Beautiful beaches like this one on Bali will not remain the epitome of ecological perfection with detritus of every imaginable description washing up on their shores.

5

Tourism on small islands:

The urgency for sustainability indicators

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ABSTRACT

To consider small islands as places for sustainable tourism—or sustainable anything, for that matter—must surely be cause for critical deliberation. Small islands as sanctuaries, or rare citadels for ecological safekeeping and tight-knit communities, runs counter to islands as sites for extraction and development, yet increasingly the latter prevails. However, the former are the precise reasons that small islands are aligned with the global travel supply chain. Consuming small islands abides with the tropical idyll narrative and, within such invocations, the exposure of small islands to externalities renders its utility to purposes that run counter to benign and constructive outcomes. Herein is the dilemma for small islands and their entanglements with tourism expansion.

The principal question posed asks: is the proliferation of tourism on small islands enhancing the development of social-ecological resilience, or accelerating the onset of system failure? If so, how can unfolding trajectories be monitored and assessed? The UNWTO's Mandatory Issue Areas for the observation of sustainable tourism are applied as guiding indicators. The urgency to articulate indicators of sustainable tourism development is palpable because the conceptualization of small islands as ideal tourist escapes will likely intensify. Small islands cannot afford to experience monumental blunders given their scale, adaptive capacity limitations, and relative fragility.

BACKGROUND

The concept of the island has long been prominent in literature and useful in science: biologists and geographers, national park managers and archaeologists, linguists, geneticists, and evolutionary theorists have all turned at times to the model of the island. Yet it might no longer be a great model for the new needs and concerns of our rapidly globalizing century (Robin, 2014, n.p.).

Robin's (2014) sentiments are a reminder of the way islands, as the received wisdom would have us believe, were sanctuaries from the madding world, where all that was unblemished could be found, and where nature thrived over and above the onerous influence of humans (Chandler & Pugh, 2018; Hauʻofa, 1994; Kothari & Arnall, 2017). The current epoch punctuated by global warming and rising sea levels and the spectre of human-derived garbage, seen in the Pacific Garbage Patch and on the remotest of islands in the Pacific, calls for urgent reassessment of the place of islands in contemporary imagination (Baldacchino, 2007; Pyrek, 2016). A call to arms, no less, arguing that the well-being of island communities is now more than ever outside of their control, buffeted by fickle winds originating far beyond, and diminishing their ability to deal with increasing frequency of climatic and economic shocks (Cheer & Lew, 2017; Connell, 2018; Grydehøj & Kelman, 2017; Lew & Cheer, 2017).

The sanctuary that islands once were has expired, and the imposts borne of peripherality and remoteness that once provided the steeliness islanders were famed for has slowly disintegrated (Kelman, 2018; Moore, 2010). Robin's (2014) doubts as to whether islands remain models of ecological perfection are epitomized on the beaches of Bali, where detritus of every imaginable description can be found. Islands as dumping grounds for the excesses of contemporary life are not new (Verlis & Wilson, 2020) as typified by the aptly named Iron Bottom Sound in the Solomon Islands, a burial ground for the assemblages of the Second World War in the Pacific.

That islands were considered robust, adaptable, and with the innate ability to bounce back from whatever was meted out was probably appropriate when things were more predictable and where the pressure on islands was less intense (Hauʻofa, 1994). Islands and their surrounding waterways—'aquapelagos', to use Hayward's (2012)

phrasing—are inseparable in that where one is compromised, the other suffers. Presently, small islands are increasingly under assault from the sea that surrounds them, not because of the ocean itself, but because of the human signatures that are writ large across the globe (Hernández-Delgado, 2015). The end result manifest is evidenced by the hopelessness of i-Kiribati to negotiate and overcome the effects of rising sea levels, hastened by global warming (Allgood & McNamara, 2017). Meanwhile, a world away in Washington, Canberra, and Beijing, the plight of small islands is an inconvenience to the pursuit of economic growth. Consequently, protest against the extraction and consumption of fossil fuels is consistently resisted in the interests of maintaining growth trajectories.

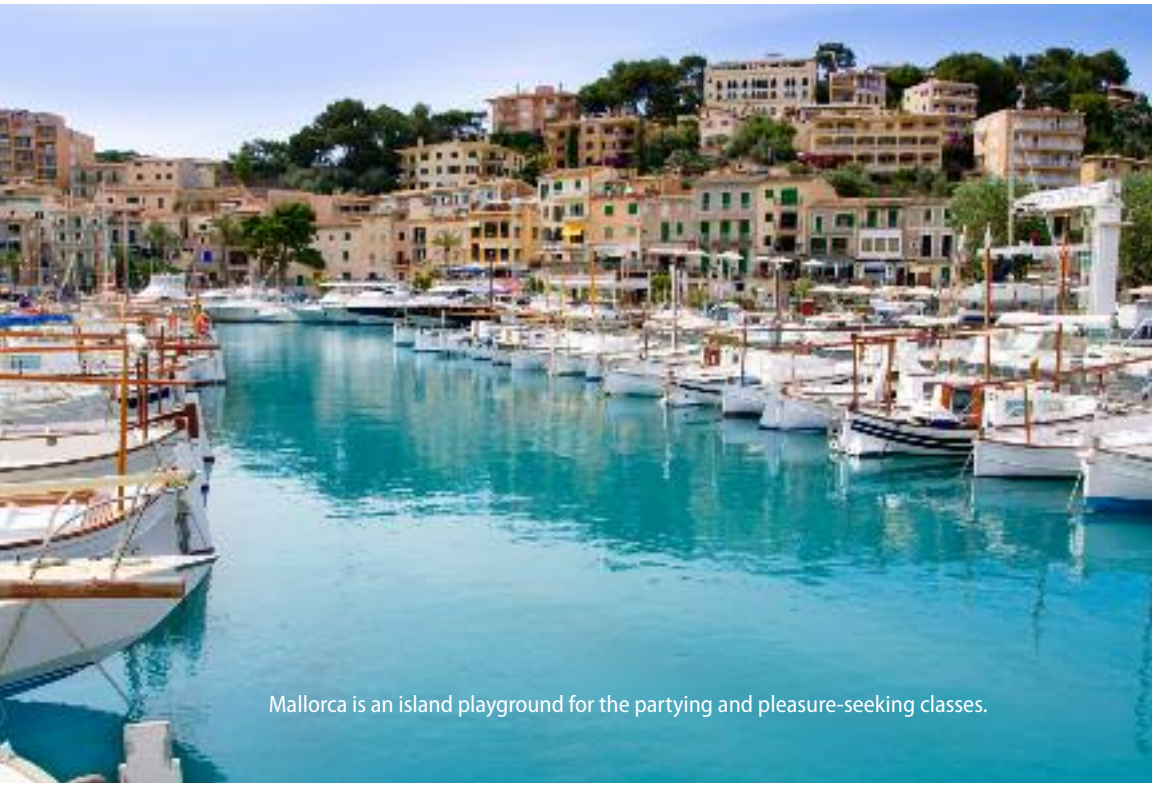
Might islands be given the rights accorded to other sentient beings as seen in assessments that rivers should be given the same rights as humans (O'Donnell & Talbot-Jones, 2018)? Islands, like rivers and tributaries, are life-support mechanisms for widespread and diverse ecosystems. That the Whanganui in New Zealand and the Ganges and Yamuna in India, non-human entities all, have been accorded the same rights as humans should jettison notions of islands as disposable landscapes (Farbotko, 2010). This is pertinent, for the expansion of tourism on small islands is often interposed with reef dredging, mangrove clearance, land reclamation, and deforestation, as well as heightened demands on what are usually scarce resources, particularly ground water (Zuidema, Plate, & Dikou, 2011). Moreover, the byproducts of tourism on small islands in the form of hard waste or wastewater are usually secreted in deep pits or tanks, or flushed into an ocean where it was thought that the capacity to absorb whatever was dumped into it was boundless (Mohee et al., 2015).

Most telling are the ways by which islands are considered ideal locations for the cast-offs from the mainland or metropolitan centres, as seen in fast deteriorating facilities in the Marshall Islands and Tahiti where the remnants of the military industrial complex lie precariously, outliving the confines that were to have protected humans from harm (Danielson, 1990; Gerrard, 2015; Johnson & Takala, 2018; Keown, 2018). Not forgetting the way islands were used to house the rejects of human society in the way of convicts, castaways and lepers, and today asylum seekers, as seen in the Pacific (Manus, Nauru, Christmas Island) and Greece (Lesvos, Chios, Samos, Kos, and Leros). Concurrently, these places retain their paradisiac and otherworldly allure for tourists, far enough to escape to and close enough to retreat from.

Tourists enjoying a beach on Kos, Greece, in 2015 as desperate migrants arrive in a dinghy.

Consequently, to consider small islands as places for sustainable tourism—or sustainable anything, for that matter—must surely be cause for critical deliberation (Cheer & Peel, 2011; Cole & Brown, 2015; Kerr, 2005; Scheyvens & Momsen, 2008). Small islands as sanctuaries, or rare citadels for ecological safekeeping and tightknit communities, runs counter to islands as sites for extraction and development, yet increasingly the latter prevails. However, the former are the precise reasons that small islands are aligned with the global travel supply chain (Prince, 2017; Scheyvens, 2006; Twining-Ward & Butler, 2002). Consuming small islands abides with the tropical idyll narrative and, within such invocations, the exposure of small islands to externalities renders its utility to purposes that run counter to benign and constructive outcomes. Indeed, islands as playgrounds where hedonism and profligacy rule is more likely, as evidenced by the partying and pleasure-seeking classes in Mallorca, Ibiza, Bali, and Phuket (Shakeela & Weaver, 2018). The demand for islands as sites of relaxation and indulgence knows no bounds, and, for whatever effluent is produced, 'out-of-mind and out-of-sight' resonates (Schwartz, 1999). This harkens back to Schalansky's (2014, p. 19) cynicism: "Paradise may be an island. But it is hell too," where she refers to the contradictions of small islands as sites of pleasure for some and places of hardship and desperation for others, as so often manifest in host-guest encounters (Sheller, 2004).

Herein is the dilemma for small islands and their entanglements with tourism



Mallorca is an island playground for the partying and pleasure-seeking classes.

expansion. Islanders usually bear the costs of growth, particularly when the beneficiaries of expansion give short shrift to the marginalizations that emerge (Cheer, 2018; Ridderstaat, Croes, & Nijkamp, 2016; Wilkinson, 1987), with the consequences falling on the shoulders of islanders and in situ ecosystems (Kurniawan et al., 2016; Ridderstaat, Croes, & Nijkamp, 2016). That small islands have seen fit to close themselves off from tourism, as in the case of Maya Bay, Borocay, and Komodo, is a high-stakes gamble, but necessitated by the surpassing of critical tipping points (Koh & Fakfare, 2019). This begs the question: what is the point of development of any kind on a small island if the very essence of the people and place is undermined? And what indicators are needed to signal that uppermost thresholds are reached?

ORIENTATION AND AIMS

This chapter is concerned with tourism on small islands and the overarching themes that allude to how sustainable tourism might be signposted via indicators. Tourism is emblematic of the challenge for small islands: how to maintain and keep pace with the rest of the world while not getting caught in the backwash that accompanies the waves of change. For many small islands, and Small Island Developing States (SIDS), tourism presents unparalleled opportunities for economic development, and diversification

The small island of Borocay in the Philippines has closed itself off from tourism.

from declining stock-in-trade endeavours such as fishing, subsistence agriculture, and cash cropping (Pratt, 2015; Scheyvens & Momsen, 2008). The gradual decline of fisheries brought about by the intensification of industrialized fishing and the falling-off of agrarian pursuits (for example, sugar and copra production) and their waning value have catapulted tourism into becoming a priority for small islands (Cheer, 2013; Cheer, Reeves, & Laing, 2013).

The principal question posed asks: is the proliferation of tourism on small islands enhancing the development of social-ecological resilience, or accelerating the onset of system failure on small islands? If so, how can unfolding trajectories be monitored and assessed? Perhaps the twin and opposing forces of resilience building and decline are in constant motion in the pursuit of sustainable tourism predicated on building more resilient communities, and also undermining the social and ecological inheritances of islanders, leaving a net deficit (Cheer & Lew, 2017; Hall, Prayag, & Amore, 2017; Lew & Cheer, 2017; Saarinen & Gill, 2018). Apropos to the overarching question is an extension to the line of enquiry: what are indicators that might determine whether, in the presence of tourism development, small island communities can build resilience?

The conceptual framing that follows applies a praxis-based approach to outlining the dynamics between tourism development and small islands. The focus on practice does not mitigate the need for theoretical development, but instead is focused on

People praying in temple Pura Luhur Uluwatu in Bali.
Pura LuhurUluwatu is a god dedicated to the spirits of the sea.

employing a device to consider how small islands might deal with and better understand the pressures of tourism growth. Although the development of theory regarding resilience and adaptation on small islands has a place in policymaking and planning, a deliberate focus in this chapter is to develop practice-based thinking.

CONCEPTUAL FRAMING

In response to the overarching line of questioning, a conceptual framework is put forward to shape the development of sustainable tourism indicators in small islands. The UNWTO's Mandatory Issue Areas for the observation of sustainable tourism are applied as guiding indicators (UNWTO, 2016). Consisting of a set of nine pointers, the application of this framework to small islands can make way for more pragmatic assessments of sustainability progress or decline. These industry-led indicators pinpoint most of the underlying variables that should ordinarily frame assessment of sustainability of tourism on small islands. While striving to be all-encompassing, they provide umbrella coverage for the spectrum of tourism impacts, with the relevance of indicators remaining subject to particular island contexts.

THE TERM 'ISLANDSCAPES' is apt as it suggests that small islands must be distinguished from non-island contexts, given their largely unique conditions.

> *The UNWTO International Network of Sustainable Tourism Observatories (INSTO) was created in 2004 with the objective to support the continuous improvement of sustainability and resilience in the tourism sector through systematic, timely and regular monitoring of tourism performance and impact in order to better understand destination-wide resource use and foster the responsible management of tourism.* (UNWTO, n.d., n.p.)

The UNWTO's Mandatory Issue Areas signpost critical success factors that are particularly pertinent for small-island contexts where tourism is firmly entrenched, and where rethinking the place of tourism is pressing. The term 'islandscapes' is apt as it suggests that small islands must be distinguished from non-island contexts, given their largely unique conditions. Very often this includes the burdens of peripherality, narrow economic bases, proportionately small resident populations, limited range of services, dependence on modest transport networks, and resource scarcity, among others. "Islandscapes encompass both the landscape (physical and cultural landscapes) and seascape (coastline and other bodies of water that encompass islands) and this intersection makes up the essential character of islands" (Cheer et al., 2017, p. 41).

The relevance of islandscapes as a concept in understanding and taking into account the departure points from the mainland or larger adjacent islands is vital. Small islands "in and of themselves, and beyond this fascination with them as nodes within

the tourist bubble, are also sites of socio-economic and environmental tension, underlined by the practicality of distance from metropolitan centres, and mostly laden down by terms of trade that are very often onerous and difficult to overcome" (Cheer et al., 2017, p. 42). Apropos, rather than simply problematizing tourism, this conceptual framing seeks to accentuate the critical success factors that can help inform policy and planning.

UNWTO ISSUE AREAS FOR SUSTAINABLE TOURISM

> *As evidence-based decision making is of utmost importance for sustainable tourism development, the visions behind the INSTO initiative highlights the key role that observatories play as an essential instrument to continuously enhance the sustainability of the tourism sector.* (UNWTO, 2016, p. 1)

The desire to develop measures for sustainable tourism acknowledges that without systematic collection and analysis of empirical data, tracking and assessing the sustainability of tourism will remain elusive. Consequently, sustainable tourism indicator regimes have emerged as one way that destinations can come to terms with the sustainability of tourism expansion. The UNWTO INSTO framework is one of the more prominent modes of indicator-driven knowledge and is increasingly seen as an essential tool for strategic destination management.

The Cathedral of la Seu Majorca in Palma de Mallorca.

Other regimes include the Global Sustainable Tourism Council's (GSTC) Criteria for Destinations (GSTC, 2013) and the European Tourism Indicators System (ETIS) for sustainable destination management (European Commission, 2016). The GSTC criteria are used for education and awareness-raising, policymaking for businesses and government, measurement and evaluation decision-making, and as a basis for certification. Underpinning the GSTC approach are minimum criteria to help reach quadruple bottom-line impacts encompassing social, environmental, cultural, and economic sustainability. While the adoption of such criteria is voluntary for destination managers, increasingly GSTC certification is acknowledged for the marketing and public relations utility. This leaves it potentially open to criticisms of greenwashing if destinations attain certification based on minimum standards, then fail to maintain or strengthen their sustainability credentials.

Conversely, the European Tourism Indicator System (ETIS) provides destination managers with tools that enable more consistent management, measurement, and knowledge development regarding sustainable operations. The intention is to enable wider tourism stakeholder groups to understand the overarching impacts of tourism on destinations and host communities. Unlike the GSTC scheme, the ETIS does not associate with certification processes and instead assumes a voluntary code of conduct. However, both the GSTC and ETIS, as well as UNWTO INSTO, have the common aim of tracking and ascertaining the sustainability of tourism. In converging all three approaches, irrespective of which criteria is used to establish the sustainability credentials of destinations, there tends to be a paucity of empirical data, thus highlighting the opportunity to apply indicator regimes, either as non-mandatory measures or in relation to earned certification.

IN THE SMALL PACIFIC ISLAND nation of Vanuatu, the term *turism blong yumi blong evriwan* in the country's lingua franca ('tourism belongs to everyone') resounds and is used as a catchcry by government to promote the merits of tourism development.

In adopting the UNWTO INSTO approach as the backdrop for this analysis, overarching considerations are given to how each of the nine criteria plays out and the methodological issues that underpin each one.

Local satisfaction

In the small Pacific Island nation of Vanuatu, the term *turism blong yumi blong evriwan* in the country's lingua franca ('tourism belongs to everyone') resounds and is used as a catchcry by government to promote the merits of tourism development. That host community satisfaction and buy-in for tourism is essential is a truism, and, evidently, when this fails the sector becomes precariously poised and risks compromising tourist satisfaction as well (Cheer et al., 2018). The tendency to prioritize tourist satisfaction

above that of the resident population is commonplace where tourism growth is pursued despite local misgivings and marginalizing propensities.

In 1980, Rajotte and Crocombe (Figure 5.1) made what was an unprecedented attempt to understand how islanders in the Pacific saw tourism and how their lives had changed. Overall, the sense of foreboding that tourism had promised so much yet delivered so little was clear. What's more, islanders articulated that in exchange for their culture and islandscapes, what they got back amounted to little more than crumbs from the tourists' table. Three decades later, Pratt and Harrison (2015) found that the challenge to enable tourism to exercise its fullest capacity for development in the region remained challenging.

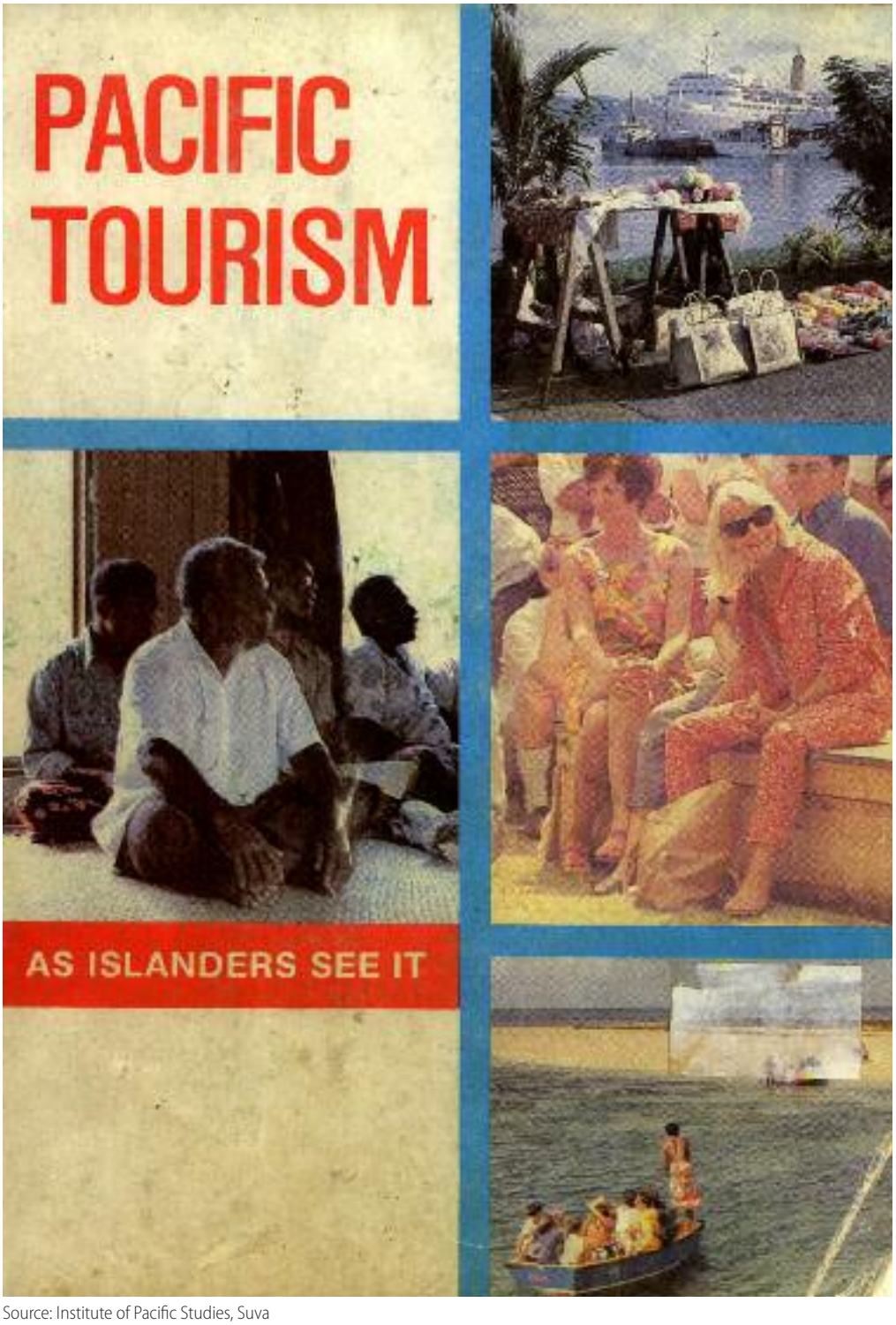
The present-day phenomenon of overtourism is largely predicated on the notion that it arises when local communities feel disgruntled with tourism growth that leaves them worse off (Cheer, Milano, & Novelli, 2019). As distinct from overcrowding, overtourism is "the excessive growth of visitors leading to overcrowding in areas where residents suffer the consequences of temporary and seasonal tourism peaks, which have enforced permanent changes to their lifestyles, access to amenities and general well-being" (Milano, Cheer, & Novelli, 2019, p. 1). The key is the enforcement of permanent changes that lead to compromised ability to adapt and become resilient to externalities (Cheer et al., 2019). Where this has been evident in small islands such as Borocay, Komodo, and Phi Phi Lei (site of Maya Beach), social and ecological tipping points had been breached, necessitating last-gasp measures or risk permanent impairment.

Insofar as questions that underline the development of indicators aligning with the UNWTO INSTO approach, these can include:

1. What are the optimal ratios of hosts to tourists?
2. What characterizes the spatial dispersal of tourists on the island?
3. Is there a longitudinal regime of monitoring and evaluating islander community attitudes toward tourism?
4. What are alternative indicators of wellbeing? This relates to non-economic variables such as security, belonging, sense of place, community cohesion, and crime, among others (VNSO, 2012).

Tourism seasonality

Seasonal variations in small islands depend on two key factors: whether they are in cold-water or warm-water contexts. In both, seasonal peaks are likely in warmer months when access to small islands is less constrained on account of climatic and environmental factors, as well as in regards to provision of transport services (Andriotis, 2005; Cuccia & Rizzo, 2011). In warm-water tropical destinations, visitation is shaped by seasonal weather factors peaking outside the hurricane or cyclone season.



Source: Institute of Pacific Studies, Suva

FIGURE 5.1: **Pacific tourism: As islanders see it**

Insofar as seasonality concerns visitation, capacity constraints on small islands often limit expansion in peak periods, underlining overcrowding and carrying-capacity anxieties (Santana-Jiménez & Hernández, 2011). Where these effects are seasonal, the capacity for recovery and regeneration in between peak, shoulder, and off-peak seasons gives communities some respite. However, where seasonality factors are less influential and where visitation is at persistent peaks, such conditions raise red flags for sustainability concerns (Cheer et al., 2019).

In employing the UNWTO INSTO approach, tourism stakeholders on small islands are encouraged to assess seasonal patterns of visitation, and align these with sustainability markers. The ability to moderate and keep visitation on an even keel, rather than experience uneven spikes with massive differences between low and high seasons, is vital. Some key questions relevant to assessing seasonality effects include:

THE ABILITY TO MODERATE and keep visitation on an even keel, rather than experience uneven spikes with massive differences between low and high seasons, is vital.

1. Are overcrowding symptoms obvious, and to what extent do these lead to temporary or permanent changes to the sense of place?
2. Are there strategies to smooth visitation to ensure absence of wild swings between high and low season?
3. Are services and utilities able to cope with visitation peaks?
4. Are businesses able to maintain viability in between low and high peak seasons?
5. Do employees enjoy security of employment throughout the various seasons?
6. Is a period of closure required to encourage ample time for recovery and regeneration following peak periods?

Destination economic benefits

When tourism is invoked, it is very often on the basis that it can serve as a key pillar of a small island's economy (Pratt, 2015). What's more, it is motivated by a desire to diversify away from typical island livelihoods including fisheries, niche agricultural commodities (e.g., copra), and remittances from links to the metropolitan centre and, in SIDS contexts, from abroad (Lasso & Dahles, 2018). In the case of SIDS where the traditional non-cash economy still predominates, the chance to parlay this into transactions in exchange for cash income is another key driver. Additionally, where inimitable cultural heritage is present, the presentation of this for tourism can garner further cash income opportunities (Cheer, Reeves, & Laing, 2013).

However, very often, the extent to which small island communities can extract

optimal returns from tourism brings into question the real economic impacts from tourism (Bojanic & Lo, 2016). The reference is to ascertaining the extent to which trickle-down and multiplier effects are garnered in favour of local communities, often subject to the degree to which external parties are engaged in the expansion of tourism as seen in the often disproportionate reliance on external capital, expertise, and linkages to the tourism supply chain (Garrigós-Simón, Galdón-Salvador, & Gil-Pechuán, 2015).

Accordingly, some of the key questions that help paint a clearer picture of the micro- and macro-level economic impacts could include:

1. What do macroeconomic indicators suggest in relation to the economic impact on island life? This might focus on island-wide issues related to housing affordability, inflation, and GDP.
2. How can data related to formal and informal income be accessed and aggregated to give a more direct and complete picture of the overall resources available to island residents?
3. Is there an established longitudinal regime of economic data collection that is supported by the island's residents and business community? Moreover, who is charged with the responsibility for collecting data and, where financing is required, who bears the cost?
4. To what extent are data on visitor expenditures collated?

Trekker on Komodo island, Indonesia.

Employment

Heavily linked to the economic imperative is the development of employment opportunities for island residents. Formal tourism employment in small islands is usually constrained and subject to seasonal fluctuations. Consequently, employment is sporadic and unreliable, meaning that, for many, multiple livelihood activities are usually needed (Hughes & Scheyvens, 2018). In SIDS contexts, this may involve complementing traditional economic activities (subsistence agriculture or mix of subsistence and cash cropping), temporary employment off the island, or full-time employment overseas on cruise ships and other maritime-going vessels.

In small-island contexts, it is commonplace for islanders to partake in guest worker schemes like Australia's Seasonal Worker program that engages Pacific islanders as guest workers on Australian farms (Bedford, Bedford, Wall, & Young, 2017). This often means families are without key family members, intensifying pressure on remaining members to satisfy child and/or elderly parent care, home maintenance responsibilities, and civic volunteerism. However, the usual dearth of secure and continuous employment opportunities necessitates movement away from island homes.

Also, there is a tendency for the skills capacity of residents to be limited given the constraints of accessing tourism skills training opportunities and prior work experience. When it comes to applying the UNWTO INSTO guidelines, some of the key questions include:

1. What are the overall aptitudes and capacities of islanders to take on positions in tourism-related enterprises? This may include language and specific skills-based competencies such as in culinary and food-related roles and accommodation and tours management.
2. What strategies are required to bridge skills gaps?
3. What funding mechanisms are available to provide skills training and professional development?

Energy management

For many small-island tourism enterprises, energy costs are the largest operating cost given reliance on fossil fuels to power diesel generators and outboard motors (Michalena & Hills, 2018). However, in line with shifts towards renewable energies, the natural capacity for solar and/or wind is increasingly being seized upon. In Tuvalu, the small-island country is aiming for 100% renewable energy by 2020. Clearly whether an island is warm- or cold-water, or located in the global south or not, can determine realistic avenues for the shifts away from reliance on costly fossil fuel usage (World Bank, 2015). It may also be dependent on the type of tourism development employed, whether high-end resort-style inclusive of golf courses and the like, or small-scale, bungalow-type, which are less energy-intensive.

1. What is the current status quo regarding energy sources in use on the island?
2. What is the capacity to harness renewable energy either via wind or solar?
3. What are wider government initiatives related to renewable energy use?

Water management

The general absence of underground water sources and scarcity of groundwater catchment areas makes shortage of potable water on small islands a practical constraint for tourism (Belmar, McNamara, & Morrison, 2016). As Cole (2016) has emphasized, little thought is given to ensuring that tourism water usage does not compromise what limited water there is on small islands. Tourism tends to be water-intensive and, unless effective planning and policy regimes are in place, water will continue to be seen as in endless supply.

LITTLE THOUGHT IS GIVEN to ensuring that tourism water usage does not compromise what limited water there is on small islands. Tourism tends to be water-intensive and, unless effective planning and policy regimes are in place, water will continue to be seen as in endless supply.

Water consumption by tourists on small islands considerably outstrips that of local residents for whom the consequences of profligate use is felt most profoundly (Bird, 2019; Hof & Blázquez-Salom, 2015). As Cole (2016) has warned, while islanders tend not to be the main beneficiaries of tourism expansion, they often bear a disproportionate cost burden of water scarcity. Seasonality trends also influence water consumption while more volatile weather patterns underlined by lower-than-average rainfalls also tend to have an abiding impact on water management (Garcia & Servera, 2003; Martinez-Ibarra, 2015). Accordingly, when it comes to water management, some underlying questions include:

1. Is there a water management regime in situ and does it have an overarching role on the effective management of water resources on the island?
2. What is the status quo of water scarcity or abundance on the island?
3. What considerations are given to water emergency situations and how are competing priorities of local resident need and tourism-sector requirements reconciled?
4. What capacity is there for a water desalination facility as a backup in times of water scarcity?

Wastewater management

The options for the dispensation of wastewater on small islands is limited, with two key options tending to prevail: in-ground storage or disposal into surrounding waterways. Moreover, wastewater treatment facilities are sparse on small islands, meaning that greater intensity of wastewater production, coinciding with increased visitation, is highly problematic (Wells et al., 2016). Eutrophication effects are introduced where surrounding water bodies become excessively nutrient-laden, leading to damage to marine life and excessive algal blooms. More often, rudimentary septic-tank systems are the fullest extent of what is provided and, over a period of time, they run the risk of not being fit for purpose when island populations and tourist visitations spike.

SMALL ISLANDS ARE particularly vulnerable to hyper-eutrophication, and the impacts can render permanent damage, especially to fragile reef ecosystems that locals rely on for subsistence fishing and tourism.

Small islands are particularly vulnerable to hyper-eutrophication, and the impacts can render permanent damage, especially to fragile reef ecosystems that locals rely on for subsistence fishing and tourism (O'-Driscoll, Bean, Mahoney, & Humphrey, 2019). Typically, the disposal of wastewater and management of effluents are considered benign, especially where tourist visitation is minimal and the pressure on wastewater production is non-threatening. The establishment of resorts on small islands, along with golf courses, lagoon swimming pools, and rainwater showerheads heap further pressure on water usage and its eventual disposal. Consequently, wastewater management has moved from being an innocuous by-product of local residents when small islands were moderately populated, to more onerous concern as tourism numbers swell and further infrastructure is established. Some underlining questions may include:

1. Are in situ wastewater management approaches and infrastructure fit for purpose now and in view of tourism growth projections?
2. Have analyses of current wastewater management regimes and their impacts on the island's marine environments been conducted, especially at outfall points?
3. What regulatory requirements and follow-up enforcement are in place to ensure tourism operator compliance with the current wastewater management regime?

Solid waste management

Much like wastewater management, the issue of solid waste management is usually intensified in tandem as tourist visitation increases (Estay-Ossandon & Mena-Nieto, 2018). Solid waste management is typically comprised of in-ground burial of organic and non-organic matter such as glass and aluminium cans, given the onerous expense of moving this off the island (Verlis & Wilson, 2020). Moreover, in SIDS contexts, avenues for recycling and reuse are very limited, resulting in off-island storage either on the 'mainland' or adjacent islands whose sole purpose is the deposit of solid waste.

A range of questions are prompted, but, most importantly, queries about how tourism production and consumption processes can change to make solid waste management less onerous are pressing. A growing focus aligning the tourism supply chain with inputs that are less demanding on waste-management processes in situ is essential. Issues including the sourcing or local input and food miles mitigation, packaging, and treatment of organic solid waste is also necessary, beyond the two most common means of dealing with solid waste: incineration or in-ground burial.

A GROWING FOCUS ALIGNING the tourism supply chain with inputs that are less demanding on waste-management processes in situ is essential. Issues including the sourcing or local input and food miles mitigation, packaging, and treatment of organic solid waste is also necessary.

In consideration of solid waste management, key questions include:

1. What scrutiny is placed on tourism supply chain inputs in small islands to ensure effective management of solid waste?
2. To what extent are local residents and tourism stakeholders consulted and involved in solid waste management discussions?
3. What level of resources is required to support the development and consolidation of solid waste management procedures?

Governance

It is without question that the imperative for effective governance is urgent as the demands on small islands as tourist destinations intensify. Apropos, the compelling need for good governance is magnified in small-island contexts where resilience and vulnerability are more pronounced, and where tourism developments at a wider scale can have far-reaching and even irreversible consequences (Figueroa & Rotarou, 2016). The lure of tourism lies in the inherent peripherality of small islands and the ways by which this tends to introduce aspiration for greater engagement with the metropolitan centre for economic and socio-psychological reasons.

In some cases, responsibility for governance of tourism on small islands rests elsewhere, including transnational resort and cruise ship corporations, and this creates grounds for discontent where decisions made offshore can have considerable implications onshore (González-Morales, Álvarez-González, Sanfiel-Fumero, & Armas-Cruz, 2016). This occurs where wider regional institutions conduct tourism destination management and promotion with little or no practical presence on the ground. Governance failures occur where the operation of tourism is not synchronized with stakeholder interests. Gaining wide stakeholder buy-in for tourism expansion on small islands is vital, for, in tight-knit and small communities, grounds for disharmony can have far-reaching ramifications. In tandem, securing greater corporate social responsibility from the tourism sector can aid policymaker attempts to guide development that is in synchrony with governance and policy regimes (Hughes & Scheyvens, 2016).

GOVERNANCE FAILURES OCCUR where the operation of tourism is not synchronized with stakeholder interests. Gaining wide stakeholder buy-in for tourism expansion on small islands is vital, for, in tight-knit and small communities, grounds for disharmony can have far-reaching ramifications.

Good governance of tourism on small islands is intertwined and tied into all of the aforementioned UNWTO INSTO issues of concern and underpins small-island tourism systems. Consequently, questions regarding the governance of tourism on small islands have implications beyond tourism, and are linked directly to the social and ecological resilience of small islands. As a result, the governance of tourism is inextricably tied to the economic and political backdrop that shapes life on a small island. Some questions that coalesce around governance include:

1. Do pre-existing tourism governance arrangements sufficiently address the need for sustainable tourism development?
2. To what extent do governance structures address local islander input into the development of tourism?
3. What monitoring and evaluation of tourism governance structures are undertaken?

CONCLUSION: INDICATING SUSTAINABLE TOURISM ON SMALL ISLANDS

Whether tourism is or is not suited to the sustainable development concerns of small islands generally is a moot point. The preponderance to veer instinctively towards tourism is understandable on small islands in lieu of the sparseness of alternative mechanisms for economic development. This is coupled with pressures not only from tourism but also from external parties keen to monetize island-based resources as seen in the increasing drive for seabed mining and the wider blue economy (D'Arcy, 2013).

The imposition of tourism invariably contributes to the reshaping of island contexts, putting new and often greater demands on the social and ecological inheritances in situ. What ensues is a regime of economic development often underpinned by external rent seekers. This comes about because entering the global travel supply chain is beyond the capacity of local networks requiring externally derived capital and know-how.

Irrespective of the extent to which economic development trickles down into the hands of islanders, over the long run we would hope that the costs of tourism and the legacies that remain are largely for them to negotiate. Where a small island's assets are parlayed into productive undertakings, questions over the extent to which they are privileged remains. The overwhelming narrative seen in small islands around the globe is that the metropolitan centre tends to accumulate the largest share of dividends. Conversely, if expansionary plans turn sour, external parties retreat far more easily than islanders who are left to deal with the long-term negative outcomes of narrowly based decisions.

The urgency to articulate indicators of sustainable tourism development is palpable because the conceptualization of small islands as ideal tourist escapes will likely intensify. This can be seen in the continuing allure of small islands to the international cruise industry. Despite the ongoing increases of port visits, little evidence can be found to confidently ascertain the extent to which islanders benefit (Cheer, 2017; Del Chiappa & Abbate, 2016; Lester & Weeden, 2004). This is mirrored in the way small-island fisheries assets have come to be developed and where large-scale factory fishing driven by foreign corporations has made this a largely unviable endeavour for locals. Looming large in the futures of small islands is the shadow of climate change, driven by emissions elsewhere, yet omnipresent on small islands.

Consequently, venturing into tourism intensification on small islands is fraught with contradiction and concern, and unless driven by informed analyses, expansionary initiatives will likely be counterproductive to sustainable development and resilience building. Herein lay the implications for a research agenda underpinned by consistent development of sustainable tourism indicators that help inform tourism development trajectories. Small islands cannot afford to experience monumental blunders given their scale, adaptive capacity limitations, and relative fragility. Blindly sailing into tourism expansion without a clear understanding of the broad range of possible outcomes puts islanders in a bind—damned if you do or damned if you don't. Often, this will be driven by an uncritical economic imperative around jobs, incomes, and other economic benefits. Yet, what good is a small island that has forsaken its social and ecological inheritances for the abiding and largely exclusive pursuit of tourism-led economic growth?

ACKNOWLEDGEMENTS

I would like to sincerely thank Drs. Jim Randall and Laurie Brinklow for helping facilitate the inclusion of this paper. I also thank Professor Randall for inviting me to speak at the International Island Tourism Conference 20–23 August 2019 from which this work is derived. Thanks also go to Ms. Li Liyun (Lara) for kindly organizing my visit to Hainan, and to the Foreign Affairs Office of Hainan Island, P.R. China, Institute of Island Studies, University of Prince Edward Island, and the UNESCO Chair in Island Studies and Sustainability. Lastly, this would not have happened had Professor Regina Scheyvens been able to attend. Her withdrawal and subsequent recommendation of me as her substitute is appreciated.

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