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Adventure tourism and local livelihoods

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Whether fixed-site infrastructure or self-contained mobile tours contribute more to local livelihoods is contentious in both terrestrial and marine outdoor tourism sectors worldwide. Examples include: mobile hunting or photo safaris *cf.* game lodges in Africa; mobile tours *cf.* fixed hotels in large national parks worldwide; and mobile *travesias cf.* fixed luxury lodges in South America (Buckley, 2012; Explora, 2014). Comparing warm-water live-aboard charter boats with island resorts provides one test. Both can offer diving, sailing, surfing, fishing and sea-kayaking. Accessibility and luxury increase continually for both, to attract cash-rich, time-poor adventure aficionados and partners. There are examples in Fiji, Indonesia, Papua New Guinea, Seychelles, Solomons, and Tanzania (Buckley, 2002, 2006, 2010; O'Brien and Ponting, 2013; Ponting & O'Brien, 2013). Livelihoods include: cash earnings, through local employment; subsistence, affected by environmental impact; and social structures, affected by social impacts.

Here we compare the surf-charter fleet and long-established Dhonveli Resort in North Male, Maldives, using: previous on-site audits; public information; and revenue and employment data from Ponting (2014). We consider social, environmental and economic criteria (Table 1), calculating statistics *per capita* for surf tourists specifically. Surf tourism is a recent development in the Maldives, and still minor, even at resort islands with exclusive access to surf breaks. Diving is much larger adventure

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Table 1
Environmental, social and economic factors for boats and resorts.

Factor	Boat Fleet	Resort
Reef damage: physical damage, nutrient pollution	Moderate	High
Island modification: engineering, biological, aesthetic	Nil or low	Very high
Crowding or loss of access to surf, for local surfers	Low	Very high
Impacts on Maldivian cultures and traditions	Moderate	High
Surf guide jobs, FTE per surf tourist per day	0.055	0.05–0.20
Total local jobs, FTE per surf tourist per day	0.33	0.31
Tax revenue, US$ per surf tourist bed night per year	23.50	45.87
Ownership	mixed	foreign

See text for sources, and Table 2 for employment and tax calculations.

subsector than surfing, and mass beach tourism at island resorts is much larger still (Republic of Maldives, Ministry of Tourism, 2014). Most boats and resorts operate without surfers, and most tourists at Dhonveli are non-surfers (Buckley, 2006; Ponting, 2014). Surf breaks only attract surfers. For most tourists at island resorts, surf breaks are irrelevant. This applies just as much for surf islands as for non-surf islands. Surfers may bring non-surfing family members, but only a few do so. In addition, family members stay in the same rooms as the surfers, so they do not increase occupancy rates or room takings. The party reputation of surfers may also discourage non-surfers from staying at surf resorts, since there are many other resorts that offer all the other activities except surfing. There is no evidence that resorts leverage surf breaks to attract more tourists, as claimed by Ponting (2014). Dhonveli also offers diving, for example, but Ponting (2014) does not argue that it leverages dive sites to attract non-diving surfers or beachgoers.

Surf tourists constitute 100% of clientele for surf charter boats, but only 5.3% for Dhonveli Resort (Table 2). Critically, therefore, for this resort only 5.3% of revenue and employment are attributable to surf tourism. Dhonveli resort generates $45.87/$23.50 = 1.95x more tax per visitor night overall than North Male boats (Table 2). This reflects current Maldives tax policy for boats and resorts. Ponting calculates $70.34/$39.00 = 1.8x, a similar ratio. Ponting calculates 0.30 FTE local jobs per surfer for

Table 2
Relative economic and employment contributions of boats and resorts.

	Boat Fleet		Resort	
	JP	OC	JP	OC
PRIMARY DATA				
Visitor bednights/yr, total, actual	16500		122567	
Non-surfer bednights/yr, actual	0		*116087	
Surfer bednights/yr, actual	16500		6480	
Average surfer occupancy,%	*90		85	
Max surfers present per day	100		30	
Total taxation revenue, US$	387750		5622480	
Total local employment, FTE jobs	30		150	
Total surf guide employment, FTE	5		5	
DERIVED STATISTICS				
Mean surfers present per day		90		25.5
Surfers/total bednights,%		100		5.3
Tax revenue from surf tourism		387750		297255
Tax revenue per bednight, total	39.00	23.50	70.34	45.87
Tax revenue per bednight, surfers	39.00	23.50	737.52	45.87
Local jobs from surf tourism		30		8
Local jobs per surfer, single day	0.30	0.33	0.62	0.31
Surf guides per surfer, single day	0.050	0.055	0.14	+0.05–0.2

Sources: JP, Ponting (2014). OC, our calculations from Ponting's data.
* Not specified explicitly by Ponting (2014), but derived from his other data.
+ See text.