Introduction

Hotel classification systems historically seek to provide clear overviews to travellers on the amount of comfort that may be expected in the different categories (Vine, 1981). Hotel classification systems historically focused on objective tangible standards, but have extended their scope over the last 10 years towards subjective tangible standards and service delivery as well as online guest reviews (Hensens, Struwig, & Dayan, 2010, Hensens, 2014, UNWTO, 2014). In addition, systems have grown their scope to fulfill standards that may not directly contribute to guest comfort but can be argued to constitute a further development in quality thinking (Staffieri & Cavagnaro, 2013).

In response to environmental concerns, environmental management certification bodies, industry partnerships and governments have set up initiatives to address the impact that hotels have on the environment. These initiatives drive the idea that the hotel industry can and should play an important role in reducing its consumption of natural resources, limit its waste and carbon emissions, develop sustainable supply chains, and protect the destination surrounding the hotel (International Tourism Partnership, 2015). In that context, Kapiki (2012) groups Environmental Management systems as a quality label in line with hotel classification systems, though it is usually offered as a separate system or an add-on to hotel classification systems (Staffieri & Cavagnaro, 2013).

A question that has remained largely unanswered is to what extent and how hotel classification systems have adapted to these initiatives. This paper reviews the developments of environmental management certification for the hotel industry and reviews eight contemporary systems to identify to what extent and how environmental management standards have been adopted.

Hotel environmental management certification systems

Since the early 1990s, a substantial number of environmental certification systems for hotels and tourism organisations have been launched, providing standards for hotels to operate more sustainably from an environment perspective. Table 1 outlines the eight leading systems in terms of membership volume and reputation within the hotel industry.
From Table 1 it can be seen that the eight systems identified typically launched in the mid-1990s following the growing trend of environmental sustainability in tourism. Organisations that look after the system are typically not for profit and pursue the objectives of making the tourism or wider industries more sustainable through education and certification (GLS5, 2015).

Though most of the systems outlined in Table 1 do not specify clearly the number of hotels that they certify, it appears that ISO 14001, Green Key and Green Key Global present the larger systems in terms of membership. ISO 14001 appears to be leading in terms of volume despite the organisation not stipulating the number of hotels that is certified (Segarra-Ona et al., 2014). However, with large hotel groups such as Hilton having its entire portfolio certified, comprising 3 750 properties in 50 countries, it is safe to estimate the total number of hotels under ISO 14001 certification to comprise several thousands worldwide (Hilton, 2011). ISO 14001 certification revolves around the process of implementing an environmental management system opposed to presenting defined criteria or targets, contrary to, for instance the Green Key System (Bügler, 2011).

The effectiveness of environmental certification for hotels has been researched by a number of authors. The key questions here revolve around guest satisfaction and profitability. In terms of guest satisfaction, Segarra-Ona et al. (2014) found in their study of Spanish ISO 14001 certified hotels that especially hotels in the four star category recorded significantly higher online guest ratings than their competitive set. The study does not reveal causes for this, however.

In terms of profitability, a study by Walsman, Verma and Muthulingam (2015) compared 93 LEED certified hotels to 514 comparable hotels in the US and found that despite recording lower occupancy levels, LEED certified hotels outperformed their competitive set in average daily rate (ADR) and RevPar (RevPar).

The apparent positive impacts of environmental management certification has led to a discussion on whether this should not be an integrated part of quality assessment for hotels. Staffieri and Cavagnaro (2013) propose a total of five dimensions in an integrated quality assessment system, including Hospitality, Sustainability, Innovation, Security, and Communication. The sustainability element in this model reflects the factors People, Planet, and Profit whereby reference is made to the Green Key Baseline Criteria alongside other certification systems as sources for standards (Staffieri & Cavagnaro, 2013).

### Hotel classification systems providing an integrated approach to quality

The growing volume and impact of online reviews has led to the question whether there is a future for hotel classification systems (Hensens, 2014). This question has been answered to the extent that the hotel classification systems need to evolve and integrate online reviews (Hensens, 2014; UNWTO, 2014). This integration is currently happening in two ways (UNWTO, 2014):

1. Comparative performance whereby online review scores are presented next to the hotel rating, or
2. A full integration whereby a certain average score is a prerequisite for a certain hotel rating.

The UNWTO report further states that “about 75% of both consumers and hotels indicate that the integration of reviews into classification is important or very important” (UNWTO, 2014).

There seems to be a trend whereby consumers consult more information sources overall before making a hotel booking, opposed to using one source to the detriment of another. A study by the TNS Institute on behalf of the German Hotel Association indicated that a sample of 1 014 private travellers based in Germany consulted more personal recommendations, online reviews, official star classification and hotel certificates in 2014 than they did in 2008 (Scheibel, 2014). These results of this study are outlined in Table 2.

From Table 2 it can be seen that all sources are reported to be consulted more in 2014 than in 2008 with the exception of the hotel’s brand name, where there is a drop of almost 50%. The growth in official hotel star classifications being used as an information source contradicts the negative scenario that hotel classification systems are being replaced by online guest reviews outlined by Hensens (2014). Similar studies by Tourism Ireland confirm that as many as 75% of respondents indicate that classification systems remain important for them when they select a hotel (UNWTO, 2014).

The question should thus be asked whether environmental certification should not be included in official hotel classification systems as well. No research has taken place, however, to review to what extent this integration has taken place in contemporary hotel classification systems, let alone the effect thereof. This study aims to identify to what extent and how recently launched or updated hotel classification systems integrate environmental management practices of hotels and seeks to assess to what extent this can be expected to be effective.

### Methodology

The method used for this study included a content analysis whereby the Green Key International Baseline Criteria for Hotels were used to derive keywords to identify environmental management standards in recently updated hotel classification systems. Green Key was selected as a system as it was found to be the most transparent and focused in terms of the identification of keywords that could be used to conduct the content analysis of the selected hotel classification systems.

Green Key certifies hotels based on a set of standards referred to as the International Baseline Criteria Green Key for Hotels (Green Key, 2015b). The criteria comprise 112 standards that are structured over 12 focus areas. Of the 112 standards, The Green Key Eco Label system requires full compliance with

| Information source                | 2008 | 2014 |
|-----------------------------------|------|------|
| Personal recommendations          | 67%  | 74%  |
| Online reviews                    | 26%  | 52%  |
| Official star classification      | 41%  | 47%  |
| Hotel’s certificates              | 10%  | 27%  |
| Hotel’s brand name                | 29%  | 16%  |

Source: TNS Institute as quoted by Scheibel (2014)
61 standards that are referred to as “imperative”. The further 51 standards are presented as guideline criteria of which an increasing percentage needs to be obtained based on the length of ones’ membership, starting with 0% in year 1 and escalating to 50% after 10 years (Green Key, 2015b). A total of 18 criteria require additional documentation in the form of, for instance, an environmental policy, action plan, meetings of minutes, or invoices from suppliers.

Table 3 outlines the structure and focus of the Green Key International Baseline Criteria for hotels.

From Table 3 it can be seen that the criteria are subdivided over a total of 12 categories that can all fit the concept of environmental management with the exception of one criterion in category 2 that refers to CSR (Corporate Social Responsibility).

Through an initial content analysis, keywords were filtered from the Green Key International Baseline Criteria that were used to screen the selected hotel classification systems with the exception of standards on a non-smoking policy as these are typically dictated by national legislation and CSR, as this did not fit the context of environmental management. The keywords that were identified are outlined in Table 4, per section. If a keyword was identified in one section, it was not recorded again if it appeared also in another section.

From Table 4, it can be seen that a total of 71 keywords were identified to screen the selected hotel classification systems.

A total of eight hotel classification systems was selected based on the following factors:
• The system was drafted, launched or updated in the last three years (2012 or later)
• The systems represent a substantial tourism market or multiple destinations, and

Table 3: Focus of Green Key International baseline criteria for hotels

| Section                        | Focus                                                       | Imperative standards | Guideline criteria | Documents |
|--------------------------------|-------------------------------------------------------------|----------------------|--------------------|-----------|
| Environmental management       | Environmental management policy.                            | 7                    | 1                  | 2         |
| Staff involvement              | Employee involvement in policy and CSR practices.           | 5                    | 1                  | 3         |
| Guest information              | Communication to guests about environmental policies and Green Key membership. | 6                    | 1                  | 3         |
| Water                          | Water reduction methods and waste water management.          | 11                   | 9                  | 2         |
| Washing and cleaning           | Reduction of washing and use of damaging materials.         | 3                    | 2                  | 3         |
| Waste                          | Reduction and separation of waste and the use of biodegradable items. | 5                    | 5                  | 1         |
| Energy                         | Minimising consumption of energy and the use of renewable energy. | 10                   | 17                 | 2         |
| Food and beverage              | Purchasing strategies and reducing consumption by guests of food and drink that harms the environment. | 2                    | 2                  | 1         |
| Indoor environment             | Smoking policy and use of damaging materials.               | 4                    | 2                  | -         |
| Park and parking areas         | Maintaining outdoor areas.                                  | 3                    | 4                  | -         |
| Green activities               | Enhancing guest awareness and enjoyment of the local environment | 2                    | 4                  | -         |
| Administration                 | Staff areas and transport, use of paper, and subcontractors. | 3                    | 3                  | 1         |
| Total                          |                                                             | 61                   | 51                 | 18        |

Source: Author’s own table based on data from Green Key (2015b)

Table 4: Keywords filtered from Green Key International Baseline Criteria

| Section                        | Keywords                                                                 |
|--------------------------------|--------------------------------------------------------------------------|
| Environmental management       | Environmental / Policy / Green / Pollute / Stakeholders                  |
| Staff involvement              | Initiative / Training / Towels / Sheet / Linen / Housekeeping            |
| Guest information              | Inform / Energy / Water / Saving                                         |
| Water                          | Consumption / Flush / Toilet / Flow / Waste / Hazardous / Chemicals / Swimming / Covered / Tap / Leak |
| Washing and cleaning           | Upon request / Chlorine                                                   |
| Waste                          | Separate / Disposable / Recycle / Bio / Packaging / Disposal             |
| Energy                         | Heating / Light / Efficient / Ventilation / Fat / Filters / Consumption / Electric / Saving / Meters / Off / Insulate / Sensors / Recovery / Card / Switch |
| Food and beverage              | Organic / Label / Local / Vegetarian / Bottle                           |
| Indoor environment             | Polluting / Climate                                                      |
| Park and parking areas         | Pesticides / Fertilisers / Drip / Endemic / Native species              |
| Green activities               | Conservation / Bicycles / Sponsor / Blue Flag                           |
| Administration                 | Paper                                                                    |

Source: Author’s own table based on Green Key International Baseline Criteria
Table 5: Overview of selected hotel classification systems

| System              | Date  | Organisation                                      |
|---------------------|-------|--------------------------------------------------|
| Abu Dhabi           | 2015  | Abu Dhabi Tourism and Culture Authority          |
| Star Ratings        | 2014  | AAA Tourism                                      |
| Dubai               | 2014  | Department of Tourism and Commerce Marketing (DTCM) |
| France              | 2012  | Atout France                                     |
| Hotel Stars Union   | 2015  | Collaboration between 15 European countries      |
| Qatar               | 2015  | Qatar Tourism Authority                          |
| South Africa        | 2013  | Tourism Grading Council South Africa (TGCSA)    |
| AAA (USA)           | 2012  | American Automobile Association                  |

Sources: Abu Dhabi Tourism and Culture Authority, 2014; Star Ratings Australia, 2014a; DTCM, 2014; French Hotel Union, 2012; Hotel Stars Union, 2015; Qatar Tourism Authority, 2015; TGCSA, 2013; AAA, 2015.

Results

The selected hotel classification systems comprise both Minimum Standards that must be achieved at all times and Rating Standards that typically are awarded with points adding to a total that each classification category needs to obtain. The effects on a hotel’s rating for not achieving a minimum standard are very different from not achieving a rating standard as these could be compensated through higher scores in other areas. The findings in each selected system are described first and are then followed by a summary and comparison of the findings.

Abu Dhabi
Abu Dhabi was the first destination to include online review scores into its new hotel classification (Thiessen, 2013), though to date the system is still awaiting formal launch. As the author was involved in the development of this system, access to the criteria was available. The system reflects environmental management standards in a number of ways. Firstly, it provides dispensation to the intervals of renewing changing bath linen and bed linen by providing guests a choice through a clear communication (Abu Dhabi Tourism and Culture Authority, 2014):

> It is allowed for hotels to work with “guest cards” that the guest can use that he/she does not want the linen changed.

The same applies to amenities where the manual states:

> Amenities may be offered through dispensers as part of the hotel’s environmental policy. The quality of the dispensers should however be reflective of the hotel’s rating.

Secondly, there is one minimum standard of the system focused on energy saving lighting in the guest rooms:

> All light bulbs should be functioning and, unless decorative, have a shade or cover. Energy saving lights mandatory, with the exception of areas that require specialized lighting.

Thirdly, in terms of rating criteria, the system presents one standard in the category guestroom technology for 2 points that states:

> Electricity saving system that switches off electricity when a guest leaves the guest room, either through key card or in room sensors.

An additional 25 rating points can be obtained through a dedicated category on environmental practices that is awarded by a national system called Estedama Pearl Rating System. Estedama was established following Abu Dhabi’s 2030 vision to address sustainability as a core principle in the vision (Abu Dhabi Planning Council, 2015). When a hotel scores the maximum amount of five Pearls in the Estedama system and scores 95-100% on the Estedama checklist, the full 25 points are allocated (Abu Dhabi Tourism and Planning Council, 2014).

Australia
Australia’s star rating scheme is operated by Australian Motoring Services and assesses each area in the hotel based on condition and quality, cleanliness, and facilities and services (Star Ratings Australia, 2014a). The system has seven minimum criteria and is further entirely points based over three key areas of assessment: Quality and Condition, Cleanliness, and Facilities and Services. The system does not directly specify any environmental management standards in its requirements, however, similar to Abu Dhabi’s draft system, the Australian system provides dispensation of standards for environmental considerations (Star Ratings Australia, 2014a):
For properties with distinct themes, unique or certified heritage attributes, and/or accredited environmental management practices that may restrict the provision of certain facilities and/or services.

Further the code of conduct, agreement and adherence to which is a precondition for rating stipulates that the hotel must “act in an environmentally responsible way” (Star Ratings Australia, 2014a).

Dubai

Dubai’s new system was launched in 2014 by the Department of Tourism and Commerce Marketing (DTCM) and comprises 1141 standards for its five star category, categorised as “licensing”, “operating” and “enhancing” standards (DTCM, 2014). Both the licensing as well as the operating standards can be considered as minimum criteria as all licensing standards must be fulfilled and no more than 10 out of 639 operating standards may be unfulfilled. Of the enhancing criteria, a minimum of 50% must be fulfilled (DTCM, 2014).

The system specifies four operating standards that relate to environmental sustainability (DTCM, 2014):

1. There is a written environmental policy, with initiatives for both employees and guests (without consequences for non-compliance for guests)
2. There is evidence of a plan to implement the policy for employees, which may be supported by organised events, training, etc.
3. There is evidence of efforts to reduce waste, without reducing guest comfort
4. There is evidence of efforts to improve energy efficiency, without reducing guest comfort.

These standards are very holistic and could be considered as very non-committal at the same time, as they don’t specify the nature of the evidence that is to be provided. DTCM does run an infrequent Green Tourism Awards competition that was hosted in 2009, 2011 and 2014 to reward best practices in Dubai hotels (Dubai Green Tourism Award, 2015). There are, however, no clear links between this initiative and the hotel classification system.

France

Up to its renewal in 2012, the classification system in France was considered as one of the most out-dated systems in the World as it was dating back to 1986 and was misaligned with international practices by offering a ‘0’ star category and simultaneously lacking a 5 star category (Thiessen, 2011).

The new system is simple in structure and presents a total of 246 standards whereby each standard is weighted by points ranging from one to five. The standards are obligatory, optional, or obligatory for only certain categories of hotels (French Hotel Union, 2012).

A total of 15 standards in the French system contribute to a total of 37 points. Three of these standards are minimum standards whereas the remaining 12 are rating standards. The minimum standards are (French Hotel Union, 2012):

1. Staff are trained in the careful management of energy
2. Staff are trained in the careful management of water, and
3. Staff are trained in the careful management of waste.

Hotelstars Union

The Hotelstars Union is an initiative of the hotel associations of Austria, Czech Republic, Germany, Hungary, the Netherlands, Sweden and Switzerland, under the patronage of HOTREC, to consolidate and align hotel classification systems in Europe (Hotelstars Union, 2015a). The system was last updated in 2015 and presents 270 standards that are weighted with one to 25 points. A total of 166 standards are mandatory for one or more categories (Hotelstars Union, 2015b).

The environmental management focus in the system is limited to two standards only. The provision of a charging station is rewarded with three points and the provision of an eco-label is rewarded with 10 points. Neither of the two standards is mandatory (Hotelstars Union, 2015b).

Qatar

Similar to the strategic vision 2030 in Abu Dhabi, the State of Qatar has also published a document with the same name and presents a similar focus on sustainable development (Ministry of Development Planning and Statistics, 2015). It is thus no surprise that environmental management standards are clearly represented in the draft hotel classification system. In terms of minimum standards, a total of seven standards are presented that deal with (Qatar Tourism Authority, 2015):

1. The availability of an environmental policy with annual targets, records on water, electricity, and waste production, and records of meetings on the execution of the policy
2. Separation of waste
3. Energy saving lights throughout the facility
4. Card controlled electricity provision in the guest rooms
5. Instructions to guests in the guest bathrooms on how to save water
6. IT equipment throughout the hotel to go into sleep mode within one hour of non-use, and
7. The integration of environmental management in the line management through a designated environmental manager and designated supervisors in departments.

These standards apply to all categories of hotels with the exception of standard four, which applies only to four and five star hotels. Also the changing of the linen standard is focussed on environmental sustainability in that it stipulates that hotels must give guests an option on linen changes (Qatar Tourism Authority, 2015):

- Hotels must provide signage within the room, bathroom and via housekeeping to indicate to the guest their environmental options for the changing of bed linen over the duration of the stay. Linen should however be changed at a maximum of 3 days.

In addition, a total of 60 out of 400 rating points can be obtained over three categories worth 20 points each:

1. Environmental certification
2. Energy saving practices
3. Procurement and general practices.

In terms of the first category environmental certification, the draft manual states the following (Qatar Tourism Authority, 2015):

- Recognised organisations are Green key, Green Seal, Green Globe, and ISO 14001. If a hotel suggests another body, this will be reviewed, and added to the list if it is found to comply with international standards.
**South Africa**
The tourism grading council of South Africa last updated its system in 2013 (TGCSA, 2013). The system differentiates between minimum requirements and grading standards. Similar to the other systems the grading standards provide the opportunity to obtain points that total to 1000. A dedicated section of the grading standards applies to environmental management and is referred to as “responsible environmental and business practices” (TGCSA, 2013). This section comprises 12 standards, totalling 59 points. However, two standards comprising 6 points refer to social sustainability standards as they involve staff and community development and thus do not fall in the context of environmental management.

**AAA (USA)**
The American Automobile Association rates more than 33,000 lodgings in the United States, Canada and the Caribbean annually (AAA, 2012). The system does not include any environmental standards, however, and proclaims (AAA, 2012):

> AAA supports environmental management and sustainability through the lodging industry to the extent that truly effective programs maintain standards of guest comfort. We strongly encourage continued use of programs that offer guests choices without consequences for noncompliance and reduce waste without reducing guest comfort.

When a property can prove that it is certified by an AAA approved programme, the AAA then provides an eco-icon in its guides and the AAA.com list (AAA, 2012). The listed approved programs include:

1. Audubon International Green Leaf Eco-Rating
2. Earthcheck
3. Green Globe
4. Green Key
5. Sustainable Travel International
6. EcoRooms and EcoSuites
7. Energy Star
8. Green Business Bureau
9. Green Seal
10. USGBC LEED.

In addition the AAA system recognises a total of 19 state programmes.

### Summary of results

Table 6 presents an overview that summarises the findings per hotel classification system. It quantifies the environmental management standards identified in the system and categorises them under minimum standards and exemptions to minimum standards as well as rating standards, expressed in points. It then expresses them as percentages of the total number of minimum standards or the total number of rating points available in the system. The table further indicates whether the standards are linked to an additional (external) scheme.

From Table 6 it can be seen that there are clear differences on how and to what extent the selected classification systems incorporate the environmental management practices of hotels.

Only half of the selected systems have environmental management standards reflected as minimum standards and five out of eight as rating standards. The percentage of environmental standards as a percentage of the total number of standards is lower with the minimum standards than with the rating standards by over three percentage points.

The systems show clear differences in the volume of environmental standards as a percentage of the total volume of standards. In Dubai, environmental management standards only comprise 0.4% of the total minimum standards whereas in France this is as high as 5.9%. In terms of rating standards the differences are equally large as environmental management standards represent 1.8% of all rating standards in the Hotelstars Union system against 15% in Qatar.

### Discussion

The apparent differences in how and to what extent environmental standards are applied in the selected systems clearly affect the extent that hotels are externally motivated to enhance their practices. Hotels in Australia, countries that are members of the European Stars Union, and the United States, will experience few to no negative consequences in their rating if they ignore environmental management practices, whereas in Abu Dhabi, Dubai, Qatar, and France, the consequences for their rating would be substantial and they could lose a star or not be rated at all.

The impact of incorporating environmental standards as minimum standards opposed to rating standards is evident,
as with the latter, hotels may chose to ignore them as long as they can compensate with standards (points) in another area. On the one hand, this provides flexibility, but it also makes it difficult to guarantee practices or standards in defined areas to consumers.

Abu Dhabi, the Hotelstars Union, and the AAA systems leave the assessment of environmental management practices to external certification organisations and endorse hotels that have obtained such certification through rating criteria or by providing an eco-icon to endorse this practice.

Conclusions and recommendations

From the findings of this study it becomes clear that recently updated hotel classification systems reflect different viewpoints on whether and how to incorporate environmental management practices. As hotel classification systems continue to play an important role in the selection of hotels by consumers, it can be used as a powerful tool to drive hotels to enhance their practices and guarantee a certain standard of practices to travellers.

The call for a more integrated approach to the quality of hotel classification systems when it comes to environmental sustainability is not dissimilar from the suggestions made with regards to online guest reviews (Hensens, 2014, UNWTO, 2014). In this case there are three options:

1. Hotel classification systems include comprehensive environmental standards in the system as a requirement for a certain star rating.

2. Hotel classification systems post or recognise external environmental certification next to their ratings as practiced by the AAA (AAA, 2012)

3. Hotel classification systems include external environmental certification by requiring external certification through approved external parties through minimum standards or rating standards.

As hotel classification systems continue to expand and become more integrated, environmental standards should be reflected in a comprehensive manner. The ways in which this is done in the systems selected for this study will result in large differences in effectiveness, as in some of the systems the ratings will hardly be affected if standards are not met. The key question is the importance that the relevant bodies place on environmental management practices. Is it a nice add-on, or an integrated part of quality?

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