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ORGANISATION MONDIALE DU TOURISME
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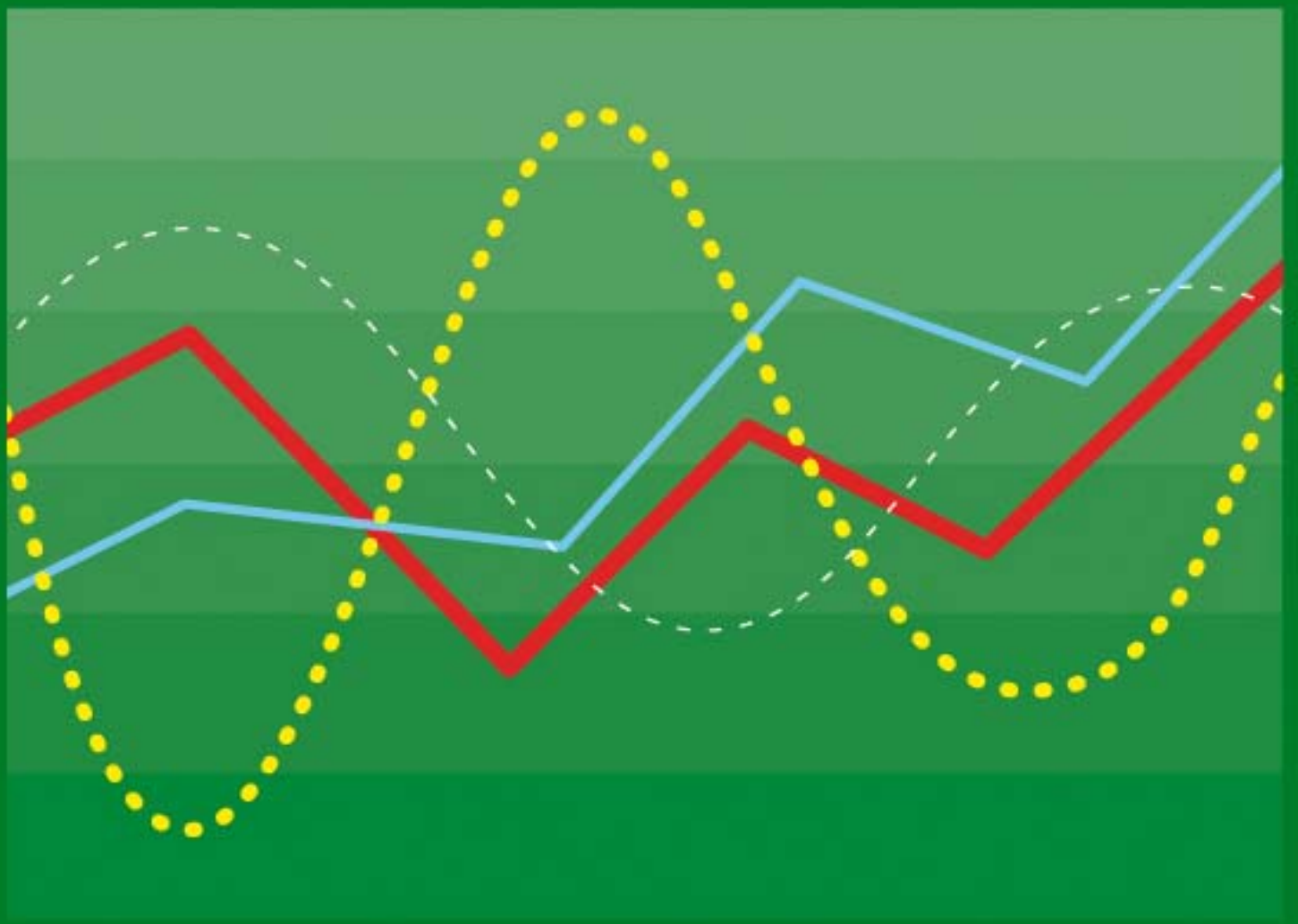
ВСЕМИРНАЯ ТУРИСТСКАЯ ОРГАНИЗАЦИЯ
منظمة السياحة العالمية

Indicators of Sustainable Development for Tourism Destinations

A Guidebook



3.9.1 Sewage Treatment ➢ Baseline issue

Wastewater Management, Extent of System, Effectiveness, Reducing Contamination

The management of liquid waste (sewage) is a key concern for tourism. The industry has frequently been harmed by contamination of its key resources – beaches, lakes, rivers. Pollution both from resorts themselves and from local communities and industries can degrade the destination, and may also contribute to disease and damage to wildlife and natural resources. Widely publicized incidents (e.g. oil spills, cholera) and beach closures on all continents due to e-coli or other contaminants can virtually close down destinations and harm the image and tourism arrivals for years. In extreme cases, contamination has resulted in virtual closure of resorts (e.g., breakdown of sewage infrastructure was a key contributor to the closure of several Iberian beach hotels in the 1970s and abandonment of Black Sea resorts in the 1990s.)

Components of the Issue	Indicators
Sewage receiving treatment	• Percentage of sewage from the destination/site receiving treatment (also break out sewage from tourism sector if possible) ; ➢ **Baseline indicator;** • % of treated sewage recycled (e.g. for irrigation).
Extent of sewage treatment systems	• Percentage of tourism establishments (or accommodation) on (suitable) treatment systems ➢ **Baseline indicator;** • Percentage of the destination served by storm water systems (separating sewage from runoff and surface drainage).
Effect of sewage treatment	• Number of reported pollution or contamination events per annum (by month) in watercourses receiving effluents; See also indicators in section on Seawater quality (p. 149)

Indicator of treatment levels:

- **Percentage of sewage from the destination receiving treatment** (Measure each of primary, secondary, tertiary treatment levels and calculate separately for tourism sector if possible) ➢ **Baseline indicator;**
- **% of treated sewage recycled (e.g. for irrigation).**

Reason for use of these indicators: The key assets of tourism can be damaged by sewage releases – either from the tourism sector or from others. Impacts on the environment and implications for the communities, the tourism industry and the overall economy can be significant.

Source(s) of data: These data are normally available from environmental or health authorities or from the utilities themselves for most destinations. Where there is no reticulated system, data can often be obtained from individual properties which have their own treatment systems.

Means to use these indicators: This is related to destination quality and also to standards like Blue Flag. From the point of view of the tourism industry it is essentially an early warning indicator of potential risk to their product and a stimulus to action to improve their own or community systems.

Benchmarking: Benchmarking is essentially done over time for the same destination although national, regional and international standards exist which can be used (e.g. Blue Flag, national standards for treatment for many nations).

Indicator of extent of sewage treatment systems:

- **Percentage of tourism establishments (or accommodation) connected to (suitable) treatment systems ➢ Baseline indicator.**

Reason for use of the indicator: Because of the dispersed nature of many tourism properties, community wastewater systems may not be available for many. This indicator identifies the overall percentage of establishments which have approved treatment systems (community systems, their own treatment facilities, approved septic and cesspool systems)

Source(s) of data: Data is likely available from local planning, building or environmental authorities.

Means to use the indicator: (same as above).

Benchmarking: Over time for the same destination.

Other indicators which may be of use relative to wastewater (sewage) management include:

- **Number of reported pollution or contamination events per annum** (by month) in watercourses receiving effluents;
- **Percentage of the destination served by storm water systems**
  (See also Sea Water Quality for destinations where the sea is the recipient of effluents p. 149).

Box 3.32 Beruwala Sri Lanka Waste: The Beach Boys know where the effluents flow

During the field work for the WTO indicators study in the beach resort of Beruwala, the visiting experts became aware of an issue regarding sewage. Beach boys contended that black sewage flowed across the beach from one hotel. The hotel manager showed the group the treatment plant, and the environmental manager showed the group the report done daily of outflow clarity. No such black water event was noted.

A live demonstration was done of the regular flushing of the holding tank. The experts and some beach boys were at the outlet when the release commenced. Those at the outlet saw thirty seconds of foul black water run across the beach, followed by clear water. By the time the environmental manager made it to the outlet from the valve he had turned on, the water was flowing clear.

The WTO group further examined the holding tank, and found that it had been poorly installed with the outlet at the bottom. Thus sludge was flushed in the initial water release each time. A cheap fix, adding a length of pipe to raise the outlet was all that was needed to remedy the problem and bring the system more into compliance.