MARINE PROTECTED AREAS (MPAs) AND TOURISM DEVELOPMENT

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OUTLINE

• INTRODUCTION TO COASTAL AND MARINE TOURISM
• A CASE STUDY OF KOH PHI PHI, THAILAND
  ❖ Significance of Reef-based Tourism
  ❖ Unsustainable Practices and Overdevelopment
• SUSTAINABLE TOURISM MANAGEMENT
• LINKING MPAs TO TOURISM
• PAYMENT FOR ECOSYSTEM SERVICES (PES)
• A CASE STUDY OF MALDIVES
  ❖ Significance of Tourism
  ❖ Management Approaches
• LESSONS LEARNED AND THE WAY FORWARD
MARINE AND COASTAL TOURISM

- **In-water activities**: swimming, snorkeling, SCUBA diving, interaction with wildlife, cruise and boating, recreational fishing
- **On-land activities**: beach relaxing, sun tanning
- **Major attractions**: healthy reefs, fish diversity and abundance, marine wildlife, water clarity, white sandy beaches, good weather, staff and service
- **Key marine tourism providers**: hotels, dive/boat operating businesses, restaurants
- **Associated services**: transportation, internet café, bars
TOURISM IN CORAL ENVIRONMENTS

- Tourism, as a whole, is the most international trade item, with reef tourism becoming an increasingly large component.

- Account for more than 15% of GDP in at least 23 countries and territories
- Top destinations: Australia’s Great Barrier Reef (GBR), the Red Sea, East Africa, the Bahamas and the Caribbean, Hawaii, Maldives, and Southeast Asia.
BENEFITS FROM REEF-RELATED GOODS & SERVICES

• Global net benefits of reef tourism: US$ 11.5 billion (2010)
• A wide range of economic values of reef tourism: from US$ 2 to 1 million per hectare per year

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TABLE 6.3. SAMPLE VALUES: ANNUAL NET BENEFITS FROM CORAL REEF-RELATED GOODS AND SERVICES (US$, 2010)

<table>
<thead>
<tr>
<th>Extent of Study</th>
<th>Tourism</th>
<th>Coral-reef Fisheries</th>
<th>Shoreline Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global a</td>
<td>$11.5 billion</td>
<td>$6.8 billion</td>
<td>$10.7 billion</td>
</tr>
<tr>
<td>Caribbean (Regional)b</td>
<td>$2.7 billion</td>
<td>$395 million</td>
<td>$944 million to $2.8 billion</td>
</tr>
<tr>
<td>Philippines &amp; Indonesia c</td>
<td>$258 million</td>
<td>$2.2 billion</td>
<td>$782 million</td>
</tr>
<tr>
<td>Belize (National)d</td>
<td>$143.1 million to $186.5 million**</td>
<td>$13.8 million to $14.8 million**</td>
<td>$127.2 to $190.8 million</td>
</tr>
<tr>
<td>Guam (National)e</td>
<td>$100.3 million**</td>
<td>$4.2 million**</td>
<td>$8.9 million</td>
</tr>
<tr>
<td>Hawaii (Subnational)f</td>
<td>$371.3 million</td>
<td>$3.0 million</td>
<td>Not evaluated</td>
</tr>
</tbody>
</table>

* All estimates have been converted to US$ 2010.
** Estimates of the value of coral reef-associated fisheries and tourism for Belize and Guam are gross values, while all other numbers in the table are net benefits, which take costs into account.

CONCEPTUAL ISSUES/CONSTRAINTS TO SUSTAINABLE TOURISM

Environments

Natural habitats
Local livelihoods

Financial Criteria

Infrastructural development
Tourist arrivals
Tourism products and services

Tourism planning or/and management
IMPACTS OF REEF-BASED TOURISM

BONAIRE
- Increase in physical damage to coral reefs
- Altered species composition

MOZAMBIQUE
- Loss of biodiversity
- Threats to whale sharks (*Rhincodon typus*)
- Alienation of local land

HAWAII
- Pressure on the use of resources
- Boat anchoring
- Pollution

SHARM-EL-SHEIKH, EGYPT
- Overdevelopment
- Sedimentation
- Sewage disposal
- Rubbish and litters
- Physical damage to reefs

KOH PHI PHI, THAILAND
- Overdevelopment
- Degradation of coral reefs
- Uneven distribution of benefits

MALDIVES
- Beach erosion
- Waste products
- Limited freshwater

THE PHILIPPINES
- Over-collection of aquarium fish and corals
- Pollution
- Coastal erosion
- Anchor damage

GREAT BARRIER REEF, AUSTRALIA
- Reefs threatened with oil pollution (oil vessel incidents)
- Alien species from ballast water

Wongthong, 2013
KOH PHI PHI, THAILAND

- Located in the Andaman Sea, a short boat ride from Phuket.
- Started as a backpacker destination but became popular and underwent intense construction after “The Beach” was filmed in 2000.
- Prior to 2004, annual tourist arrivals reach 1.2 million (at times 5,000 tourists a day and 2,000 day visitors).
- Building legislation and EIA in place but no enforcement.
- Issues: pollution, shortage of freshwater, rapid and unplanned development, blackouts, uneven distribution of benefits, high cost of living.
KEY FACTORS TO UNSUSTAINABLE MANAGEMENT

• Limited knowledge and awareness (surrounding the sustainability concept) → overdevelopment and encouragement of mass tourism
• Economic priority over social and environmental concerns
• Gaps in legislation
• Weak enforcement (and corruption)
• Lack of coordination (vertical and horizontal scales)
SUSTAINABLE TOURISM

Sustainability Concept and Stakeholder Theory

- The conservative use of natural and social resources
- The competitive advantage for the tourism businesses
- The quality of life of the host community
- A high level of tourist satisfaction
MANAGEMENT STRATEGIES FOR MARINE TOURISM

- **Management approaches:**
  - Economic approaches (e.g. entrance fees)
  - Regulatory approaches (e.g. zoning)
  - Institutional approaches (e.g. property right)
  - Educational approaches (e.g. briefings)
  - Voluntary approaches (e.g. green fins)

- **Target or site specific:**
  - At dive sites (e.g. buoys, alternative dive sites)
  - At dive operators (e.g. best practices)
  - At tourists/ divers (e.g. responsible behaviors)
LINKING MPAS AND TOURISM

Benefits to Tourism from MPAs
- Safeguarding critical habitats
- Protecting iconic species
- Habitat restoration
- Cultural and historic resource preservation
- Healthy coral reefs and abundant and diverse reef-associated fish communities can add value to the experience of visiting tourists

Benefits to MPAs from Tourism
- Revenue
  - entrance fee/visitor user fees
  - private sector concession
  - donation
- Employment
- Political justification for MPA
- Environmental education
  - nature guide
  - visitor center
  - on-shore signage
PAYMENT FOR ECOSYSTEM SERVICES (PES)

• Increasingly acknowledged as an alternative to failed regulatory mechanisms.
• Adding PES to existing regulatory schemes can make them more effective in protecting both environments and livelihoods.
• Benefits:
  – Compensating for lost earnings e.g. no-take zone Vs. fishing communities
  – Restoring habitats e.g. financial and in-kind benefits to communities for planting mangrove trees
  – Conserving endangered species e.g. payment for turtle nest adoption
WAYS PES CAN BE ADDED TO EXISTING REGULATORY SCHEMES

- Restore coastal habitats
- Conserve endangered species
- Promote sustainable fishing practices
- Compensate for lost earnings

International Institute for Environment and Development (IIED), 2012
MALDIVES

• Situated in the Indian Ocean, south-west of India
• Contain 1,190 small islands – only one-sixth are populated
• Tourism accounts for over 30% of GDP
• High standards of environmental care and local benefit-sharing
• The “tourism industry” is synonymous with “resort islands”
• Developed under “one island one hotel scheme”
• Attractions: coral reefs, wildlife (e.g. whale sharks, manta rays, turtles), lagoons, island vegetation, white sandy beaches
• Key issues: beach erosion, coral bleaching, solid waste and discharge, sedimentation
BENEFITS FROM SHARKS & RAYS VIEWING TOURISM

Belize
US$ 3.7 million

Canary Islands
US$ 22.8 million

Palau
US$ 18 million

Bahamas
US$ 78 million

Maldives
US$ 38.6 million

French Polynesia
US$ 5.4 million

Seychelles
US$ 9.49 million

Fiji
US$ 42.2 million

South Africa
US$ 5.9 million

Australia (West)
US$ 12 million
RESORT ISLANDS AND HOUSE REEF CONCEPTS
PROTECTING ICONIC SPECIES AND CORAL REEFS

- The first MPA established in 1993
- Currently 33 MPAs, in which only diving and bait fishing are allowed

Whale Sharks Santuaries: Ari Atoll (Maamigili MPA) and Baa Atoll (Hanifaru MPA and Angafaru MPA) → banning sharks and rays fishing - illegal to capture, keep or harm

- Designated for the explicit purpose of tourism, aiming to provide an alternative income for locals which encourage them to move away from harmful fishing practices and at the same time preserve the whale sharks habitats
CODES OF CONDUCT

For tour operators
• Vessels: reduce their speed, looking out for animals, no vessel traffic directly above the aggregation site, drop off guests at a safe distance upstream and pick up guests downstream from the aggregation site
• On-board: pre-encounter briefing
• In-water: distance from the animals

For divers
MANTA RAY: Make a quiet entry; Adhere to minimum distance; Never chase; No Touching; Alert and calm; Rest and remain still; Avoid obstructing; Enjoy your experience!
LESSONS LEARNED FROM
KOH PHI PHI & MALDIVES

To sustainably manage tourism, these key factors are required:

• Capacity development
• Consideration of a complex range of sub-national, national, and transnational relationships
• Regulatory frameworks
• Community involvement, trust, acceptance, and support
• PES: compensating for loss earnings, protecting and restoring habitats, conserving endangered species
• Sustainable financing: entrance fees, fund raising, private-sector partnerships
• Coordination between multi-sectoral and multi-faceted agencies
• Collaboration of all stakeholders
REFERENCES


Thank you for your attention