a population of around 100,000, half of whom

live in the capital thereby concentrating development problems there, but I-Kiribati society has proved to be "highly adaptive" (ibid: 261), having faced serious environmental and social challenges over time. Moreover, national and local institutions are uncomfortable with the idea of planning as introduced (imposed and now expected) by (post) colonial governments and international aid agencies (Thomas and Tonganibeia, 2007) while many development problems in Kiribati, such as water, are indicated as being a climate-related problem yet long-standing cultural and religious factors introduce significant constraints to adaptation (Kuruppu, 2009). Furthermore, western-led projects are often considered by local leaders for their short-term benefits (read: financial compensation) rather than long-term outcomes (Gaillard, 2012: 262). And yet, perhaps the most poignant critique is that Kiribati's official response to climate change - the Kiribati Adaptation Project - as designed by international 'experts', has mainly benefitted the urban capital of Tarawa (even while being promoted as applying to all of Kiribati), and has seen most of its over US\$ 6 million allocation "gone into the retribution of foreign consultants" (ibid.). Sounds familiar? It should: this analysis indicates that the urban and western bias of traditional development assistance (eq Lipton, 1977) is repeated. Should we thus be surprised that wily local islanders 'play games' in their responses to the "tidal wave" of green/blue-tied development aid (eg Hau'ofa, 1983)?

4. Let's play the game, then

The name of the game is to be blue and green: facilitating the allegedly pristine and natural qualities of both the marine and terrestrial environments; preserving or restoring the coast's current shoreline and its coral reefs with other parts of the marine ecosystem; and protecting property and other infrastructure, both private and public, in coastal locations. Many SIDS, and others, are now caught in a drive to brand themselves as green and as blue as possible, in pursuit of 'more sustainable living', without always having a specific definition or description. Samsø (in Denmark) and El Hierro (Canaries, Spain) are amongst the most famous of these enisled "geographies of hope" (Turner, 2007: 27-44). The initiative is seen to have many positive spinoffs: cutting down on fossil fuel consumption and import bills; promoting a more eco-friendly environment for residents and would-be visitors; securing the attention, promotion and support of environmental groups; fostering economic

development without the polluting effects of manufacturing; and encouraging ecotourism (eg Green Islands, 2013).

In so doing, however, the focus risks shifting decidedly – and alarmingly – away from issues of power and inequality, often classically represented by left (red) and right (black) leanings along the ideological and political spectrum. Indeed, within sustainable development concerns, the climate change discourse has two contradictory disarming qualities about it. On the one hand, it suggests that climate change – like death – is a great leveller: the rich, as much as the poor, are affected by climate change because climate change is a global challenge for everyone. This may well be the case, but only in the very long run, in the remote case that the future of the whole human race ends up in jeopardy or if day-to-day life across the entire planet is substantially impacted. On the other hand, and immediately, SIDS and others, especially indigenous peoples, have identified climate change as being fundamentally a concern about justice and human rights (eg Aminzadeh, 2006; Indigenous Peoples' Global Summit on Climate Change, 2009) in that those who have polluted least are liable to face the brunt of the effects of climate change. UNFCCC agreements, including the Kyoto Protocol, specifically distinguish between developed and developing countries, giving them different responsibilities, and frequently identify the Least Developed Countries (LDCs) and SIDs as being the most vulnerable to climate change and needing the most support to deal with it.

Irrespective of a perspective à la *Kraken Wakes* (Wyndham, 1953), climate change, and the responses brought to bear against it, *will* and *do* discriminate; and, as usual, discriminate disproportionately against the poor and powerless. <u>Table 1</u> provides a schematic (albeit stylised) rendition of the winners and losers from medium-term climate change impacts on low-lying island and coastal areas; and how these connect with, and impact on, the world's rich and poor (*also* Glantz, 1989; Glantz et al, 1990).

Those who will be affected least by climate change, or not at all, tend to be those who have the fiscal and political resourcefulness to move around and undertake 'jurisdictional shopping'. Should certain environments or islands, even whole SIDS, be compromised, they can vote with their feet, having the financial and political leverage to choose their destination. They notably include "nomad millionaires" (Palan, 2006), those with dual citizenship and multiple passports, and many other "high net worth

individuals" with considerable liquid assets that can be switched around the globe electronically. Sheller and Urry (2006: 219) call these "... a 'kinetic elite', whose ease of mobility differentiates them from the low-speed, low-mobility majority."

		Rich and Powerful	Poor and Powerless
Climate change	Winners	'Kinetic elite'	Proprietors of attractive, high ground, inland
		Coastal residents;	
		owners of second	Residents of
	Losers	homes by the sea;	low-lying, unattractive
		investors in	coastal areas
		tourism infrastructure	

Table 1: Winners and losers from climate change impacts on low lying island and coastal areas, and how they affect the rich and the poor.

Those who are likely to suffer the brunt of climate change impacts are the poor and politically ineffective who inhabit low-lying coastal areas not deemed accessible, safe or aesthetically pleasing enough to warrant the interests of property developers or tourism operators. These could be estuarine zones, marshes, mud flats, swamps and mosquito-infested areas, liable to high tides, shoreline erosion, dangerous currents, unpleasant odours and/or stormy weather. These are also likely to be the sites where minimal investment in climate change adaptation will be undertaken.

Instead, it will be more upscale coastal residents; owners of second (summer, winter, or just holiday) homes by the sea; and investors in private tourism infrastructure (hotels, water sports facilities, seaside restaurants and other beach/summer related businesses) who will likely attract most attention from those wanting to take measures to 'manage' or 'stop' climate change impacts. Such measures will have a higher social and political visibility, and will be justified by their clear connection with tourist revenue. Some of these measures will be undertaken by the private property

owners themselves, concerned with the protection of their own investment; but in

many cases, they will be (at the very least) co-financed by public funds. Ironically,

some of these very measures – such as 'beach nourishment' or shoring up the

beachfront with boulders and concrete defences – can, in themselves, be unsustainable and short-term because they can increase flood vulnerability (Etkin,

1999), and have the potential to exacerbate long-term erosion in front of, or adjacent

to, any structural defences (Finkl and Walker, 2002).

Finally, there may be unexpected benefits accruing to the owners of suitable inland

properties or lots, especially on higher ground and commanding wide views. They

may see the market value of their properties rise, even as that of coastal properties

wanes. This would be the reverse scenario of what started happening on many SIDS a

century or so ago. Prime agricultural land fell in value as cash crop production -

sugar, tobacco, banana, copra – became unprofitable; while what were infertile,

degraded and saline plots of land near the coast, not suitable for farming, accrued in

value with the emergence of beach leisure and tourism industries (Löfgren, 2002).

Conversely, not all SIDS communities have the option to buy and sell land; in many

Pacific islands, more than 95% of land can be protected by customary title and

cannot be sold. What happens to the titles of that land which disappears due to

realigning coasts under climate change? Are the families forced to migrate off the

island? That would not be migration induced by climate change per se, but would be

migration because social structures do not permit on-site adaptation to climate

change impacts. Any sustainable development advantages of customary land structures in a stable environment could be lost due to the dynamism induced by

climate change.

5. Elusive island sustainable development

The challenges arising from extreme weather, coastal erosion, freshwater

contamination, threats to biodiversity, employment/livelihoods, energy, and resource

scarcity are increasingly pronounced in SIDS due to a combination of internal and external factors. The environmental focus is appreciated, especially after centuries of

neglect in an imperial and industrial age when enterprising elites assumed that

abundant natural resources were both unlimited and meant for subjugation and

exploitation. Moreover, SIDS present themselves today as the proverbial canaries in the coalmine, especially with respect to climate change (Benwell, 2011) in that SIDS'

will experience climate change first, portending what will happen to other locations.

Thinking about the future, especially given the uncertainties, is needed and

welcomed.

And yet, have we now gone too far in the opposite direction in terms of aiming for

sustainable development in, and for, a distant future emphasising climate change,

without considering the more pressing needs of the moment? And have we

presented climate change too much as being "global environmental change", even if

caused by humans, thereby drawing attention away from local and social problems

which also contribute to the witnessed difficulties? To what extent are 'global

environmental' concerns and 'the future' both social constructions, obsessions of the

modern era? If the past has been described as "a foreign country" (Lowenthal, 1985),

should not 'the future' be considered with at least some healthy scepticism? Are we

pushing forward an agenda that marginalises key social, political, economic and

cultural issues, especially those that should be addressed locally, in preference for

strictly global environmental ones?

Furthermore, the green/blue sustainable development agenda being championed by

the SIDS is not always borne out by the scientific evidence. For, ultimately, within

current economic paradigms and applications, many islands cannot be sustainably

developed. True, islands, and SIDS in particular, stand out nicely as prototypes,

synecdoches and 'master metaphors' of what can and should be done, and they can

be presented as shining microcosmic examples for others to follow (Baldacchino,

2007: 9). Small islands are "good to think with" (Gillis, 2004: 9), and they provide

dramatic and illustrative models of both good environmental management as much

as of malpractice (eg Nunn, 2007). But the island sustainable development factor is

only tenable and credible at certain analytic scales. Change the focus, widen or narrow the magnification, simultaneously consider 'big picture' and 'small picture'

inputs and outputs, and suddenly the island, any island, might not be sustainable any

more.

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Indeed, according to a 2006 World Wildlife Federation report, Cuba (a SIDS) is the *only* country in the world that meets the WWF's criteria for 'sustainable development': it combines high human development standards (through high literacy and health indices) with a low ecological footprint (including the rate of electricity consumed, plus carbon dioxide emitted, per capita) (Bachtell, 2009; also Mayo, 2012: 27). Would Cuba be anywhere close to such a status were it to 'open up' to foreign investment and without having to contend with a US-led embargo? 'Environmentally sustainable socialism' may be the exception that proves the rule: Cuba's 'success' presumably "... has a LOT to do with having no other choices (once the trade embargo with the US, and the collapse of the Soviet Union, cut off most its external trade)" (Ecosherpa.org, 2006; emphasis in original; also Hansen, 2007) while governance via totalitarian dictatorship helps to keep the masses in line.

As for other SIDS, consider, for example, the matter of carbon neutrality. Mohamed Nasheed, when President of the Maldives from 2008-2012, went on a climate change crusade, offering his country as a test bed for climate change mitigation through carbon neutrality. Analyses of the Maldives suggest that, realistically, carbon neutrality is not compatible with sustainable development for the country. Its 2009 national carbon audit (Bernard et al, 2010) shows that tourism is the economic sector with the plurality of in-country greenhouse gas emissions, accounting for 36% of the Maldives' in-country carbon equivalent emissions and dwarfing the second largest sector (which is electricity generation) coming in at 19%. Some 650,000 international tourists (more than one-and-a-half times the country's population) visit the country annually and the emissions from their international flights were calculated to be equal to the domestic emissions from all of the Maldives (Bernard et al, 2010). These emissions, though, exclude shipping from cruise ships and yachts visiting the country, along with goods brought in by sea.

Achieving complete carbon neutrality would only be feasible for the Maldives by severely restricting international tourism, its main foreign exchange earner (Domroes, 2001). CIA (2012) describes how tourism, the Maldives' largest economic activity, accounts for 28% of GDP and more than 60% of foreign exchange receipts. Over 90% of the state's tax revenue comes from import duties and tourism-related taxes. Fishing is the second leading sector, but the fish catch has dropped sharply in recent years. With a country debt of twice annual budget revenues and an annual budget

deficit equal to nearly two-thirds of budget revenues (CIA, 2012), the Maldives cannot

afford to throttle tourism.

Thus, the SIDS sustainable development rhetoric can go only so far. Despite the

Maldives' high-profile—and, to a large degree, legitimate—battle against climate change, the country cannot embrace sustainable development entirely, without

experiencing a massive decline in its citizens' standard of living, and radically toning

down the expectations of 'development'.

The stark and contemporary economic truth is that SIDS' economies do well when

they competitively tap foreign markets with their tangible or intangible exports. These $\,$

used to be cash crops (eg banana, sugar, copra, and tobacco) or minerals (eg

phosphate, nickel, and bauxite). Today, they are increasingly service-based (with

offshore finance, tourism, transhipment, geo-strategic rents, foreign language teaching and internet domain name rental among these). These services do not suffer

as much from the absence of economies of scale or the higher costs and irregularity

of unit air or sea transport. It is precisely those SIDS that are ill-suited to tap into

foreign markets (for economic or political reasons, or both, as in the case of Cuba)

that economically suffer and, as such, display sustainable development. To make

themselves more sustainable, SIDS need to be or become insular and self-reliant; but

islands are often anything but (Eriksen, 1993; Gosden and Pavlides, 2002). Various

sustainable development practices around the world, such as slow food (growing and

using food locally) and 'staycations' (staying at home for holidays), would spell the

economic demise of small economies that depend on food exports and/or tourism

for their foreign exchange earnings.

6. Attractions of sustainable development

The attraction of pursuits in favour of sustainable development, for the sake of

insuring 'the future' within the context of climate change, without at least an equivalent focus on what could and should be done now, stem from a number of

causes. Foremost among these is a deep-seated modern belief in science, technology

and geo-engineering, and their ability to steer, facilitate, manage or pre-empt

harmful change (see critiques in Davies, 2011; Gardiner, 2011; Shepherd et al, 2007).

Second is some sense of commitment by the current generation to act as stewards of

the environment for future generations. Inspired by the likes of the Brundtland

Report (WCED, 1987), explicit debates on intra- and inter-generational equity have become increasingly prominent (eg Glantz and Jamieson, 2000). This drive for a

balance amongst generations has inspired research on the rights and duties of

'custodianship' (eg Acciaioli, 2010; Lettsome and Mills, 2003; Trundle, 2010). But it

also carries implications of how we, here and now, envisage the 'future' and how we

may seek to construct and determine it.

Third, from a SIDS perspective, is a thinly-veiled selfishness. Many SIDS communities

and governments are recognising that supporting sustainable development principles, and many sustainable development practices, for the long-term is not a question of

comfort or luxury, but of survival, with climate change at the forefront. But

irrespective of climate change, SIDS such as Kiribati and Barbados have severe

freshwater and waste management problems (ISF-UTS, 2011; Brown, 2012).

Irrespective of climate change, extremes can challenge survivability, as occurred in

Tuvalu during September-October 2011 when desalination equipment was airlifted

there on an emergency basis in order to deal with a drought (BBC News, 2011)—an

extreme which will be expected to occur more frequently under climate change (IPCC, 2007).

As with the Maldives and tourism, many such problems are exacerbated by the desire

for modern amenities. For the Maldives, it is foreign cash and cash-based jobs giving

wider lifestyle choices. Worsening waste management on SIDS is emerging due to

the use of modern, non-biodegradable products such as batteries and plastics. Water

use per capita increases substantially with daily showers and flushing toilets. No one

can deny SIDS communities these options. It does mean that the rhetoric of/for

sustainable development, and the agenda promoted along with that, can ring hollow, when the lucidly expressed desires for the future are at variance with actions taken

today.

Conclusion: phase, phrase, craze

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In what has been called the 'post socialist' age, specific group identity has nowadays supplanted social class interest as the chief vehicle for political mobilisation (Fraser, 1995). Similarly, in our current addiction to the mantra of sustainable development, green/blue initiatives have supplanted or eclipsed other measures that may have sought to address other, more pressing, challenges in a contemporary world of exacerbated material inequality: in income, wealth, property ownership; in access to decent paid work, clean water, adequate daily calorific intake, education, health care and recreation; and in age-related rates of morbidity and mortality (eg Fraser, 1995). Wide-ranging and long-standing development concerns continue to afflict SIDS, irrespective of climate change: energy, water, gender equality, human rights, land use (Kelman, forthcoming). Such a shift in policy focus is unjust and not power-neutral, since it is likely to discriminate in favour of those who are already rich and socially influential (and including climate change scientists who benefit from research funding). Sustainable development with climate change at the core may have even eclipsed 'development' as the centre of one of today's incredibly powerful semantic constellations in the Western world that guides thought, behaviour and policy (cf. Esteva, 1992: 8).

Every fashionable trend and fetish eventually burns itself out, is overtaken by events or the next big idea, or becomes mainstream. The prospects for sustainable development becoming truly mainstream, to be accepted and implemented fully, seem to be increasingly diminishing given the expansion and dominance of shortterm capitalist approaches to resource management and allocation. Meanwhile, the sustainable development phrase(s) and phase(s) have both been critiqued: because of the inadequacies of current definitions, the hypocrisy of lifestyle actions by sustainable development advocates, the patronising philanthropic gaze they engender, and the contradictions in conceptualisations of sustainable development similarly to other populist shibboleths such as 'resilience', 'security', 'growth', 'transformation' and 'development' (eg Hickey and Mohan, 2004; Manyena, 2006; Paris, 2001). Will the future – assuming there is a future – look back at the sustainable development paradigm disparagingly and for comically being driven by naïve pretensions of apolitical science (epitomised by the IPCC), as much as for responding to emotive calls to save dying island cultures from rising waves (as epitomised by some SIDS' discourses)? If not humanity at large, if not the sustainable development consultants and other academics (ourselves included), then who will

truly end up benefitting handsomely from this current craze? We need to move

beyond the mono-dimensional characterisation of so many threatened island 'paradises', recognising sustainable development as a "sacralising discourse ... that

[also] betrays a neocolonial salvationist sensibility" (Elie, 2012: 223).

In this :with article, we have tried to argue and document how the need to show

progress on sustainable development, dominated by tackling climate change (and

thus securing climate change driven funding), can easily lead (in SIDS, most of all) to

a benign neglect of other, current and more pressing challenges. Does that

necessitate a trade-off between, say, preparing for earthquakes and climate change?

We think not, because it is not necessarily a zero-sum game. For instance, UNEP's

efforts to provide biomass fuelled cooking stoves in Haiti (UNEP, 2012) tackle the long-term challenge of climate change; yet, reading the details reveals a whole host

of reasons why the stoves are needed for immediate development concerns, such as

environmental conservation, indoor air quality, and saving money on charcoal. In

Samoa, Daly et al (2010) outline a participatory development process by which day-

to-day concerns in villages were tackled as part of coastal management and disaster

risk reduction in order to place climate change and longer-term futures into

immediate contexts.

We don't have to sacrifice or neglect the present to secure a future. As the old British

adage goes: blue and green should not be seen without a colour in between.

Endnote:

¹ Such as www.islandvulnerability.org/docs/islandsclimatechange.pdf

Bibliography

Shima: The International Journal of Research into Island Cultures

Acciaioli, G (2010) 'Lake and land at Lindu: imposition, accommodation and contestation in the revaluation of resources in Upland Central Sulawesi', *Asian Journal of Social Science* v38 n2: 239-257

Aminzadeh, S.C (2006) 'A moral imperative: the human rights implications of climate change', *Hastings International and Comparative Law Review* v30 n2: 231-265

Angelucci, F and Conforti, P (2010) 'Risk management and finance along value chains of small island developing states: evidence from the Caribbean and the Pacific', *Food Policy* v35 n6: 565-575

Bachtell, J (2009) 'Cuba shows that Planet Earth can be saved with the help from environmentally sustainable socialism', *Green Blog.* September 3: www.greenblog.org/2009/09/03/cuba-shows-that-planet-earth-can-be-saved-with-the-help-from-environmentally-sustainable-socialism – accessed April 2013

Baldacchino, G (2007) 'Introducing a world of islands' in Baldacchino, G (ed.) A World of Islands: An Island Studies Reader, Charlottetown and Luqa: Institute of Island Studies, University of Prince Edward Island and Agenda Academic: 1-29

Ballu, V, Bouin, M.N, Siméoni, P, Crawford, W.C, Calmant, S, Boré, J.M, Kanas, T, and Pelletier, B (2012) 'Comparing the role of absolute sea-level rise and vertical tectonic motions in coastal flooding, Torres Islands (Vanuatu)', *PNAS Proceedings of the National Academy of Sciences* v108 n32: 13019-13022

BBC News (2011) 'Australia, New Zealand in airlift to drought-hit Tuvalu', *BBC News* 7 October. 7th, archived online at: www.bbc.co.uk/news/world-asia-pacific-15210568 – accessed April 2013

Bedford, R.D., and Bedford, C (2010) International migration and climate change: a post-Copenhagen perspective on options for Kiribati and Tuvalu', in Burson, B (ed) *Climate Change and Migration: South Pacific Perspectives*, Wellington: Institute of Policy Studies, Victoria University of Wellington: 89-134

Benwell, R (2011) 'The canaries in the coalmine: small states as climate change champions', *The Round Table*: *Commonwealth Journal of International Affairs* v100 n413: 199-211

Bernard, F, Khelil, T.B, Pichon, V, and Tissot, L (2010) *The Maldives' 2009 Carbon Audit*, Paris: BeCitizen

Brick, D (2013) 'Development to help people adapt to climate change in Haiti', *Fletcher Forum of World Affairs*, February 21st, online at: www.fletcherforum.org/2013/02/21/brick – accessed April 2013

Brown, D (2012) 'New waste-to-energy facility helps Barbados toward greener economy', *Inter Press Service*, July 18th: www.ipsnews.net/2012/07/new-waste-to-energy-facility-helps-barbados-toward-greener-economy/ – accessed April 2013

Campling, L, and Rosalie, M (2006) 'Sustaining social development in a small island developing state? The case of Seychelles', *Sustainable Development* v14 n2: 115-125

CIA (2012) CIA World Fact Book, Washington DC: Central Intelligence Agency, online at: www.cia.gov/library/publications/the-world-factbook – accessed April 2013

Daly, M, Namouta, P, Nelson, F, and Kohlhase, J (2010) 'Reducing the climate vulnerability of coastal communities in Samoa', *Journal of International Development* v22 n2: 265-281

Davies, G (2010) 'Geo-engineering: a critique', Climate Law v1 n3: 429-441

Domroes, M (2001) 'Conceptualising state-controlled resort islands for an environment-friendly development of tourism: the Maldivian experience', *Singapore Journal of Tropical Geography* v22 n2: 122-137

Dowell, S.F, Tappero, J.W, and Frieden, T.R (2011) 'Public health in Haiti: challenges and progress', *New England Journal of Medicine* v364 n4: 300-301

Dubois, L (2012) Haiti: The Aftershocks of History, New York: Metropolitan Books

Ecosherpa.org (2006) 'Cuba only country with sustainable development' *Ecosherpa*, October 26th: www.ecosherpa.com/news/cuba-only-country-with-sustainable-development – accessed April 2013

Elie, S.D (2012) 'From ethnography to mesography: a praxis of inquiry for a post-exotic anthropology', *Qualitative Inquiry* v19 n3: 219-231

Eriksen, T.H (1993) 'Do cultural islands exist?', *Social Anthropology* n1, archived online at: folk.uio.no/geirthe/Culturalislands.html – accessed 5 April 2013

Esteva, G (1992) 'Development', in Sachs, W (ed.) *The Development Dictionary*, London: Zed: 6-26

Etkin, D (1999) 'Risk transference and related trends: driving forces towards more mega-disasters', *Environmental Hazards* v1 n2: 69-75

Farbotko, C (2005) 'Tuvalu and climate change: constructions of environmental displacement in the Sydney Morning Herald', *Geografiska Annaler: Series B, Human Geography* v87 n4: 279-293

Farbotko, C (2010) 'Wishful sinking: disappearing islands, climate refugees and cosmopolitan experimentation', *Asia Pacific Viewpoint* v51 n1: 47-60

Fielding, D (2010) 'Aid and Dutch Disease in the South Pacific and in other small island states', *Journal of Development Studies* v46 n5: 918-940

Finkl, C.W and Walker, H.J (2002) 'Beach nourishment', in Chen, J, Eisma, D, Hotta, K and Walker, H.J (eds), *Engineered Coasts*, Dordrecht, the Netherlands: Kluwer: 1-22

Fraser, N (1995) 'From redistribution to recognition: dilemmas of justice in a post-socialist age', *New Left Review* v212 July/August: 68-93

Füssel, H.-M (2012) 'Vulnerability of coastal populations' in Edenhofer, O, Wallacher, J, Lotze-Campen, H, Reder, M, Knopf, B and Müller J (eds) *Climate Change, Justice and Sustainability: Linking Climate and Development Policy*, Oxford: Springer: 45-57

Gaillard, J.C (2012) 'The climate gap', Climate and Development v4 n4: 261-264

Gardiner, S.M (2011) 'Some early ethics of geo-engineering the climate: a commentary on the values of the Royal Society Report', *Environmental Values* v20 n2: 163-188

Ghina, F (2003) 'Sustainable development in small island developing states: the case of the Maldives', *Environment, Development and Sustainability* v5 n1: 139-165

Gillis, J.R (2004) *Islands of the Mind: How the Human Imagination created the Atlantic World*, London: Macmillan

Glantz, M.H (1989) 'Assessing the impacts of climate: the issue of winners and losers in a global climate change context', paper prepared for conference on Adaptive Responses to Sea Level Rise and Other Impacts of Global Climate Change, Miami, Florida, 27 November – 1 December

Glantz, M.H, and Jamieson, D (2000) 'Societal response to Hurricane Mitch and intra versus intergenerational equity: whose norms should apply?', *Risk Analysis* v20 n6: 869-882

Glantz, M.H, Price, M.F, and Krenz, M.E (1990) *Report of the Workshop 'On Assessing Winners and Losers in the Context of Global Warming'*, St. Julians, Malta, 18-21 June, Boulder: Environmental and Social Impacts Group, National Center for Atmospheric Research

Goldenberg, S (2009) 'Season of dread returns as Haiti awaits devastating hurricane season', *The Guardian (UK),* 17 August 17th online at: www.guardian.co.uk/environment/2009/aug/17/haiti-hurricane-season – accessed 5 April 2013

Gosden, C, and Pavlides, C (1994) 'Are islands insular? Landscape vs. seascape in the case of the Arawe Islands, Papua New Guinea', *Archaeology in Oceania* v29 n1: 162-171

Green Islands (2013) '50 Green Islands from around the World', *Global Islands Network*: www.globalislands.net/greenislands/ – accessed 5 April 2013

Haiti Ministry of the Environment (2006) *National Adaptation Programme of Action* (in French), online at: unfccc.int/resource/docs/napa/hti01f.pdf – accessed 5 April 2013

Hansen, T (2007) 'What does sustainability mean in Cuba? Socialist Cuba champions environmentally sustainable development', *Fire This Time* website: www.firethistime.net/ftt41_cubaenviro.html – accessed 5 April 2013

Hau'ofa, E (1983) Tales of the Tikongs, Honolulu: University of Hawai'i Press

Hewitt, K (ed) (1983) *Interpretations of Calamity from the Viewpoint of Human Ecology*, Boston: Allen and Unwin

Hickey, S, and Mohan, G (eds) (2004) *Participation: From Tyranny to Transformation*, London: Zed

Huang, J.C.K (1997) 'Climate change and integrated coastal management: a challenge for small island nations', *Ocean and Coastal Management* v37 n1: 95-107

Indigenous Peoples' Global Summit on Climate Change (2009) *Report of the Indigenous Peoples' Global Summit on Climate Change*, April 20-24th, Indigenous Peoples' Global Summit on Climate Change: Anchorage

IPCC (2007) Fourth Assessment Report. Geneva: IPCC (Intergovernmental Panel on Climate Change)

ISF-UTS (2011) *Kiribati Water, Sanitation and Hygiene Sector Brief*, prepared for AusAID by the Institute for Sustainable Futures, Sydney: University of Technology

Sydney, online at: www.isf.uts.edu.au/pdfs/ISF_KiribatiWASH.pdf – accessed 5 April 2013

Kelman, I (forthcoming) 'No change from climate change: vulnerability and small island developing states', *The Geographical Journal ANY UPDATE ON WHETHER THIS IS NOW PUBLISHED?*

King, D (2004) 'Climate change science: adapt, mitigate, or ignore?' *Science* n303: 176-177

Knutson, T.R, McBride, J.L, Chan, J, Emanuel, K, Holland, G, Landsea, C, Held, I, Kossin, J.P, Srivastava, A.K, and Sugi, M (2010) 'Tropical cyclones and climate change', *Nature Geoscience* v3 n1: 157-163

Kuruppu, N (2009) 'Adapting water resources to climate change in Kiribati: the importance of cultural values and meanings', *Environmental Science & Policy* v12 n7: 799–809

Lettsome, B, and Mills, A.P (2003) Island Systems Management: joined up GIS for environmental custodianship, paper presented to the 2003 *ESRI User Conference*, San Diego CA, July 7-11th

Lewis, J (1979) 'The vulnerable state: an alternative view' in Stephens, L and Green, S.J (eds), *Disaster Assistance: Appraisal, Reform and New Approaches*, New York: New York University Press: 104-129

Lewis, J (1999) *Development in Disaster-prone Places: Studies of Vulnerability*, London: Intermediate Technology Publications

Lipton, M (1977) Why Poor People Stay Poor: Urban Bias in World Development, Cambridge: Harvard University Press

Löfgren, O (2002) *On Holiday: A History of Vacationing*, Berkeley: University of California Press

Lowenthal, D (1985) *The Past is a Foreign Country*, Cambridge: Cambridge University Press

Maclellan, N (2011) 'Kiribati's policy for migration with dignity', *Inside Story* December 4th, online at: hinside.org.au/kiribati%E2%80%99s-policy-for-migration-with-dignity/ – accessed April 2013

Manyena, S.B (2006) 'The concept of resilience revisited', Disasters v30 n4: 433-450

Mayo, P (2012) *Politics of Indignation: Imperialism, Postcolonial Disruptions and Social Change, Abingdon: Zero Books/John Hunt Publishing*

McNamara, K and Gibson, C (2009) "We do not want to leave our land": Pacific ambassadors at the United Nations resist the category of 'climate refugees", *Geoforum* v40 n3: 475-483

Melick, D (2010) 'Credibility of REDD and experiences from Papua New Guinea', *Conservation Biology* v24 n2: 359-361

Mercer, J, Kelman, I, do Rosario, F, de Deus de Jesus Lima, D, da Silva, A, Beloff, A.M, and McClean, A (2013) 'Nation-building policies in Timor-Leste: disaster risk reduction and climate change adaptation', *Disasters*, forthcoming *ANY UPDATE ON WHETHER THIS IS NOW PUBLISHED?*

Mora, S and collaborators (2010) *Analysis of Multiple Natural Hazards in Haiti*, Report prepared by the Government of Haiti, with support from the World Bank, the Inter-American Development Bank, and the United Nations System, March 26h, online at: gfdrr.org/docs/Haiti_Multi-Hazard_RiskAssessment_Report_EN.pdf – accessed April 5th 2013

Natural Resources Forum (2007) Special issue on 'Addressing the vulnerability of SIDS' v31 n2: 99-131

Nunn, P (2007) 'Island origins and environments' in Baldacchino, G (ed) *A World of Islands: An Island Studies Reader*, Charlottetown and Luqa: Institute of Island Studies, University of Prince Edward Island and Agenda Academic: 107-142

Palan, R (2006) *The Offshore World: Sovereign Markets, Virtual Places and Nomad Millionaires,* Ithaca: Cornell University Press

Paris, R (2001) 'Human security: paradigm shift or hot air?', *International Security* v26 n2: 87-102

Pielke Jr., R, and Pielke Sr., R (1997) *Hurricanes: Their Nature and Impacts on Society,* New York: John Wiley and Sons

PNG (2000) Papua New Guinea: Initial National Communication under the United Nations Framework Convention on Climate Change, November, online at: unfccc.int/resource/docs/natc/papnc1.pdf – accessed 5 April 2013

PNG-OCCD (2013) Office of Climate Change and Development, Port Moresby: Government of Papua New Guinea

Quanz, C, Fleischer-Dogley, F, and Frühauf, M (2009) 'Compatibility of nature conservation and tourism on the Seychelles Islands: potentials, projects and problems', *Hercynia* v42 n1: 1-20

Rankey, E.C (2011) 'Nature and stability of atoll island shorelines: Gilbert Island chain, Kiribati, equatorial Pacific', *Sedimentology* v58 n7: 1831-1859

Schuller, M, and Morales, P (eds) (2012) *Tectonic Shifts: Haiti Since the Earthquake*, Sterling: Kumarian Press

Shah, N.J (1995) 'Managing coastal areas in the Seychelles', *Nature and Resources* v31 n4: 16-33

Shaheed, A (2010) *Letter to His Excellency Mr. Yvo de Boer, Executive Secretary, United Nations Framework Convention on Climate Change,* Malé, Republic of the Maldives: Ministry of Foreign Affairs

Shaw, R (2011) 'Climate change just one worry in struggling Haiti' *AlertNet* February 25th, online at: www.trust.org/alertnet/news/climate-change-just-one-worry-in-struggling-haiti – accessed 5 April 2013

Sheller, M, and Urry, J (2006) 'The new mobilities paradigm', *Environment & Planning A* v38 n2: 207-226

Shepherd, J, Iglesias-Rodriguez, D, and Yool, A (2007) 'Geo-engineering might cause, not cure, problems', *Nature* v449 n7164: 781

Shibuya, E (1996-1997) 'Roaring mice against the tide": The South Pacific Islands and Agenda-Building on Global', *Pacific Affairs* v69 n4: 541-555

Steele, J (2002) 'Nation-building in East Timor', *World Policy Journal, 19*(2), in Strachan, J and Vigilance, C (eds) (2008) *Sustainable Development in Small Island Developing States: Issues and Challenges*, London: Commonwealth Secretariat: 76-87

Sustainable Development (2006) Special issue on 'Small Island States and Territories: Sustainable Development Issues and Strategies: Challenges for Changing Islands in a Changing World' v14 n2: 75-147

Tannehill, I.R (1950) Hurricanes, Princeton: Princeton University Press

Thomas, F.R and Tonganibeia, K (2007) Pacific island rural development: challenges and prospects in Kiribati. In J. Connell & E. Waddell (eds.) *Environment, Development and Change in Rural Asia-Pacific: Between Local and Global*, London: Routledge: 38-55

Transparency International (2012) *Papua New Guinea,* online at: www.transparency.org/country#PNG – accessed 5 April 2013

Trundle, C (2010) 'Against the gated community: contesting the 'ugly American dream' through rural New Zealand dreams', in Trundle, C and Bönisch-Brednich, B (eds) *Local Lives: Migration and the Politics of Place*, Aldershot: Ashqate: 31-48

Turner, C (2007) *A Geography of Hope: A Tour of the World we need*, Toronto: Random House Canada

UN (1994) Report of the Global Conference on the Sustainable Development of Small Island Developing States, Document A/CONF.167/9 (October, 1994) from the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April–6 May, New York: United Nations

UN (2005) *Draft Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States,* Document A/CONF.207/CRP.7 New York: United Nations

UNDP (2013a) *International Human Development Indicators: Papua New Guinea,* online at: drstats.undp.org/en/countries/profiles/PNG.html – accessed April 2013

UNDP (2013b) Papua New Guinea, online at: www.undp.org.pg - accessed April 2013

UNEP (2012) *Cooking away climate change.* United Nations Environment Programme, http://www.unep.org/unite/30ways/story.aspx?storyID=23 – accessed 5 April 2013

UNISDR (2005) Building the resilience of nations and communities to disaster: an introduction to the Hyogo Framework for Action, Geneva: United Nations International Strategy for Disaster Reduction

UNOHRLLS (2012) United Nations Office for the High Representative of Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, online at: www.un.org/special-rep/ohrlls/sid/list.htm – accessed April 2013

USCIS (2011) Federated States of Micronesia, Republic of the Marshall Islands, and Palau. Washington DC: United States Citizenship and Immigration Services, online at: www.uscis.gov/portal/site/uscis/menuitem.5af9bb95919f35e66f614176543f6d1a/?vgne

xtoid=a9825565d1be3310VgnVCM100000082ca60aRCRD&vgnextchannel=ad3e1921c 6898210VgnVCM100000082ca60aRCRD – accessed April 2013

Venton, C.C, Venton, P, and Shaig, A (2009) *Cost Benefit Study of Disaster Risk Mitigation Measures in Three Islands in the Maldives*, Malé: United Nations Development Programme Maldives and Government of Maldives, Department of Housing, Transport and Environment

WCED (World Commission on Environment and Development) (1987) *Our Common Future,* Oxford: Oxford University Press

Webb, A.P, and Kench, P.S (2010) 'The dynamic response of reef islands to sea-level rise: Evidence from multi-decadal analysis of island change in the Central Pacific', *Global & Planetary Change* v72 n3: 234-246

Wyndham, J (1953) The Kraken Wakes, London: Michael Joseph

Yamamoto, L, and Esteban, M (2010) 'Vanishing island states and sovereignty', *Ocean & Coastal Management*, v53 n1: 1-9