


# Investigating the factors for achieving and encouraging environmental certification: Driving and restraining forces

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Environmental sustainability has increasingly become a priority for organisations. However, the public and academic attention is generally on large companies, while small and medium enterprises constitute the bulk of organisations and are arguably lagging behind. Fewer than ten per cent of total environmental certifications are awarded to small hotels. This lack of attention represents an opportunity to investigate small hotels and how to increase certification numbers. On the basis of existing literature, three overarching factors that hold managers back from achieving certification were individuated: motivations, personal values, and barriers. To explore whether these factors play a role in small hotels too, semi-structured interviews were conducted with ten hotel managers/owners in the Netherlands. The findings include the discovery of three new barriers: other priorities, negative views regarding certification, and building restrictions. More specifically, findings suggest that hoteliers do not proceed with certification because they perceive it as unambitious and meaningless, and thus not worth the effort. Simultaneously, managers seem to have a limited understanding of the scope and depth of existing certification. This study provides certifying organisations an insight into small hotel managers' viewpoints; information that can be used to better reach this important target group.

**Keywords:** barriers, environmental certification, environmental measures, motivation, small hotels

## Introduction

While sustainability encompasses more than just environmental sustainability, the increasingly distressing research figures on global warming and climate change demonstrate the importance of addressing these phenomena (Intergovernmental Panel on Climate Change [IPCC], 2018). The tourism sector accounts for 5% of the world's carbon dioxide (CO<sub>2</sub>) emissions (one measure of the environmental footprint), while the accommodation sector is responsible for 20% of this amount (World Tourism Organization, n.d.). It is therefore vital for the industry to respond swiftly and reduce its environmental footprint.

Most hotels have adopted environmental measures, but the number of hotels achieving environmental certification is still low, especially among small and medium enterprises (SMEs), i.e. companies with less than 50 staff and €10 million in turnover or balance sheet total (European Commission Directorate-General for Internal Market, 2017). Examples of organisations that provide environmental certification in the Netherlands are GreenKey and Green Globe. GreenKey (2018) has found that out of 11 288 hotels in the Netherlands, only 388 hotels have achieved certification, of which less than 10% are small hotels. Similarly, Green Globe counts only 53 certified hotels in the Netherlands, of which only one is a small, independently owned establishment (Green Globe, 2017). This is despite SMEs accounting for 98.8% of all enterprises in the Netherlands (European Commission Directorate-General for Internal Market, 2017).

SMEs are underrepresented in the academic discourse. Kim, Lee and Fairhurst (2017), for example, found that out of 146 articles published in eight hospitality journals between 2000 and 2014 on green practices, only one article focuses on SMEs. These data show that notwithstanding their number, SMEs in general, and independently owned and small hotels in particular, are lagging behind in environmental certification and do not receive the academic attention that they deserve. This lack of focus on SMEs presents an opportunity to investigate why small hotels are not obtaining certification, and how the barriers that they face can be reduced so that they might achieve certification.

## Literature review

Personal values, motivation and barriers have been proven to impact on environmental sustainability decision-making, such as deciding whether to apply for environmental certification or not. In this section these three factors will be examined one by one, starting with values.

In the decision of whether to attain an environmental certification or not, personal values play a role, particularly in SMEs hotels that have a flatter structure that make it easier for the individual manager's to affect the organisation with his or her values (Hemingway, 2005; Serban, 2015). Four value orientations have been found to predict pro-environmental behaviour: hedonic, egoistic, altruistic, and biospheric value orientations (Steg, Perlaviciute, Van der Werff, & Lurvink, 2014). People high in hedonic values seek to improve their

own comfort and reduce effort; those high in egoistic values consider costs and benefits for themselves when deciding on pro-environmental behaviour; those with altruistic values consider costs and benefits for others; and those with biospheric values consider costs and benefits for the biosphere (Steg et al., 2014). People for whom altruistic and biospheric values are more salient than hedonic and egoistic ones tend to engage in pro-environmental behaviour. It might therefore be expected that managers who identify themselves as holding altruistic or biospheric values are more likely to be implementing environmental measures (including certification) than their peers with higher hedonic and egoistic values.

Research has concluded that, along with values, three overarching motivations drive decision-makers confronted with pro-environmental issues: competitiveness, legitimisation, and ecological responsibility (Bansal & Roth, 2000). Managers motivated by competitiveness take sustainability measures, hoping for increased profitability. They usually put greater thought into cost-benefit analysis than in environmental impact assessments. Managers mainly driven by legitimisation find it important to play by the rules and comply with legislation. Consequently, they often meet and do not exceed the standards of the industry. Finally, managers driven by ecological responsibility are concerned with society as a whole and wish to achieve a solution that is best for all stakeholders. They show traits of responsibility, philanthropy and doing what is right. In these organisations, decisions are often based on the manager's personal values and are often idealised rather than rationalised (Font, Garay & Jones, 2016; Bansal & Roth, 2000). It might be argued that if the institutional or broader societal context does not expect hoteliers to engage in sustainable certification, legitimisation will not lead to certification. Similarly, if hoteliers do not perceive certification as a way to differentiate themselves from competitors or acquire more direct financial benefits, a competitive motivation will not sustain the choice for certification, leaving only ecological responsibility as a driver. Connecting motivation with values, it may also be expected that managers for whom egoistic and hedonic values are more salient would be motivated by competitiveness and legitimisation, while managers high on altruistic and biospheric values would be motivated by ecological responsibility.

Besides values and motivations, barriers should also be considered when analysing decision-making processes (Font et al., 2016; Valero-Gil, Rivera-Torres, & Garcés-Ayerbe, 2017). Even when social norms and stricter regulations push towards environmental responsibility, organisations can face barriers that impede them from taking responsibility (Font et al., 2016; Valero-Gil et al., 2017). Though researchers tend to agree that the most common barriers experienced by SMEs are a lack of time, knowledge and financial resources, there is still a lack of consensus on which of these barriers constitutes the main threshold for SMEs to engage with sustainability. Recently, Valero-Gil et al. (2017) have proposed to categorise barriers into four main themes: lack of commitment, lack of economic resources, organisational difficulty, and lack of knowledge and internal resources. The majority of barriers found by other research can be fit into one of the four themes, as Table 2 in the appendix shows. Table 2 also illustrates that some barriers discussed in the literature do not fit into one of the four themes, but can be broadly classified as a lack

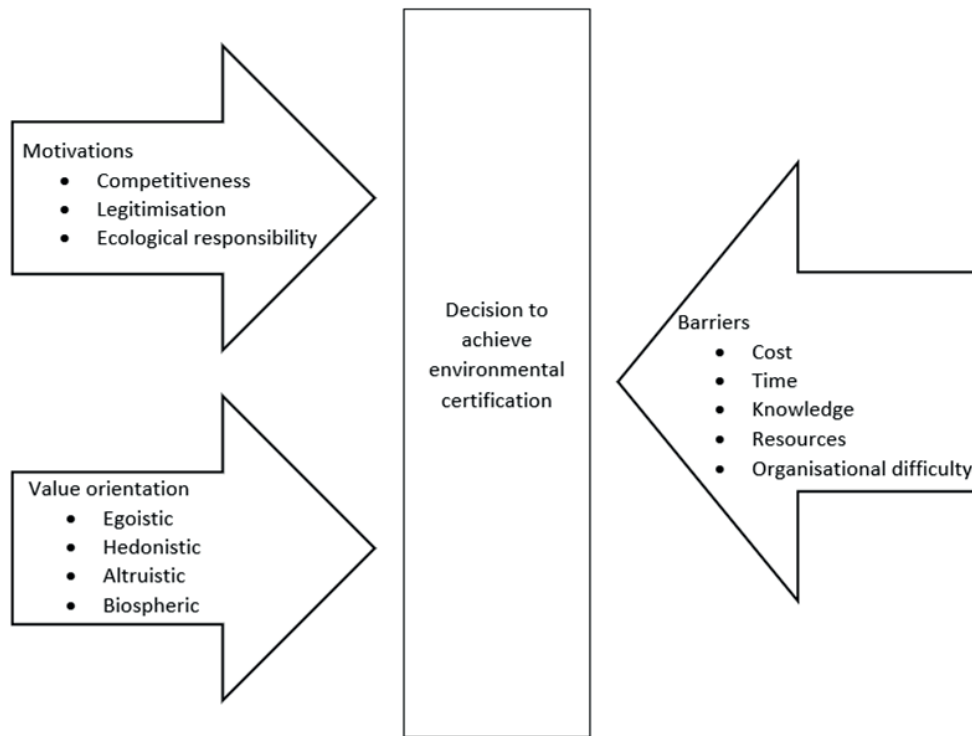
of time, a barrier commonly found in the literature (Font et al., 2016). Thus, the final list of barriers used in this research comprises five categories, i.e. lack of employee commitment, lack of economic resources, organisational difficulty, lack of knowledge and internal resources, and lack of time.

Values, motivations and barriers interplay with each other in influencing the decision of whether or not to attain environmental certification. Figure 1 models the interplay as an adaptation of Kurt Lewin's field theory (Burnes & Cooke, 2013). Field theory was developed to understand individual behaviour, but has also been used to analyse organisational change (Burnes & Cooke, 2013). According to Lewin, both driving forces and restraining forces act to affect locomotion, which is the movement towards a goal or behaviour. Driving forces initiate, while restraining forces oppose locomotion (Lewin, 1938, as cited in Burnes & Cooke, 2013). In this research, value orientations and motivations are driving forces, barriers are restraining forces, and all three act on the decision to achieve environmental certification, the goal of locomotion. In field theory, restraining forces play an essential role, because if driving forces increase but restraining forces remain, no locomotion will occur. Therefore, this research focuses on barriers (i.e. restraining forces) more than on motivators (i.e. driving forces) in order to find an answer to how to encourage small hotel managers to attain environmental certification (locomotion).

## Research method

The study aims to achieve an in-depth understanding of the managers of small hotels, their values, motivations and perceived barriers on one side, and to understand at what point barriers have to be reduced so that managers decide to attain environmental certification. As the research aims at exploring perceptions, a qualitative approach is the most appropriate. More specifically, topical and semi-structured interviews were used to allow comparability of answers while leaving enough freedom for the interviewer to follow the line of thought of the interviewee (Cooper & Schindler, 2014).

Purposive and snowball sampling were utilised because these sampling techniques ensure that the interviewees meet the criteria required in this research, and also because interviewees who meet the criteria prove difficult to identify (Cooper & Schindler, 2014). First, purposive sampling was utilised with the criteria that interviewees must be the decision-maker in a small hotel who had attempted to attain environmental certification, but did not finish the process. With the much-appreciated assistance of the Dutch branch of GreenKey, a well-established environmental certification scheme, hotel managers who met this criterion were contacted. Next, snowball sampling was utilised by asking interviewees to recommend other possible interviewees who fit the criteria (Cooper & Schindler, 2014). In total, five hotel managers and four hotel owners were interviewed between June and July 2018. All respondents were responsible for environmental decision-making in their hotels and all of these hotels have current environmental policies. An informed consent form presenting the interviewees' rights to withdraw and privacy protection was signed. Interviews lasted between 30 to 60 minutes and were tape-recorded. Field notes, where relevant, were taken by hand. To prompt respondents to share their personal values, the values in the



**Figure 1:** Interplay between values, motivations and barriers

Steg et al. (2012) value scale as expanded by Cavagnaro and Staffieri (2015) (Table 1) were printed separately and presented to the interviewees with the question to choose the three values most important to them. Respondents were then questioned further on the values’ rankings. This allowed interviews to be coded by personal values.

**Findings**

As there was a large list of codes and multiple variables, data matrices were constructed to describe, interpret and compare data (University of Sheffield, 2012). Hotels were mostly privately owned, with only one being leased (Appendix Table 3). In discussing findings, we will use the term “managers” and “owners” interchangeably. This section presents and discusses first the findings about values, then the hoteliers’ motivation to conclude with the perceived barriers.

Interviewees displayed a mix of values from different value orientations. A majority of respondents (six out of ten) presented at least some biospheric values. This was expected because all managers interviewed had implemented some

environmental measures and biospheric values have been consistently found to positively influence pro-environmental choices (Steg et al., 2012). As literature moreover suggests, in an ecologically responsible firm the decision-maker’s values are often the basis for taking decisions rather than any decision rules (Bansal & Roth, 2000; Font et al., 2016).

In literature, three basic motivations are suggested: competitiveness, legitimisation, and ecological responsibility (Bansal & Roth, 2000). The views expressed by the hotel managers are very much in line with the literature understanding of the three basic motivations, with varying combinations of up to two motivations. These were found to be 1) competitiveness + legitimisation, 2) competitiveness + ecological responsibility, and 3) ecological responsibility. None of the hotel managers displayed all three motivations at once, or a combination of legitimisation and ecological responsibility. The absence of this combination is understandable because legitimisation is driven by external forces (such as new laws) and is satisfied with meeting current standards, while ecological responsibility stems from the intrinsic motivation to do good and usually leads to exceeding existing standards (Bansal & Roth, 2000). Hotel managers who display both competitiveness and ecological responsibility find a balance between their care for the environment and their striving for higher profits. Typically, they do not consider costs as a barrier since costs are either viewed as negligible or as a long-term investment that will pay itself back, as the following quote shows.

*Sometimes on long-term 10 year we will get our investment back so there’s no problem with cost at all* (Hotel 2, personal communication, 28 June 2018, line 116)

**Table 1:** Value orientations in environmental decision-making

Value orientation	Values
Egoistic	Social power, wealth, authority, influence and ambition
Hedonic	Pleasure, enjoying life, gratification for oneself, exciting life, varied life, daring
Altruistic	Equality, a world at peace, social justice, helpful
Biospheric	Respect for the planet, unity with nature, protecting the environment, preventing pollution

On the contrary, hotel managers who display competitiveness and legitimisation motivations tend to comply with new regulations at the lowest possible costs, as the following quote exemplifies:

*Yes, so we have to do it [change from gas power to electric]. It was the cheapest way to do it, of course (Hotel 1, personal communication, 14 June 2018, line 15)*

One of the hotel managers interviewed is motivated solely by ecological responsibility. Differently from other respondents, this manager merely wishes to maintain profitability, not to increase it, and focuses instead on doing good. The hotel manager's strong biospheric values are reflected in the hotel's policies that extend beyond the environment to include the community.

*We have a profit that's enough to sustain the business and the rest goes to charitable causes. So what we do, we do the utmost to be good to the environment (Hotel 5, personal communication, 6 July 2018, line 29)*

Considering values and motivations, it was not surprising that managers who displayed biospheric values were also motivated by ecological responsibility (Steg et al., 2012). Conversely, hotel managers who do not choose biospheric values in their top three did not display ecological responsibility motivations. The hotel managers with egoistic and/or hedonic and/or altruistic values displayed competitiveness and legitimisation motivations.

As stated above, most managers present biospheric values in their top three, and some are motivated by ecological responsibility. Still they do not attain environmental certification after trying for it. Perceived barriers may offer an explanation for this discrepancy as they are restraining forces which prevent locomotion even with strong driving forces present (Lewin, 1938, as cited in Burnes & Cooke, 2013). Out of the five barriers considered in this study (lack of commitment, lack of economic resources, organisational difficulty, lack of knowledge and internal resources, and time) (Valero-Gil et al., 2017), time and capital costs were pointed out as the two most important barriers. Employee commitment and organisational difficulty were also experienced as barriers, but were far less constraining than money and time. Lack of time was explained by some with reference to the small size of their hotels, where staff numbers are limited and the managers themselves see to daily operations such as cleaning. Moreover, respondents perceive certification as a time-consuming process. One hotel manager, for example, said that without a full-time employee who is focused solely on environmental sustainability, it would be impossible to complete the certification process. Respondents also complained that the work needed could not be easily planned because some steps require more work than others, and some cannot be set before the results of previous steps are known. They also reported difficulties in accommodating the long-term process needed to achieve certification within the day-to-day operations of the hotel. For example, they often mentioned that "something came up", such as an urgent guest request or needed repairs, leading to a break in the certification process, as other research has also found (Hillary, 2004; Post & Altma, 1994).

When speaking about costs, hotel managers made a distinction between (sunken) costs and investments. Here too it emerges that respondents see costs of environmental

measures as an investment. For example, one respondent said that if an environmentally sustainable product costs up to 1.2 times the price of a non-sustainable product, and is able to provide a return on investment within five years, the green product is acceptable (Hotel 2, personal communication, 28 June 2018, line 106). However, there are costs that do not reap any additional benefits, such as one hotel's problems with AdBlue, a new feature on diesel vehicles which reduces nitrogen oxide in the exhaust fumes (Rix, 2016). Utilising this feature on his diesel vehicles tripled costs, without providing any benefits to the competitiveness of the business. In such a case, the cost is not an investment and so the hotel stopped this policy. Tellingly, environmental benefits were not considered to outweigh the costs without any direct return.

When asked about the relative importance of time and costs, respondents always ranked time first. They consistently stated that they were more willing to spend money than time, because they see costs as an investment rather than just as an expenditure. In other words, while one may expect a return on the invested money, the time spent will not come back. This finding supports Chan (2008), who found that lack of management and/or staff time scored a higher mean than lack of financial support, showing that time was a greater barrier than costs. Remarkably, respondents added three barriers to the ones presented to them from the literature. These are other priorities, building restrictions, and negative view of certification. Other priorities might be interpreted as a consequence of the lack of time and internal resources, as the next quote illustrates.

*In a small hotel you're always busy with small problems, daily things. Your day is filled with daily things, the guests, or the organisations. (Hotel 8, personal interview, 12 July 2018)*

However, as a barrier to certification "other priorities" highlights the discretionary power of the manager to decide on what should be done first (Hemingway, 2005; Serban, 2015). Therefore, we propose it as a new barrier that should be considered alongside lack of time and internal resources. Building restrictions, the second new barrier identified in this study, occur when hotels are situated in old or historical buildings, causing problems when trying to implement policies such as achieving efficiency in water and energy consumption. Under building restrictions, managers meant, for example, the difficulty in obtaining governmental approval for modifications and the impossibility of implementing specific environmental measures expected by the environmental certification body due to laws protecting old, historical buildings.

*Being an old building (castle), [the hotel has] single glass windows with old metal frames and you're not allowed to change it. (Hotel 4, personal communication, 4 July 2018, line 6)*

*There were some things just difficult to implement because for us we are located in a monumental [sic] building. (Hotel 6, personal communication, 9 July 2018, line 47)*

This barrier should be distinguished from the higher costs related to renovating a historical building because managers may be willing to incur these costs but be impeded in doing so by "building restrictions".

The third and last barrier added by respondents is a negative view of certification. Certification is perceived as meaningless, out-dated or not important.

*The certificate as I look at it has become a bit meaningless in my view. (Hotel 4, personal communication, 4 July 2018, line 8)*

Tellingly, hotel managers with strong ecological motivations and strong biospheric values display this view most prominently. They state that knowing that they have taken responsibility for the environment is more important to them than showing it to the world via a label.

*It's more important that you do your best for the environment... that's better than to have a label. I don't feel nowadays it's not really something important. (Hotel 6, personal communication, 9 July 2018, line 49)*

*I had also made an appointment with a representative of this organisation. We were sitting in the bar and we're talking. I was listening to this guy and I thought this is nothing. I was a bit disappointed in this whole thing and that's maybe one of the reasons we didn't pursue it. (Hotel 4, personal communication, 4 July 2018, line 102)*

The second quote offers an explanation for the counterintuitive phenomenon. The point that this manager seems to make is that the certification's requirements are too easily met, and (more significantly) lower than what his hotel had already achieved. In other words, findings suggest that for ecologically motivated managers, certificates have low credibility and do not form an aspirational goal. Findings moreover show that a negative view of certification makes other barriers more salient to the interviewees. In other words, because certification is not considered a desirable goal to achieve, managers find that an investment of time, money or effort is not worthwhile. Certification then becomes a lower priority. As one hotel manager puts it:

*I don't want to burden the people here and myself with things that aren't really helpful. (Hotel 5, personal communication, 6 July 2018, line 113)*

The negative view voiced about certification also offers an avenue to understand which barrier should be lowered first. In fact, respondents were not able to give a straightforward answer to the question of which barrier was the most significant to them. They experience a compound of barriers or a chain effect between barriers. However, from the interviews emerges the idea that while the barrier that is voiced most easily might be time or cost, the underlying reason is that respondents do not view certification as a worthwhile investment of their resources. The negative view of certification leads to the unwillingness to allocate resources, be it time or money, to achieving it. Thus, it seems that the most pressing barrier facing small hotels currently is not time, costs, or employee commitment, but a view that certification is not important, or lacks meaning. If this barrier would be lifted, then managers are willing to act, as the following quote shows:

*It needs to be a meaningful certificate...I do believe that if there would be a certification which has a name that will help; it will definitely help to make sure that you are going to get the thing. (Hotel 4, personal communication, 4 July 2018, line 119)*

Other hotel managers speak of barrier reduction in a much more abstract manner, referring to theoretical changes in policies or in the hotel's situation. One hotel manager described the requirements of certification schemes as too rigid because they do not take into consideration planned but only current measures. In this manager's view, certification schemes are only concerned with hotels meeting a set of criteria and showing that they are green, rather than actually being green and progressively doing better for the environment (Hotel 2, personal communication, 28 June 2018, line 149). Other hoteliers concurred with the view that certification should be focused on continuous improvement instead of checking boxes (Hotel 5, personal communication, 6 July 2018, line 55). In particular, hotel managers with strong ecological responsibility and biospheric values are looking for a certificate that is able to demonstrate that they are truly concerned with doing good for the environment. As stated above, when a certificate is viewed as meaningless, out-dated or not important, hotel managers are unwilling to put resources into achieving it. Therefore, several respondents insisted that the process of obtaining a certificate should be as simple as possible.

*Make it easy. I'm willing to...for instance, you're here now and that's probably an hour of my time. If somebody from [name of certification organisation] comes and sits here or walks around with me for an hour, 2 hours, it's no problem. I just don't have to do the boring paperwork. (Hotel 5, personal communication, 6 July 2018, line 117)*

In other words, resource-based barriers should be lowered. Alternatively, respondents acknowledge that external pressure or stakeholder pressure would push them to attain certification.

*Thing that might help is if the moment I would start losing business that the organisation would come... they said to us we are going to stay with you in your hotel if you have a particular [name] certificate...it's sad to acknowledge that some external pressure will help. (Hotel 4, personal communication, 4 July 2018, lines 119, 123)*

*If a lot of guests care about this or do not choose you because you don't have this, then yes. (Hotel 6, personal communication, 9 July 2018, line 87)*

Summing up the discussion so far, it might in fairness be concluded that though the lack of external pressure and resources has been voiced as a barrier to certification, it is the respondents' perceptions of certification as meaningless that has to be changed to induce small hotels to obtain it. The point that should be made here is that while most of the hotels who displayed biospheric values and strong ecological motivations are already implementing environmental measures, these measures only fulfil a few of the requirements of the same certification system that they perceive as not being ambitious enough. During interviews, hotels mentioned water, energy, food, and waste management as areas that have their particular interest. However, the main Dutch certification schemes for hotels go further by also focusing on washing and cleaning, green areas, green activities, communication and staff involvement. While these green hoteliers are undoubtedly managing their operations with the intention to fully meet social, economic and environmental expectations now and in the future, they seem unaware of measures that they could

take to fulfil this goal and that are highlighted in the existing certification schemes.

## Conclusion

The interviews conducted showed that personal values align with motivations to implement, or not, environmental measures. Egoistic or hedonic values are displayed, together with a focus on competitiveness, while biospheric values appear together with ecological responsibility motivations (Steg et al., 2012). Values and motivations are not just factors along with barriers in environmental decision-making (Valero-Gil et al., 2017), but also affect the managers' view of barriers. The more biospheric and ecologically responsibly a hotel manager perceives himself to be, the less he mentioned resource-type factors as a barrier. In contrast, resources are the biggest concern of egoistic and competitive hotel managers and, consequently, they want environmental certification to be as resource-light as possible. For biospheric and ecologically responsible hotel managers, the main barrier they face is their own view that environmental certification is meaningless, out-dated and not important. They suppose that they might easily obtain a certificate on the basis of the environmental measures that they have already implemented, but do not want to apply for it because they find that it does not add any value to their existing policies. With regard to these hotel managers, it is important to clarify the meaning and scope of environmental certification to overthrow their negative judgment.

If hotel managers view certification as a worthy and meaningful goal, they would strive to attain it. Even in the case of egoistic and competitive hotel managers, a well-designed information campaign might change their view on environmental certification and therefore of costs as a barrier. Environmental certification organisations that are interested in boosting their application numbers are encouraged to develop an outreach and information programme targeted at small hotels and their unique needs. Further research could develop and test various messages to find the most effective way to channel the meaning and value of environmental certification to small hoteliers. Certification bodies are moreover recommended to design more flexibility into their schemes so that special situations, such as hotels in historical buildings, can be accommodated.

With all this said, it must be acknowledged that this research was limited in its scale, being based on the views of nine managers or owners of small hotels who expressed an interest in environmental certification. Further research could extend the study to small hotels that have not expressed an interest in environmental certification to find out the personal values, motivations and barriers of those managers and how to encourage them to attain environmental certification.

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## References

- Bansal, P., & Roth, K. (2000). Why companies go green: A model of ecological responsiveness. *Academy of Management Journal*, 43(4), 717–736.
- Biondi, V., Frey, M., & Iraldo, F. (2000). Environmental management systems and SMEs. *Greener Management International: The Journal of Corporate Environmental Strategy and Practice*, 29, 55–69. <https://doi.org/10.9774/GLEAF.3062.2000.sp.00007>
- Burnes, B., & Cooke, B. (2013). Kurt Lewin's field theory: A review and re-evaluation. *International Journal of Management Reviews*, 15, 408–425.
- Chan, E. S. (2008). Barriers to EMS in the hotel industry. *International Journal of Hospitality Management*, 27(2), 187–196. <https://doi.org/10.1016/j.ijhm.2007.07.011>
- Chan, E. S. (2011). Implementing environmental management systems in small- and medium-sized hotels: Obstacles. *Journal of Hospitality & Tourism Research (Washington, D.C.)*, 35(1), 3–23. <https://doi.org/10.1177/1096348010370857>
- Cooper, D. R., & Schindler, P. S. (2014). *Business Research Methods*. New York: McGraw-Hill/Irwin.
- Delgado-Ceballos, J., Aragon-Correa, J. A., Ortiz-de-Mandojana, N., & Rueda-Manzanares, A. (2012). The effect of internal barriers on the connection between stakeholder integration and proactive environmental strategies. *Journal of Business Ethics*, 107(3), 281–293. <https://doi.org/10.1007/s10551-011-1039-y>
- European Commission Directorate-General for Internal Market. (2017). *Entrepreneurship and SMEs*. Small Business Act Fact Sheet. <https://ec.europa.eu/docsroom/documents/29489/attachments/22/translations/en/renditions/pdf>
- Font, X., Garay, L., & Jones, S. (2016). Sustainability motivations and practices in small tourism enterprises. *Journal of Cleaner Production*, 137, 1439–1448. <https://doi.org/10.1016/j.jclepro.2014.01.071>
- Green Globe. (2017). *Europe*. From Green Globe. <http://greenglobe.com/europe/>
- GreenKey. (2018). *GreenKey*. <http://www.greenkey.global/>
- Hemingway, C. (2005). Personal values as a catalyst for corporate social entrepreneurship. *Journal of Business Ethics*, 60(3), 233–249. <https://doi.org/10.1007/s10551-005-0132-5>
- Hillary, R. (2004). Environmental management systems and the smaller enterprise. *Journal of Cleaner Production*, 12(6), 561–569. <https://doi.org/10.1016/j.jclepro.2003.08.006>
- Intergovernmental Panel on Climate Change (IPCC). (2018). *Global Warming of 1.5C*. Incheon: Intergovernmental Panel on Climate Change.
- Kim, S., Lee, K., & Fairhurst, A. (2017). The review of "green" research in hospitality – 2000-2014. Current trends and future direction. *International Journal of Contemporary Hospitality Management*, 29(1), 226–247. <https://doi.org/10.1108/IJCHM-11-2014-0562>
- Murillo-Luna, J. L., Garcés-Ayerbe, C., & Rivera-Torres, P. (2007). What prevents firms from advancing their environmental strategy? *International Advances in Economic Research*, 13(1), 35–46. <https://doi.org/10.1007/s11294-006-9059-6>
- Post, J. E., & Altma, B. W. (1994). Managing the environmental change process: Barriers and opportunities. *Journal of Organizational Change Management*, 7(4), 64–81. <https://doi.org/10.1108/09534819410061388>
- Rix. (2016). *AdBlue: What diesel vehicle owners need to know*. <https://www.rix.co.uk/blog/2016/7/adblue-what-diesel-vehicle-owners-need-to-know/>
- Serban, A. (2015). How personal values influence Romanian CSR manager's involvement in CSR campaigns. *Management Dynamics in the Knowledge Economy*, 3(4), 729–748.

- Staffieri S. and Cavagnaro, E. (2015). Understanding youngsters' tourism experiences: values and motivations to travel as a key for identifying target clusters for sustainable tourism. In: *Proceedings of the 24th Annual Conference of the Council for Hospitality Management Education (CHME)*. Manchester Metropolitan University, Manchester. [Online] [https://www.researchgate.net/publication/309546720\\_Understanding\\_youngsters%27\\_tourism\\_experience\\_values\\_and\\_motivations\\_to\\_travel\\_as\\_a\\_key\\_for\\_identifying\\_target\\_clusters\\_for\\_sustainable\\_tourism](https://www.researchgate.net/publication/309546720_Understanding_youngsters%27_tourism_experience_values_and_motivations_to_travel_as_a_key_for_identifying_target_clusters_for_sustainable_tourism)
- Steg, L., Perlaviciute, G., van der Werff, L., & Lurvink, J. (2014). The significance of hedonic values for environmentally relevant attitudes, preferences, and actions. *Environment and Behaviour*, 46(2), 163–192.
- Steg, L., Van der Werff, E., & Perlaviciute, G. (2012). The significance of hedonic values for sustainable behaviours to mitigate climate change. *International Journal of Psychology*, 47, 351.
- Sucheran, R. (2015). Barriers to environmental management in hotels in KwaZulu-Natal. *African Journal for Physical, Health Education, Recreation and Dance*, Suppl. 1, 168–179.
- University of Sheffield. (2012). *Learning and Teaching Services*. <https://www.sheffield.ac.uk/lets/strategy/resources/evaluate/general/data-analysis/matrices>
- Valero-Gil, J., Rivera-Torres, P., & Garcés-Ayerbe, C. (2017). How is environmental proactivity accomplished? Drivers and barriers in firms' pro-environmental change process. *Sustainability*, 9(8), 1327–1342. <https://doi.org/10.3390/su9081327>
- World Tourism Organization. (n.d.). *FAQ – Climate Change and Tourism. Sustainable Development of Tourism*. <http://sdt.unwto.org/content/faq-climate-change-and-tourism>

Appendix. Table 2: Summary of extant literature on barriers of sustainability

Employee commitment	Economic resources	Organisational difficulties	Knowledge and internal resources	Time
Post & Altma, 1994 1) inadequate top management leadership 1.1) detached, uncaring, lack of understanding of environmental/economic cost 2) employee attitudes 2.1) disengaged, environment not a priority	1) capital costs	1) configuration of current operations 2) competitive pressures 3) industry regulations 4) poor communication 4.1) "distance" between top management and actual action 5) past practice 5.1) existing SOPs	1) technical information 2) information 2.1) difficulty of collecting appropriate data, measurement problems 3) technical knowledge 3.1) inability to eliminate some risks or effects	
Biondi, Frey, & Iraldo, 2000	Technical costs: 1) Capital costs 2) Costs connected with informing and training personnel 3) costs for control and maintenance 4) investment in technology 5) expenditure in consultancy 6) costs of management time Costs in compliance 7) registration costs		1) lack of technical expertise to conduct environmental audit 2) lack of environmental management skills / technical expertise 2.1) lack of clarification on what is required for EMS (not explained...) in specific situations (i.e. for SMEs) 3) difficulty in defining objectives and programme	1) lack of time to carry out in-depth analysis on environmental impact
(Hillary, 2004)	1) perception of high cost for implementation and maintenance 2) requirement for capital expenditure 3) Changing economic climate alters the priority given to an EMS in SMEs 4) insufficient drivers and benefits 5) uncertainty about the value of an EMS in the market place 6) lack of accessible financial support 7) high cost of certification/verification which disproportionately penalises small firms 8) negative view or experience with ISO standards	1) perception of bureaucracy 2) management instability 3) lack of internal marketing of EMSS 4) internal auditor independence difficult to achieve in a small firm 5) it is an interrupted and interruptible process 6) verifiers exceeding their role e.g. influencing audit cycle length 7) lack of promotion of EMSS 8) lack of clear or strict legislative framework	1) inadequate technical knowledge and skills 2) lack of awareness of benefits 3) lack of understanding of EMAS (?) environmental statement or value of reporting 4) lack of knowledge and formalised systems 5) uncertainty and concern over possible de-registration for minor breaches of legislation 6) inability to see relevance of all stages 7) doubts about ongoing effectiveness of EMSS to deliver objectives 8) difficulties with environmental aspects/effects evaluation and the determination of significance 9) uncertainty about how to maintain continual improvement 10) confusion between certification and EMAS and how they relate 11) lack of experienced consultants of quality to assist SMEs 12) inconsistent approach of consultants to EMS implementation 13) external assistance needed to interpret ISO 14001, environmental review and implementation 14) lack of sector specific implementation tools and examples 15) absence or lack of trade association or business network support 16) ISO 14004 not used and largely irrelevant 17) lack of explanation of concepts and more guidance needed on environmental aspects and significance evaluation 18) poor quality information and conflicting guidance given 19) lack of experienced verifiers 20) duplication of effort between verifiers/certifiers and internal auditors 21) variations in verifiers approach to EMAS validation 22) absence of a central source of information on environmental legislation 23) absence of a single authoritative body to interpret EMAS	1) lack of management/ staff time for implementation and maintenance due to lack of understanding of benefits (cross-link to knowledge)



<p>(Murillo-Luna, Garcés-Ayerbe, &amp; Rivera-Torres, 2007)</p> <p>1) limited motivation and preparation of the employees</p> <p>1) limited development of the environmental supply sector</p> <p>2) rigidity of the legislation and bureaucratic complexity</p> <p>3) deficient strategic capability of the firm</p> <p>4) operational inertia</p> <p>5) difficulties derived from competitive pressures</p>	<p>1) High opportunity cost of the investment</p> <p>2) limited financial and organizational capability of the firm</p> <p>1) variation in verifiers approach to validation</p> <p>2) Lack of knowledge of effective conservation measures</p> <p>3) Lack of knowledge of new technology</p> <p>4) Lack of knowledge of formalised systems</p> <p>5) Do not have adequate technical knowledge and skills</p> <p>6) Lack specialist staff</p> <p>7) Lack of central authoritative source of information</p> <p>8) Lack of explanation of concepts and more guidance needed on environmental aspects and significance evaluation</p> <p>9) doubt the effectiveness of EMS to deliver objectives</p> <p>10) uncertain about the value of EMS</p>	<p>1) lack of knowledge or difficulty to understand the legislation</p> <p>1) Lack of knowledge and skills and/or staff time for implementation and maintenance</p>
<p>(Chan, 2008)</p> <p>1) support from top management is inconsistent</p> <p>2) staff easily distracted by other work</p> <p>1) Limited capital budget</p> <p>2) High cost of implementation and maintenance costs</p> <p>3) lack accessible financial support</p> <p>4) high cost of certification disproportionately penalises hotels</p>	<p>1) lack of qualified verifiers/consultants</p> <p>2) lack of motivation and professional advice</p> <p>3) outcome uncertainty</p> <p>4) inconsistent support</p> <p>5) lack of a sense of urgency</p>	<p>1) lack of knowledge and skills***</p> <p>2) conflicting guidance</p> <p>3) ambiguity of EMS standards*</p>
<p>(Chan, 2011)</p> <p>1) implementation and maintenance costs</p> <p>1) difficulty in modifying non-environmentally friendly practices</p> <p>2) inadequate top management leadership (lack of training and expertise)</p> <p>3) unfavourable attitudes among workers and directors with respect to changes in working habit</p> <p>4) absence of green market opportunity</p>	<p>1) uncertainty about international and national environmental legislations</p> <p>2) technical complexity of environmental solutions</p> <p>3) lack of environmental awareness among organisational members</p>	<p>1) lack of environmental knowledge and skills</p> <p>2) lack of specialised staff</p>
<p>(Delgado-Ceballos, Aragon-Correa, Ortiz-de-Mandujana, &amp; Rueda-Manzanares, 2012)</p> <p>1) lack of financial resources for investments in the necessary actions and resources</p> <p>1) poor economic climate</p> <p>2) high costs</p> <p>3) no economic benefits</p> <p>4) no consumer demand</p>	<p>1) lack of government assistance</p> <p>2) lack of promotion of EM</p> <p>3) lack of environmental regulation and legislation</p>	<p>1) lack of knowledge of measures</p> <p>2) HR with no specialised training</p> <p>3) lack of knowledge of process &amp; advantages</p>
<p>(Sucheran, 2015)</p> <p>1) lack of management team's commitment</p> <p>2) lack of environmental responsibility</p> <p>3) lack of motivation</p> <p>4) lack of leadership in management team</p>	<p>1) complexity of the production system</p> <p>2) aversion to change</p> <p>3) excessive organisational complexity</p> <p>4) static organisational culture</p>	<p>1) lack of knowledge of measures</p> <p>2) HR with no specialised training</p> <p>3) lack of knowledge of process &amp; advantages</p>
<p>(Valero-Gil, Rivera-Torres, &amp; Garcés-Ayerbe, 2017)</p> <p>1) lack of financing</p> <p>2) prioritisation of other investments</p> <p>3) presence of sunk costs</p>	<p>1) lack of knowledge of measures</p> <p>2) HR with no specialised training</p> <p>3) lack of knowledge of process &amp; advantages</p>	

**Table 3:** Summary of hotel demographics and psychographics

Hotel	Location (municipality)	Manager's gender	Motivations	Personal values	Barriers
1	Hoogeveen	M	Competitiveness ...number 1 is to make money (Hotel 1, personal communication, 14 June 2018, line 5) Legitimation Because the government wants to do it...we have to do it (Hotel 1, personal communication, 14 June 2018, line 11)	Authority Ambition Influence	Capital cost
2	Zuidhorn	M	Ecological responsibility ...as long as we are doing the right thing we can also communicate the right thing and during the communicating process, people can become aware of what we do and they become aware of what they can do for themselves as well (Hotel 2, personal communication, 28 June 2018, line 38)	Equality, ambition, respect for the earth	Rigid and outdated
3	Breda	M	Ecological responsibility I love nature (Hotel 3, personal communication, 2 July 2018, line 3)	Respect for the planet, unity with nature	View of certification
4	Maastricht	M	Competitiveness ...there's much more focus on commercially running the hotel so on a commercial basis and looking at how we can improve business (Hotel 4, personal communication, 4 July 2018, line 30) Ecological responsibility We want to have, we have to, just for the sake of you know that's what we have to do (Hotel 4, personal communication, 4 July 2018, line 38)	Protecting the environment, helpful, influence, enjoying life	Other priorities, capital cost, organisational difficulty, building restrictions
5	Berg en Dal	M	Ecological responsibility So what we do, we do the utmost to be good to the environment (Hotel 5, personal communication, 6 July 2018, line 11)	World at peace, unity with nature, equality	Time, view of certification, other priorities
6	Amsterdam	F	Competitiveness You see it in quite some hotels. So that's the one that took my interest (Hotel 6, personal communication, 9 July 2018, line 45) Ecological responsibility Responsibility and I think also it's a must. (Hotel 6, personal communication, 9 July 2018, line 24)	Helpful, respect for the earth	Time, employee commitment, building restrictions
7	Kapelle	M	Ecological responsiveness ...you actually live on the planet and you don't want to waste the planet for future generations (Hotel 7, personal communication, 11 July 2018, line 14)	Helpful, respect for the earth, varied life	Time, building restrictions, other priorities
8	Rotterdam	M	Competitiveness I like badges. Maybe that's why everyone wants success. Everyone wants to say to show they're good ecological responsibility (Hotel 8, personal communication, 12 July 2018, line 142) Legitimation If the Netherlands stops using gas, then we have to find an alternative. (Hotel 8, personal communication, 12 July 2018, line 51)	Varied life, enjoying life, helpful	Time, capital cost, employee commitment, other priorities
9	Bergen op Zoom	M	Competitiveness ...we have to attract as many guests as possible of course (Hotel 9, personal communication, 14 July 2018, line 44)	Daring, varied life, ambition, enjoying life	Time, capital cost

**Table 4:** Barriers experienced and to be lifted (THIS TABLE IS NOT MENTIONED IN THE TEXT)

Hotel	Barriers experienced	Barrier to be lifted
1	<p>Capital costs</p> <p>...we can do some solar panels because we have a very big roof but that's expensive (Hotel 1, personal communication, 14 June 2018, line 3)</p> <p>Negative views</p> <p>...well GreenKey is okay but it's also really corrupt (Hotel 2, personal communication, 28 June 2018, line 92)</p> <p>Negative views</p> <p>Better be green than to have that certificate (Hotel 3, personal communication, 2 July 2018, line 179)</p> <p>Capital costs</p> <p>...to tell you very honest on one hand it can be a cost thing (Hotel 4, personal communication, 4 July 2018, line 8)</p> <p>Organisational difficulties</p> <p>Well what has been the reason why we haven't started in the past? Internal organisation to get our internal organisation just the operational aspects running smoothly (Hotel 4, personal communication, 4 July 2018, line 48)</p> <p>Other priorities</p> <p>Yeah so it's commercial situations it's our marketing and it's our commercial license those 3 aspects are very important aspects that we focus on at the moment. (Hotel 4, personal communication, 4 July 2018, line 54)</p> <p>Negative views</p> <p>But to be very honest with you, the GreenKey certificate as I look at it has become a bit meaningless in my view (Hotel 4, personal communication, 4 July 2018, line 8)</p> <p>Building restrictions</p> <p>...one of the big challenges we have is that being an old building we have single glass windows with old metal frames and you're not allowed to change it. You know you are but then you need to protect the history of the building (Hotel 4, personal communication, 4 July 2018, line 6)</p> <p>Negative views</p> <p>...that's the thing with certificates, a lot of the times that on the outside it looks nice and then people say we are sustainable but they forget what the certificate is. It cannot be window dressing (Hotel 5, 6 July 2018, line 61)</p> <p>Employee commitment</p> <p>And to train all your employees for everyone to be convinced also to use the GreenKey. You really need someone. (Hotel 6, personal communication, 9 July 2018, line 43)</p> <p>Time</p> <p>It was so...should be your daily job I think to implement it and also to keep it running in the right way. It's extremely...you have to have someone responsible only for this. (Hotel 6, personal communication, 9 July 2018, line 29)</p> <p>Negative views</p> <p>That's better than to have a label. I don't feel nowadays it's not really something important (Hotel 6, personal communication, 9 July 2018, line 49)</p> <p>Building restrictions</p> <p>There were some things just difficult to implement because for us we are located in a monumental building. So that's also where it stopped. (Hotel 6, personal communication, 9 July 2018, line 47)</p> <p>Time</p> <p>...we stopped after some time and you had to start over again and probably things have changed and it takes again some time so we just didn't do it in time. (Hotel 7, personal communication, 11 July 2018, line 68)</p> <p>Other priorities</p> <p>...we are still improving things but the certification, to get it is on a lower priority (Hotel 7, personal communication, 11 July 2018, line 88)</p> <p>Building restrictions</p> <p>We don't have much space. (Hotel 7, personal communication, 11 July 2018, line 6)</p>	<p>Barrier to be lifted</p> <p>Capital costs</p> <p>...what kind of level we get our money back that's for us our only business (Hotel 1, personal communication, 14 June 2018, line 1)</p> <p>Negative views</p> <p>No and that's rigidity of GreenKey certificate/ maybe a reason why I didn't get the GreenKey certificate. We can get gold but I don't want to (Hotel 2, personal communication, 28 June 2018, line 155)</p> <p>Negative views</p> <p>It needs to be a meaningful certificate. If I buy or you buy something in the supermarket nowadays and you see all those different types of certificates half of them are meaningless and most of the time people don't even look at it anymore. (Hotel 4, personal communication, 4 July 2018, line 109)</p> <p>Negative views</p> <p>Maybe the GreenKey also can do more advertising for what is the meaning of their label then the fact is guests will ask do you have GreenKey then it will (Hotel 6, personal communication, 9 July 2018, line 97)</p> <p>Negative views</p> <p>Building restrictions</p> <p>What also is maybe different here than to bigger hotels is that we rent the hotel and we do the business. So, we have to agree on a lot of things with the owner of the hotel. But he does some things like replacing windows with double glass windows. That has been done. But that makes it a lot more difficult to take big steps (Hotel 7, personal communication, 11 July 2018, line 6)</p>
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Table 3 (continued)

Hotel	Barriers experienced	Barrier to be lifted
8	<p>Barriers experienced</p> <p>Capital costs So as long as we get a trainee, it works. That's free. Otherwise...it would cost us money (Hotel 8, personal communication, 12 July 2018, line 13)</p> <p>Employee commitment ...the people in the organisation, I know they do it at home but getting them to do it at work as well is more difficult. (Hotel 8, personal communication, 12 July 2018, line 21)</p> <p>Time Everyone is busy with daily work and you're not always able to plan 40 hours to do it. So, it has to be in between the other small tasks you have. (Hotel 8, personal communication, 12 July 2018, line 49)</p> <p>Other priorities ...then it doesn't get a high priority (Hotel 8, personal communication, 12 July 2018, line 49)</p>	<p>Time It's a lot. Have you ever looked at it? Yeah for instance water measurement you have to measure all tap points how many litres per hours. There's a lot of tap points for water. That's one thing. That will take you a few hours to walk from room to room to do the bath room, the shower, where you wash your hands. You have to do all of that. So, there's a few hours just walking around measuring. (Hotel 8, personal communication, 12 July 2018, lines 118, 120)</p>
9	<p>Capital costs I want to help but not for more costs as the regular stuff. (Hotel 9, personal communication, 14 July 2018, line 46)</p> <p>Time I was too busy (Hotel 9, personal communication, 14 July 2018, line 34)</p>	<p>Time Biggest problem...I think the start up. If it runs it runs. I don't think you have to do any more effort more work when it runs you know. (Hotel 9, personal communication, 14 July 2018, line 214)</p>