

Best Environmental Practice for Resorts

**Dr. Ted Manning, Tourisk Inc. Ottawa, Canada, Dec. 2005.
(Based on work in Maldives, Thailand, the Caribbean, and African coastal destinations on the development and evaluation of proposals for new resorts)**

The purpose of this *guideline* is to identify best practice – based on review procedures for resort development in fragile destinations. The empirical review criteria are based on actual evaluations of several hundred winning and losing proposals in several competitions and published models/cases of best practice for new resorts including empirical assessments based on three different proposal evaluation/design rating procedures done in three continents.

The key observations/recommendations are as follows:

- The elements normally addressed and evaluated were pertinent to the probable environmental performance of the resort, both during the construction and operations phases
- The evaluation standards used in a majority of the evaluations covered several distinct elements: a representative rating process and standard based on those used in each of the ten general elements is outlined in the annex to this note.
- The weighting of each element is normally determined prior to any evaluation process and known to proponents: one weakness found in each of the review procedures (and which should be rectified in future evaluations) is that overall environmental management, monitoring and integration of environmental management into overall resort management were often difficult to value due to the discrete definition of elements of the overall evaluation procedures – in the cases documented these were often spread across all rated elements (e.g. incorporated to some extent in such areas as structural design or energy management) . For improved proposals and more holistic evaluations it would be valuable to have explicit sections where these broader elements can be assessed and rated.
- Some specific areas (e.g. energy production, water production) tended to show little differentiation across all bidders due to the constraints of site, water availability, or prescribed requirements in the bid documents; hence the range of the ratings for the more technical areas was generally small. Nearly all bidders in each competition tended to propose similar technical processes (fossil fuelled generators supplemented by some solar water heating, reverse osmosis systems supplemented by some rainfall harvesting, the same greywater management systems or filtration equipment); the only range among competing proposals tended to be in the level of detail provided and the specifics of installation procedures and monitoring.
- Overall, there were several exemplary environmental plans contained in proposals in each of the reviewed competitions – several of which could be used as models for future resort design or for teaching purposes. Because the bids are normally proprietary, it is likely to be difficult to obtain access to them for teaching or model purposes, unless a proponent agrees to allow the use of a successful or unsuccessful proposal as a model, or to sell the model to potential users. The range of detail

contained in reviewed proposals was generally very large, with some proponents of new resorts providing over 100 pages on environment components alone, while others were much less detailed.

- One weakness noted in all of the review cases was a paucity of emphasis on socio-cultural impacts and the human environment, although several bidders provided good plans to deal with the local community, including cultural contact and pro-active education and benefits for local communities in the area affected by the resort development or to be involved in the tourism experience.
- In all of the reviewed bidding procedures formulae were used to aggregate results, even though each of the rated sections was treated as a unique criterion: While most of the bids in all of the reviewed cases met minimum requirements, the structure of most of the bid processes could permit unacceptable proposals to succeed (e.g. –a bid which proposed to undertake an action which would eradicate a fragile wetland system would only lose a few points (for conservation and for impacts) and if that bid was the highest overall due to high ratings in other elements, it could be the winning bid, based on points gained for other actions or on other rated components (e.g. economic performance, energy saving). This is a common weakness in evaluation procedures which could be avoided by having minimum criteria to be met for each element.

The following guide is a generalization from several actual review processes – extracting some commonalities and providing a ten element review process which is a hybrid of that used in the different procedures which were reviewed. This includes analysis of specific observations/comments which led to proposals receiving the marks which they did. While different weightings or organization were used in each case, all of these elements figured prominently. The listing is extracted from several sources and attempts to synthesize best practice from these. For reasons of confidentiality, no specific resort names are used in the examples. This summary document is provided on line as input to the ongoing effort to help managers understand and implement best practice in sustainable tourism.

Rated Element: 1 Understanding of Baseline Environmental Conditions and Assets of the Site and Destination

Scoring Superior: Superior survey/state of the environment. Sensitivity analysis done on key biophysical features, rare or fragile species, physical processes, identifying potential impact of these on the design, siting, management and mitigation; conditions related to other rated elements such as impact on water production, waste disposal, need for tourist behaviour management. Reference to current and/or past human use(s) and potential factors to consider in development, including local sensitivities and level of participation.

Scoring Good: Good, complete review:
Survey of site/destination covering geological, climate, vegetation, reef conditions, key animal bird and plant species, inventory of fragile sites, status of water table, local communities (if any)

Scoring Satisfactory: *Fair:* Overview survey
Brief survey notes location and some key conditions of site– key ecosystems, coastal conditions, whether it is vegetated, and some basic conditions of the site.

Scoring Unsatisfactory:: major missing sections, little direct information on site.

Observations/Comments: Many proposals did not seem to respond to why a basic conditions and assets inventory was required and simply took existing data or reports without comment. . While most provided a map, noted the main elements of the environment, few proceeded to build these factors into the overall development plan so that the design, management and mitigation clearly reflected the key factors and sensitivities. The best proposals did this, and established a clear monitoring program to measure their performance relative to protection of the site and surroundings.

Rated Element: 2 Energy Generation Methods (on-site generation)

Scoring Superior: Excellent with innovative elements. Full exploration of alternatives. Commitment to test alternative sources. Full fuel management plan with spill containment, pipe testing, vacuum systems etc. Complete plan for generator management with details on efficiency, heat recuperation from other operations, real-time energy use monitoring, contingency plans, backup systems.

Scoring Good; Good proposal with investigation of alternatives. Low energy/efficient generators with backup. Some use of solar or alternative heating. Consideration of fuel sources, storage, spill containment.

Scoring Satisfactory: Fair proposal – with efficient sources / generators specified, some energy management suggested.

Observations/Comments

Most proposals fell into the Satisfactory to Good range – with little variation, although some received lower percentage due to lack of clear energy management plan, training, monitoring etc. or failure to consider or specify other sources. In one of the reviewed sites, none of the proponents undertook any review of potential alternative energy sources, even though some innovative low impact co-generation solutions were being used by existing properties in the destination. This may have reflected the low/subsidized cost of energy in the particular situation.

Rated Element: 3 Energy Conservation

Scoring: Superior Full cradle to grave energy management plan beginning with construction phase. Real time monitoring of use, efficiency. Regular energy audit. Design of structures to reduce energy demand (insulation, lighting, shade, heat retention). Energy efficient appliances, cogeneration/heat extraction, employee training program for energy savings, information program for guests, reduction of energy hungry attractions (e.g., powerboats) integration of energy management into overall management process.

Scoring Good: Good proposal with energy management, steps specified. Range of steps including provision of energy saving features, design, appliances, lighting and other consuming appliances, control shutoffs (key switches), use of solar for some suitable uses like hot water, landscape lighting. Monitoring, education elements.

Scoring: Satisfactory: Commitment to energy conservation with some key actions specified.

Observations/Comments: A majority of proposals reviewed did this reasonably well, although some otherwise strong sections focused only on technical fixes, omitting any training, education, management etc. Some weaker proposals lacked sufficient detail to show how they would implement an energy conservation plan, even though nearly all committed to having one – this was true in all three destinations. .

Rated Element: 3.4 - Water Drawdown/Production

Scoring: Superior Excellent proposal with production process clearly delineated, evaluation of options, design of system to respond to ecological conditions and sensitivities. Clear consideration of impacts of siting, disposal of salt from desalinization (if proposed), capture of rainwater, ongoing monitoring of infiltration and impact on freshwater aquifers, real time monitoring of demand and water budget, contingency plans. Clear grey water management system with grey water budget, methods to monitor grey water quality and to control quality before use/release. This criterion was of greater importance in the two destinations which had very limited water supply (islands, remote desert shoreline). This factor was less important (and received less attention) in the more water-rich site, even though the full cost of well pumping was paid by the user. (Again low cost energy was a factor)

Scoring: Good: Good proposal with clear plan, detail on management and monitoring water recovery for reuse (grey water management) and demonstrated sensitivity to ecology.

Scoring: Satisfactory – clear on methods and volumes but lacking in impact, monitoring or details of management of the system. Some included plans to draw on aquifers, the poorest did so with no indication of monitoring or knowledge of aquifer size or sensitivity.

Observations/Comments: This element was generally done well, with most receiving marks in the “Good” range. Those ranked lower often lacked clear grey water plan, monitoring or management plan, or sufficient detail on process to be used. The most frequent items lacking were monitoring programs and provision of training for staff who would manage the system.

Rated Element 5: Water Conservation

Scoring Superior: Comprehensive water management and monitoring plan which includes real time monitoring of use(s) design strategy for low consumption in all parts of resort; education for staff; sensitization for guests; attention to specific conservation strategies for major water users such as laundry, restaurants, irrigation systems, guest facilities in all areas. Integrated plan for water generation/conservation/ sewage (often as water budget) with specific capture, cleaning and use plans for grey water.

Scoring Good: Good proposal with water conservation plan including mechanical measures to reduce consumption (e.g. spring taps, low flow shower heads), recycle program for grey water, monitor consumption, sensitize guests and staff. Specifics provided on water conservation mechanisms, guest information program.

Scoring Satisfactory: Fair proposal which indicates intent to have a conservation program covering most key areas of use. Lacks specifics or details on implementation or procedures and measurement.

Observations/Comments: Most proposals included a list of specifics in this area, but many did not present an overall conservation plan. Some proposals only addressed mechanical conservation methods (citing specific taps, washers etc) but missed the training, awareness and management elements. While nearly all proposals indicated intent to conserve water, weak proposals provided little to show how this would be done.

Rated Element 3.6: Sewage/Waste Water Management:

Scoring Superior: Complete proposal for full cradle-to-grave management of waste water, integrated with water production and conservation. Efficient monitored system with quality control at all stages. Best plans included detailed procedures for grey water separation, quality monitoring and use, and methods to control and monitor impacts of grey water use (for e.g. Irrigation) on aquifers. Indicators defined re water quality for effluents to be recycled. Clear contingency plans for water spills, excess release; zero discharge of

untreated effluents into either sea or land. Specific technologies cited which will ensure suitable quality of wastewater. Clear plan to clean/reuse sludge

Scoring Good: Good: A complete plan defining suitable technology for sewage management, including system for black and grey water separation, suitable means for disposal of waste water and sludge, management plan for waste water covering all sources, disposal of effluents and sludge.

Scoring Satisfactory: Plan shows that waste water will be treated in a suitable method but may lack detail on how it will be managed or monitored. Some lacked specific grey water reuse plans, methods to ensure that emergency discharges would not impact on e.g., sea water quality, aquifers.

Observations/Comments: Most proposals were of good quality; some failed to include sufficient attention to end use of effluent and sludge.

Rated Element 7: Solid Waste

Scoring Superior: Complete plan for waste management, from procurement, design for reduction, specific plans for waste audit/monitoring, specifics of measures for each major waste stream, source; program to integrate waste management into each part of the resort (e.g., kitchen, housekeeping, recreation, grounds keeping, office). Assessment of options for each waste stream with clear plan to control. Means to handle all waste with zero discharge (with some recycling exceptions which are sent to suitable depots). Integration with wastewater/incineration/heat recapture as part of comprehensive EMS or equivalent.

Scoring Good: Comprehensive plan to handle all types of waste with measures to reduce, recycle, recuperate, reuse – with specifics on waste mix and program for each waste type. Suitable process to handle each waste type, with elements of conservation and education/training.

Scoring Satisfactory. Proposal addresses all major waste streams defining how each will be treated. May lack specifics of how each waste will be gathered, sorted, treated. Low level of detail on implementation training etc.

Observations/Comments: Nearly all proposals recognized the need to separate and handle each waste stream separately. Many of the weaker ones provided insufficient detail on the actual program and implementation methods; some of the weakest proposals favoured sea disposal, landfill of some (mainly construction and organic) wastes.

Rated Element 8: Conservation of Flora and Fauna

Scoring Superior: Complete conservation strategy for site and surrounding ecosystem(s), identifying all assets and sensitivities, defining EMS or SDS to provide ongoing conservation/enhancement of key species and ecosystems. Best proposals had comprehensive ongoing monitoring program involving scientific experts, on-site full time environmental managers and protection officers, specific scientific and educational programs for guests, staff, other local community members, outreach/partnership to obtain help in protection of species and impacted ecosystems throughout the destination. . Continuous learning and improvement of implementation procedures. Links to national and international conservation organizations, certification under international ecological programs.

Scoring Good: Proposal defined a clear plan to inventory and identifies sensitivity for all key ecosystems and species. From construction phase to operations, clear measures were detailed on how to conserve and protect each, including commitments to maintain integrity (local species) limit impact on existing vegetation, limit any construction on fragile reef or terrestrial systems, enhance and maintain systems supporting the existing flora and fauna. Program for education of guests, awareness for employees, monitoring and control of ongoing impacts.

Scoring Satisfactory: Commitment to and protection of flora and fauna, but lacking specific details such as clear inventory of species and ecosystems, plans for each, monitoring program, or educational elements.

Scoring Unsatisfactory: Insufficient plan – or in worst case, lack of any plan.

Observations/Comments: All proposals contained at least a commitment to environmental conservation but some of the weakest ones provided insufficient detail on how this would be accomplished and several fell into the unsatisfactory category.

Rated Element 9: Mitigation of Impacts of Development Process

Scoring Superior: – Full cradle to grave impact management plan beginning at design/construction phase. Best proposals provided complete tables of sensitivities, expected impacts and effects of construction, operation and visitor activities, expected areas of concern and mitigation/control measures to be undertaken for each. . Some proposed co-management of the site during the entire process.

Scoring Good: Complete regarding identification of likely impacts from construction phase through to operations including tourist activities. Identification of specific plans to manage and control negative impacts on land, reefs, aquifers, fragile ecosystems, local communities and resources. Includes inventory of key likely tourist impacts and proposes suitable measures to contain these impacts or mitigate them. (Covered in detail in next element)

Scoring Satisfactory: Identification of most likely impacts and some consideration of how the resort will be built and managed to avoid them.

Observations/Comments: Many of the weaker proposals failed to address the entire life cycle of the resort. Some dealt well with one element, such as mitigation of construction impacts, but failed to deal with operations. There was a wide range in this element, from full cradle to grave strategies, to relatively cursory coverage indicating intent to manage and control (largely unspecified) impacts.

Rated Element 10: Management of Tourists

Scoring Superior: Clear identification of key sensitivities and likely range and impact of tourist activities (on site and in visited areas). Best plans had full visitor management plan, with sensitivity analysis and proposed responses for each predicted tourist activity, and also examined co-management options. Range of built solutions to reduce potential for impact, human solutions – awareness, monitoring, incentives, regular reporting system, educational approaches for visitors, staff, local communities likely to interface with the tourists. Also included clear consideration of a range of visitor management techniques, suitability of such techniques from both local and visitor cultural perspectives, monitoring and steps towards implementation of e.g. EMS, ISO14000, Green Globe or similar as comprehensive ongoing mitigation/management process.

Scoring Good: Complete visitor management plan – identifying key sensitivities and responding to most. Plan includes some awareness/training and at least a basic regular monitoring process, including links with providers of tours etc for the tourists. .

Scoring Satisfactory: Contains a visitor management plan, with some detail but lack of specifics or clarity regarding actual management or implementation program. Many failed to include any consideration of management of the impacts of tourism activities off the site – as they visited other nearby attractions.

Note that these summaries are intended to extract “best practice” based on actual results during evaluation procedures.

For specific indicators which may be of use as performance measures relative to each of these criteria, refer to the World Tourism Organization Guidebook : *Indicators of Sustainable Development for Tourism Destinations*, 2004, available from the UNWTO website at <http://www.world-tourism.org/> .