

# THE TOURISM INDUSTRY

## MODULE 7



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### 7.1 TOUR OPERATORS

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Guidelines for tour operators

Four case studies

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### 7.2 HOTELS

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Hotels, resorts, & other lodging facilities

Hotel site selection & design

Hotel management practices: water, energy, waste

Off-site activities & community relations

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### 7.3 CRUISE SHIPS

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Growth of the cruise industry

Waste discharge & other environmental issues

The cruise industry as a source of funding & support

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### 7.4 RECREATIONAL ACTIVITIES

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Guidelines for boating, snorkeling/diving, and wildlife viewing

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### 7.5 SUSTAINABLE SUPPLY CHAINS

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Benefits of using sustainable supply chains



### **Acknowledgements**

*The majority of the following material is excerpted or modified from:*

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### OVERVIEW

*The involvement of the tourism industry is essential for sustainable tourism to succeed. Tour operators, hotels, cruise ships, and recreational activity providers can all make substantial differences by using environmentally sound management practices.*

The tourism industry is multifaceted and consists of a large variety of tour operators, hotel operators, cruise ships and recreational activity providers. For tourism to be carried out in a sustainable manner, representatives of all of these industries need to be contacted and included in the planning process.

Tour operators can have a particularly large impact since they influence tourists' choices to go to a particular destination, and they contract with many other operators (hotels, recreation, etc.). Tour operators who run their own tours can make a big impact by hiring local guides, limiting group size, and including educational messages. Tour operators can also develop a "sustainable supply chain" of providers who adhere to sustainable practices.

Hotel design, location, and landscaping all will affect the ultimate impact of the hotel on coastal and marine resources. Once constructed, a hotel's daily management practices for water use, energy use, wastewater treatment and solid waste can all contribute substantially to preserving the local environment, and building ties with the local community, while at the same time saving money for the hotel operator and enhancing the tourist experience. Cruise ships have particular impacts at ports and via waste dumping at sea, and off-ship excursions by the tourists can affect coastal and marine areas. Recreational activity providers are at the forefront of tourists interacting with the environment, and can directly act to minimize damage to coral reefs, harassment of wildlife, and other impacts by educating staff and tourists.

### LEARNING OBJECTIVES

- ✓ Understand the role of all segments of the tourism industry in contributing to sustainable tourism
- ✓ Become familiar with environmentally sound management practices for tour operators, hotels, cruise ships & recreational activity providers
- ✓ Develop guidelines for hotels, cruise ships, and recreation in your MPA
- ✓ Understand trade-offs of supply chain standards
- ✓ Understand the relationship between economic efficiencies and conservation



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## LESSON PLAN

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### 7.1 THE ROLE OF TOUR OPERATORS

#### *Handout 7.1 - Tour Operators' Initiative Pamphlet*

In the last module we focused on the role of the local community in sustainable tourism planning and management. Today we will focus on another major group of stakeholders: the tourism industry itself. Engagement of the tourism industry is key for the success of any sustainable tourism plan. The tourism industry is primarily responsible for the siting and design of tourist facilities, the environmental impacts of those facilities in water, energy, and waste outflow, the type of local jobs and treatment of local employees, the types of activities offered to tourists and environmental impact of the tours, and, ultimately, the tourists' choice of destination. However, the tourism industry is not a single entity. It is composed of a multitude of small and large businesses, engaged in very different enterprises. The needs, viewpoints, and impacts of all the different sectors of the tourist industry should be considered, to the extent practicable.

In this section we consider the role of tour operators. Later today we will look at three other major segments of the tour industry: hotels, cruise ships and recreational activity providers. Whether or not these tourism sectors impact your MPA right now, they likely affect nearby communities and may encroach on your MPA in the future. For effective long-term planning, it is important to understand all of the environmental impacts of all sectors of the tourism industry, both within and outside the MPA.

### Sustainable Tourism Guidelines for Tour Operators

Tour operators are in a key position to have enormous impacts on tourists' choice of destination and of the type of tours and activities that are promoted for a certain area. Many tour operators are already part of voluntary initiatives to promote sustainable tourism (for example, the [Tourism Operators' Initiative](http://www.toinitiative.org), [www.toinitiative.org](http://www.toinitiative.org)). Promotion of sustainable tourism makes good business sense in the long run for tour operators, because sustainable tourism can be carried on indefinitely without degradation of the tourist attractions, and in addition, tourists are often more satisfied with their experience and are more likely to bring repeat business to the tour operator.

***Tour operators can make great impacts via their own management practices.*** Operators who run their own tours can follow the management guidelines such as those listed below. Tour operators who sub-contract to other providers can use [sustainable supply chains](#) (to be discussed more later today) to ensure and encourage sustainable practices by every provider, contractor and supplier involved in the tour experience.

***Tour operators can also help monitor the ongoing success of a sustainable tourism operation*** in an area, by surveying tourists after their visits to ask them about such issues as pollution, damaged habitats, poverty, etc. If the local authorities are alerted by tour operators that tourists have negative perceptions about the destination, they may be encouraged to address the underlying issues.



### ***Some management guidelines for tour operators:***

- ***Select appropriate destinations*** - Tour operators make careful choices about which destinations to take tourists to. They may not be aware of the environmental vulnerability of certain destinations, or about other more sustainable destinations that may be just as, or more, attractive to tourists. Throughout the assessment process, the MPA manager, local community, and tour operators can all help inform each other about which destinations to focus on.
- ***Reduce impacts in sensitive environments*** - Certain environments are particularly vulnerable to tourist-caused damage or tourist-associated construction. Tour operators need to be alerted to which environments locally are most sensitive, such as mangrove forests and coral reefs (we will discuss these more in the recreational activity section).
- ***Limit group size*** - Some sensitive or very popular habitats may still be used for tourism if visitor group size is limited. Though this reduces client numbers per tour, tourists often appreciate the more intimate experience and personalized attention of smaller groups and less crowded environments, and are typically willing to pay more for the tour.
- ***Hire local guides, use local suppliers, and treat them fairly*** - Whenever possible, local guides & suppliers should be used. This may require guide-training programs in such areas as history, wildlife biology, botany and languages. Guide quality is often ranked by tourists as the most important feature of a nature tour. When using local staff, it is essential to pay staff fairly and treat them well.
- ***Build awareness and educate tourists*** - Tour operators can help educate tourists, by handing out brochures and/or having guides describe the conservation and cultural issues of the local area. Most tourists want to learn about the local environment and culture, especially if the information is presented in an interesting way.
- ***Contribute to conservation & local community*** - Tour operators can donate a portion of proceeds to local conservation activities and to local community needs such as schools, clinics, etc., and can set an example by using conservation measures in their own offices (recycling, etc.)

### **Case study 1: Eutrophication in Italy - tour operators pressuring for change**

The municipalities of Rimini in Italy, located in the Mediterranean and heavily dependent on tourism, experienced overdevelopment and environmental degradation throughout the 1970's and 1980s. Coastal eutrophication of the Adriatic Sea led to algal blooms and heavy fish mortality in 1985, with ensuing odors and pollution causing tourism losses. The tourism industry pressured local authorities to engage agribusinesses and hotel chains to reduce use of fertilizers and improve waste and sewage management. The environmental improvements were accompanied by public awareness and marketing campaigns to improve the city's image, and visitor numbers increased.

### **Case study 2: Side, Turkey - tour operators focusing on a destination**

The Tour Operators' Initiative for Sustainable Development (TOI) is a voluntary initiative by primarily Europe-based tour operators who are seeking to encourage sustainable tourism in the destination countries that they patronize. TOI members recognize that they cannot achieve their sustainability goals without working in partnership with stakeholders in the destinations. Side, on the southern coast of Turkey, was the first destination in which TOI members forged a partnership



with local stakeholders. TOI members and their local partners bring approximately 300,000 tourists to Side annually.

To begin, local stakeholders and TOI members were interviewed for their opinions on key sustainability issues. These interviews were followed by a workshop in 2002, organized by one of the TOI members (Vasco Travel) and TUDER, the local hotel association. The meeting was attended by the mayor of Side, the local chamber of commerce, local hotel owners, local tour operators, and local travel agencies; representatives of WWF Turkey, UNEP, UNESCP, and WTO; and TOI members. This is a good example of the mix of stakeholders that should be included at planning meetings.

The meeting gave the opportunity for all members to share their views. They agreed on the importance of a continued dialogue between tour operators and local stakeholders, and agreed on three priority issues:

1. Waste management, with a focus on separation and recycling.
2. Education and training for sustainability in hotels, bars and restaurants.
3. Promotion of Side's culture and cultural activities

During follow-up meetings, a detailed plan of action was developed and a locally based coordinator was appointed, financed by the Side administration and by TUDER, the local hotel association. In the two years since, activities included design and implementation of waste separation schemes, coordination with recycling companies to schedule pick-ups of recyclable waste at local hotels, placement of used-battery containers in hotels and schools, and training sessions on solid waste management and recycling for managers and staff at hotels, restaurants, sanitation workers. Over 100 hotels and all local shops and restaurants now participate in the scheme. Data are promising: 276 tons of inorganic waste and 11,978 batteries were collected, and a new land fill was approved and is under construction.

Note that in this example, tour operators and local representatives together identified on a very specific issue - waste management - and then took concrete, practical steps to improve waste management throughout the town.

### **Case study 3: Peru Treks & Adventure - the impact of a local operator**

One of the most popular tourist destinations in all of the Americas is the ancient Incan city of Machu Picchu in the Peruvian Andes. Over the last twenty years, the 4-day "Inca Trail" hike from Cuzco through the Andes to Machu Picchu has become extraordinarily popular. It is perhaps the most popular overnight hike in the Western Hemisphere, and offers an interesting example of a carrying capacity problem because massive numbers of tourists overwhelm the limited resource, **but the local operator can make an important contribution towards solving it.** Though this tourist example is in a mountain rather than marine environment, the general principles, of carrying capacity and fair treatment of local staff, are applicable to marine environments as well. The main message of this example is the attention a local tour operator can give to fair treatment of local staff, and contributions to the local community. See the accompanying handout for details:

#### *Handout 7.2 - Peru Treks & Adventure*

### **Case study 4: Lastovo - developing a small island destination**

WWF and TOI have forged a partnership to support biodiversity conservation in areas of high-volume tourism. In 2004, they sponsored a joint workshop for sustainable tourism in sensitive marine areas. Both WWF and TOI share concerns over the environmental effects of tourism at



popular coastal destinations. Negative effects include hotel construction which infringes environmental guidelines and causes destruction of important habitats, while increased sedimentation from surface-water outflows via rivers and drains can damage warm-water corals, which are particularly sensitive to water clarity levels.

At the same time, it was appreciated that not all adverse impacts on sensitive marine biotopes are caused by tourism, and that the passengers handled by high-volume tour operators are not the sole cause of tourism-related impacts. In particular, it was noted that with the availability of cheap, Internet-booked flights and an increasingly sophisticated traveling public, FITs ("free, independent travelers") make up an increasingly large segment of the total market, while certain important niche markets for marine tourism (particularly dive tourism) have an especially high proportion of FITs. Furthermore, a significant proportion of visitors to coastal destinations are domestic tourists, originating from within the destination country, and statistics for this group are often either non-existent or unreliable. The attitudes and behavior of these categories of travelers are clearly not susceptible to influence through international tour operators, and will need to be tackled through other channels.

As the first 'pilot project' the partners selected the island of Lastovo, on the Dalmatian coast of Croatia, which has been proposed as a Marine Protected Area to the Croatian government. In September 2005 a 'Sustainable Tourism Day' was organized on the island of Lastovo for the local community. Participants included over 30 representatives of the local community. The TOI team was composed by representatives of Aurinkomatkat, LTU Touristik, TUI AG and First Choice/Sunsail. WWF Germany, representing the WWF International tourism network, the Mediterranean Program and SUNCE also participated as main organizers.

Recommendations from this meeting included:

- **Create a network to link the many small tourism related services on the island.** An incoming agent would then coordinate all the elements, including private apartment rentals, hotel, bars, restaurants, car and bicycle rental, dive operators, as well as providers of agricultural and fisheries products into a tourism package, and then sell it to outbound tour operators. The outbound operators would find this much more efficient than having to deal with individual small operators.
- **Aim for one or two target groups of tourists.** The tourism market is highly segmented, with each segment having different and often conflicting requirements. The segments include sun & beach; fun & action; nature & outdoor; culture & education; families; traditional repeat tourists; and individualists. Rather than trying to serve them all, which would be a mistake given the island's small size, define which groups can be best served by the unique attractions of Lastovo.
- **Offer high quality accommodation**, which will require the adoption of very strict health and safety criteria, for comfort as well as environmental reasons.
- **Attract nautical tourism** - e.g., yacht travel. This is already a very strong market segment for the island. This could be improved by the establishment of mooring buoys, which will also prevent damage to the sea bed. In general yachters will be willing to pay for this. Rubbish removal service can be offered as part of the mooring fee, as well as providing good local food, nature and cultural excursions, and cultural events.
- **Assess the competition.** An island like Lastovo competes at the regional, national, and international levels. It is therefore important to define what would make Lastovo unique.
- **Assess & improve infrastructure.** Critical for the long-term sustainability of the tourism industry is the assessment and improvement of the island's fresh water supply, waste water management, sewage water treatment etc.



- **Realize that tourism development and conservation are allies.** Tour operators stated that , in their experience, areas that are declared protected typically experience an increase in tourism. Tour operators therefore strongly support conservation, and in particular the establishment of protected areas when necessary, as this will preserve the tourism industry in the long term.

### ***Exercise: Assess the impact of tour operators in & near your MPA***

Working in small groups, develop a list of tour operators, inbound (local) or outbound (international), who send tourists to your area. Are guided tours common in your area, and if so, are local guides used? If not, why not? What do tour groups do in your area? Could group size be limited? Are local tour operators aware of environmental and sustainability issues? Are they aware of the existence of the MPA, and do they make use of it?

## **7.2 HOTELS**

*Handout 7.3 - Hotel Water, Wastewater, Waste & Energy*

*Handout 7.4 - Hotel Planning Principles & Checklists*

### **Hotels, resorts and other lodging facilities**

Lodging facilities are the tourism industry's main local job generators, and the main users of local resources such as water, energy and land. They require significant infrastructure (roads, energy, water and sewage facilities). They are the cornerstone of coastal tourism, because without adequate accommodation, very few tourists will visit coastal areas, particularly rural coastal areas.

Most hotels are independently owned, medium-scale enterprises. Since hoteliers have invested their assets in a particular site, they have a particularly strong stake in the long-term sustainability of the surrounding environment. ***In addition, most management practices that will reduce a hotel's environmental impacts will also immediately reduce its utility costs.*** For both reasons, the hotel industry is often very active in community outreach and in social and environmental sustainability, and hotel owners are often very willing to participate in sustainable development planning.

### **Hotel site selection & design**

A primary initial step in a hotel's impact on the environment is simply where it is located. MPA managers may become involved in this process if hotels are to be sited in or near the MPA. Site selection by resort developers usually involves simply finding a spot along the shoreline where guests can have quick, easy access to the beach and scenic views of the sea. However, available infrastructure, sewage treatment, water supplies, etc., may not be sufficient to support the site. Some guidelines for good site selection:

- Avoid sensitive environments such as mangroves, rain forest, or steep slopes; be particularly aware of beach erosion (we will discuss this more tomorrow).
- Seek local knowledge on the environmental, cultural & social importance of the site



- Potential user conflicts should be avoided, such as with local residents who traditionally use that area for fishing, etc.
- Concentrate coastal development in nodes, rather than a thin ribbon spread along the entire coast
- Assess proximity to basic infrastructure, such as electricity, roads, water, solid & liquid waste disposal
- Ensure that local residents still have easy access to and along the beach
- Ensure appropriate use of **setbacks** - a prescribed distance away from the shoreline, to protect structures from wave action, protect shorelines from erosion, and ensure free access for local residents to and along the beach.

Once the general site has been selected, a detailed site plan should be drawn showing the exact location of all facilities (reception areas, guest rooms, swimming pools, parking areas, etc.). This will help with planning for:

- Setbacks and buffer zones to ensure free access to beach and protect sensitive areas
- Clustering to centralize infrastructure & preserve open spaces
- Aesthetically pleasing design
- Sustainable use of local products and materials

Although some tourism developers feel setbacks decrease their establishment's desirability to tourists, there are several advantages to having setbacks in place. In a resort or tourist area, the land between development and the beach can be enhanced and provide attractions to tourists. Many tourists come from countries where they have to spend months indoors avoiding the cold. When they travel to the tropics, they want to spend as much time as possible outside. The beach will always be an attraction, but open, landscaped spaces away from the water can be equally as appealing in providing:

- Shade from the sun and heat
- Places for artists and photographers to work
- Native vegetation which provides tourists an opportunity to enjoy indigenous plants
- Open space to enhance the view of the coastline and ocean.

**Landscaping and vegetation** add to a visitor's sense of place. Native plants and trees provide a sense of "getting away" for tourists, who often become quite interested in tropical flowers, palms, and birds. Vegetation also provides shade from the sun, helps minimize erosion, provides privacy barriers between guests, and can even filter wastewater. Shading of lodgings by shrubs and trees can often reduce air conditioning energy use by about 20%.

Typically, developers completely clear vegetation during the construction process. Evaluate soil, water conditions and suitable plant species *before* final site selection. During construction, retain as much of the original vegetation as possible, and plant additional vegetation when construction is finished, paying particular attention to using drought-resistant vegetation where possible, grouping plants with high-water needs together, and planting shade trees where they will shade guest areas (patios, etc.) during the hot mid-day sun. Those areas that do require irrigation should be irrigated during the cool hours of late evening, night, or early morning, and irrigation should be designed to water just the plants, not concrete walkways and roads.

## Hotel management practices

Once operational, a hotel can both save money and benefit the local environment with careful management of water & energy use, and environmentally sound policies for treatment of wastewater and solid waste (garbage). Simple changes in policy and staff training can produce cost-savings and benefit the coastal environment immediately. Other improvements may require investments in cost-effective appliances and repairs; these will typically pay for themselves within



3 months to a year, with further savings accruing in subsequent years. **Overall, hotels usually will reduce their utility costs by about 20-30% by using environmentally sound management practices.**

Though it is not expected that an MPA manager will need to operate a hotel, MPA managers should be aware of the ways in which hotel management contributes to environmental impacts along the coast, and able to steer interested local hoteliers toward good information. Hotels that wish to implement best management practices should be encouraged to begin with a thorough evaluation of the hotel's current usage and policy, resulting in a detailed list of specific desired changes. The ideas below are excerpted from the "Toolkit" series from the Small Tourism Enterprises Project (STEP) in the Caribbean.

### **1. Water conservation**

Tourist hotels require vast amounts of water for bathing, housekeeping, cooking, laundry, landscaping and swimming pools. Tourist consumption of water is usually many times higher than that of the local people. Studies show that in most hotels, a tourist will use between 40-100 US gallons of water per day. This can result in water shortages and degradation of water supplies, as well as increased wastewater discharge. The problem is particularly acute in hot, dry countries, where available resources can be in short supply, yet tourist demands on water (for swimming pools, showers, etc.) are high because of the climate. At large resorts, golf course irrigation can be a particular problem. An average golf course soaks up at least 525,000 gallons of water per day, which can severely affect fresh water availability in certain areas.

**Water sources** should be identified during site selection. Water wells may be needed; as a general guideline, place them away from the beach to minimize salt water contamination, and away from the hotel's septic tanks. (*Detailed well and septic tank placement guidelines can be found in the "Guidelines for Coastal Tourism Development in Tanzania" (2001); see citation at beginning of this module.*)

**Water conservation** is an easy win-win step for hotels to take, as it immediately reduces water costs. Small hotels often can reduce water use by 1/3 with simple steps such as:

- Regularly check water meters
- Check for leaks throughout the system, including main water lines
- Install water-efficient showerheads, low-flush toilets, and water aerators
- Inspect water use practices in irrigation systems, kitchens, and laundries
- Reduce laundry service to every other day unless guests opt for daily laundering
- Install foot-pedal valves in kitchens, allowing kitchen staff to quickly turn water on and off while hands are occupied. These usually pay for themselves in 3-12 months.
- Harvest rainwater for use in laundry, irrigation, etc.
- Irrigate the grounds with graywater or treated wastewater.

See the "Water Conservation" handout from the STEP series for details & more ideas.

### ***Case Study: Resort Impacts in Pulau Redang, Malaysia***

Before development on the island of Pulau Redang, Malaysia, an environmental impact assessment predicted that major resort development would result in depletion of freshwater supplies, slope erosion and the destruction of the surrounding coral reef (marine park). Although the EIA recommended significantly limiting development and placing restrictions on building in steep areas, these recommendations were ignored and major resorts were developed, not surprisingly causing the predicted impacts. Freshwater resources on the island have been overused, resulting in saltwater intrusion and contamination and forcing the government to propose an expensive water pipeline from the mainland to meet tourists' needs. Furthermore, slope erosion has destroyed terrestrial ecosystems and choked the surrounding reef, resulting in significant species loss, the clouding of previously clear waters and a decline in the quality of the



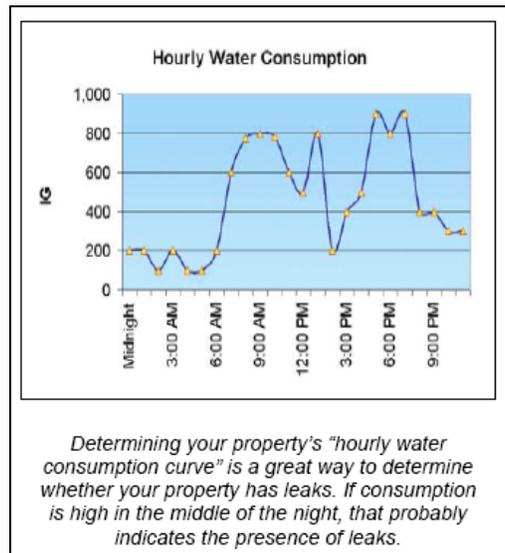
tourism product.

Source: *Sustainable Coastal Tourism Handbook for the Philippines, 2002*

### **Case Study: Undetected leaks**

Hotels lose an astonishing amount of water, and money, to undetected leaks, particularly leaky toilets. On average, 40% of hotel toilets have leaks and other water-related problems. A typical case: a water conservation check at a 35-room hotel in the Caribbean found three malfunctioning toilets that together wasted 3900 gallons or US\$41 per day. These three toilets alone accounted for 40% of the hotel's water consumption. They were fixed by adjusting the position of two of the floats and replacing one damaged flapper valve; the repairs took 15 minutes and US\$5 worth of parts. Other cases: A defective drain valve on a washing machine at another hotel was costing US\$6000 per year of wasted water. A third hotel had a large underground leak that had gone undetected for a week because nobody was checking the water meter daily. During that one week the leak wasted US\$1700 of water. (Source: *STEP Toolkit series, "Water Conservation"*)

Leaks can only be fixed if they are detected. This simply requires daily checking of water meters, and instructing staff to report leaks promptly.



### **Case Study: Simple water conservation steps reduce costs**

Treasure Beach Hotel, Barbados, adopted these changes and immediately reduced water use by 10%:

- Flow diverters and toilet dams.
- Low flow showerheads and faucet aerators.
- Sub meters for kitchen and irrigation.
- Daily meter readings.
- Water hoses fitted with control nozzles.
- Drip irrigation system controlled by a timer and a moisture probe.
- Towel and linen reuse program.

## **2. Wastewater management**

Wastewater treatment facilities are often virtually non-existent along rural coasts, and tourist developments will usually need their own septic tanks or other waste treatment systems. Care should be taken in the design and placement of the septic systems, particularly with regard to sources of freshwater; see the accompanying handouts for details.



### *Handout 7.5 - Septic Systems*

### *Handout 7.6 - Water Wells*

**Wastewater** is simply any water that has been used and is no longer pure. It includes human sewage from toilets, scraps and grease from kitchen sinks, and “graywater” (water that has been used, but that does not include toilet waste or kitchen waste. It usually has been used for washing - in sinks, tubs, showers, or laundries - and appears gray). Wastewater also includes industrial wastewater from factories, shops, etc.; and storm water, flood water, etc that enters the water system through the soil or drains.

Wastewater is often overlooked by hotels, often because of a lack of understanding of potential problems, a lack of appreciation of the need for continual maintenance and monitoring of sewage equipment, as well as by a tendency to consider wastewater treatment a “menial” task to be delegated to lower-level staff.

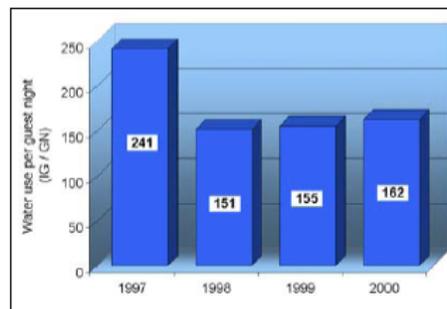
A particular problem in tropical resorts is poorly treated or non-treated wastewater, particularly raw sewage, polluting beaches and coral reefs. This can cause growth of seaweed and algae that can smother the coral reefs, can create foul smells on beaches, and can spread disease. To avoid this problem, most coastal hotels need their own septic tanks. Many do have them, but may not appreciate the need to site them correctly, and monitor the tanks and outflow field for blockages. Another common problem in small hotels is the excessive grease from kitchens and cleaners, which can clog septic systems.

Some management tips:

- Inspect site placement of septic tanks (e.g., far from water wells)
- Use graywater for laundry re-use or irrigation.
- Treated wastewater can also be used for irrigation - but be absolutely sure it is treated correctly and is safe for animals and children.
- Clean grease traps of kitchen sinks once a week.
- Use bioaugmentation (bacterial cultures that break down grease) in grease traps.
- Minimize use of harsh bleaches and other harsh cleaning chemicals; they will kill bacteria in the septic tank and slow the septic process of waste filtration.

### **3. Solid waste management**

In many tropical resort areas, hotels and resorts produce more solid waste (garbage, trash, etc.) than all the local residents combined. In some cases, poor waste management results in garbage



*Sea Splash Resort, a small property in Jamaica, conducted an environmental assessment in 1997 and reduced water consumption by 35% ever since.*



washing up onto the beaches and contaminating the coastal waters, threatening the very attractions that lure visitors.

***The cleanliness of beaches can be a major factor in tourists' decisions to return to the area, or to recommend the area to others.***

Other costs of poor waste management include: odors, infestation by rats and other vermin and their associated diseases, pools of stagnant water that breed mosquitoes and their associated diseases (dengue fever, etc.), physical injury to workers & guests, and fire hazards.

Improved waste management is beneficial to fragile coastal ecosystems, and protects the natural beauty that tourists and locals both enjoy. In addition, hotels can save on manpower for waste hauling and landfill tipping, can gain revenue from recyclables, can reduce insect, rodent and fire-hazard issues, improve community relations and increase guest satisfaction.

### ***Reduce, Re-use, Recycle***

Most waste can be enormously reduced with the simple guidelines of "Reduce, Re-use, Recycle."

**Reduce:** minimize use of unnecessary packaging, plastic bags and other disposable items; use cost-effective home-made alternatives to harsh glass cleaners, pesticides, etc.; buy supplies in bulk; provide coffee mugs instead of paper coffee cups; etc.

**Re-use** all possible items (scrap paper for notes, scrap lumber, etc.); donate old furniture and soap ends to the local community for re-use; etc.

**Recycle** all possible materials such as paper, plastics, aluminum and glass. In rural communities, recycling capacity is often low, but local communities and governments may be able to start simple recycling schemes. Organic garden and kitchen waste can be composted for use as garden fertilizer (typically, about 60% of hotel solid waste is organic waste.). Buy products made from recycled materials whenever possible.

### ***Case studies: Simple steps to reduce solid waste at 2 resorts***

Concordia Eco-Tents (US Virgin Islands) implemented these changes:

- Composting low-flush toilets use minimal water and produce valuable fertilizing materials.
- Aluminum recycling receptacles are located next to all trash bins.
- Upon departing, guests leave food, suntan lotion, etc. on the "Help Yourself Shelf" where they are available to incoming guests.

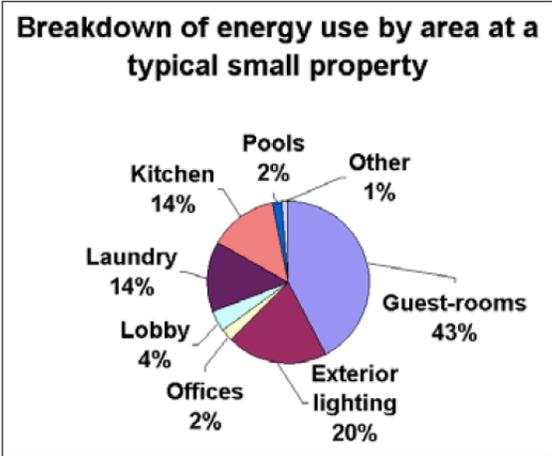
Casuarina Beach Club (Barbados) implemented these changes:

- Yard waste is put through a chipper machine and then composted.
- Toilet tissue is a recycled product.
- Many drinks are now on tap as opposed to individual bottles, and the use of straws is restricted. Reusable plastic glasses are also used in preference to disposables.
- The use of plastic bags, plastic wrap and foil is minimized, and 100% biodegradable plastic bags used when necessary. Garbage bags are replaced only when soiled and reusable cloth bags are available in the hotel's Mini-Mart.
- "Ends" of soap are taken to the Salvation Army and old furniture/soft furnishings are given away to the needy.

## ***4. Energy use***

At a typical small tropical hotel, guestrooms use approximately 40% of energy use. The majority of this is air conditioning. In such hotels, ***an investment of approximately US\$20-30 per room in energy conservation will usually yield an annual savings of US\$100 per room.***

Investments in solar and wind power, while requiring a considerable investment up-front, may result in large long-term savings as well.



Note the high energy use by guestrooms - primarily air-conditioning.

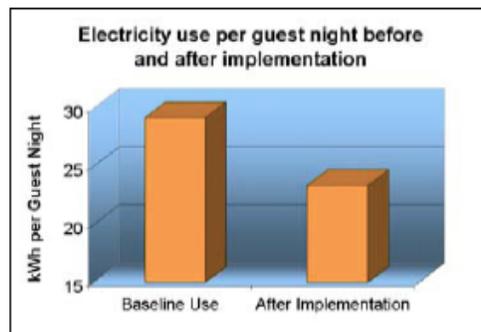


Figure 2. Energy use per guest night before and after implementation of energy conservation measures at Blue Waters Inn.

Simple steps to take include:

- Install door sweeps & weather strips on all windows and doors
- Caulk all wall openings
- Make bathroom doors self-closing (so that cool air doesn't escape through window)
- Install occupancy sensors that automatically turn off security lights & restroom lights
- Use energy-efficient light bulbs (compact fluorescent, LED, etc.)
- Minimize use of air conditioning, such as: install guestroom controls that turn off AC when the guest is not there; turn off AC while cleaning.
- Frequent servicing of air conditioners & seals on doors, windows, freezers, etc. (replacing belts, cleaning filters, repairing ducts, etc.) will often result in a 20% energy savings
- Use timers to turn off pool pumps, AC in offices, etc.
- Use ionizers to remove scale buildup in hot water heaters
- Use heat recovers that use waste heat from AC units to heat water
- Landscaping to use trees as natural shade for buildings.



## Off-site activities & community relations

Hotels should, obviously, always seek to maintain good relations with the local community. The most important aspect is simply to maintain open lines of communication from the beginning. Use local employees and local materials whenever possible. Hotels can also work with local communities to identify sources of locally produced supplies and also handicrafts and artwork. Training may assist local villages in producing particular handicrafts that will be marketable to tourists. Hotels can assist local people in developing village or cultural tours. This helps create a comprehensive tourism destination that can only improve the business prospects of the hotel in the long-term.

Hotels are the base from which a tourist engages in other nearby activities, such as water recreation, tours, shopping at local markets, etc. It is the responsibility of all stakeholders, including the local hotel management, local authorities and villages, to ensure that these excursions are positive ones, for the locals and the tourists alike. Guiding principles:

- Tourists should be encouraged to go on excursions to nearby attractions
- Tourists' activities should contribute to the local economy
- Tourists should enjoy a safe, clean, and hassle-free environment.
- Carrying capacity levels and codes of conduct should be adhered to
- Attractions must be maintained and developed

### **Exercise: Develop hotel guidelines for your MPA**

1. In small groups, discuss the hotel practices of your own area. Do you know the energy, water, wastewater, and garbage practices of local hotels in your area? If not, how could you find out? What would be the most effective way in your area to encourage local hotels to implement environmentally sound management? Are there other important practices, besides the ones listed below, that you think would benefit your area?

2. Using the ideas you have discussed, draw up a list of recommended site selection guidelines and management practices for hotels in your area.

## 7.3 CRUISE SHIPS

### Growth of the cruise industry

Since 1980, the cruise ship industry has grown annually at a rate of 8.4% - nearly twice as fast as tourism in general. It is expected to continue growing at this rate throughout this decade. Much of this growth has occurred as cruise lines redefined their market from being exclusive journeys to being entertaining vacations for everyone.

<u>Year</u>	<u>Number of passengers worldwide</u>
1970	500,000
1998	9.5 million
2010	14.2 million (estimate)

Most cruise business worldwide focuses on Alaska and the Caribbean, but cruises occur worldwide. The Panama Canal zone also is experiencing a sharp upswing in cruise business, and



cruise lines are constantly looking for new attractions. Many cruise lines are currently advertising a Panama Canal transit, and hence are exploring possible activities and destinations for cruise ships on the Pacific side of the canal. MPA managers should keep aware of the locations of the nearest cruise ship ports, the major cruise ports throughout the ETPS, and of any plans to build new ports.

Three major cruise line companies comprise nearly 2/3 of the market - Royal Caribbean Cruises, (with 23 ships), Carnival Corporation (43 ships), and P&O Princess Cruises (18 ships). Though this may sound like a relatively small fleet, each of these ships represents a floating city with thousands of passengers, and the aggregate environmental impact can be large.

Cruise ships have large impacts at ports, where their numerous passengers disembark. Tourist attractions, restaurants, retail shops, and shore businesses all may benefit financially by tourist visits. Tourists may also take day trips to nearby attractions, with concomitant environmental and cultural effects. (See the "Recreational Activities" section below for some common issues.) Cruise lines should be encouraged to send their guests to appropriate tours run by environmentally responsible tour operators.

## Waste discharge & other environmental issues

**Waste discharge** has been the primary environmental concern in the cruise ship industry. Cruise ships obviously have limited capacity to carry all their waste until they reach their home port, and destination ports have limited incentive (and capacity) to accommodate periodic discharges.

In the last decade there have been numerous cases of cruise lines illegally dumping oily bilge water, garbage, and other waste. In 2001, four major cruise lines were cited in Juneau, Alaska, for illegal wastewater dumping (and another six for air pollution). For instance, in 2002, Carnival Corporation was fined \$18 million and Norwegian Cruise Line \$1 million for deliberate falsification of oily bilge-water record-books. This issue has garnered much attention recently, and, partly due to the embarrassing publicity, all major cruise companies have responded to this issue and have refined and developed new technologies for waste handling, bilge water treatment and other technologies.

Cruise ships produce three major types of waste:

- 1. Sewage & wastewater** may be legally dumped at sea more than 10 miles from land, because the open ocean is capable of assimilating and dealing with human sewage through natural bacterial action. The assimilation process is fastest when the wastewater is dispersed by being discharged while the ship is moving fast, which is now standard procedure on all cruise lines. Within 4-10 miles of land, sewage must be treated and disinfected before discharge. Sewage may not be legally discharged within 4 miles of land.
- 2. Solid waste (garbage)** accumulates rapidly on cruise ships. On average, each passenger generates at least two pounds of trash per day and disposes of two bottles and two cans. Much of this waste is not biodegradable and can injure and kill marine wildlife that eat or become entangled in lines, plastics, etc. Most of the major cruise lines have experienced embarrassing incidents of illegal dumping, and all now have shipboard recycling programs, waste separation, reducing use of plastics, etc.
- 3. Oily bilge water** has been dumped or accidentally spilled from cruise ships in many well-publicized incidents, causing oil slicks and oiling of wildlife. Oily bilge water is a by-product of



normal ship operation. Bilge water (water in the lowest part of the ship's hull) becomes progressively contaminated with engine oil during normal ship operation. When engines are in operation, a large cruise ship produces approximately 8 metric tons of oily bilge water per day. To maintain ship stability and reduce the hazards associated with oil vapors, the water must be pumped out regularly. Ships now pass bilge water through OWS (oily water separator) devices to remove and secure the oil before the water is pumped out to sea. The separated oil can be re-used, or disposed of on shore. All cruise lines maintain log books of oily bilge water disposal.

### ***Some other environmental issues relevant to the cruise line industry:***

***Construction of cruise ship ports*** and related infrastructure has a significant impact on certain coastal areas. The building and maintenance are often done by local governments in order to attract cruise ship business. Because the cruise lines themselves do not build the ports, the cruise lines have historically had little accountability if port construction harmed fragile environments. The local governments, for their part, often have few resources for designing conservation-friendly ports. Cooperation and communication between local governments, the cruise industry, and conservation-minded communities and organizations is necessary to ensure that ports are constructed in an environmentally sound manner, with minimal disruption to fragile ecosystems.

***Air emissions*** - Cruise ships use diesel fuel, which generates air pollution that, while small when compared to the global shipping fleet, can produce air opacity, or haze, at frequently visited ports. In response, P&O Princess and some other small cruise lines are switching to newer "enviro-engines" that lower emissions and eliminate haze. Cruise ships in some ports also now shut down engines while in port, connecting to the local energy supply instead.

***Ballast water*** is used to maintain stability on large ships. ***Discharge of ballast water that was taken on board in another environment can release non-native plant and animal species.*** In some locations this has caused significant environmental problems. San Francisco Bay, for example, now has at least 212 non-native species that were introduced via ballast water, and which have now invaded 100% of shallow-water habitats in the area.

***Anchor and cable damage*** - Cruise ships' large anchors and anchor cables can cause substantial damage on coral reefs. Designated cruise ship mooring locations, as used on the Great Barrier Reef in Australia, can help reduce this problem.

## **The cruise industry as a source of funding and support**

Cruise lines have a large stake in supporting the sustainable tourism in the coastal areas that they visit. Increasingly, their passengers want to see clean, healthy coastal environments, want to learn about local communities, and want to travel with a cruise line that is environmentally responsible. In response, many cruise lines now have diverse programs for supporting conservation, education, research and community programs in the coastal environments that they visit. ***MPA managers should be aware that cruise lines may be a potential source of funding support for projects in their MPA and local community.*** Some examples are:

### **1. Patronizing local sustainable tourism activities.**

For example, Cunard cruise line offers a special shore excursion for its passengers in the Panamanian port of Puerto Amador, in partnership with the Embera Indian village. This is



designed to help community members maintain their unique heritage and share it with villagers. Cruise ship passengers travel by traditional canoe to the village, where they meet members of the Embera community who share information about their culture, crafts, and lifestyle. The partnership not only educates visitors, but has also encouraged some members of the younger Embera generation to maintain stronger connections with traditional aspects of their culture.

Many cruise lines also visit MPAs directly. In large MPAs, cruise lines may dock in or near the MPA. Creation of designated cruise ship sites can limit anchor damage and streamline the permitting and fee-collection process. Usually, arrangements are made directly with the cruise line to collect an entrance fee for each passenger (often approximately US\$4 per passenger).

### **2. Hiring local residents for passenger education.**

Many cruise lines now have educational programs for their passengers, and some will hire local community members to come on board for talks or short visits. For example, Holland America Line (HAL) has a variety of programs to enhance environmental understanding among its passengers. On all of its Alaska cruises, the company employs naturalists who give lectures and host environmental discussion groups and bird- and whale-watching programs. Native artisans and local tribe members are brought on board to demonstrate their skills and discuss their culture.

### **3. Instituting educational programs for local residents or schoolchildren.**

For example, in Juneau, Alaska (where cruise ships have struggled with a poor image among local residents), an association of several cruise lines works with the local community in an environmental education program for students from local schools. The program includes tours of ships docked in port, where students learn about the ships' recycling, emissions, and wastewater programs. Princess Cruises takes students to their lower deck recycling center, to see boxes broken down, glass crushed and garbage incinerated. Celebrity Cruises includes the engine room on its tours, to show students where emissions are monitored and teach them about gas turbines. Holland America has provided oceanography classes to local high school students. Additional programs are being piloted in Hawaii and elsewhere in Alaska.

### **4. Contributing directly to local communities and MPAs**

Several cruise lines directly fund environmental programs in coastal parks, communities and MPAs. Celebrity Cruises, for example, supports several conservation and community efforts in the Galapagos, paying for a high-speed Zodiac for park members to use in patrols, and donating to a local foundation (Fundacion Galapagos) that recycles plastics and hires local fisher people for shore clean-ups. Celebrity Cruises also sponsors an agricultural engineer to assist local farmers in their efforts to grow local produce, and invites local school children and teachers on board to join the cruise and learn more about their own islands, and sponsors local programs in sustainable hotel management.

As another example, the Disney Wildlife Conservation Fund collects donations from Disney's cruise ship passengers for conservation, and use the donations to fund grants to non-profit organizations for conservation projects world-wide. The fund is supporting projects on sea turtles, conservation of the Bahamas parrot, the Jamaican Iguana Recovery Program, coral reef preservation, etc. This fund also has a Rapid Response Fund as a source of rapid funding to coastal communities in times of crisis, such as after hurricanes.

### ***Exercise: Attracting cruise lines to the ETPS***

1. In a large group, discuss where cruise ships currently go in the ETPS. Set up a large map of the ETPS to refer to during this discussion. Do you know which cruise lines currently go in the



ETPS, how often, and where their major ports are? How could you find out? Mark major cruise line ports, if known, on the map.

2. Discuss whether it would be a good idea to try to attract more cruise line business to the MPAs in the ETPS. Based on your attractions and infrastructure inventories performed earlier, and the cruise line ports you have just identified, are there locations that cruise lines could be visiting, but are currently not visiting? Would the environmental and cultural benefits outweigh the costs?

3. Brainstorm ways to attract funding support from cruise lines for conservation or community projects in the MPAs of the ETPS as a whole. (*Information on many programs is available in the brochure "From Ship to Shore", published by Conservation International.*)

## 7.4 RECREATIONAL ACTIVITIES

More so than in the case of cruise ships and hotel operators, recreational activity providers help tourists interact directly with flora, fauna and environment of the seascape. They are in a prime position to help or hinder tourists in the ways they affect particular species and habitats. A critical step is to facilitate training and information to local recreational activity operators about the particular impacts of their activity, and particular issues of certain species or waste disposal. A good initial goal is for the tour operators to educate their on-site staff, and, ultimately, educate the tourists.

### *Handout 7.7 - Questions for Marine Recreation Providers*

### *Handout 7.8 - Visiting Mangroves & Coral Reefs*

#### **Anchoring**

Boat anchors and chains can cause extensive physical damage to the underwater environment. Coral reefs are especially vulnerable. Repeated anchoring causes extensive physical scarring to reefs, and can also kill or weaken corals by clouding the water with sediment, which chokes corals and blocks out sunlight. Anchor damage can also occur not only on reefs, but also on shipwrecks and other maritime heritage sites. Boats swinging around from anchors can also mow down seagrass beds.

Dive operators are typically very willing to help address this problem, because anchor scars on reefs obviously reduce the reefs' appeal for tourists, and directly threaten the tour operators' livelihoods.

Damage can be greatly reduced through a mooring buoy program at popular coral reef sites. Companies that rent boats directly to tourists can help by providing information to the tourists on basic seamanship, navigation and the locations of the mooring buoys. This can include education regarding the damage that anchors can do to coral reefs, and a waterproof map of the location of the buoys at popular snorkel and dive sites. If mooring buoys are not available, another alternative is drift dives, where no anchor is dropped.

#### **Boat operations**

Propeller wash and boat wakes in shallow-water environments disrupts sedimentation, particularly in coral reefs, sea grasses and mangroves. Boat operators should:



- Stay within designated channel markers and away from reefs
- Obey speed limits to avoid hitting marine mammals
- Avoid dark water areas that may be important shallow ecosystems
- Know how to read & interpret a navigational chart
- Use “gentle” and slow motoring in shallow areas
- Educate tourists about good boating practices

### Boat maintenance

Hazardous materials such as fuels and oils can threaten the health of coral reefs and other environments in popular destinations. Though one small leak from one boat may not seem like much, many small leaks from many boats in a limited area can stress corals and make them vulnerable to disease. Encourage regular boat maintenance, particularly regarding engines, fuel tanks and other potential leakage areas.

Antifouling paints contain known carcinogens and heavy metals. These toxic paints slowly flake off of boats and settle on reefs as small chips that eventually acquire a film of algae, are eaten by herbivores. The heavy metals and carcinogens thus enter the food chain and are eventually concentrated in the bodies of carnivorous fish, which are in turn eaten by humans. Dumping of unused paint in bulk can directly kill animals. Encourage the use of antifouling paints made from biodegradable fuels, and encourage proper disposal of unwanted paints and chemicals, both at-sea and at dry docks.

Older two-stroke engines are inefficient and discharge as much as 30% of the fuel, unused, into the environment. Encourage replacement of older models with the newer, much more efficient four-stroke models. An alternative is retrofitting for biodiesel as an alternative fuel source. If a two-stroke engine must be used, use alkylate petrol.

### Sewage & garbage disposal

Discharge of raw or partially treated sewage into coastal waters is obviously not environmentally sound. Sewage should be disposed of at land-based pump-out facilities. If pump-out facilities are not available, boats should treat sewage mechanically and with nontoxic biodegradable chemicals. Boats should move as far offshore as possible before pumping out. Alternatively, boats can use self-contained toilets, which can be removed from vessels and dumped at onshore facilities. Remind passengers to use land-based toilets before heading out. Particularly sensitive environmental areas can be marked as No Discharge Zones.

Garbage on shores and in water is unsightly and threatens health of many forms of marine life, as well as of human beach-goers. Plastic objects, fishing line, cigarette butts and styrofoam debris are mistakenly consumed by turtles, seabirds, fish and marine mammals. Fishing lines, nets, and plastic rings entangle and kill many animals. On boats, garbage bins should be contained or kept inside to minimize the chance of garbage blowing overboard. Where possible, use products made of paper instead of Styrofoam or plastic; paper is more biodegradable. Always try to avoid loss of long non-degradable filaments of any type, such as six-pack holders and lost fishing lines and nets; these frequently entangle and kill animals.

### Snorkeling & scuba diving

Corals are notoriously vulnerable to physical damage. Inexperienced or simply over-abundant snorkelers and divers frequently crush and break corals and stress wildlife. Most damage occurs when snorkelers or divers lose control in the water (i.e. grabbing coral while fighting a current), walk in a shallow area, or try to touch wildlife. Explain to tourists the importance of following a no-contact rule with corals and other animals. Offer buoyancy refresher courses to enable divers to better maintain control in the water, and remind them not to stand or walk in shallow areas and not to grab coral for control. If there are simply too many divers, limit diver numbers by establishing a diver carrying capacity for the area.



### Recreational fishing, seafood consumption & souvenir collecting

Many food fishes and invertebrates are being harvested at unsustainable levels from near-shore and coral environments. Tourists are often unaware that a seemingly harmless purchase of a souvenir or food dish can have serious environmental consequences. Many popular game fish and other marine species have declined significantly due to overfishing. This includes many species of groupers, jewfish, jacks, marlin, tuna, snappers, lobsters, and crabs. Overfishing directly threatens the ecological integrity of coral reefs and other marine environments throughout the world. Similarly, over-harvesting of reef fish, sea urchins, shells, coral pieces, and other marine animals to sell as ornaments will contribute to the decline of coral reefs.

Marine recreation providers should not harvest rare, threatened, or endangered species to serve as seafood. Fishing charters can protect healthy fish stocks by using catch-and-release programs, and educating tourists about which species are rare and to be avoided. In general, tourists should be discouraged from collecting “souvenirs”. For those tourists that insist on a physical souvenir, the best souvenir option is “sea glass” (glass litter that has been buffed by wave action to form blue, green, and white pebbles), since in that case tourists are actually removing litter.

### Marine wildlife viewing

Marine wildlife such as turtles, dolphins and whales can be easily disturbed. Note that species that appear to be unaffected may, in fact, be disturbed in subtle ways that may not be apparent to a tourist. Research has shown, for example, that animals that are apparently undisturbed by humans may have elevated levels of stress hormones and may alter their behavior in subtle ways, e.g. whales surrounded by boats may dive more often and spend less time resting at the surface, and sea turtles may feed less.

The most appropriate way to view marine mammals is at a slow speed from a distance that does not change the animal’s behavior, such as its rate of feeding, the direction of its swimming, and its intervals between dives. Other guidelines:

- Avoid approaching animals in ways that make them change direction or speed.
- Avoid approaching animals head-on.
- Never chase an animal. If an animal swims away, let it go.
- Resist the temptation to approach mother/calf pairs too closely
- Resist the temptation to continually creep closer.
- 100 meters is a good minimum distance for watching large whales.
- Do not touch animals. It may cause them to abandon feeding or breeding grounds.
- Do not feed wildlife. It changes their behavior, trains them to become dependent on humans for food, and is often not nutritionally sound. (An exception is bird feeders at hotels, which can be done in a nutritionally sound way, and is generally not disruptive to the birds. The birds can also become “conservation ambassadors” for hotel guests who might not have gone on a wildlife tour.)
- Divers should never “ride” a sea turtle – it needs to be able to surface to breathe air.

### Terrestrial wildlife viewing

For land-based tours such as of sea lion colonies, seabird colonies, etc., blinds and viewing platforms are an excellent way to provide tourists with a clear view, while also protecting animals and vegetation. Bird-watching tourist groups will seek out areas that have elevated blinds by wetlands, mudflats, and ponds. Just as with viewing of marine wildlife, terrestrial wildlife should never be touched, chased, or approached too closely. A few other guidelines for terrestrial habitats:

- Never disturb a on-shore nest of any animal (sea turtle, bird, etc.). Nests on beaches, such as sea turtle nests and some shorebirds, are particularly vulnerable and may require closing of beaches, or roping-off of nesting areas.



- Do not walk through colonies of breeding seabirds if the birds are not habituated to humans. The disruption can result in territory battles, breakage of eggs, and death of chicks.

**Exercise: Develop recreational guidelines for your MPA**

*In small groups, describe the primary marine recreational activities that occur in your area, or you think could be a useful part of a sustainable tourism project in the future. What negative impacts could these activities have on species, habitats aquatic and terrestrial environments? In consultation with other group members, write a list of the major recommendations you would make to recreational operators in your area.*

**Case study: Coiba – Small Business Credit Schemes**

Presenters will discuss business models for sustainable tourism at Coiba.

**Case study: Gorgona – Concesiones de Servicios**

Presenters will discuss business models for concessions at Gorgona.

**7.5 SUSTAINABLE SUPPLY CHAINS****Benefits of developing a sustainable supply chain*****Handout 7.9 - Tour Operators Products and Suppliers***

Because most of the goods and services included in an arranged tour are provided by a supply chain of subcontracted companies, organizations, and agents, tour operators are not always in direct control of the environmental and social impacts of those products. For example, tour operators may send to tourists to a cruise ship, hotel or recreational tour that does not use the management practices outlined above. Yet, a tour operator's choice of service suppliers, and their contracts with those suppliers, can encourage suppliers to meet sustainability standards and report on progress made.

Working with suppliers to integrate sustainability into the supply chain can benefit tour operators, suppliers, customers and destinations. From a financial standpoint, improved sustainability can lower costs through greater operating efficiency, reduced waste generation, and reduced consumption of energy and water. Sustainability practices can also lead to increased revenue by generating more repeat business and attracting new business from customers who value good environmental and social performance. A strong positive reputation as a company that cares about sustainability issues, coupled with improvements to the quality of the tourism experience provided to clients, can result in increased customer satisfaction and loyalty, strengthened brand value, enhanced publicity and marketing opportunities, and better acceptance by local communities in destinations.

Good performance and a high-quality, sustainable product can also help a tour operator reduce the risk of conflict or problems with suppliers, governments, staff and local communities, and improve its status as a respected partner in destinations. This may mean enhanced access to key



business resources such as capital, the ability to develop products to meet growing market demand, improved relationships with governments, and a motivated and loyal staff.

The costs and benefits of integrating sustainability criteria into the supply chain will vary for each company, depending on:

- Purchasing and contracting arrangements with suppliers;
- Availability of alternate suppliers in key destinations;
- Suppliers' current levels of sustainability performance and potential for change;
- Barriers to sustainability, such as external factors
- A company's main sustainability and operational concerns; and
- Resources available to implement and promote sustainability throughout the supply chain.

Large tour operators often encourage suppliers to join a sustainable supply chain by offering better marketing or advertising to those that join the program. This may take the form of certification programs or eco-labels (an icon, such as a green leaf, that advertises to tourists that that hotel is environmentally friendly). Certification programs and eco labels will be discussed in more detail in the next module. As an introduction, consider the following case studies.

### Case studies

Let's look at how some **outbound tour operators** are establishing sustainable supply chains in their destinations.

#### ***Discussion: Effectiveness of Sustainable Supply Chains***

*As you read through these case studies, think of what are the plusses and minuses of outboard-operator initiatives for the businesses at the local destinations? What can make it worthwhile for a local business to participate in one program versus another? After all case studies have been described, discuss these issues with the whole group.*

### **Sustainable Supply Chains - Case Study 1**

**Aurinkomatkat**, a Finnish outbound tour operator, began integrating sustainability measures into its supply chain system in early 2000. The company developed sustainability criteria for partner hotels, based on existing tourism literature and using expertise from academia, with priority given to good **water management** and **energy saving**.

Minimum criteria were established for partner hotels, including connection to a wastewater treatment system and water- and energy-saving measures. The sustainability program has been implemented in phases, to give existing contract partners a **several-year transition period** to meet the requirements of the program and understand what will be expected in the future.

The first phase of the program included **monitoring** of environmental performance, but did not actually require accommodation providers to meet all the requirements. Most of the monitoring of the program is done by the Manager for Sustainable Tourism, together with staff and agents at the destinations. The initial monitoring takes place through a checklist completed by a representative of the facility, which is then checked by Aurinkomatkat personnel at the destinations and verified annually. All Aurinkomatkat staff have been trained in sustainable tourism through lectures and round-table discussions. Training continues through discussions, an intranet site, a newsletter on sustainable tourism and an information package. Responses to the program from Aurinkomatkat agents and accommodation suppliers in the destinations have been positive, and some hotel managers have provided information on their environmental performance before being asked to do so. Aurinkomatkat informs its suppliers about the program and how to fulfill the sustainability criteria through letters and personal visits, depending on the



destination. Because many of the accommodations are family-owned enterprises, the environmental program and the criteria are translated into the language of the destination.

To provide incentives for its partners to improve their environmental performance, Aurinkomatkat has created a **sustainability classification system**. The classification system will soon appear beside the traditional quality classification in Aurinkomatkat brochures, web pages and marketing materials. The classification system is based on a 100-point scale. By meeting the minimum criteria of connection to a wastewater treatment system, and water- and energy-saving measures, a facility can achieve the 30-point minimum required for inclusion in the sustainability program. Additional points are awarded for having an environmental or sustainability policy, developing an effective waste management system, using renewable energy sources, implementing a sustainable purchasing policy and having a community relations program. Hotels can receive up to three stars for environmental performance. If there is negative feedback from customers or if issues arise that compromise the criteria, a hotel may have its environmental classification downgraded.

Concerned that integrating of environmental criteria into hotel contracts might increase the risk of losing touch with the socio-cultural and economic sides of sustainability, Aurinkomatkat has also integrated indicators for **social, cultural and economic sustainability** into the program. These criteria recognize that an 800-room hotel has a different scale of impact than a six-room holiday apartment hotel, and their resources are not comparable. A five-star multinational resort with eco-certificates is not always a “better” choice than a family-owned apartment building that has no environmental program but which employs the family next door and helps the local economy by encouraging tourists to buy food and other goods from local stores. Thus, the company has made it easier for **small family-owned properties** that cannot invest in environmental technology to the same extent as large hotels by giving an additional five points to small-scale locally owned accommodations. This will mean that a small family-owned hotel that uses water- and energy-saving measures and treats its sewage appropriately will meet the minimum requirements for inclusion in the sustainability program. Achieving a higher environmental classification will require more investment.

### **Sustainable Supply Chains - Case Study 2**

In summer 2000, **LTU Touristik**, a German tour operator that specializes in package tours to all continents, launched a campaign to help contracted hotels improve their environmental performance. The campaign was based on the company’s experience with contracted hotels that showed that most hoteliers felt a general sense of responsibility for the environment, but needed suggestions for how they could implement good environmental practices. To determine where assistance was most needed, LTU Touristik’s Environmental Department worked with a consultant to distribute a questionnaire to contracted hotels. The department also held personal meetings with hotel managers in a number of destinations, allowing them to learn firsthand about the contracted hotels’ environmental practices and environmental impacts.

As the centerpiece of the campaign, the company developed a small manual, *Das Umwelt freundliche Ferienhotel* (The Environmentally Friendly Holiday Hotel) to give technical assistance to contracted hotels (those that are not directly operated by LTU Touristik). Topics addressed in the manual include drinking water, outside areas, energy, purchasing, waste and communication. Each section includes a general description of the problem and concise suggestions about how to solve it, presented in simple language and a user-friendly layout. Great importance is attached to explaining why actions should be carried out in the way described and symbols show how much time an action will take and the investment required. Many examples are given of how actions to improve the environment can save money.



The manual, which targets hotel managers and other staff members responsible for hotel operation, was launched in all destinations worldwide where LTU Touristik does business. Now in its 3rd edition, the 20-page manual is published in German, Greek, English, French, Italian and Spanish. In 2002, about 15,000 manuals were distributed, and several large hotel companies ordered the manual to use for staff training or reprinted it on their own.

Where possible, the manual was distributed personally to hotel managers. Tour guides, buyers and the head of the destination agency delivered the manuals during routine visits, explained LTU Touristik's objectives and offered initial suggestions for environmental practices. These representatives then reported back on the first reactions of the hotel managers to LTU Touristik's Environmental Manager. Along with the manual, hotel managers received a personally addressed letter and a one-page questionnaire about whether they were able to use some of the practices in the manual, whether they needed further information and which environmental protection measures they already implemented. Nearly 20 percent of all contracted hoteliers have offered feedback to the company.

If hoteliers need further assistance beyond these first contacts, LTU Touristik provides it through its Environmental Department's two-person technical assistance team, thus guaranteeing a continuous dialogue with hotels that want to improve their environmental performance. Training is offered to buyers, heads of destination agencies and tour guides, and the Environmental Manager personally updates them on the campaign. Information is also provided on what type of technical assistance is expected from them and how to make an informal evaluation of the visited facilities. The company's web site provides all interested employees with more detailed information.

LTU Touristik has recognized that relying solely on manuals has its limitations, principally that there are no mechanisms for enforcement of the voluntary practices nor incentive for their implementation. The company's long-term goal is to be able to demonstrate the benefits of environmental action and to establish environmental standards for holiday hotels. As a next step, LTU Touristik plans to collect all information about environmental action introduced by the hotels and report its findings to other hotels and eventually to its clients.

#### ***Exercise: Assemble the management guidelines produced today***

*Look over the management guidelines and other ideas that you or your small group created today for tour operators, hotels, cruise ships, recreational activities, sustainable supply chains, and any other particular sectors of the tourism industry that you may have discussed. Do you have good information on management guidelines for all sectors of the tourism industry that are involved, or could be involved, in your MPA? Take a few minutes to fill in any gaps, and to make notes on what the next steps are that you wish to take when you return home.*