Indicators of Sustainable Development for Tourism Destinations

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Tourism is at the top of the food chain; dependent upon social, economic and ecological sustainability.

Unique characteristics of tourism:

- Often uses other sectors’ resources
- Takes the client to the product
- Depends on many different social and environmental factors
- Has many different demand segments
- Very risk-averse - can change rapidly due to real or perceived risk

Both good and bad images influence the decision to visit: pollution, disease, disaster, civil strife can alter the image significantly and it may take a long time to restore a lost image.
What do tourism managers need to know – to support sustainability?

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Why Indicators of Sustainability?

Decision-makers need to know:

- How their actions can affect the assets and values of the destination
- How external factors (including extreme events – natural and human) can affect their interests
- How tourism interacts with the other uses and users of the destination and its assets
- The objective is to reduce future risks to the ecological, socio-cultural and economic functions of regions (destinations)

Key Questions for Monitoring and Management

- How many tourists is enough?
- How can we capture benefits without excessive costs?
- What are the limits of capacity or sensitivity to change?
- What are the risks to the key assets?
- Can we measure impacts?
- What are appropriate indicators of the real risks to the values?
- Can we manage tourism to respect limits and opportunities?
- Can we measure our progress?
What are Indicators?

- Indicators are signals of
  - upcoming situations or problems
  - current issues
  - need for action
  - results of our actions
- certain data or information becomes critical warning indicators when their relevance becomes understood
- Red sky at night, sailors delight, increase of coals at midday, in mine tunnel
- increased smoke from a volcano

Key Issues Where Indicators are Required

- WTO task force has identified approximately 50 issues, with corresponding indicators fall into many categories: Economic, Environmental, Cultural, Community participation, Safety, Security. These categories include:
  - Economic indicators: Economic development (% occupancy, % local, % full time)
  - Environmental indicators: Energy management (use per day per tourist, ratio per capita local use to tourist use)
  - Cultural indicators: Maintaining cultural assets (% of tourist revenues which is positive for community)
  - Community participation indicators: Visual pollution (% buildings in vernacular architecture, % local, % full time)
  - Safety and security indicators: Health and security (% with water borne diseases, % harassed)

Typical issues and indicators: Economic

- Reducing seasonality (ratio of tourists in peak month relative to annual mean)
- Sustaining tourism related employment (jobs in industry, % local, % full time)
- Reducing currency leakage (net benefit per tourist which remains in destination)
- Managing the pace of development (% occupancy, visitor build rate)
- Value for money (tourist perception)
- Cost of market (re)positioning

Typical issues and indicators: Cultural

- Maintaining local satisfaction (% who agree that tourism is positive for community)
- Maintaining cultural assets (% of tourist revenues which go to maintain or conserve key sites and structures)
- Maintaining security (number of crimes affecting/involving tourists)
- Tourist wellbeing (% tourists who feel safe in the destination)
- Health and security (% with water borne diseases, % harassed)

Typical issues and indicators: Environmental

- Climate change (measures of vulnerability and response)
- Managing destinations within carrying capacity (tourists per square metre in peak day/season, % area degraded)
- Energy management (use per day per tourist, ratio per capita local use to tourist use)
- Water availability (annual supply in use, % days shortage per year, cost of new water)
- Sewage (% waste water treated to standard, number of contamination events)
- Visual pollution (% buildings in vernacular architecture, % hotels in degraded state)

Good Indicators are:

- Relevant: Important to real decisions
- Feasible: Practical to obtain, current, accessible when needed
- Objective: Objective and based on good science
- Clear: Understandable and meaningful to users
- Comparable: Can show changes over time and between destinations
**Typical issues and indicators: Tourism Management**

- Development control (% new tourism enterprises receiving development review)
- Transportation (% hotels served by public transport, % area used for vehicles)
- Green tours and products (% having certification, % hotels with EMS)
- Controlling use intensity (persons per hectare in peak periods, persons per toilet)
- Protecting image (% tourists who rate elements of image high on exit questionnaire)
- Image of destination

**Rationale for the WTO approach**

- The indicators used are destination specific, responding to the key needs of each place (community, site, resort) in both short and long term.
- Participatory approach helps both get information and generate buy-in from all stakeholders.
- Baseline indicators are suggested for all destinations — to help in comparison and standardization and encourage communication.
- Options are provided regarding means of measurement to allow destinations at different stages in processes to begin to use and develop indicators.
- Long term objective is to have international standard set in use by most destinations to help in benchmarking and information exchange, while allowing each destination to have its own specific indicators which respond to its needs.

**Issues and Indicators**

- The central elements of the WTO process are:
  1. To identify key issues (problems, opportunities, concerns) where information or indicators are needed; and
  2. To develop indicators with their specific measures to allow the issues to be better understood and managed.
  3. To integrate the indicators into a comprehensive planning and management process aimed at sustainability.

**Challenge: to make the indicators useful both for short term management needs and longer term sustainability.**

**Indicators in the context of recovery**

- Measure degree of damage and setbacks.
- Measure pace of recovery of industry, infrastructure, attractions.
- Provide data to assure market that assets are still there and safety has returned.
- Critical to local and regional marketing.
- Image indicators are as important as sustainable ones in international marketplace.

**WTO Process for Indicators Development**

1. Definition of destination's tourism
2. Use of participatory processes
3. Tourism assets and risks/sensitivity
4. Long term vision or plan for destination
5. Selection of priority issues and policy questions
6. Wish list of potential indicators
7. Inventory of data sources
8. Indicators selection
9. Evaluation of feasibility for implementation
10. Data collection and analysis
11. Accountability and communication
12. Monitoring and evaluation

**Suggested WTO Baseline Issues for All Destinations**

- Local satisfaction with tourism.
- Effects of tourism on communities.
- Sustaining tourist satisfaction.
- Tourism seasonality.
- Economic benefits of tourism.
- Energy management.
- Water availability and conservation.
- Drinking water quality.
- Sewage treatment.
- Solid waste management.
- Development control.
- Controlling use intensity.

Note that specific indicators and means of measurement are also suggested for each.
Coastal Zones

Ecological destruction
Beach degradation
Use intensity
Exposure to risk from:
storms, flood,
seismic events

Indicators:
Amount degraded (%/area in degraded state)
Levels of erosion (% of beach eroded)
Density of visitors (Persons per m²)
Number(%) persons in high risk zones
% of persons within reach of warning system

Mountains

Flora / fauna loss
Erosion
Local benefits

Indicators:
Reproductive success (Key species counts of indicator species)
Extent of erosion (% of surface in eroded state and proportion caused by tourists)
Employment (Number of locals employed in protection)

Small Islands

Currency leakage
Water supply
Local jobs
Protection

Indicators:
% of visitors/residents with safe haven from extreme events

Unique Ecological Sites

Site degradation
Tourist impact

Indicators:
% of area negatively affected
Visitor numbers relative to carrying capacity

Traditional Communities

Violation of norms
Displacement of locals

Indicators:
Local satisfaction (Questionnaire % positive)
Complaints (Number registered at tourist office)
Disruption (Local/visitor ratios, complaints)
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Cultural Sites – Built Heritage

Site degradation
Safety

Indicators:
Level of pollution from visitors
Level of vandalism (events recorded)
Restoration costs (Repair costs per year)
Crime rate and type (Number of crimes against tourists)
Black Sea Coast, Romania
- Beach and historic resorts on Black Sea coast
- Concern for beach pollution, service quality
- Large-scale inclusive resorts targeted at foreign markets
- Need to manage quality of product and image in key markets
- Concern for loss of custom to other nations now that Central Europeans have access abroad.

Key indicators: water quality, service quality, tourist satisfaction

Cozumel, Mexico
- Island cruise ship destination up to 11 ships per day
- Fragile reef ecosystem
- Visitor numbers may equal resident population
- Limited water availability

Key indicators: total tourist numbers, ratio to locals, water use, levels of ecosystem protection, currency leakage

Indicators Case: Mексіalтін, Mexico
- Island in swamp
- 2000 year history
- Shrimp production
- Little tourism yet
- Not prepared for influx

Key indicators:
- Water supply
- Small local numbers
- Tourism
- Cultural disruption - crime, data
- Level of planning
- Garbage control

Villa Gesell, Argentina
- Heavily used beach site
- Intensive summer use
- Fragile dune ecosystem
- Need for control
- Problem with protection of fragile ecology

Key indicators: use levels, ratio of tourists to locals, rate of beach erosion, rate of dune destruction, water availability

Indicators Case: Ugljan and Pasman, Croatia
- Small islands as yet undeveloped for mass tourism
- Vibrant local community
- Adjacent to national marine park
- History, music, family are key assets
- Wish to benefit from tourism and minimize negatives

Key indicators:
- Water quality
- Access, employment
- Seasonality
- Repeat visits
- Image

Indicators Case: Phuket, Thailand
- Key issues:
  - Level of recovery from tsunami (number of hotels back in operation, % rooms, % occupancy)
  - Image and perception of risk (% who believe the destination is now safe)
  - Level of effort re safety and security (% beaches with full tsunami/storm warning system in place)
Indicators Case: Yangshuo China

- Karst landscape
- Rapidly growing tourism
- Focus on rivers and fragile sites
- Competition among villages and boatmen
- Need for integrated planning and management
- Emerging participatory process

Key indicators: use density, visitor management, level of control, participation

Cyprus Case: Indicators at National Level

- Objective: to support better decisions at national, regional and site levels
- Process: SWOT - identifying key indicators at each scale (and ability to tier them)
- Participatory process with key potential users and data providers
- Lead by Tourism Ministry - with ongoing role to build process as part of national statistical initiative
- Good basis in regional and industry statistics - to support most key indicators

Indicators can help design measures for control of tourism – both risks and impacts

- Zoning approaches
- Site planning
- Demand management
- Access management
- Tourist behaviour management

Planning for Site and Impact Management

- Inventory of site characteristics and ecological fragility
- Site planning
- Hardening of used areas
- Paths / controlled routes
- Waste management
- Control of combined buffer
- Safety viewing sites
- Indicators to monitor impacts and results

Understanding of capacity and stress can lead to control of numbers:

- Measuring and limiting demand
- Limits on numbers
- Pricing strategies
- Quota systems
- Lotteries
- Marketing strategies
• Monitoring impacts of visitors supports people management:
  – route design
  – use of vehicles
  – timing of visits
  – control of access points
  – organization and synchronization
  – special access for older or disabled tourists

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  – organization and synchronization
  – special access for older or disabled tourists
  – rescue

Tourism can be a strong element in development and can foster protection
Integrate tourism planning with community planning
Clearly identify what assets are most valuable and sensitive
Use a suitable participatory process to help identify risks and manage them
Develop indicators as a basis for management and monitoring
Use a risk management framework to support sustainable development
Follow through to implement sound management and to measure performance
The Workshop

- Confirm key assets and risks (SWOT)
- Create list of information needs – and indicators which can respond
- Begin to evaluate the practical steps to implement indicators
- Work through some specific high priority indicators needed now.
- Learn by doing – an applied exercise