

Sustainable tourism development in Marine Protected Areas

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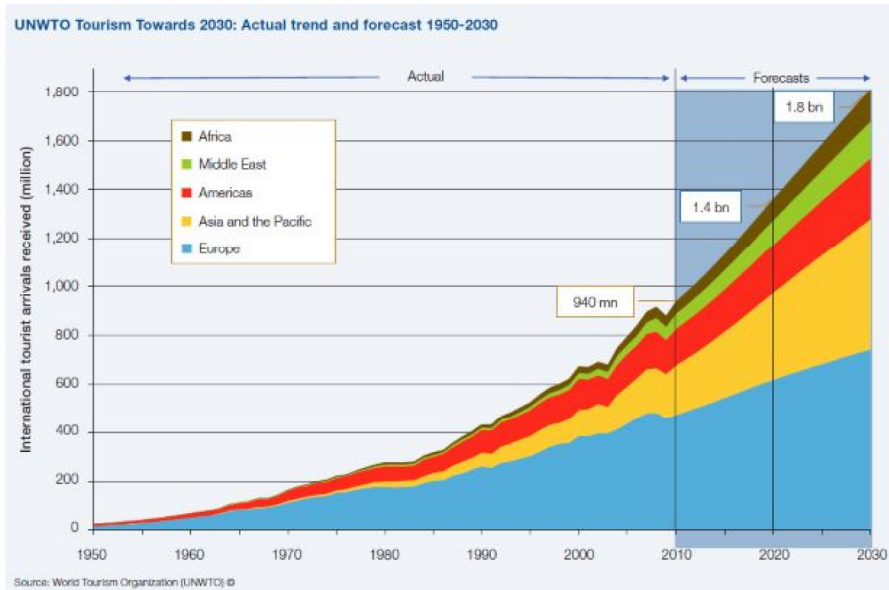
OUTLINE



- Motivation
- Sustainability and tourism development
- Private and social optimal strategy in MPAs
- A case study of Nha Trang Bay MPA
- Lessons learned from NTB-MPA

UNWTO TOURISM FORECAST

Tourism as an "alternative development" for SGs



TOURISM AS A NATIONAL DEVELOPMENT STRATEGY



WHY TOURISM MATTERS

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TOURISM DEVELOPMENT & SDGs (14)



DEFINITION (WTO)

sustainable tourism as
"tourism that takes full
account of its current and
future economic, social and
environmental impacts,
addressing the needs of
visitors, the industry, the
environment and host
communities"

SOLUTION (SBE)

*promotes economic growth
while improving human
well-being and protecting the
environment*

POSITIVE VS NEGATIVE IMPACTS



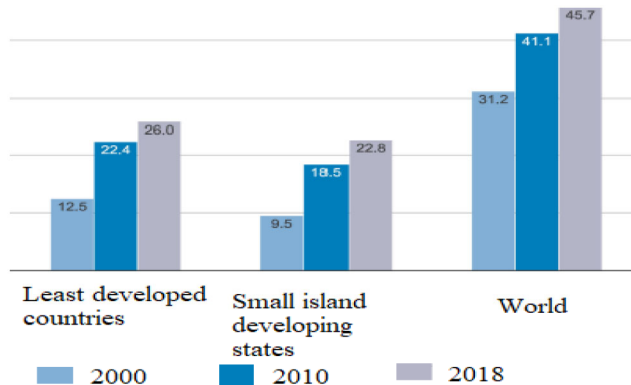
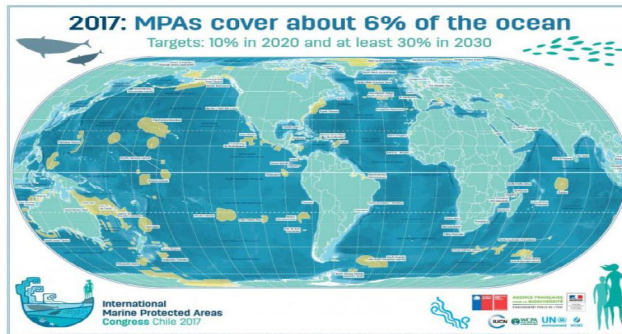
FIGURE: Pan et al (2018)

Positive: jobs \uparrow , inter-sectoral linkages for promoting growth

Negative: tourists $\uparrow \implies$ the risk of negative impacts \uparrow

Unexpected and unforeseeable events

WHY SUSTAINABLE TOURISM MATTERS IN MPAs?



SUSTAINABLE TOURISM DEVELOPMENT IN MPA?



- MPAs often have multiple objectives and offer tourists many opportunities
- Sustainable Tourism requires to meet *sustainable local communities, natural resources and economic activities*

TOURISM DEVELOPMENT AS A GAME

- Protected areas (PA) remain a cornerstone of global conservation efforts
- Negative impacts on environment & communities
- Existing issues/equity: sustainable population level/use of fishery resources

FACT

Conflict between residents and tourists, residents with authorities/investors

DEFINITION

Tourism carrying capacity means that tourist economic growth has to be responsible towards local society, natural environment and other traditional economic activities

PROBLEM

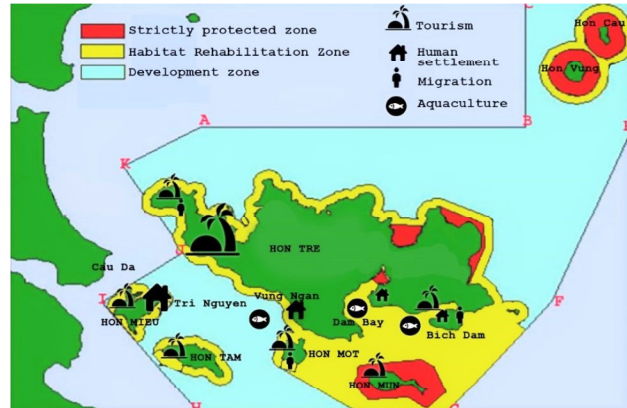
How to achieve sustainable tourism in MPAs (i.e. sustainable blue economy equilibrium)?

A MODEL FRAMEWORK

	Authorities/Corporate		
Residents	<i>Strategies</i>	Keep EMP/Support	Not EMP/support
	Involve EMP	R_{ph}, A_{ph}	R_{pl}, A_{pl}
	Not participate	R_{nh}, A_{nh}	R_{nl}, A_{nl}

- EMP: Environmental management performance (i.e. social benefit or blue ocean strategy)
- *Tourism development is sustainable* iff $R_{ph} = \max\{R_{ij}, \forall i, j\}$ and $A_{ph} = \max\{A_{ij}, \forall i, j\}$
- If authority could gain more & resident less at Nash equilibrium \Rightarrow conflict \uparrow (prisoner's dilemma)

NHA TRANG BAY MPA



NT-MPA established in 2002, 14 islands, 3 zones: 250 km² : 38 km² land, 212 km² waters

- **Population declines** (5647 to 4793). **Tourists increase (200%). Residents depend on fisheries (30%)**

SAMPLE SURVEYED IN 2014

140 households (12%), 4 communities in NTB-MPA

Place	Involve in tourism		Not involve in tourism	
	Respondents	Rate (%)	Respondents	Rate (%)
Vung Ngan	5	14.29	21	20.00
Tri Nguyen	10	28.57	37	35.24
Bich Dam	0	0.00	22	20.95
Main land*	20	57.14	25	23.81
Total	35	100.00	105	100.00

DESCRIPTIVE STATISTICS

Variable	Involve in tourism		Not involve in tourism			
	Total	SD	Mean (n=35)	SD	Mean (n=105)	SD
Age	41.10	8.80	36.46	7.92	42.60	8.56
Gender 1: female; 0: otherwise	0.11	0.32	0.23	0.43	0.08	0.27
Education 1: high level; 0: low level	0.10	0.30	0.31	0.47	0.03	0.17
Support 1: support; 0: otherwise	0.06	0.24	0.23	0.43	0.00	0.00
Location 1-4: low difficulty to high difficulty in accessing the tourism areas	2.17	1.05	1.54	0.70	2.39	1.07
Job category 1: employer; 0: employee	0.65	0.48	0.37	0.49	0.74	0.44
Positive effect Number of positive effects: higher income, better infrastructure	1.14	0.79	1.49	0.78	1.03	0.77
Negative effect Number of negative effects: sex worker, high price, lack of labour force, migration, poor living environment	1.31	0.91	1.00	1.06	1.41	0.84

INVOLVE OR NOT INVOLVE IN TOURISM

Employee	Employer	
	Participates in tourism	Does not participate in tourism
Participates in tourism	102.71; 274.37 (10.46; 76.27)	114.40; 352.36 ^{*NE} (105.23; 96.87)
Does not participate in tourism	71.87; 90.45 (5.17; 38.5)	64.27; 108.14 (4.07; 8.12)

- Support: government or investor, not both.
- NE (114.40, 352.36) is optimal \Rightarrow unstable tourism development
- Employer: better is not to involve
- Employee: better is to involve

FINDINGS FROM NTB-MPA



- job opportunities:
inequality vs supports
- gender: for women or who are young and living in the same island
- government supports low educated people
- tourism investors support higher educated people
- support does not secure a better income
- lack of commitment and transparent policy

- **tourism has yet improved the local people wellbeing in NTB-MPA**

CONCLUDING REMARKS



- Tourism plays a vital role in drawing attention to MPAs but needs to consider the consequences of tourism development
- Investment plays an important role for improving local communities
- *Sustainable Tourism requires commitment by all individuals*

CONCLUDING REMARKS

- Tourism impact on development through multiplier effects: direct & indirect

$$E_{develop} = E_{growth} + O_f$$

$$E_{growth} = I_R + T_R + G_R + O_f$$

Given other factors O_f , if tourism (q) $\uparrow \implies I_R$ (income), T_R (revenue from trade), G_R (government revenue) $\uparrow \implies E_{growth} \uparrow \implies E_{develop} \uparrow$

- The perception of tourism effects on society and environment plays a key role in communities living adjacent to MPAs.
- Social-benefit interaction as a game between corporate and civil advocates
- *Every journey is an exchange, not a commodity*
- *Key factors require to achieve sustainable tourism in MPAs: capacity development (education), collaboration of all stakeholders, community involvement, acceptance and support*

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SUSTAINABLE DEVELOPMENT GOALS



Conserve and sustainably use the oceans, seas and marine resources for sustainable development



THANK YOU FOR YOUR ATTENTION