



**FINAL MEETING OF THE TECHNICAL WORKING GROUP FOR THE REFERENCE
DOCUMENT ON BEST ENVIRONMENTAL MANAGEMENT PRACTICES IN THE
TOURISM SECTOR**

Brussels, 24th and 25th November 2011

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1. Introduction

The Community Eco-Management and Audit Scheme (hereafter EMAS) was originally established in 1993 by Regulation (EC) No 1836/93. This voluntary scheme was originally restricted to companies from industrial sectors. EMAS was revised in 2001 by Regulation (EC) No 761/2001 to allow participation by organisations from all economic sectors. A second revision of EMAS was recently undertaken, called EMAS III, reflected in Regulation (EC) No 1221/2009. This new regulation foresees the development of sectoral reference documents on best environmental management practice (Article 46). The goal of this workshop was to bring stakeholders together to discuss on the current draft version of the reference document for the tourism sector.

2. Opening of the workshop and Introduction to EMAS Sectoral Reference Documents

The chairman, Harald Schoenberger, opened the session and welcomed the participants. Working group members presented themselves and summarised their experience in tourism, environmental assessment and EMAS. A list of participants, including contact details, is provided in Annex 1. The meeting agenda (Annex 2) was accepted without changes. Annex 3 summarises information and links working group members offered to send IPTS during the meeting.

The goals of the meeting and the voluntary nature of the descriptive sectoral reference document (SRD) were presented in a brief presentation. The main purpose of the meeting was to conclude on appropriate indicators and benchmarks, refine the list of best practices, identify gaps and collect information for further document development. The scope of the SRD was summarised, with changes in relation to the kick-off meeting being: change of 'non-serviced accommodation' chapter to 'campsites' chapter, inclusion of destination management techniques and inclusion of more tour operator techniques. One technique refers to travel to destinations in as far as it can be influenced by tour operators. Other aspects related to tourism such as golf courses and attractions were left out of the document to maintain a core scope (destination managers, tour operators, accommodation providers and food and drink providers) that could be developed thoroughly within the available time.

The importance of using process-level indicators that are comparable across organisations and linking benchmarks of excellence with frontrunner performance was discussed. It was agreed that frontrunners are usually identifiable as organisations that have been collecting environmental performance data for many years, motivated by social responsibility and economic efficiency. They are often more willing to share information. In some cases it may not be possible to benchmark frontrunner performance quantitatively, for example in terms of influencing tourist behaviour.

3. Indicators and benchmarks

Following a brief summary of the approach and format of the document, best practice techniques were presented and amendments made (see presentation in 'Conclusions' section of this document), focussing on relevant indicators and benchmarks of excellence. Techniques that had already been developed in the draft SRD were presented first, according to the sequence in which they appeared in the document, followed by techniques to be developed at the end of the meeting. There was some discussion over the definition 'benchmark of excellence', a term defined under article 46 of the EMAS regulation. IPTS have based 'excellence' as performance approximating to the top ten percent of best performers, or if such data are not available, as performance that is economically achievable across organisations.

It was clarified that SMEs will be addressed in the document by inclusion of a chapter summarising relevant techniques and indicators, as was done for the retail trade SRD. The term 'registration', and not 'certification', should be used for EMAS. Also, it was agreed that the sector flowchart shown during the presentation should be expanded to include impacts.

Below is a summary of the discussion in relation to each technique within the document. Techniques still to be developed, described under 'Remaining work' of main presentation during the meeting (see 'Conclusions' section of these minutes), are denoted (TBD).

3.1. Cross cutting techniques

Implementation of an EMS

This technique summarises the performance oriented aspects of EMS implementation, with a focus on systematic application of indicators and benchmarks of excellence referred to throughout the SRD. Some additional ticks were suggested for main environmental performance indicators relevant for specific tourism actors in Table 2.2 on p. 56. Also, waste is often measured in litres, not kg.

It was concluded that staff training and methods to encourage systematic implementation of best practice throughout an organisation should be described in more detail, along with methods to communicate best practice implementation to stakeholders.

Supply chain management

This technique also cross-refers to other sections of the document where more detail is provided for management of particular supply chains. The technique must be described to exclude 'green washing'.

3.2. Destination management

Biodiversity and conservation

The title of this technique will be changed to reflect not only planning but management of biodiversity at the destination level. There will be extensive cross-referencing to the SRD on public administration – the purpose of these techniques will be to summarise relevant tourism-specific aspects. The term 'Destination Management Organisation' was introduced by Peter Lane. A DMO may be public, or public-private partnership, and influence local authorities where relevant to improve destination management.

The European Destination of ExcelleNce (EDEN) award is administered by DG ENTR and could provide a useful indication of best practice. Constanze Adolf offered to send information on a recent conference held in Budapest regarding destination management and tourist behaviour. Simon Pickup offered to send examples for techniques on biodiversity conservation. Barcelona has been certified by Biosphere scheme, while the Global Sustainable Tourism Criteria destination group comprises 130 cities. DG Enterprise should be able to provide some information on destination management, while IPTS will contact Euromontana to obtain other examples.

It was concluded that the SRD should reflect but also inform the development of destination management criteria by DG Enterprise. Relevant Tourism Sustainability Group indicators will be referred to in the document. DMOs should ensure that there Environmental Impact Assessments are produced where relevant, and Protected Area Management implemented. Biodiversity loss from some habitats may be compensated within the destination, other not, leading to the concept of ' Limits of Acceptable Change' being inserted into the benchmark of excellence.

Service provision (TBD)

DMOs and local authorities may undertake many types of action to promote the development of services that improve environmental performance within a destination, including provision of low-interest loans for renewable energy installation (Simon Pickup offered to provide IPTS with examples). IPTS will follow up leads offered during the discussion, including the Tourism Portugal report, Abu Dhabi Tourism Authority report, Malcolm Bell in the Tourism Sustainability Group regarding the development plan for Cornwall in the UK, and the EDEN project. Some member states also report environmental performance for destinations, and European Cities marketing organisation have a benchmarking system that may include some environmentally relevant criteria. Paula Gomes offered to send IPTS information on Natura 2000 sites relevant for tourism. Brianda Lopez offered to send IPTS a link to the San Francisco sustainable development plan, and Elodie Perrat offered to send IPTS contact details for the European Greener Capitals project.

3.3. Tour operators

Management of accommodation providers

Voyager du Monde was identified as a frontrunner tour operator certified by AFNOR in France, with a requirement to improve environmental performance every year. The benchmark of 100% for accommodation environmental improvement was reduced to 90%, reflecting TUI's target for 90% of accommodation providers to demonstrate environmental improvement by 2014. Also, the benchmark was modified to reflect the offer, not actual sales, to reduce susceptibility to influence by volatility in sales to particular destinations owing to events (e.g. Egypt demonstrations). IPTS will elaborate what is meant by Environmental Management System, focusing on improvement of environmental performance and ensuring that SMEs will not be excluded owing to a restrictive focus on certification/registration. Some examples of relevant certification schemes will be included in the technique description, prioritising IO Type I ecolables but not excluding other schemes associated with environmental improvement. IPTS will also elaborate Table 4.2 on p.100 to ensure it more comprehensively reflects best practice measures.

Management of transport providers (TBD)

It was agreed that influencing consumer behaviour regarding travel patterns is outside the scope of this technique. However, reference could be made to Forum Anders Reisen flying criteria, that suggest transport modes and holiday durations appropriate for different travel distances. Basic good practice would be the calculation and presentation to customers of carbon footprints for customer journeys (see also technique 4.5). IPTS will explore the state of the art regarding use of sustainable biofuels for planes – including TUI use of used cooking oil and Air France / KLM demonstration of algae derived biofuel. Assisted taxiing of planes at airports, and connection to airport electricity supply, rather than using engines on the ground, can reduce fuel consumption (tour operators can request these options from airport authorities). Flight GHG emissions should be multiplied by the appropriate radiative forcing factor based on IPCC guidelines, and other emissions including NOx and noise will be considered. Other possible best practice measures include use of speed limiters on coaches and training in efficient driving techniques. Also, there are examples of walking and cycling tour organisers (or accommodation providers) transporting guest luggage to their next destination, or offering discounts to guests arriving with public transport.

Following transport efficiency improvement and emissions reductions, carbon offsetting paid for automatically by tour operators out of ticket prices can be regarded as an element of best practice. Offsetting must be verifiable, and the IPTS will therefore refer to third party verified offsetting, such as the Gold Standard for Clean Development Mechanism projects. It was noted that some youth hostels also offer carbon offsetting for guest stays.

Tour operators driving destination improvement

Voyager du Monde may have information on the percentage of revenue directed towards destination improvement. The Travelife and Futures schemes may include information for this technique. Simon Pickup will provide some information on best practice. Leveraging tour operator influence, and not just financial assistance, is best practice. The benchmark was modified to reflect three aspects of best practice: (i) driving supply chain improvement; (ii) influencing destination management to improve environmental performance; (iii) direct participation in environmental improvement schemes.

Develop and promote frontrunner sustainable tourism packages (TBD)

Naut Kusters offered to provide some examples of sustainable tours, including Austrian non-flying tours. Kuoni offers Fairtrade tours, and IPTS will look into the Austria Ecolabel for tours. Tourism can contribute to the conservation of biodiversity and wildlife in high nature value areas, though care must be taken to manage tourism activities in a sustainable manner. Tour operators can also discourage unsustainable destinations, and promote more sustainable activities within destinations. There is overlap, and perhaps sometimes conflict, between social and environmental criteria.

Encouraging sustainable tourist behaviour (TBD)

Tour operators can provider consumers with information to encourage them to take sustainable tourist packages, and promote environmental activities within destinations. A number of examples were provided, including: providing information such as carbon footprint at time of booking; providing guidance such as how to minimize luggage and reduce shower times; engaging customers with sustainable activities such as local cooking classes or bike hire; promoting sustainable excursions and biodiversity education tours. Some of this can be integrated into promotional material. Travelife list tour operator actions and excluded activities. Preventing the trade of illegal souvenirs should be mentioned in the SRD. Elodie Perrat offered to send IPTS information from Agir pour un Tourisme Responsable regarding promoting sustainable tourist activities.

Efficient retail operations (TBD)

In addition to energy demand expressed per m², energy per worker-hour could be a useful indicator here. It is important to avoid open door policies, or at least to install a draught lobby. This technique will be kept short, and will draw on Travelife criteria and the Retail Trade SRD. One tour operator specific issue that should be included is the use of brochures – green procurement is important.

3.4. Accommodation energy

Energy monitoring (TBD)

Two of the six energy techniques have yet to be developed but the IPTS already has a large body of data for these techniques, and will cross-refer to the Construction SRD. For energy monitoring, accommodation providers will be referred to the Hotel Energy Solutions online benchmarking tool, and IPTS will integrate the findings of HES publications. The International Business Leaders Forum is working with the ITP to develop a standardised reporting method for GHG emissions. The key point of this technique is to set energy performance targets, and to have indicators for total energy demand and for non-renewable energy demand.

Good building envelope

This technique will draw on detailed descriptions in the Retail Trade and Construction SRDs. The importance of grey, or embodied, energy was discussed. There was some discussion over energy demand versus renewable energy supply. It was concluded that this technique will focus on how demand can be reduced. Techniques 5.1 on energy monitoring, and 5.4 on renewable energy, to be developed, will reflect accommodation performance with respect to renewable energy supply. IPTS has confidence in the data provided by the anonymous hotel chain and used to derive benchmarks.

Optimised HVAC (TBD)

Brianda Lopez offered to send examples of youth hostels with controlled ventilation, and Constanze Adolf offered to provide examples of CO₂ neutral hostels in Germany (north of Berlin) and in Scotland. IPTS will look for further information from Copenhagen Towers Hotel regarding use of groundwater for heating and cooling.

Heat pumps (TBD)

Elodie Perrat will send factsheets on best practice for different technologies from the HES project. IPTS will draw on information provided in the original background report for this technique.

Renewable energy sources (TBD)

IPTS will look for information from the EREC database on energy neutral and energy positive buildings. There are examples of hotels using onsite biogas plants (from fermentation) for electricity generation – this may include use of green cuttings from outdoor areas, linked to technique 9.1. In Germany, CLIMA hotels may provide good examples. Bad practices, such as use of solar collectors to heat pool water in hot climates, will be excluded. IPTS will distinguish between renewable energy provided onsite versus renewable electricity purchases. Brianda Lopez offered to provide examples of guest education on renewable energy generation, such as use of visible 'solar gardens', and display panels showing how much renewable energy is produced onsite.

Efficient lighting and electrical equipment

This technique will cross-refer to technique 9.1 in which outdoor lighting is described, but will also be expanded to include reference to decorative/advertising lighting.

3.5. Accommodation water

Water system monitoring and maintenance

There was agreement on the benchmark proposed for this technique, but it was agreed to include a separate indicator for youth hostels if sufficient data could be provided (Brianda Lopez offered to send data on the performance of Swiss youth hostels). Aerators should be inspected and replaced at least every six years.

Efficient water fittings

There was broad agreement on this technique. Some additions were proposed: (i) mixer taps are best practice; (ii) waterless urinals should be based on mechanical rather than chemical designs. Efficient fittings should be applied in back-of-house and not just guest areas. The description and conclusions in the document will be modified accordingly.

Housekeeping

It was emphasised that this technique covers many aspects, including guest behaviour and back-of-house green procurement for chemicals. This is a technique where staff training is particularly important, and with implications for waste management. IPTS will ensure there is a clear cross-reference to other relevant techniques, such as waste sorting.

Optimised small-scale laundry

IPTS will check the latest EU Energy Labelling regulations for domestic appliances, and replace 'A+' with either 'A+++’ or e.g. '30% better than A+', as appropriate in the benchmark. It was clarified that detergent ecolabelling percentage should be reported based on active ingredient content. Brianda Lopez referred to the Doufas heat recovery system for tumble dryers that is applied in some hostels, and will provide information.

Optimised large scale laundry

The applicability of this technique is restricted to those accommodation establishments within relatively short distances of commercial laundries, and where there is a choice of laundries, or where accommodation has some influence over them. Destination managers may also play an important role in driving improvement or certification across large laundries.

Economic factors should drive efficiency improvements for this technique. The Nordic Ecolabel is not widely applied to laundries across Europe, but criteria for award of maximum points under this ecolabel are consistent with the frontrunner approach for defining benchmarks of excellence.

Optimised pool management (TBD)

This technique remains to be developed by IPTS. Reference was made to a project by University of Salamanca regarding natural cleaning of pools – IPTS will investigate this.

Grey water and rain water recycling

It was clarified that this technique refers to indoor use of recovered rain and grey water for toilet flushing and laundry processes – outdoor use of such water for irrigation is referred to in section 9.1 regarding green area management. IPTS will look into Monterosa Hut example of rainwater use. Clear cross-reference will also be made to technique 9.2 that describes heat recovery from grey water. Applicability may be limited by high retro-fit installation costs.

3.6. Accommodation waste

Waste Avoidance

IPTS will check legal restrictions to waste minimisation, such as rules regarding single portion packaging in Belgium, and five start hotel criteria requiring individual packaging of soaps in Germany.

Waste sorting

There was agreement on proposals presented for this technique.

Wastewater treatment (TBD)

This technique will be confined to a short technical description of best practice as it is not widely applicable. It is more relevant to rural areas, and could be moved to the Campsite chapter. It is important to relate to legal requirements in different member states for wastewater treatment.

3.7. Kitchens

Green sourcing of food

Local sourcing is an aspect of best practice considered as a relevant basic criteria in the benchmark of excellence. In Switzerland the Ibex label may be used to indicate product transport distances. It is difficult to reflect all ingredients for any product with a single label or criteria – instead managers should identify main ingredients used and relevant criteria for them. This may involve high initial effort and cost, and could be outsourced, but subsequent implementation of relevant green procurement should not require so much effort. One of the TSG indicators refers to 25% sourcing of

local products from within a destination. There was emphasis on the importance of marketing green procurement by advertising it in the menu. The composition of the offer, particularly in relation to non- meat or fish dishes, is important to reduce impact but difficult to benchmark. IPTS will look into this further. IPTS will also check the definition of 'seafood' and freshwater fish standards.

Organic waste management

There may be some conflict between organic waste avoidance and local sourcing of fresh, non-prepared vegetables. The definition of 'avoidable' versus 'non-avoidable' waste from the UK WRAP food waste study may be used. For buffets, 'eat only what you need' signs can be installed, and best practice should be listed specifically for buffets. SP will provide data from TUI hotels with buffets for organic waste. IPTS will refine a quantitative waste generation benchmark if sufficient supporting data can be found, otherwise will amend to a qualitative benchmark based on implementation of a waste minimisation programme.

Dishwashing, cleaning, food preparation

The definition of 'cover meal' requires further definition. IPTS will look for further data on water consumption in kitchens to support a quantitative benchmark, otherwise will model best achievable water consumption based on data at process level (for pre-rinsing, dish-washing, cooking, cleaning, etc) – with an appropriate caveat included.

Optimised cooking, refrigeration and ventilation

The global warming potential of refrigerant leakage is important, but leakage detection and maximum allowable rates are described in legislation. Best practice is to minimise the importance of leakage by using natural refrigerants with a low GWP.

3.7. Campsites

At the beginning of the Campsite chapter, IPTS will include a summary of EMS implementation in campsites, cross-referring to technique 2.1, especially in relation to the large number of activities potentially occurring on campsite grounds and cross-linkages with other parts of the document. A new technique may be included for campsites including a description of environmental education of guests and provision of sustainable local transport such as (electric) bikes. Campsites and hostels may offer reduced prices for guests arriving with public transport. Caravan sites are included in the definition of campsites.

Management of outdoor areas (TBD)

This technique will refer explicitly to biodiversity management. Numerous aspects for inclusion were suggested, including the design of gardens based on available water, the avoidance of mineral fertilisers, the avoidance of salt in cold areas for de-icing, and the installation of below-ground irrigation systems with automated control (or control by trained grounds persons). On campsites, best practice includes the avoidance of plastic ground sheets directly on grass (wooden structures available), and the avoidance of car or caravan washing on green areas. It is important to ensure (e.g. with signage) that rainwater drains are not used by guests for emptying wastewater. The percentage of sealed area could be a useful indicator.

Energy efficiency and renewable energy

IPTS confirmed that benchmarks proposed in the SRD are more ambitious than the EU roadmap for 2020 based on 20% energy and GHG emission reductions, and 20% renewable energy generation.

Water efficiency and waste management on campsites

These techniques draw on information provided by MW from the Ecocamping network, and cross-refer to techniques 6.1 and 6.2, and techniques 7.1, 7.2 and 8.1. There were no further comments.

Natural pools (TBD)

MW offered to provide a link to a Bavarian indoor pool maintained at 30C and cleaned by tropical plants.

4. Way Forward

New deadlines are summarized in the table below.

Written comments to be sent before	9/1/2012
New draft with filled gaps will be published in the IPTS webpage by	22/2/2012
Written comments on the new draft to be sent before	13/4/2012
Final draft to be published in the IPTS webpage by	31/4/2012
Tele or videoconference (to be organised by IPTS)	April 2012

5. Conclusions



DEFINITIONS

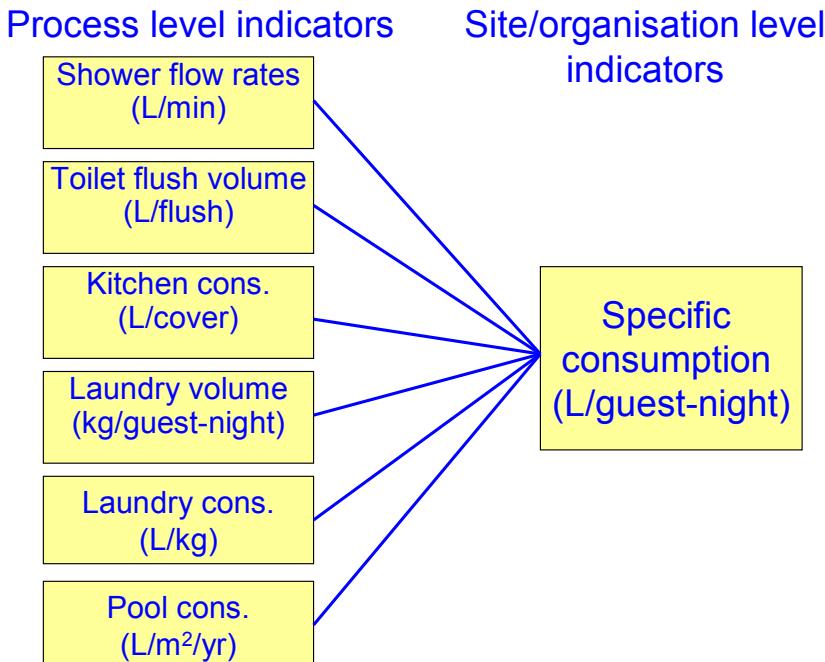


Tourism Best Environmental Management Practice Working Group Meeting – 24-25/11/2011

3

An **Environmental Performance Indicator** is a specific measure of environmental performance comparable at the process, site and/or organisation level.

A **Benchmark of Excellence** is the indicator value achieved by commercial best performers, under certain applicability and economic conditions.



Description: Environmental Management System Proposed Indicators

- relevant indicators referred to in subsequent BEMPs are identified and applied at the appropriate level (process, site, organisation)
 - sections 5.1 (energy), 6.1 (water) and 7.1 (waste)

Proposed Benchmarks of Excellence

- relevant indicators are used to continuously monitor environmental performance
- best environmental management practice measures are implemented where applicable

Some modifications of the text to be done.

Not a description of formal EMS requirements – emphasis on monitoring and improvement

Cross-reference other sections of this document

pp. 54-58

Description: Supply chain management

Proposed Indicators

- LCA indicators for product or service
- % products or services (by value) that:
 - (i) are certified according to relevant environmental standards or ecolabels;
 - (ii) comply with a specified level of environmental performance;
 - (iii) originate from suppliers who are improving their environmental performance (e.g. hold a certified EMS)

Proposed Benchmarks of Excellence

- implementation of a supply chain management plan that minimises the lifecycle environmental impact of products and services
- quantitative benchmarks in subsequent sections
 - e.g. ≥ 97 % of chemicals used in accommodation and restaurant premises are ecolabelled (10 percentile hotel data)

pp. 59-65

Description: Planning, management and biodiversity conservation

Proposed Indicators

- implementation of CBD guidelines regarding destination management
- percentage protected (high-nature value) area within the tourism destination
- abundance of indicator species
- % tourism income (or tax revenue) allocated to conservation
- implementation of continuous biodiversity monitoring based on an ecosystem approach

Proposed Benchmark of Excellence

- implementation of a destination plan informed by continuous biodiversity monitoring and feedback from all relevant stakeholders
- Ensure any biodiversity loss from tourism development is within the limits of acceptable change, and where possible is compensated for inside the destination to ensure that destination-level biodiversity is at least maintained

pp. 72-92

Description: Environmental standards for accommodation

Proposed Indicators

- accommodation suppliers implement best practice techniques described in chapters 5-8
- % packages offered that have been certified according to an environmental-standard (by value)
- % packages offered complying with specific environmental requirements
- % packages offered with environmental management system

Proposed Benchmarks of Excellence

- systematic application of environmental criteria across accommodation suppliers
- 90 % accommodation suppliers demonstrate environmental performance improvement

pp. 100-110

Description: Drive destination improvement

Proposed Indicators

- destination management indicators from section 3.1 (biodiversity) and 3.2 (service provision)
- Accommodation improvement

Proposed Benchmarks of Excellence

- the tour operator drives destination environmental improvement by i) improving supply chain performance, ii) influencing destination management and iii) direct improvement schemes

Definition of participation can be further developed, not only in financial terms.

pp. 114-119

Description: Insulated building envelope

Proposed Indicators

- (U-values walls, doors, windows, roofs)
- heating and cooling energy demand kWh/m²/yr

Proposed Benchmarks of Excellence

- Minergie and Passive standards for new buildings Cross-ref Construction SRD
- heating and cooling energy < 75 kWh/m²/yr for existing hotels (10 percentile hotel data)

Applicability and the links with other energy efficiency and renewable energy sources techniques will be clearly described in the text. An integrative approach should be considered (link to SRD Construction).

pp. 127-130

Description: Efficient lighting and electrical equipment

Proposed Indicators

- installed lighting capacity (W/m²)
- installation of an intelligent control system
- lighting electricity consumption (kWh/m²/yr)
- total electricity consumption (kWh/m²/yr)

Proposed Benchmarks of Excellence

- installed lighting capacity < 10 W/m² (best observed); 10-30 W/m² low-high light provision EN15193
- (lighting electricity consumption < 25 kWh/m²/yr, best observed; 35-98 kWh/m²/yr EN15193)
- total electricity consumption < 80 kWh/m²/yr (10 percentile hotel data)

Rapid development of LED lighting, values already achieved in some hotels better than EN15193 benchmarks

pp. 134-147

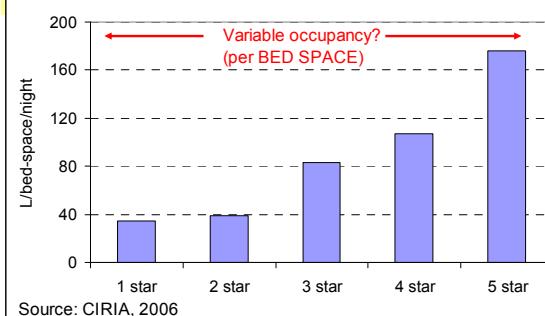
Description: Water system monitoring and maintenance Proposed Indicators

- implementation of monitoring and maintenance plan
- specific water consumption (L/guest-night)

➤ Proposed Benchmark of Excellence

➤ total water consumption < 140 L/guest-night (10 percentile hotel data), 130 L/gn for youth hostels

Applicability: mid-range hotels with restaurant, excludes pool consumption



Include lower value for basic accomm. without ensuite bathrooms and restaurant (see left)?

pp. 155-167

Description: Efficient fittings in guest areas

Table 6.8 (p.174)

Aspect	Best practice	Quantitative benchmark
Shower fittings	Low-flow shower heads, aerators and flow-restrictors	Average shower flow rate \leq 7 L/min
Retrofitted tap (except bath)	Aerators and flow-restrictors	Average tap flow rate \leq 6 L/min
New tap fittings* (except bath)	Spray taps	Average flow rate \leq 4 L/min
Toilet	Low-flush, dual-flush	Average effective flush \leq 4.5 L
Urinal	Waterless urinals	Average urinal water use \leq 2.5 L/person**/day
Guest information	Prominent notices in all bathrooms on water saving measures	NA
Total water use in guest areas	Implementation of all above measures	Average water use in guest areas \leq 100 L/guest-night***
Energy for heating water in guest areas	Implementation of above measures and system optimisation (section 6.1)	3.0 kWh/guest-night****

*Recent retrofit
**Based on average use rate
*** See Fig. 6.3
**** based on heating 60 L water by 40 °C

pp. 168-183

Description: Efficient housekeeping

Proposed Indicators

- chemical use (grams active ingredient per guest-night)
- green procurement (% chemicals, soaps, bedclothes, towels)
- % reduction in laundry through guest reuse programmes
- specific water consumption (L/guest-night)

Proposed Benchmarks of Excellence

- ≥ 80 % of bedclothes are cotton-polyester mix or linen, and at least 80 % of bedroom textiles have been awarded an ISO Type 1 ecolabel or are organic
- consumption of active chemical ingredients ≤ 10 grams per guest-night (**10 percentile hotel data**)
- reduction in laundry achieved through reuse of towels and bedclothes ≥ 30 % of laundry volume without reuse
- ≥ 80 % by weight of all purpose cleaners, sanitary detergents, soaps and shampoos have been awarded an ISO Type I ecolabel (**EU Flower criteria**)

pp. 184-200

Description: Optimised small scale laundry

Proposed Indicators

- water consumption (L/kg laundry)
- energy consumption (kWh/kg laundry)
- washer extractor energy rating
- % detergent ecolabelled

Proposed Benchmarks of Excellence

- laundry is outsourced to efficient commercial laundry service providers complying with benchmarks specified in section 6.5
- new domestic washing machines have an EU energy label rating of at least "A+", and new commercial machines consume ≤ 6 L per kg laundry washed **To be changed to A+++ or equivalent**
- total laundry process energy consumption of 1.0 kWh per kg textile, for dried and finished laundry products **real data?**
- ≥ 80 % by weight of laundry detergent has been awarded an ISO Type I ecolabel (e.g. Nordic Swan, EU Flower)

pp. 185-220

Description: Optimised large scale laundry

Proposed Indicators

- laundry service is ecolabelled
- water consumption (L/kg laundry)
- energy consumption (kWh/kg laundry)
- % detergent ecolabelled
- wastewater treatment standard

Proposed Benchmarks of Excellence

- where possible, all outsourced laundry is serviced by a provider who has been awarded an ISO type-1 ecolabel, or comply with Nordic Ecolabelling criteria...

Water

- for accommodation laundry, total water consumption of 5 L per kg textile for the complete wash cycle
- for restaurant laundry, total water consumption of 9 L per kg textile for the complete wash cycle

pp. 221-236

Description: Optimised large scale laundry cont...

Proposed Benchmarks of Excellence

Energy

- for accommodation laundry, total laundry process energy consumption of 0.90 kWh per kg textile, for dried and finished laundry products
- for restaurant laundry, total laundry process energy consumption of 1.45 kWh/kg textile, for dried and finished laundry products

Chemicals

- use of laundry detergents compliant with Nordic Swan ecolabel criteria for professional use (Nordic Ecolabelling, 2009);
- appropriate dosing

Wastewater treatment

- wastewater is treated in a biological wastewater treatment plant having a feed-to-microorganism ratio of < 0.15 kg BOD5 per kg dry matter per day.

pp. 221-236

Description: rainwater and greywater recycling

Proposed Indicators

- Installation of rain- or grey- water recycling
- percentage of annual potable water consumption substituted with recycled rain- or grey- water

Proposed Benchmarks of Excellence

- installation of a rainwater recycling system that supplies internal water demand, or a grey water recycling system that supplies internal or external water demand
- 10% potable water substituted with rainwater or 20% potable water substitute with grey water

Accor Birmingham Hotel e.g... other data?

pp. 238-246

Description: waste avoidance

Proposed Indicators

- total waste generation (kg/guest-night) Including waste that is reused/recycled

Proposed Benchmarks of Excellence

- total waste generation (sorted plus unsorted) ≤ 0.6 kg per guest night

Legal restrictions to be explained in the text

pp. 250-257

Description: waste sorting, reuse and recycling

Proposed Indicators

- the proportion of waste that is sorted and sent for recycling (percentage mass of total waste);
- the quantity of unsorted waste sent for disposal (kg per guest night)

Proposed Benchmarks of Excellence

- ≥ 84 % of waste, expressed on a weight basis, is reused or recycled (10 percentile hotel data)
- unsorted waste generation ≤ 0.16 kg per guest night (10 percentile hotel data)

pp. 258-276

Description: green sourcing of food and drink products

Proposed Indicators

- % food and drink products compliant with specified criteria or standards

Product groups	Basic standard	High standard
Coffee, chocolate, tea		4C, FT, OC, UTZ
Dairy	GAP, NPC	OC
Fruit and vegetables	GAP (avoid airfreight, from heated greenhouses)	FT, NPC, OC (in season)
Fats and oils	GAP, NPC	RSPO, RTRS, OC
Grains and pulses	GAP, NPC	OC
Poultry, eggs	GAP, NPC	OC
Red meat	GAP, NPC, RA	
Seafood	RLF	MSC
Soft drinks	see sugar, below	
Sugar	GAP	BSI, FT, OC (cane sugar)
Water		(filtered) tap water
Based on standard classification elaborated in EC (2011)		

Check Fish and RLF
from Greenpeace

Table 8.4 (p.283)

pp. 279-293

Description: green sourcing of food and drink products

Proposed Benchmarks of Excellence

- documented information, at least including country of origin, for all main ingredients (**Nordic Ecolabelling criteria restaurants**)
- at least 60 % food and drink products, by procurement value, are certified according to basic or high environmental standards or criteria
- at least 40 % food and drink products, by procurement value, are certified according to a high environmental standards or criteria

pp. 279-293

Description: organic waste management

Proposed Indicators

- the quantity of organic waste generated, expressed in kg, per dining guest or per cover meal
- the percentage of organic waste sent for anaerobic digestion or alternative energy recovery
- the percentage of organic waste composted onsite or sent for composting, where the alternative waste disposal option is landfill

Proposed Benchmarks of Excellence

SRA data, other data?

- total organic (**avoidable**?) waste generation ≤ 0.25 kg per diner (**to be confirmed and maybe to be removed or transformed to qualitative benchmark – waste minimization plan**)
- $\geq 95\%$ of organic waste separated and diverted from landfill, and, where possible, sent for anaerobic digestion or alternative energy recovery (**more emphasis on this benchmark**)

pp. 294-309

Description: optimised dishwashing, cleaning, food prep.

Aspect	Indicators of best practice
Monitoring	<ul style="list-style-type: none"> Kitchen water consumption is monitored separately and recorded at least once per month*
Dish washing	<ul style="list-style-type: none"> Waste grinders not used PRSVs are fitted with trigger operation and have a maximum flow rate $\leq 6 \text{ L/min}$ New stationary (under-counter or hood type) dishwashers have rated water consumption $\leq 3 \text{ L per rack}$ Tunnel dishwashers are installed with heat recovery and heat pump Dishwashers are connected to hot water supply, or to a dedicated gas boiler in the case of tunnel washers New conveyor dishwashers have rated water consumption $\leq 2 \text{ L per rack equivalent}$ Dishwasher racks are filled before loading into the dishwasher
Food preparation	<ul style="list-style-type: none"> Sink taps are installed with foot pedal or sensor operation and have maximum flow rate $\leq 12 \text{ L/min}$ Steam cookers consume $\leq 8 \text{ L water per hour of operation}$ Thawing under running water is avoided
Cleaning	<ul style="list-style-type: none"> Use of hose to wash floor is avoided Cleaning agents do not contain the following: alkylphenolethoxylates (APEO) and alkylphenol derivatives (APD), dialkyl dimethyl ammonium chloride (DADMAC), linear alkylbenzene sulphonates (LAS), reactive chlorine compounds (exemption if required by authorities for hygiene reasons*) At least 70% of the purchase volume of chemical cleaning products (excluding oven cleaners) for dishwashing and cleaning are ecolabelled*

* Nordic Swan (2007) criteria

Table 8.11 (p.313)

pp. 310-323

Description: optimised dishwashing, cleaning, food prep.

Proposed Indicators

- process consumption (see Table 8.11)
- kitchen water consumption (L/cover meal)
- % cleaning products ecolabelled

SRA data, other data?

Proposed Benchmarks of Excellence

- total kitchen water consumption $\leq 10 \text{ L per cover}$ (revised depending on data availability, maybe based on indicative qualitative indicator and/or model based approaches)
- $\geq 70\%$ of the purchase volume of chemical cleaning products (excluding oven cleaners) for dishwashing and cleaning are ecolabelled (Nordic Ecolabelling criteria)

pp. 310-323

Description: optimised cooking, ventilation, refrigeration

Proposed Indicators

- equipment rated energy efficiency
- GWP of cookers (kg CO₂ eq./kWh effective food heating)
- GWP of refrigeration systems (kg CO₂ eq./m³/yr)

Proposed Benchmarks of Excellence

- US Energy Star thresholds for cooking equipment (Table 8.21, p.329)
- select either: (i) induction hobs; or (ii) gas flame hobs with pot sensor control
- new fridge and freezer units have rated energy consumption ≤ 1.14 kWh/L/yr for fridges and ≤ 3.6 kWh/L/yr for freezers (US Energy Star thresholds)
- cold room refrigeration systems use hydrocarbons, ammonia or carbon dioxide refrigerants
- xxkWh/cover meal??? Data required... pp. 324-342

Description: energy efficiency and renewable energy

Proposed Indicators

- space heating kWh/m²/yr
- water heating kWh/guest-night
- % energy consumption from verifiable renewable sources
- non-renewable energy consumption (kWh/guest-night)
- carbon footprint kg CO₂ eq. / guest-night

Proposed Benchmarks of Excellence

- electricity and onsite fossil energy consumption ≤ 2.0 kWh per guest night (Ecocamping 10 percentile)
- all electricity consumed is sourced from genuine additional renewable sources

pp. 345-356

Description: water efficiency

Proposed Indicators

- water flow rates for fittings cross-ref. Table 6.8 in section 6.2
- specific water consumption (L/guest-night)

Proposed Benchmarks of Excellence

- total water consumption ≤ 96 litres per guest night on fully serviced four and five star campsites (**Ecotrans**), and water consumption ≤ 58 litres per guest night on all other campsites (**Ecocamping 10 percentile**)

pp. 357-362

TECHNIQUES TO BE DEVELOPED...

Can you contribute information?

Can you identify relevant experts, organizations, case studies?

Can you suggest appropriate indicators or benchmarks?

Description: Infrastructure and service provision

Proposed best practice

- avoid over-development of tourism (planning: section 3.1)
- use of economic instruments to minimise water consumption (stepped charging)
- installation of WWTP(s) with sufficient capacity to deal with peak season effluent loads
- provision of waste recycling services
- provision of public transport to important tourism sites

Proposed Indicators

- specific water consumption in the destination
- water quality parameters

pp. 93-95

Description: Environmental standards for transport

Proposed best practice

- encourage fewer but longer-duration flight holidays? (Maybe out of the scope)
- contract more efficient planes, and ensure high occupancy
- specific techniques for planes (e.g. self-cleaning engines)
- carbon offsetting (outsourced or in the reservation or included in the package?)
- provide public transport to/from airports
- Development of carbon footprint information to consumers
- Mobility and accessibility to be considered.
- Use of biofuels?

Proposed Indicators

- g CO₂ per km
- kg CO₂/person-week for holiday packages (to be revised)

pp. 111-113

Description: Develop and promote frontrunner sustainable tourism packages

Proposed best practice

- promote “eco-labelled” tours? Which labels?
- promote non-flying tours
- promote tours that contribute to maintenance or improvement of threatened destinations (to be revised)

Proposed Indicators

- % tours (by value) complying with various criteria or standards...
- kg CO₂/person-week for holiday packages?

Definition of sustainable tourism should be taken into account.

p. 120

Description: Encourage more sustainable tourist behaviour

Proposed best practice

- information provided to tourists (engage with tourists)
- ???

Proposed Indicators

- ???

p. 121

Description: Efficient retail and office operations

Proposed best practice

- cross-reference retail BEMP document
- select efficient buildings
- Green procurement for office materials
- install low-energy office equipment and intelligent lighting
- install low-flow water fittings
- paperless operations where possible,
- separation and recycling consumables

Proposed Indicators

- kWh/m²/yr
- Water consumption (L/day/employee) (from CIRIA, 2006 for offices)
- paper consumption per package sold?
- % waste recycled

p. 122

Description: Energy monitoring

Proposed best practice

- Sub-meter electricity and gas or oil consumption by area/major process (kitchen, restaurant, laundry, pool/spa areas) (e.g. Savoy)
- Building Management System to control HVAC and room electricity (e.g. Scandic Berlin, Rafayel)

Proposed Indicators

- energy sub-metering system
- total energy consumption (kWh/m²/yr)

Proposed Benchmark of Excellence

- < 180 kWh/m²/yr total onsite energy consumption (10 percentile hotel data)

pp. 125-126

Description: Optimising HVAC

Proposed best practice

- heat recovery ventilation
- controlled air-exchange rates
- Free cooling
- cross-refer Retail and Construction SRDs

Proposed Indicators

- total energy consumption (kWh/m²/yr)

Proposed Benchmark of Excellence

- < 180 kWh/m²/yr total onsite energy consumption (10 percentile hotel data)

p. 131

Description: Efficient heat pumps

Proposed best practice

- use of heat pumps for space and water heating
- operational details to maximise efficiency
- cross-refer to camp site HP application (section 9.2)

Proposed Indicators

- heating and cooling energy consumption (kWh/m²/yr)

Proposed Benchmark of Excellence

- < 75 kWh/m²/yr total onsite energy consumption (10 percentile hotel data)

p. 132

Description: Renewable energy sources

Proposed best practice

- wood boilers and solar collectors for water heating (Hotel Victoria)
- solar photovoltaic
- investment in offsite wind turbines (or other renewables: GP electricity)
- cross-refer to camp site renewables (section 9.2)

Proposed Indicators

- % energy consumption provided by renewable energy
- non-renewable onsite energy consumption (kWh/m²/yr) (see section 9.2)

p. 133

Description: Optimised pool management

Proposed best practice

- optimise filter back-wash rate
- install cover to reduce heat and water loss
- use backwash water for toilet flushing
- low-flow timed showers (cross-ref. section 6.2)
- simple solar collectors
- electrochlorination?

Proposed Indicators

- water consumption (L/m²/yr)
- heating energy (kWh/m²/yr)
- active chlorine consumption (g/m²/yr)

p. 237

Description: Wastewater treatment

Proposed best practice

- where possible send WW for treatment in centralised WWTP
- or at least secondary treatment onsite

Proposed Indicators

- secondary treatment
- post-treatment water quality parameters (SS, coliforms...)

p. 277

Description: Environmental management of green areas

Proposed best practice

- plant indigenous species
- green barriers (Ecocamping e.g.s)
- avoid pesticides or comply with organic criteria
- minimise irrigation requirements and use grey water
- green roofs
- avoid light pollution (sodium lamps, timed or sensor activated)

Proposed Indicators

- all indigenous species
- L/m²/yr water consumption for irrigation
- % irrigation water from collected rain- or grey- water

p. 344

Description: Waste minimisation

Proposed best practice

- cross refer to section 7.1, 7.2 and 8.1
- provide convenient waste sorting areas (covered, dry, lighted, clean)

Proposed Indicators

- kg unsorted waste per guest-night

Proposed benchmark of Excellence

- 0.2 kg unsorted waste per guest-night (Ecocamping 10 percentile)

pp. 363-364

Description: Natural pools

Proposed best practice

- installation of a natural pool using reeds and other aquatic plants to clean water (e.g. from Uhlenköper campsite)

Proposed Indicators

- installation of natural pool
- water consumption (L/m²/yr)

p. 365

Annex 1. List of participants (plus contacts from kick-off meeting)

Participant	Organisation	Country	
Harald Schoenberger	European Commission JRC-IPTS	Spain	
José Luis Galvez	European Commission JRC-IPTS	Spain	
David Styles	European Commission JRC-IPTS	Spain	
Gilles Vincent	European Commission DG-ENV	Belgium	
Paula Gomes	European Commission DG-ENV	Belgium	
Rolf-Jan Hoeve	European Commission DG-ENV	Belgium	
Silvia Draghi	European Commission DG-ENV	Belgium	
Constanze Adolf	EUFED	Belgium	
Arie de Graaf	MKB NEDERLAND (SME UEAPME)	Netherlands	
Naut Kusters	ECEAT	Netherlands	
Peter Lane	Peter Lane Tourism Planning and Leisure Consultancy	UK	
Brianda Lopez	EUFED	UK	
Elodie Perrat	UNEP Tourism	France	
Simon Pickup	ABTA	UK	
Georg Vogel	GWÖ, Gesellschaft für WirtschaftsÖkologie	Germany	
Marco Walter	Ecocamping	Germany	
Additional kick-off meeting participants			
Christian Baumgartner	Naturefriends International	Austria	
Klaus Erlich	Eurogites	Spain	
Franz Fiala	ANEC	Austria	
Mathias Friebel	GWÖ, Gesellschaft für WirtschaftsÖkologie	Germany	
Herbet Hamele	ECOTRANS	Germany	
Marion Hammerl	Bodensee Stiftung	Germany	
Stig Hirsback	Institute of Technology, Aalborg	Denmark	
Maria Passalacqua	Club EMAS	Spain	
Markus Racke	DAU GmbH	Germany	
Eberhard K. Seifert	IöB-office South/Karlsruhe	Germany	
Lars Thykier	Danmarks Rejsebureau Forening	Denmark	
Heinz Werner Engel	Eco-Conseil Enterprise	Belgium	

Annex 2. Meeting Agenda

<p>WORKSHOP ON THE EMAS REFERENCE DOCUMENT FOR THE TOURISM SECTOR BRUSSELS, 24-25 NOVEMBER 2011 <u>DRAFT AGENDA</u></p> <p>24 NOVEMBER 2011: 15.00 – 18.30</p> <p>15:00 - 15:15 Opening and welcome by chairperson</p> <p>15:15 – 15:30 Purpose and goals of the workshop</p> <p>15:30 – 15:45 Overview of the information exchange to develop the draft document – presentation followed by discussion</p> <p>15:45 – 16:00 Approach, findings, changes in the scope, gaps and commenting – presentation followed by discussion</p> <p>16:00 – 16:30 Break</p> <p>16:30 – 17:00 Indicators and Benchmarks of Excellence, cross-cutting techniques – presentation followed by discussion</p> <p>17:00-17:45 Indicators and Benchmarks of Excellence, destination manager techniques – presentation followed by discussion</p> <p>17:45 – 18:30 Indicators and Benchmarks of Excellence, tour operator techniques – presentation followed by discussion</p>	<p>23 November 2011: 9.30 – 17.30</p> <p>09:30 – 10:00 Indicators and Benchmarks of Excellence, tour operator techniques – presentation followed by discussion</p> <p>10:00 – 11:00 Indicators and Benchmarks of Excellence, accommodation techniques – presentation followed by discussion</p> <p>11:00 – 11:20 Break</p> <p>11:20 – 12:00 Indicators and Benchmarks of Excellence, accommodation techniques – presentation followed by discussion</p> <p>12:00 – 12:30 Indicators and Benchmarks of Excellence, kitchen techniques – presentation followed by discussion</p> <p>12:30 – 13:00 Indicators and Benchmarks of Excellence, campsite techniques – presentation followed by discussion</p> <p>13:00 – 14:30 Lunch</p> <p>14:30 – 15:15 Indicators and Benchmarks of Excellence: remaining work – presentation followed by discussion</p> <p>15:15 – 15:30 Way forward – presentation followed by discussion</p> <p>15:30 – 16:00 Conclusions: Identified gaps, information needs and TWG input</p> <p>16:00-16:30 Break</p> <p>16:30 – 17:00 Conclusions: Indicators and Benchmarks of Excellence</p> <p>17:00 – 17:30 Any Other Business</p> <p style="text-align: right;">Close of workshop</p>
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Annex 3. Participant information commitments

Participant	Commitment
Constanze Adolf	<ul style="list-style-type: none"> – information on a recent conference held in Budapest regarding destination management and tourist behaviour – examples of CO₂ neutral hostels in Germany (north of Berlin) and in Scotland – summary of how best environmental management can be disseminated throughout an organisation with e.g. staff training
Silvia Draghi	<ul style="list-style-type: none"> – DG Enterprise will provide some information on destination management
Paula Gomes	<ul style="list-style-type: none"> – information on Natura 2000 sites relevant for tourism
Naut Kusters	<ul style="list-style-type: none"> – examples of sustainable tours, including Austrian non-flying tours
Brianda Lopez	<ul style="list-style-type: none"> – link to San Francisco sustainable development plan – examples of youth hostels with controlled ventilation – information on Doufas heat recovery system for tumble dryers used in hostels – Swiss youth hostel water consumption data
Elodie Perrat	<ul style="list-style-type: none"> – contact details for the European Greener Capitals project – information from Agir pour un Tourisme Responsable regarding the promotion of sustainable tourist activities.
Simon Pickup	<ul style="list-style-type: none"> – examples for techniques on biodiversity conservation – examples of low-interest loans for environmental investments (e.g. renewable energy installation) in destinations – data on organic waste generation from TUI hotels with buffets for organic waste.
Marco Walter	<ul style="list-style-type: none"> – information on chemical-free waterless urinals – link to hotel with indoor tropical natural pool