

Sustainable Tourism, 30 Years On

Ralf Buckley

Distinguished Visiting Professor,
Chinese Academy of Sciences.

International Chair in Ecotourism Research,
Griffith University, Australia.

Why does it matter?

“How can we harness human desires, and create social machines and political institutions, to protect planetary ecosystems?”
Buckley et al., *Science* **356**: 590-592 (2017).

Can tourism be one of those social machines?
Answer: usually no, but sometimes, **YES**.

Sustainable Tourism, research & reality, 2012 review

Ann Tour Res 39: 528-546 (2012).

5 Ps of sustainability:

Population stabilisation

Peace, global and local

Prosperity, poverty alleviation

Pollution, environmental management

Protection, parks and conservation

Population: few effects from tourism

- higher female income, fewer children?
- no evidence of tourism-specific effect

Peace: few effects from tourism

- some local wars bypass tourism
- larger wars destroy tourism

Prosperity, poverty alleviation: major effect

- tourism boosts national, regional economies
- may not be positive for sustainability
- equity effects secondary to growth effects

Pollution: role of tourism

Local waste discharges from tourism.
Urban infrastructure *cf* remote resorts.
Global climate change, water pollution.
Aero, e-cars, change modes, growth.
Small-scale cost savings widespread.
Few large-scale options for tourism.
People create pollution, everywhere.

Protection: tourism contributions

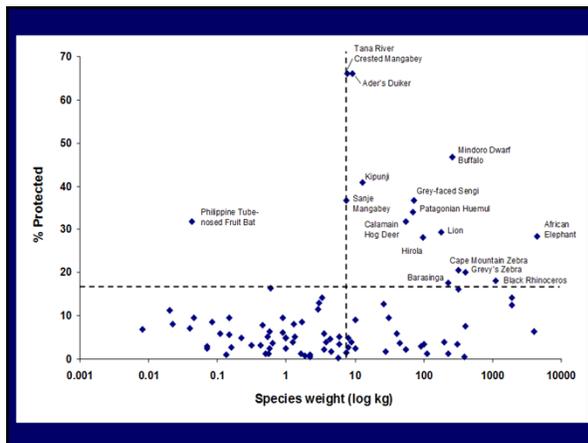
best chance for sustainable tourism
if +ve effects can outweigh -ve impacts
tourism creates impacts inside reserves
but also funds new & existing reserves
thereby protecting threatened species
can we calculate net outcomes?

Conservation tourism model

Conservation Tourism, CABI, 2010
 developed in Africa, applied worldwide
 best examples of tourism sustainability
 depends on successful tourism marketing
 effective marketing uses emotional drivers
 cross-links to mental health of tourists

Tourism and threatened species: population accounting approach

PLoS ONE, 2012-2013, 3 articles:
 use distribution maps and park budget info
 % global population relying on tourism \$
 IUCN RedListed mammals, birds, frogs
 for a few species, tourism \$ critical
 includes well-known tourism species

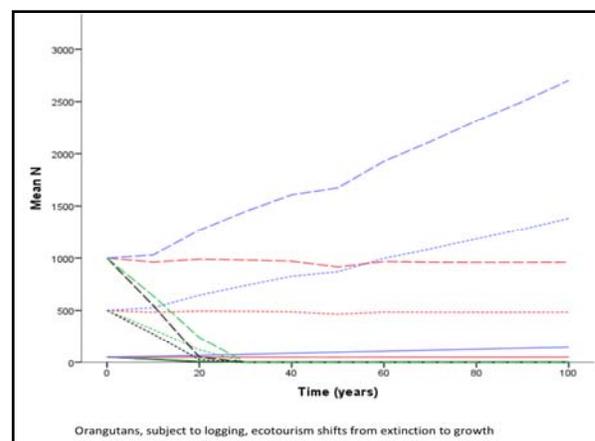


Tourism and threatened species: population viability models

PLoS ONE 11(2), e0147988 (2016)
 ecological models, individual populations
 needs lots of basic biological information
 includes both +ve & -ve tourism effects
 convert to population parameters
 eg more habitat, less poaching etc
 predict effects for 9 species, eg orangutan

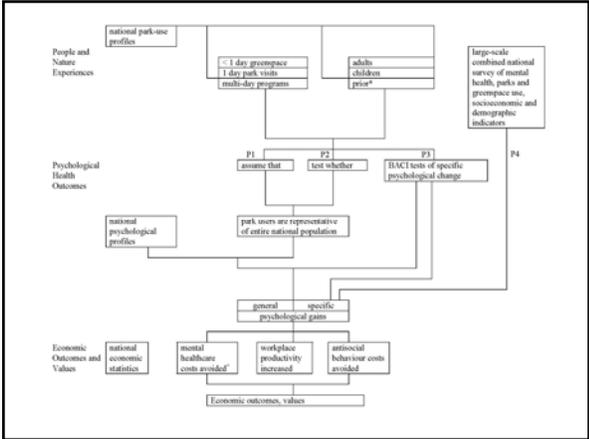
Tourism and threatened species: e.g. orang-utan in Sumatra

3 existing orang-utan populations studied
 all threatened by ongoing logging
 will be extinct in 20 years, loss of habitat
 large-scale tourism can displace logging
 orang-utan can then survive and prosper
 but tourism effects differ for each species
 eg NZ sealions, tourism effects negative

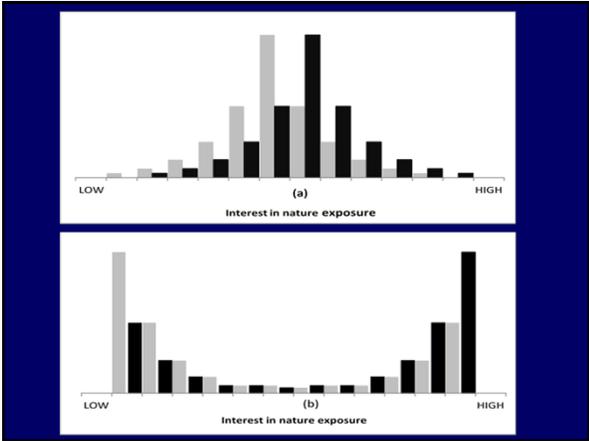


New research direction #1:
 value of mental health gains from outdoor nature, eco & adventure tourism and recreation.

Calculate cash value of improved mental health from outdoor tours.
Frontiers in Ecology & Evolution (2017)
 doi: 10.3389/fevo.2017.00016
 3 calculation modules:
 who goes where & what do they do?
 what mental health gains accrue?
 what are those gains worth in \$\$?
 key info: mental health of park tourists



Social levers for lifestyle change.
Frontiers in Public Health (2016)
 doi: 10.3389/fpubh.2016.00257
 outdoor tourism can target individuals, and give them enjoyable experiences, leading to longterm lifestyle change, and hence improved mental health. there are successful examples already.



New research direction #2:
 embedding of human psychology and behaviour in human culture.
 affects impacts, law, economics, human physical & mental health.

Chinese cultural concepts relevant to sustainable tourism: examples.

tian ren he yi

sheng tai wen ming

sheng tai lu you

sen lin yang ba

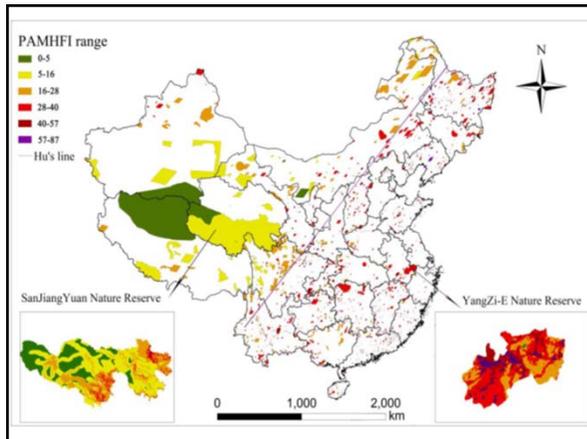
New National Parks in China: tourism management, Sanjiangyuan

Frontiers in Ecology & Evolution

doi: 10.3389/fevo.2016.00136

map of mean human footprint index for all China's Nature Reserves.

Sanjiangyuan key low-impact area



Roads or wilderness in Sanjiangyuan?

Angsai Valley tourism hotspot

self-drive 4WD domestic tourism

also rafting, hiking, “eco-camp”

roadlessness key for IUCN-II parks

road construction jeopardises this

politics: national, provincial, local..

Banggeyong, lower Angsai Valley

red rock gorge, world-class scenery
 gorge damaged by blasting new road
 commercial “eco-camp”, doof music
 most domestic tourists use own tents
 wilderness raft tours available
 opportunity for hiking trails



Conclusions

sustainable tourism **is** important.

“nature does not negotiate.”

but we **can** change human societies.

and tourism can be a social lever

future research: culture and health.

r.buckley@griffith.edu.au

Xie xie!