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HURTIGRUTEN
 EXPEDITIONS

Pro-environmental transformation of Hurtigruten's guests

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Sustainable Entrepreneurship Project - Master Thesis

June 2023

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02nd of June 2023

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ABSTRACT

One of the contributors to global warming, while simultaneously highly vulnerable to its causes is the tourism sector. Specifically, the cruise industry is vastly polluting and needs sustainable development. The responsible cruise industry, including companies like Hurtigruten Expeditions, strives to become a greener industry by encouraging crews and guests to engage in pro-environmental activities onboard. This mixed-method research investigated how the sustainable measures onboard Hurtigruten Expeditions influence the pro-environmental behaviour of their guests. While the quantitative part focused on the Norm-Activation-Model (NAM) and how it relates to the willingness to change, the qualitative part explored the tourist transformation theory in the context of responsible cruising. The results show that norms have the highest influence on the willingness to change, however, cognitive stimuli are needed to start the transformation process. Only by participating in sustainable activities onboard, do guests reflect and intend to transform towards more pro-environmental behaviour. Thus, to change the guests' intentions and behaviour, cruise operators should provide a mix of educational and hands-on activities onboard to offer their passengers first-hand what sustainability is about (cognitive stimuli) and why a behaviour change is needed (appealing to their norms).

Keywords: responsible cruise industry, pro-environmental behaviour, Norm-Activation-Model, sustainable activities onboard, tourist transformation



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INTRODUCTION

“There is an old saying in the travel industry that goes, ‘take only memories, leave nothing but footprints.’ To be honest, that is no longer good enough!” (1 p.65)

Henrik Lund’s quote (CEO of Hurtigruten Foundation) describes our current state well: we face many interlinked global challenges, such as climate change, pollution, and irreversible ecosystem losses with a larger magnitude than previously estimated (2,3). These threats are caused by different countries, sectors, businesses, and humans - and the consequences are felt by many more (4). One of the contributors to global warming, while simultaneously highly vulnerable to its causes is the tourism sector (5). Specifically, the cruise industry is highly polluting: a large cruise ship can have a higher carbon footprint than 12.000 cars which translates to 500 kg CO₂ per passenger for a five-night cruise travelling 2.000 km (6,7). This gets problematic considering the expected industry growth of 12% by 2026 compared to pre-pandemic passenger volume levels (8).

One of the players in the niche expedition sector is the Norwegian cruise operator Hurtigruten Expeditions offering voyages from Arctica to Antarctica (1). The company recognised the environmental footprint the entire cruise industry is having, including their own negative impact. Since it started to operate 130 years ago, Hurtigruten put sustainability at its heart and will continue to take their responsibility (1). With the vision to become *“the undisputed global leader in sustainable inspirational adventure travel – a catalyst for change towards a greener travel industry”* (1 p.2), the company strives to set new sustainability standards for the cruise industry while simultaneously pushing the boundaries of the entire tourism sector towards more sustainable practises. This is essential for preserving the environment in which all tourism companies operate and to continue offering unique guest experiences at different destinations (3).

The need for more sustainability in tourism is also acknowledged by the UN World Travel Organization, defining sustainable development as taking full account of present and future economic, environmental, and social impacts, known as the triple bottom line, while concurrently



supporting the needs of all stakeholders involved (9). Hereof, the stream of responsible tourism emerged, striving additionally to maximise benefits for communities at destinations as well as positively contributing to the conservation of natural and cultural heritage (10,11). This is important since tourist activities can have both desirable and undesirable effects on the surroundings and involved stakeholders (12,13). For the cruise industry, Klein (14) suggests assessing different elements regarding the triple bottom line like waste and pollution on the environmental side and creating well-distributed economic value for locals. Lastly, from the social point of view considering people pollution and sociocultural authenticity helps determine whether the cruise operations or the cruise industry is responsible (14). Environmentally responsible cruise companies, like Hurtigruten Expedition, are eager to implement effective greening practices and encourage crews and guests to participate in a variety of green activities, e.g., beach cleans, or the company-specific “Green Stay Program¹”, through environmental education programmes (15). In addition, tourists are becoming more aware of environmental issues and prefer environmentally friendly alternatives, requiring tourism operators to become more sustainable (16).

This conscious choice for ‘green’ options as well as displaying behaviour that minimises harm or even does good for the environment is called pro-environmental behaviour (17). To increase the intentions for this sustainable behaviour, awareness, attitudes, and norms need to be changed by informing and educating people (4). Particularly in the context of cruising, which is considered a high-involvement product, these positive attitudes are important. Here, the customer is more engaged as these products are usually more expensive and not a repetitious action in the daily purchasing behaviour (18,19). Thus a transformation towards positive attitudes is needed to foster intentions for more pro-environmental behaviour to reduce the impact the individual is having on the triple bottom line (20).

¹ By hanging a green doorhanger can guest indicate if their cabin needs cleaning. For the saved resources Hurtigruten Expeditions donates to the company’s foundation (1).



Han et al. (21) argue that too little is understood about the pro-environmental behaviour of cruise passengers and the comprehension of personal and social norms is necessary to improve sustainable coastal and marine destinations hosting cruise tourism (13). In recent years, the tourist transformation theory emerged, trying to explain behavioural changes (22,23). Transformation means a positive change in attitude and behaviour and is typically expected to happen through extraordinary experiences. Yet, there are not many empirical studies testing this model (24). The little existing research was conducted in the context of back-packing (e.g. 25), gap-year tourists (e.g. 26), long-distance-walkers (e.g. 27), and volunteers (e.g. 28), but not in the expedition sector which also offers extraordinary experiences.

Connecting the most influential theory on pro-environmental behaviour (29–35), Schwarz’s Norm-Activation-Model (32), with the newer tourist transformation theory (22), this study focuses on the question “*How do the sustainable measures onboard of Hurtigruten Expeditions transform passengers towards more pro-environmental behaviour?*” Therefore, this research aims to understand the relationship between the measures taken by Hurtigruten Expedition and their effect on the sustainable transformation of their passengers. This supports the development of guest behaviour towards more sustainability by being able to involve guests in sustainable activities offered onboard Hurtigruten’s expedition fleet. Additionally, this transdisciplinary research can, on the one hand, provide valuable information for the company, the responsible cruise industry and ultimately the tourism industry in the process of becoming greener. On the other hand, this study contributes to the existing theory in terms of adding insights into pro-environmental behaviour in the responsible cruise sector and enhancing the little literature on transformative tourism.



LITERATURE REVIEW

Pro-Environmental Behaviour

Encouraging pro-environmental behaviours among tourists is an essential part of the global tourism industry's future. Pro-environmental behaviour is also called environmentally sustainable behaviour, eco-friendly behaviour, green behaviour, and environmentally responsible behaviour (36,37). As many names this concept has, as many practices are included: sustainable consumption, recycling, conserving and reusing resources – practically everything to reduce the environmental impact and to meet the needs of current and future generations (20,36).

In the context of tourism, *“intended environmentally sustainable tourist behaviour is when a person makes a vacation-related decision or displays behaviour at the destination that is different from how they would have otherwise decided or behaved for reasons of environmental sustainability”* (17 p.34). In practice, this implies, e.g., choosing domestic holidays over far destinations due to the negative environmental impact of flying. While cruising, it means that if passengers decide to turn off the light when leaving the cabin or re-use their towels several times, knowing that they reduce carbon emissions and preserve natural resources, they act environmentally sustainable (36). Nonetheless, for Juvan and Dolnicar (17) paying a carbon-offset fee also suffices. Their definition of tourist behaviour is specific; it must be caused by the intent to reduce any negative effects, yet, behavioural activities can be diverse (17). Good intentions without the right actions do not qualify as pro-environmental behaviour. This is called the attitude-intention-behaviour-gap (38,39). Moreover, there might even be tensions between the intentions and the actual behaviour, called cognitive dissonance (39). The same applies for environmentally responsible beliefs, attitudes, and values; they are deficient to guarantee pro-environmental behaviour. Contrary, only environmentally friendly behaviour derived from conscious decisions that is displayed to minimise harm or even do good for the environment should be considered pro-environmental behaviour (17).



Furthermore, Foroughi et al. (36) categorise literature on hotel guests' pro-environmental behaviour in three streams: 1) guests' attitudes and behavioural intentions towards green stay options *pre-visit*, 2) determinants of guest behaviour *post-visit*, and 3) drivers for pro-environmental behaviour *during the visit*. While there is extensive research on the first category (15,40–45), there is less knowledge about the other two. As for the former, various theoretical frameworks have been applied to understand environmental attitudes, intentions, and behaviours, such as the theory of planned behaviour (TPB) (46) or the norm activation model (NAM) (32). The TPB argues, that behaviour is predicted by intentions, which are influenced by attitudes towards possible consequences of a behaviour, perceived social norms and perceived behavioural control (18,46,47). In contrast, the NAM focuses on personal and social norms, awareness of consequences, and ascription of responsibility, which in sequence form pro-environmental intentions and consequently behaviour (15,32,33,48). In this case, personal norm is considered to be the key variable within the process of norm activation and refers to a feeling of personal moral obligation to display a certain, socially learned behaviour or conduct specific actions based on internalised values (31,49). Subjective norms, interchangeably used with social norms, though, refer to the social pressure one can feel to act in a particular way and is an effective predecessor for personal norm (34,46,47). Also, awareness of consequences and the ascription of responsibility are activators of personal norms. Whereas the first refers to the extent to which an individual is aware of the problem including the adverse consequences of not acting pro-socially (50), is ascription of responsibility about the “*feelings of responsibility for the negative consequences of not acting pro-socially*” (50 p.725). Adopting this model into the cruise context, awareness of consequences means that passengers are conscious of the pollution and the biodiversity loss the cruise is contributing to. Feeling, e.g., guilty about these impacts, combined with one's moral obligation and social norms to behave more sustainably, results in behavioural intention to choose an environmentally responsible cruise.



According to many researchers, the NAM is the most influential theory on pro-environmental behaviour, since it proved to be an appropriate framework to assess individuals' decision-making processes (29–35). Therefore, Han (15,34,47,51) researched combinations of this theory by adding other elements e.g., goal-directed behaviour and value-attitude behaviour, in the cruise tourism sector and confirmed that awareness of consequences, ascription of responsibility, and social norms are crucial to activate and predict personal norms of passengers. On the contrary, research by Dimitrovski et al. (41 p.8) revealed that personal and social norms “do not predict cruise tourists’ pro-environmental behaviour“, which confirms Eijgelaar et al. (52) stating, cruise tourists had no positive environmental awareness nor attitudes, despite frequent reporting of the high amounts of CO2 emissions caused by the cruise tourism.

To add to the discussion, the following hypotheses are researched:

***Hypothesis 1:** Awareness of consequences has a significant and positive impact on the willingness to change.*

***Hypothesis 2:** Ascription of responsibility has a significant and positive impact on the willingness to change.*

***Hypothesis 3:** Norms have a significant and positive impact on the willingness to change.*

Behavioural Change

To increase the intentions towards more pro-environmental, Steg and Vlek (4) identified several motivational and contextual factors that influence behaviour. They include, e.g., positive attitudes toward sustainability, the removal of barriers, or providing feedback, and precede behaviour. By changing any of them, a transformation towards more sustainable behaviour is higher likely. To do so, there are several interventions categorised into informational and structural strategies (4). The latter aims to either make pro-environmental behaviour choices more attractive or to increase the opportunities to act more sustainable, particularly in a context where showing this behaviour is more costly or difficult due to external barriers, like buying an electric car when the



infrastructure is not fully developed yet (4). Informational strategies, in contrast, “[aim to change] perceptions, motivations, knowledge, and norms, without actually changing the external context in which choices are made“ (4 p.313). These strategies are especially effective when it is relatively convenient to show pro-environmentally behaviour in terms of low costs, time, efforts, and constraints, but with high social approval. For responsible cruise companies, particularly these strategies are suitable to alter guests’ perceptions of sustainability by, e.g., increasing their knowledge and raising the awareness of environmental problems, explaining the impacts their behaviour has, and informing them about the advantages and disadvantages of behavioural alternatives. This leads the guests to feel more responsible for those negative consequences, increases social pressure to choose greener travel products, and eventually results in changes towards more environmentally friendly attitudes which in turn affect behaviour (4,15,22,53).

Another way to motivate guests can be via persuasion to reinforce individuals' altruistic and ecological values as well as their determination to behave pro-environmentally. Here, commitment strategies are effective in encouraging a behavioural change by using eliciting implementation intentions, by asking people not only whether a behaviour change is intended, but also by letting them indicate how they plan to do so (4,53).

Both approaches can provide the cruise operator with opportunities for understanding the guest's perspective on sustainability, attracting people's attention, and gaining their commitment (4,54). This helps to design interventions that fall within people's tolerance limits and build support for pro-environmental measures, which, in the best case, will lead to more sustainable behaviour.

Besides these strategies, other research discovered that external stimuli and past travel experiences can lead to perspective changes (23). Travel experiences have the potential to stimulate self-development when they are personally meaningful (22,23). Perceived meaningfulness and experience accumulation are central to the development of future behaviour (23,55,56). This approach derives from Mezirow’s transformative learning theory (57,58), which, in recent years, has been



studied more frequently in the tourism and sustainability context (22,24,55,59–61). His theory tries to better understand learning and integrating new assumptions through critical self-reflection, which is necessary for meaningful behavioural change to happen (57,58). Transformation can occur through new tourism experiences generating novel ideas and assumptions leading to a positive change in attitude and behaviour (24,55).

Transformation is a process of change in an individual's self [...] and actions [...] triggered by cognitive and affective stimulation from a significant experience; cognition being opinions, thoughts, and beliefs on self and the environment, affect being emotional reactions to self and the environment, and conation being behavioural intentions about self and the environment (23 p.12).

Therefore, transformation is considered to be the ultimate goal in tourist endeavours, when resulting in sustained changes in values, knowledge, attitudes, and behaviour contributing to an individual's well-being as well as the greater good (24,62). In line with this, Pung et al. (22) propose that tourist transformation is enabled through contextual stimuli that trigger tourists and lead them to reflect and integrate new knowledge, skills, and beliefs. Ultimately, these enhance the tourists' personal authenticity as well as increase their cross-cultural understanding and pro-environmental awareness, with potential consequences on long-term behaviour. Additionally, not only an increased consciousness characterises transformative tourism experiences, but also practices tourists engage in during the trip or at the destination influence these experiences (22). These accumulated experiences, the pre-existing attitudes and the reflection process can lead to a shift towards more responsible travels, sustainable actions in general, more pro-environmental awareness and attitudes as well as cross-cultural understanding and respect in the everyday life environment (22,23).

There are different factors preceding the transformation: length and destination of the trip, the nature of the activities during the tips, e.g., adventurous or romantic experiences, and interactions

with others (24,63). Tasci and Godovykh's (24) research revealed that transformation may occur on any journey as long as the activities provide extraordinary pre-conditions for cognitive and affective stimulations to trigger the change in self and, ultimately, behaviour. Thus, transformative tourism with its learning experiences, and existential re-evaluations, consisting of a combination of stimuli experienced throughout the holiday can disrupt the tourists' value system and change their attitude towards a new, more sustainable meaning (22).

Summarising, the conceptual model (Figure 1) illustrates the behaviour of guests prior to the cruise, based on their awareness of consequences, ascription of responsibility and norms (NAM). During the cruise, they get stimulated marking the starting point of the tourist transformation process. This leads to a reflection moment after the cruise, where passengers consider their new knowledge and previous behaviour, which, in turn, results in more pro-environmental behaviour.

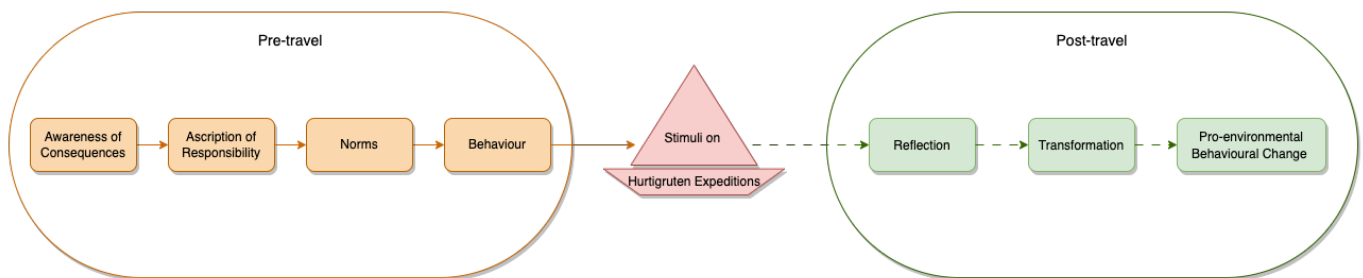


Figure 1: Conceptual Model based on Han (34) and Pung et al. (22)



METHODOLOGY

Research Design

The purpose of this empirical research was to understand the influence of Hurtigruten Expeditions' sustainable measures onboard on their guests' pro-environmental behaviour. To be able to recognise the effect these measures have and compare behaviour, a longitudinal study was conducted using a mixed-method approach, with a focus on the qualitative part. Therefore, two sets of semi-structured interviews were held: firstly, at the beginning of the cruise on MS Maud sailing the British Isles from the 19th of April to the 1st of May 2023, and secondly, one a week after returning (Appendix A). These interviews explored what pro-environmental actions the guests took before coming onboard, which role sustainability plays in their daily life, and which activities onboard stimulated them to change their behaviour. In addition, the quantitative study was conducted during the cruise with the aim to find out which aspect of the NAM has the biggest influence on the intention to change behaviour, as well as aiding in identifying which specific activities onboard were taken most frequently. The advantage of using mixed methods is enhanced confidence in the findings, meaning a comprehensive, in-depth picture can be drawn by embedding a quantitative design in the qualitative design (64). Furthermore, longitudinal studies enable that change can be mapped and an understanding of why this change happened can be generated (64). Additionally, this way allowed insights into all three stages of the cruise (pre-, during and post-travel), following Foroughi et al.'s recommendation (36) to add knowledge to the last two categories.

Data collection and analysis

To explore the samples' reasoning (65), the data collection process consisted of eleven interviews in total, six in the first three days of the cruise and five a week after. While the first set of interviews lasted around 15 minutes, the second set took roughly 30 minutes. The interviewees were selected conveniently (65) since the researcher presented her research onboard including an



invitation to participate in this study. Seven people signed up, including two couples who were interviewed together (see Table 1 in Appendix A). After Interviewee 1 got excluded, due to lacking availability after the cruise, another couple was recruited after showing interest in sustainability. This process happened in the first three days to ensure the interviewees had the chance to experience similar activities onboard, in order to have a consistent baseline. Also, the second set of interviews was scheduled for two following days to ensure consistency.

Simultaneously, questionnaires were accessible as hard-copy and via a QR code, leading to a Google Form (Appendix B), to test previously made assumptions on a broader scale about the population of all 259 guests who were on this cruise. Eventually, the sample size was 71 passengers selected randomly, since every passenger had the same chance to participate in this study.

Overall, these data collection methods allowed potential biases: during the interviews, there was the possibility of social desirability biases and for the questionnaires, the voluntary bias might have occurred. Since both are participant biases, the researcher acknowledged the probability of occurrence by having the final decision of which dataset to include and took these biases into account when analysing the data.

Regarding the quantitative data analysis, MS Excel and SPSS were used to examine descriptive statistics and three regressions. The latter helped not only to understand the current state but to discover relations among variables and thus be able to predict future events (66). For the collection of the qualitative data, the software otter.ai was used to record and transcribe the interviews before the transcripts were checked and coded using the software atlas.ti. With this software, data can easily and systematically be analysed which increases the validity of the results (67). With a thematic analysis approach of six steps (familiarisation, coding, themes, revising, structuring and presentation), patterns in qualitative data were identified, analysed, and reported on (65). Overall, by evaluating every response with the same weight, the confirmation bias was minimised.

Data Quality

To ensure data quality, referring to replicability, reliability, and validity, several measures were taken. While the statements for the questionnaire were adopted from Han et. al (15) and measured with the validated 7-point Likert-Scale, the questions for the interviews were based on Tasci and Godovykh (24) and Pung et al (22). Using existing literature and validated scales makes this research replicable. Furthermore, having asked questions aligning with self-prophecy (68) and commitment strategies (4), meaning prompting the interviewees to specific plans on how to change their behaviour after stating they intend to do so, helped validate the findings and add to its replicability. Additionally, to ensure consistency, and thus reliability, the interviews and questionnaires were pilot tested and an audit trail was run in atlas.ti as well as in SPSS. During these tests, the leading question bias, and the question order bias was reduced through peer feedback. Furthermore, peer feedback was given regularly not only to have reliable but also valid data. In terms of generalisability, the findings can be generalised for Hurtigruten Expeditions and the responsible cruise industry, since the mixed-method approach allows a higher validity (64).

Ethical Considerations

In this study, ethical aspects were considered based on *Research Ethics for Students in the Social Sciences* (69). This also includes the data collection according to the Code of Conduct (CoC) of the University of Groningen (70), as well as the CoC of Hurtigruten Expeditions (71). Furthermore, the participants gave informed consent (Appendix C) to this study which notified them about their data protection and anonymisation and what happens in case of withdrawal of the study (72,73). This has been approved by the internal ethics committee.

RESULTS

In the following, the findings from the ten interviews and the corresponding questionnaire (Appendix A) are described based on the three moments of time: pre-cruise, onboard, and post-cruise. The qualitative data provided a baseline of the guests' awareness of consequences, ascription of responsibility, the role of norms and their pre-cruise behaviour, to, then, be able to establish a transformation in their behaviour post-cruise. The quantitative part investigated which part of the NAM framework correlates strongest with the participant's willingness to change towards more pro-environmental behaviour after the cruise. Furthermore, both methods were used to draw an elaborate picture of which activities onboard stimulated the guests most.

Pre-cruise

Awareness of consequences

Generally, the interviewees were environmentally conscious before starting the cruise as well as aware of possible consequences of travelling, even when responsibly cruising, mainly naming the carbon footprint, fuel, and CO₂ emissions (Appendix D). Additionally, Interviewees 5 and 6 not only mentioned environmental concerns, but linked sustainability to social issues like overpopulation. Interviewee 5 showed an awareness of the complexity and interconnectedness of sustainability: *"It's all down to food production, being able to produce enough food in a way that will support the population. And that's the other issue, [the] population is always increasing"*.

Furthermore, food waste was mentioned. The interviewees expected the breakfast and lunch buffets to create much food waste. Interviewees 3 and 4, who have been on other cruises, compared Hurtigruten Expeditions and noted: *"What we don't see here, which was on other cruise ships, is too much waste. I think the food for us on the buffet is quite small. And that means too there aren't so much leftovers."* Nonetheless, Interviewees 8 and 9 were aware that buffets can also tempt guests to put too much food on a plate and then realise they cannot eat it all. Counteracting this, some interviewees pointed out Hurtigruten Expeditions' awareness, implementing the

waiting services in the evenings, and hence cooking only what is ordered, serving well-portioned plates, and thereby reducing waste again.

Other interviewees were aware of the consequences of the laundry service and the room cleaning, that every time one would not change the bedsheets or towels it contributed to the conservation of resources.

Aligning with the qualitative findings, the descriptive statistics revealed that with a mean of 5.27 ($N = 71$, $SD 0.62$, Appendix E) the participants somewhat agree with the statements on awareness, showing they understand what possible consequences of the cruise industry are. Besides this, the data presents that guests tend to somewhat agree with the statement that Hurtigruten Expedition with its sustainable efforts is not doing enough to mitigate climate change ($N = 71$, $mean 4.94$, $SD 1.38$), while simultaneously they also somewhat agree ($N = 71$, $mean 5.14$, $SD 1.09$) that Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations, which is contradicting.

Ascription of responsibility

Although the interviewees are aware of the consequences, not all of them are feeling a responsibility towards the negative effects of their behaviour. Interviewee 2 explains this by saying:

“It's easier to pretend [climate change] isn't happening, isn't it? [...] So yeah, I feel worried about it, which is why I think a lot of people don't want to think about it. So, I'm trying to do [it] without analysing too much. Otherwise, [...] you can get depressed if you're not careful.”

Furthermore, Interviewees 3 and 4 admitted that everyone has different viewpoints on sustainability and that some think that no matter what they do, climate change cannot be stopped. For these interviewees though, this is exactly the reason to continue doing their part. Also, Interviewees 5 and 6 do what they can to minimise their environmental impact. However, they add frustrated that they cannot do it all alone and need additional long-term governmental strategies to

support a country-wide change towards more sustainability. Also, Interviewees 8 and 9 highlighted a tension they feel, wanting to live a certain lifestyle including the possibility to travel, however, that emits emissions and contributes to climate change. Interviewees 3 and 4 describe: *“I think we look at it that we do lots in our day-to-day life that compensates for [the environmental footprint of travelling].”*

Quantitatively speaking, Hurtigruten’s guests are rather neutral ($N = 71$, *mean* 4.78, *SD* 1.2) about feeling responsible for the negative consequences of their behaviour (Appendix E).

Personal Values, Personal Norms, and Social Norms

Many interviewees (I2-6, I9) chose Hurtigruten Expedition because their sustainability focus aligns with their personal values, as Interviewee 9 illustrates: *„I liked [their] philosophy. [Hurtigruten Expeditions] seemed a good company, you know, as an employer giving people chances, working training, people paying fair wages, [...] they seem environmentally aware.“* Additionally, the small ship ethos and the uniqueness of the expedition got mentioned by several people (I2, I5, I6). Also, the fact that the cruise started in the UK, where most interviewees could take the train made it environmentally friendly.

Regarding norms, Interviewee 7 pointed out that: *“as responsible citizens of the world, we should be looking after our planet and so [...] it should be something we do every, every day and become part of our daily life.”* He was not the only one talking about collective responsibility, that everybody must do something to make a difference since it would be not enough if just one person changes towards more pro-environmentalism.

Besides, the questionnaire participants agree that their personal values and principles to behave environmentally friendly have a bigger impact than the expectations of other people ($N = 71$, *mean* 6.07, *SD* 0.85). Additionally, the participants somewhat agree with feeling an obligation to choose a sustainable cruise ($N = 71$, *mean* 5.42, *SD* 1.36), and think it is important for cruise travellers in general to make eco-friendly decisions ($N = 71$, *mean* 5.62, *SD* 1.10) (Appendix E).



Pro-environmental actions at home

To find out what sustainability means to Hurtigruten Expeditions' guests, they were asked to explain which pro-environmental actions they integrated into their daily life. Several aspects got mentioned: minimising plastic packaging, recycling waste, using less fuel, renovating the house to reduce the carbon footprint, and consuming less meat. Some interviewees also pointed out that repairing clothes is something they do rather than buying new things.

Regarding travelling, Interviewee 2 bought herself a small micro camper to travel domestically instead of going abroad and she deliberately chooses green campsites that look after the environment. Also, Interviewees 5 and 6 said, they go only once a year on vacation abroad and otherwise compensate by travelling within the UK. Interviewees 8 and 9 rather go on vacation abroad for a longer time, than fly somewhere in Europe just for a weekend.

Quantitative results point in the same direction (Appendix E): while the participants find it somewhat important to travel environmentally responsibly ($N = 71$, *mean* 5.77, *SD* .99), they agree on the importance of separating their waste ($N = 71$, *mean* 6.59, *SD* 0.65), repairing broken things ($N = 70$, *mean* 6.23, *SD* 0.78) and buying locally ($N = 71$, *mean* 6.07, *SD* 0.82). Aspects like eating no meat/fish are not important to them ($N = 69$, *mean* 3.26, *SD* 1.67).

Overall, the results show that Hurtigruten's guests are aware of some consequences of cruising before they embark. Aligning their personal values and social norms with their actions, all interviewees chose this cruise with sustainability in mind: itinerary-wise by being able to take the train to and from the ship, deciding on a smaller ship with fewer people and less entertainment, getting scientifically educated onboard and overall choosing the company due to its sustainable vision. When asking the interviewees about their feeling towards sustainability and the negative consequences their behaviour has, some answered feeling a tension between wanting to be able to travel, while simultaneously leaving no negative footprint. They compensate for their vacation behaviour by acting pro-environmentally at home or choosing domestic holidays.



Onboard

Pro-environmental activities onboard

During the first set of interviews, guests stated not to be aware of the different educational or hands-on activities they could participate in. Eventually, though, all interviewees joined, among others, the “Green Stay Program”, highlighting the aspect of not changing bedsheets daily at home, thus it is not needed on holiday either. The lectures and workshops in the science centre stimulated most interviewees cognitively by teaching new things about e.g., birds, sea mammals, and the impact of sound in the oceans. One couple, though, had different priorities; although they listened to two lectures, they rather went hiking than participating in the science centre activities.

Other interviewees, though, also participated in the Citizen Science projects, such as joining the Science Boat, where water samples got analysed for plankton, or downloading different apps to note sightings of flora and fauna to help researchers worldwide. Lastly, Interviewees 2-6 participated in different beach cleans, which exceeded their expectations, as Interviewee 2 mentioned: *“It made me feel good that I did the beach clean. [...] I can't say I enjoyed it, but I thought it was a really good thing to do.”*

They were not the only ones: 46 questionnaire participants also helped clean beaches, being the third most pro-environmental activity taken by the guest. Only the lectures (69 of 71 participants) and local guided tours (61 participants) were more popular (Appendix E). Additionally, 38 of the questioned guests actively used the “Green Stay” door hanger, indicating the cabin needs no cleaning that day.

Stimuli

Except for one couple, who did not participate much in the scientific activities, everybody’s environmental awareness got stimulated during the lectures and science centre workshops. Especially one presentation about the ocean’s currents, including a simple demonstration of different water types reacting, *“hit a chord”* for Interviewee 5. Interviewee 7, inversely, was stimulated by



the nature of the island St. Kilda, which is an uninhabited UNESCO world heritage, where high measures are taken to preserve the ecosystem: *“I mean, we were told to be very careful, which everyone was, but I think it's just a need for being really careful in the environment, like in St. Kilda.”* Lastly, the interview for this research *“crystallized a lot of it”* in terms of sustainability consciousness for Interviewee 2.

Generally, education was the cognitive stimulus most guests experienced onboard leading to higher awareness. Furthermore, the beach cleaning, which was an activity several interviewees thought they would not enjoy, turned out to be one of their highlights in terms of pro-environmental activities. Nonetheless, also fragile environments such as St. Kilda influenced the guest's environmental awareness. Furthermore, the interviewees who did not participate in many sustainable activities onboard were not triggered towards a higher environmental consciousness.

Post-cruise

Reflection

After the first talk, the interviewees had time onboard and at home to reflect on the cognitive stimuli, the inspiration by nature and their pro-environmental behaviour. One couple was aware already, and *“doing a lot before we went away anyway, but we're more conscious of what we do [now]”* (6). Also, Interviewee 2 said, she reflected a lot and thought about possible sustainable actions she could implement into her life. Contrarily, Interviewees 8 and 9 described it to be difficult to reflect because they were *“being dropped back into the normal world and all of the same opportunities and pressures and everything are immediately back so I'm not sure how much carried over, to be honest.”*

Transformation

Depending on the level of reflection, some interviewees had higher intentions to change their behaviour, than others. For Interviewees 5 and 6 the lectures and talks to the scientists opened

their eyes and made them realise the impact one has on the environment. Interviewee 7 agrees, adding that nature also *“does make one kind of very conscious of the fact that we are stewards of these environments, and we should be, it's everyone's responsibility to evolve. I think, that's the, that's the challenge.”*

The challenge he talks about is also noticeable in other interviews. Although most interviewees have a higher environmental consciousness after the cruise, they do not know how to translate this new knowledge into specific actions, as Interviewee 2 stated:

“That's what it has left me with. [...] I haven't come up with any answers, [...] it's about now changing my behaviour. [...] I haven't worked out what I can do. But it's definitely on my mind as to what, what pledges I can make to myself that would actually be better than just recycling and using less plastic.”

For interviewees 8 and 9, the awareness level is about the same. Therefore, the experience onboard did not make them more conscious about their footprint, because they were caring about it already.

Behaviour change

Most interviewees are intending to change their behaviour after returning from the cruise. One even took a specific action already: Interviewee 2 loved the beach cleans, so she noted to find out the next beach clean in her community and will go there. Interviewee 7 tried to sign up for a smart meter to understand his electricity consumption to be able to reduce it. However, he also admits, that *“I haven't really changed in that week, because I'm just doing the same things I've done previously. But I think I mean, it's a thought process.”* Interviewees 8 and 9 experienced something similar; daily life pressures and routines are immediately back and therefore they did not implement anything new. When prompting them about getting engaged in the local community as an example to do more in terms of sustainability, Interviewee 9 mentioned that the biggest barrier for them is that they *“don't want to be committed to something”* to be able to travel more.

Interviewees 3-6 are taking many sustainable actions already, and still would like to do more, however, they encounter structural barriers as well. All mentioned that the next things they would like to implement are very expensive, which hinders them from an immediate change. So are Interviewees 5 and 6 intending to buy an electric car, however, besides the high price, the missing infrastructure of chargers is another reason to wait. Next to these barriers, some interviewees lacked inspiration for specific pro-environmental actions to take, also when comparing their individual progress to the overall challenge of climate change: *“I'm not sure what more we can do,”* admits Interviewee 6 while her husband adds, *“what we can do as an individual to be able to stop [climate change]. As I said, it's a lot of the government's procrastinating.”*

Regarding travel behaviour change, some interviewees indicated, that they want to continue flying due to a lack of alternatives, and the few existing are higher priced, as Interviewee 7 confirmed. He has thought about taking a train from the UK to Spain, however, *“it's just a matter of price and availability.”* Interviewees 5, 6, 8 and 9 cope differently with this tension of wanting to be environmentally friendly and the desire to continue to travel. So, they compensate for their travel behaviour by living a life with a low environmental impact. Interviewees 5 and 6 *“make [the] rest of [their] lifestyle carbon neutral, [...] because if we make ourselves more carbon neutral, any travelling we do we're offsetting it.”*

Quantitative data (Appendix E) on that topic shows, though, that most participants are probably willing ($N = 70$, *mean* 4.90, *SD* 1.01) and planning ($N = 68$, *mean* 4.54, *SD* 1.19) to travel in a more environmentally friendly way. Furthermore, regression analyses were performed to find out if Hurtigruten Expeditions' guests intend to become generally more pro-environmental beyond their travelling habits. These are needed to be able to either accept or reject the hypotheses, if awareness of consequences, ascription of responsibility and/or norms affect the guests' willingness to change their behaviour. Several attempts were carried out to find the analysis with the highest R-Square. By accumulating the items 'willingness to travel more environmentally friendly' and 'the willingness to adopt more sustainable measures at home', 'overall willingness'



was used as the new, dependent variable with eleven independent variables from the cruise industry section. This included statements on awareness of consequences, ascription of responsibility and norms. With an R-Square of .394, this model fits best to the collected data (*ANOVA Regression Sig. .001*), however, it only explains about 40% of the variety of the dependent variable. When looking at the individual coefficients, the only significant regression of overall willingness was with a statement regarding personal norms. This is in line with the Pearson correlation, where the norm items scored highest (.697 and .602). Additionally, to test whether norms are influenced by awareness of consequences and ascription of responsibility, another correlation analysis indicated that norms correlate stronger with awareness (.56, sig. <.001) than ascription of responsibility (.47 sig. <.001), while both are still significantly related. Lastly, a third regression analysis was performed to find out if the overall willingness to change as an independent variable can predict the planning on doing so. With an R-Square of .569 (*ANOVA Regression Sig. <.001*) this model had a high fit and the coefficients were significantly (<.001) related (Appendix E).

Concluding this theme, the Interviewees mentioned the science centre sessions and lectures to be cognitively stimulating as well as nature and beach cleans. These stimuli triggered a reflection of their behaviour and led to higher consciousness. However, although most interviewees want to be more environmentally friendly, they encounter barriers, which hinder them to implement new activities. In contrast, the couple who did not join many workshops did not reflect on their behaviour and is not intending to transform. Lastly, the quantitative results suggest, that norms are the only factor influencing the overall willingness to act.



DISCUSSION

By using a mixed-method approach, a comprehensive picture was drawn understanding the relationship between sustainable measures onboard Hurtigruten Expedition's fleet, such as educating guests through lectures and workshops in their science centre, cleaning beaches, as well as implementing the "Green Stay Program", and their effect on the pro-environmental behaviour transformation of their guests. The quantitative part helped describe and relate the different aspects of Schwartz's Norm-Activation Model (32) to the case of Hurtigruten Expeditions guests and their overall willingness to change. However, it revealed little that was new to existing literature, rather than joining an ongoing discussion. The qualitative part based on the tourist transformation theory, on the other hand, provided a possible explanation for the quantitative findings as well as missing empirical results regarding this model in the responsible cruise industry. All in all, the strengths of each method helped to connect theory and practice to answer the transdisciplinary research question: *how do the sustainable measures onboard of Hurtigruten Expeditions transform passengers towards more pro-environmental behaviour?*

Norms predict willingness to change

Beginning with the analysed data regarding the pre-cruise, Schwartz's NAM theory (32) was integrated into this study. Sequential, awareness of consequences leads to ascription of responsibility which activates personal and social norms forming behavioural intentions (15,24,36,37). While Han et al. (15) and Dimitrovski et al. (41) argue about the role of norms as a predictor of passengers' pro-environmental behaviour, this study can add to the discussion by confirming Han et al.'s (15) findings. A performed regression analysis showed that norms were the only variable which influenced the overall willingness to change behaviour after the cruise. The qualitative findings can provide a possible explanation: all interviewees chose this responsible cruise because of its alignment with their personal values and norms regarding sustainability. Due to the guests' awareness of possible consequences when cruising, and the knowledge that Hurtigruten



Expeditions is trying to mitigate their impact, the guests are stimulated with easy activities like the “Green Stay Program” or the participation in the Science Centre sessions to increase their knowledge, leading to reducing their ecological footprint as well. Thus, by acting upon their personal values combined with Hurtigruten Expeditions’ norms, the guests are more likely to also implement more environmentally friendly actions at home.

Nonetheless, this regression analysis only fit roughly 40%, meaning 60% was not explained by that model. Here again, qualitative data potentially explain this: structural barriers, such as price and availability, hinder the interviewees from implementing more pre-environmental actions at home. This means, although their norms and intentions align, to actually transform and take specific actions to become more environmentally friendly, these structural barriers need to be removed. Therefore, contextual factors require to be changed to increase the opportunities for individuals to act pro-environmentally (4). However, applying structural strategies is, depending on the type of barrier, the task of organisations who can take infrastructural, financial and/or legal measures (4), thus not Hurtigruten Expeditions’ business. Nonetheless, the cruise operator is already implementing informational strategies to increase knowledge and raising awareness of environmental problems. This confirms Steg & Vlek’s (4) assumption that these strategies result in changes in attitudes and intentions that in turn affects behaviour.

Furthermore, the questionnaire questions regarding the intentions to change towards a more environmentally friendly behaviour on vacation or at home were asked using commitment strategies (4) and self-prophecy (68). So did the guests not only indicate their willingness to change but if they are planning to do so as well. As expected, the regression indicates a significant relationship between planning and willingness. Wood et al (68) link this type of questioning to the fact that norms were the only variable influencing behaviour intentions. Their research concluded that these self-prophecy questions make the respondents aware of what they should do based on social norms. Thus, by prompting the participants if they are also planning on changing, they not only

recall norms but also think about more specific desired actions based on feasibility than just answering based on their intent (68).

To conclude the quantitative part, H1: Awareness of consequences does *not* have a significant and positive impact on the willingness to change. H2: Ascription of responsibility *neither* has a significant and positive impact on the willingness to change. Thus, H1 and H2 are *rejected*. Only, H3: Norms *have* a significant and positive impact on the willingness to change and is *accepted*.

Cognitive stimulus as the start of the transformation process

For the post-cruise data analysis, the qualitative results illustrated in Table 2 (Appendix D) show that only when cognitively stimulated, do the guests reflect on their behaviour, starting the transformation process which results in intentions to implement more sustainable actions at home, as described in the tourist-transformation process (22–24). This is demonstrated by the couple, who did not participate in the science workshops, and thus got less stimulated. They reflected less on their behaviour and showed no intentions to implement more pro-environmental actions. This allows the assumption that the active participation in Hurtigruten Expeditions' activities does influence awareness and personal norms, which lead to intentions and thus also a possible behaviour change. Therefore, in order to get to a transformation, the role of awareness of consequences, ascription of responsibility and norms should be included in the tourist transformation model, as suggested in the conceptual model (Figure 1).

However, it needs to be pointed out, that transformation is only temporary and only if a change in personal values and norms is strong enough, the transformation can lead to a long-term behaviour change (22). Since the follow-up interview has been only a week after the return, the long-term behaviour change could not be observed. Nonetheless, following the behavioural models, like NAM or TPB (32,46), intentions precede behaviour.

The results show, though, that some interviewees intend to become more pro-environmental, however, they do not know what more to do. This holds the same for guests who were already



pro-environmental as for guests who do not take many actions yet. Therefore, Hurtigruten Expedition and potentially other responsible cruise operators should use this opportunity to stimulate the guests even more to take the next steps, by inspiring them with specific, easy-to-implement actions which are provided at the end of the cruise through another workshop. So, the intention to change can be implemented directly after the cruise, without daily life routines interfering.

These interferences, and barriers, including the resulting tension between the attitude towards protecting the environment and the actual vacation behaviour, can be linked to the attitude-intention-behaviour gap within sustainable tourism. Juvan and Dolnica (39) describe these tensions as cognitive dissonance and provide a wide range of beliefs to cope with them. Although this research did not look for any of these coping mechanisms, the findings align with what these authors call downward comparison, denial of control, denial of responsibility, and exception handling (39). By stepping out of their daily life and into different surroundings, the guests' attitude changes, resulting in less attention given to pro-environmental behaviour. Nonetheless, since they have sustainable norms and values, guests cope with these tensions by compensating their travel behaviour with their pro-environmental behaviour at home (exception handling and downward comparison) or by excusing their behaviour, pretending not having a negative footprint (denial of control and denial of responsibility). Additionally, by being educated about behavioural impacts and by being stimulated to implement new actions, the guests get confronted and inspired to become even more pro-environmental, hence being able to travel responsibly again.



CONCLUSION

Since the cruise industry has an ambiguous role regarding climate change by contributing to it while simultaneously their unique destinations are affected by it, also this sector needs sustainable development (3,5). Therefore, the responsible cruise industry, including companies like Hurtigruten Expeditions, strives to become a greener industry by encouraging crews and guests to engage in pro-environmental activities onboard (15). Especially since tourists are aware of environmental issues and choose more frequently sustainable alternatives when travelling (20). By showing environmentally friendly intentions to do no harm or even do good, and acting upon them, tourists display pro-environmental behaviour (17). Overall this research shows, that Hurtigruten Expeditions' guests display this true pro-environmental behaviour since their intentions and behavioural activities align (17). Hurtigruten Expeditions thus acts as the catalysator for change they envision to be through their sustainable activities onboard, which in turn leads to a transformation towards more pro-environmental behaviour of their guests.

Being able to stimulate guests towards a higher environmental consciousness also has implications for the responsible cruise industry. When offering a mix of educational and hands-on activities, passengers experience first-hand what sustainability is about and why a behaviour change is needed. Therefore, a leaflet with an overview of sustainable activities onboard can help Hurtigruten and other companies already to promote these activities. Additionally, a day before disembarkation another educational moment with specific, easy-to-implement actions guests can implement at home in their daily life can help to move the intentions to actual transformation.

Due to the time constraint of this research, it was not possible to research a long-term behaviour change. Therefore, it is recommended to replicate the qualitative part of this study with a longer time frame to be able to study the behavioural change or, alternatively, to find out if the attitude-intention-behaviour gap interferes with it, which can influence the type of actions needed to be taken by practitioners. Furthermore, the chosen methodological approach has its limitations. While both designs complement each other drawing an in-depth picture, the results only apply in



the same context and are not transferable to the entire cruise sector, thus the findings are not generalisable beyond the responsible cruise industry. Another research would need to study the opinions and intentions of conventional cruise passengers regarding pro-environmental behaviour and what these companies would need to do to stimulate sustainability.

Concluding, this research showed that the responsible cruise industry can provide the context for extraordinary experiences to stimulate guests to transform towards more pro-environmental behaviour. To say it in Lund's words, these guests, thus, do not only take memories but take action to leave a positive footprint.



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APPENDICES

Appendix A: Demographics of interviewees and participants

Appendix B: Interview guide and Questionnaire

Appendix C: Informed consent form and ethical check list

Appendix D: Illustrative Quotes of qualitative findings

Appendix E: SPSS Outputs



Appendix A: Demographics of Interviewees and Participants

Table 1: Demographics of Interviewees and Participants

Type	Participants	Age	Included / Excluded
Interview 1	Interviewee 1	79	Excluded
Interview 2	Interviewee 2	59	Included
Interview 3	Interviewee 3	66	Included
	Interviewee 4	65	Included
Interview 4	Interviewee 5	63	Included
	Interviewee 6	63	Included
Interview 5	Interviewee 7	44	Included
Interview 6	Interviewee 8	72	Included
	Interviewee 9	72	Included
Questionnaire	73	N: 63 Mean: 71 / SD: 9.03 Min: 26 / Max: 85	71 included, 2 excluded
Interview 7	Follow-up: Interviewee 7	44	Included
Interview 8	Follow-up: Interviewee 5	63	Included
	Follow-up: Interviewee 6	63	Included
Interview 9	Follow-up: Interviewee 3	66	Included
	Follow-up: Interviewee 4	65	Included
Interview 10	Follow-up: Interviewee 2	59	Included
Interview 11	Follow-up: Interviewee 8	72	Included
	Follow-up: Interviewee 9	72	Included



Appendix B: Interview Guide and Questionnaire

The complete interview guide including the questionnaire can be found on the Google Drive via:

[REDACTED]
In the folder 'Qualitative Data' the transcripts of the Interviews are saved, while in the folder 'Quantitative Data' the SPSS Datasheet is accessible.

Appendix C: Informed Consent Form and Ethical Check List

Via [REDACTED], the applicable Research Ethics can be found, including the signed informed consent forms of the researcher and the interviewees.



Appendix D: Illustrative Quotes of qualitative results

Table 2: Example quotes to illustrate qualitative results

Interviewee(s)	Awareness	Ascription of Responsibility	Personal Values & Norms	Pro-environmental actions at home (examples)
Interviewee 2	"I am aware of what I do and what I buy." "I think the biggest [consequence of cruising] is fuel but I think [...] there's a lot of us going along. Is luxury travel isn't?"	"It's easier to pretend it isn't happening, isn't it? [...] so yeah, I feel worried about it, which is why I think a lot of people don't want to think about it. So I'm trying to do without analysing too much. Otherwise, you know, you get you can get depressed if you're not careful."	"And I have tried to use campsites that [...] look after the environment. So [...] I've deliberately chosen sites where I thought that they had the best way of looking after the environment."	"I do try to, [...] a) stop using plastics and b) to [using less] petrol." "My current thing is to [...] eat less meat." "... it's not like I go out there and buy a new outfit every month or anything like that ..."
Interviewees 3 + 4	"The whole transport industry it's got the same problems with being sustainable. And it doesn't matter in the end, whether you're using electric power, or petrol or whatever, you know, you're still that power has got to come from somewhere. So if you're using an electric bus or an electric ship, you've still got to generate the power and unless you're using solar panels, or wind power, where it's actually free, effectively, you know, the earth is providing it then there's always going to be an issue because electric buses and the electric cars have to be plugged in to a wall somewhere. I don't know how they do it. I assume it's a similar thing when they run boats with electric batteries." "One thing that works against [Hurtigruten] a little bit is they're quite small boats. So the cost per head of the fuel is reduced. And I think the chief engineer said they use 200,000 litres of fuel for that trip. That's 1000 Litres per head almost."	"I think we will always try and do we can. However, I don't believe that everybody is going to be able to say that they're all on board with it because everyone has different viewpoints. Some people believe that climate change is because of all of our actions and that nothing we do will change it." "So, when you see the things about the polar bears, maybe not being around in a 100 years time and things like that, that does make you think and feel something."	"We always have [cared for sustainability]" "Yeah, I don't like seeing waste." "So and we've always done that. And hopefully, well, we think we've tried bringing our children up to be like that."	"So think we're quite green. We have solar panels, we have air source heat pump for heating, so no gas" "Very rarely do we have to use water, [...] other than from what we've collected. So we try and grow our own vegetables and things like that." "We live in a rural area. [...] Now we have a village with all. So we don't take the car, we, we will walk to those [...] and we even walk into the local city, which is three miles." "I've always been thinking, I'm one of these people that I don't throw things away because, oh, I can mend that or I can use that in something else."
Interviewees 5 + 6	"We're not very good, are we? Because I mean, these [cruises] aren't exactly eco friendly, in that sense, because they use big engines that guzzle fuel like it was nothing. It's very difficult, I think, to change overnight, to go from other... the only other way to do it is [if] nobody travels, all the companies go out of business and nobody travels. And I don't think that's the way forward either." "I agree that, you know, travel needs, you need to look at it in some shape or form to try and reduce your footprint. But how you do that? I don't know. It's difficult, because you don't want to go away anywhere." "... because everything you do has an impact."	"I'm pretty proud of what we're doing. But yeah, again, there is a frustration there. There's more that needs to be done, but it needs to be coming from a government perspective."	"We wanted something that was different, we've done other cruises. And we wanted to be on a small ship. And we wanted to do something slightly different and the expedition side of it sounded interesting. And the fact that you can get involved or listen to people that had different outlooks, you know, the guys will take you out on the expeditions, and someone did the little walk today and that was brilliant, with the Expedition Team. [...] We wanted to do a cruise which had more interest for us."	"we've been looking at it for some time because we decided quite early on when I retired that we were going to do things with our house that would actually be sustainable. So we've just had solar panels fitted. And we've also an air sourced heat pump fitted. We've got rid of all of our reliance on gas including the cooker and everything that's gone because we wanted to do our bit if you like for science and also for for the world. Because if you don't stop doing it then obviously the issues that we're seeing that we're only going to get worse." "We don't go away every year abroad. Like I said with the motorhome now we're more self contained. So we actually travel around the UK. Although we're looking to come across to Ireland [by ferry], maybe this year is our first away trip."
Interviewee 7	"So consequences [of travelling with a cruise, in terms of] water, waste, kind of co2 emissions, and things like that. [My behaviour] probably contributes, but I mean, it'd be good to mitigate even more."		"I mean we should, because as responsible citizens of the world, we should be looking after our planet and so it should be, it should be something we do every, every day and become part of our daily life."	"I don't have my heater on at home, I [...] restrict the amount of electricity [and] water because my the, my shower head is a restricted water showerhead. [...] and I try and use a reusable bag when I go shopping. I know there, there's lot of packaging, which is still around which we have to still go with, unfortunately." "Yes, I mean, I don't eat meat every day."
Interviewees 8 + 9	"I wouldn't say very aware, but I mean, I feel that we are aware [...], but I don't think anybody can not be aware nowadays, but you can't ignore it." "I think [having grandchildren] just really brings it into focus. Why you know, it's not just nice to have, it kind of more than that." "I honestly don't know how we're at the carbon foot print, a cruise like this is, [but] you're still using resources in the end in your destination."	"The beauty of the world and [...] I think the idea that it's climate change is real and can't be ignored, but it's also you know, we we want to live our lives and enjoy it and that it's the tension between those things."	"I wouldn't be interested in a huge great city where there's entertainment and this and that and you know, all sorts I mean, that doesn't appeal at all. You feel much more that you can see smaller places and go to be it, just I mean, that's a big cruise ship, certainly now does not appeal in the slightest."	"I've always not been impressed with the throwaway society, never agree with them now this petrol growth, that you've got to buy buy buy. I reuse everything, if it is mendable is mended. And I wear clothes for years and years. Do not especially now where I can avoid buying things with plastics, I do." "And if we're going, we would go for longer because we're retired now for longer to make [...] rather than just, Oh let's go to Paris for lunch. As it was a few years ago where people were buzzing off for weekends and Sunday cities. We never did that."



Table 2: Example quotes to illustrate qualitative results (continued)

Interviewee(s)	Pro-environmental actions onboard (examples)	Trigger moment (stimuli)	Reflection	Transformation (examples)	Pro-environmental behaviour change?
Interviewee 2	<p>Green Stay: "I've tried to put my green sign on my door every day, because I don't need clean towels every day."</p> <p>Science Centre: "... listening to the science people, talking about the problems within the ocean..."</p> <p>Beach Clean-up: "...it made me feel good that I did the beach clean. So I can't say I enjoyed it, but I thought it was a really good thing to do."</p>	<p>"I think it's partly talking to you. I think you being on the ship, crystallised a lot of it [...] you kind of brought it right to the forefront. So I think [Hurtigruten's pro-environmental actions] and talking to you is what's made me more aware of it."</p>	<p>"I have thought about it a lot, probably because I knew that I was going to be talking to you. But I've thought about it quite a lot since I came back about what more I could do."</p>	<p>That's what it's left me with. [...] I haven't come up with any answers, [...] it's about now changing my behaviour. [...] I haven't worked out what I can do. But it's definitely on my mind as to what what pledges I can make to myself that would actually be better than just recycling and using less plastic. Whether there's other things I can do as well.</p>	<p>Yes: "there are local beach cleans that happen every month. So yeah, I'll find out the next one [and] I'll put that in my diary to find out the next one and go. [...] I've done a beach clean. I loved it. I'll go and do another one."</p>
Interviewees 3 + 4	<p>Green Stay: "we use the green thing on the door every other day. We like to have our towels cleaned every other day. And so I suggested perhaps because we didn't need the cabin clean that second day but they could have a one on there were it's just a change of towels and empty the bin."</p> <p>Science Centre/Citizen Science: "Well, [we learned] all about measuring the plankton and the how far you can see so how clear the water was in sun light [which was new to me]." "and I learned about the iNaturalist project, which I'm still carrying on with that. I made a project called 'at walking'."</p> <p>Beach Clean: "Well, if you'd asked me before, I wouldn't have said the beach clean. But I actually found the beach clean quite addictive. (laughter). Trying to find the tiniest pieces whereas you were finding the biggest pieces." "... it was 29kg [waste] for the morning group and then 82kg in total."</p>	<p>"I think it's the combination of all the lectures we went through probably and the science boat."</p>	<p>"Yeah, I just said I, my attitude has always been well, if you if you're floating on the sea, then you're not being as non-sustainable as if you're flying in the air. Yeah, to be quite honest. Him saying how much fuel they burned made me more aware. It isn't as sustainable as I thought it was, yeah, with floating in a boat." (see awareness)</p> <p>"Well, I think with me it started originally on our first Hurtigruten Cruise [...] that I think for me that started me thinking more about you know, sustainability."</p>	<p>"We, we were more questioning, thinking about it more than we were before probably."</p> <p>"[Hurtigruten] dotted the I's and cross the T's didn't they? Because you did something and then straight away you got feedback from it which is really good."</p>	<p>Partly: "Our next thing which we might do on the green front when the price is right is get some batteries."</p>
Interviewees 5 + 6	<p>"...having had the our interview, I started to look more at what [Hurtigruten] were doing. And I suddenly realise [...] all of their sustainability [effort]."</p> <p>Green Stay: "We've got the green label on our door since since we came here." "I mean, the little things like not changing your towels and your bed sheets every day that contributes to conservation. Whereas only cruises we've been on before don't give you that option."</p> <p>Lectures: The lecture that the marine scientist gave on sound was fascinating for me."</p> <p>Beach Clean: "I quite liked the beach cleaning, it was actually quite interesting because I've walked around loads of beaches in my life and not really taking any notice of what you're walking on."</p>	<p>The presentation about the ocean currents: "I don't know it really hit a chord [...] when they did that demonstration with the red and the blue water. [...] Yeah, yeah, that was very that was very good. [...] It was quite powerful. You sat there like Wow, that's, that's serious."</p> <p>The Beach Clean: "We walked back along some other beaches and found loads and loads of debris on the beaches [...] So yeah, open my eyes that day particular."</p>	<p>"Yeah, it was the science. Talking to the to the scientists. Getting the information about various things that we didn't realise, I suppose." "Well, I think we are aware but it gave more clarity."</p> <p>"I think we were doing a lot before we went away anyway, but we're more conscious of what we do."</p>	<p>"Yeah, I think so having listened to some of the lectures that were on Hurtigruten and and just reflecting on what we do, you suddenly realise what impact that you have on the environment. But it takes more than one person that's the only problem."</p> <p>"... it opened your eyes a bit some of the some of the lectures and not just the lectures that some of the discussions that you had with some of the scientists, they opened your eyes to what was going on around you."</p>	<p>Partly: "We're trying to reduce our own carbon footprint and the next thing on the road is going to be an electric car but as and when we can afford to do it." "And when the infrastructure is there."</p> <p>"Yeah, I'm not sure what more we can do." "What we can do as an individual to be able to stop [climate change]. As I said, it's a lot of the government's procrastinating."</p> <p>"But the little bit that we are doing has been reinforced by Hurtigruten. We are making a difference even though it's only us."</p>
Interviewee 7	<p>Reusable Water Bottles: "Okay, so I use the bottle that they provided for the water. I didn't use my plastic bottle and I still got the metallic bottle which I'm going to use until it leaks and everything I use that."</p> <p>Green Stay: "So, and then after I talk about the the green thing on the door and I would all say don't don't clean my room and always taking my own mugs up and get new ones. So that helps a little bit."</p> <p>Citizen Science: "So I listened to [the workshop] how to upload the [app] iNaturalist. I think there was ebird. [...] I haven't been uploading any flowers or anything to that yet. But [...] I've been one day thinking about it."</p>	<p>"So it's what people sort of think. I think back to that, but I think going on the tenders and that's quite an interesting concept going from kind of viewing or closing that environment on ships then going literally stepping out into nature. It's an interesting kind of, kind of thought process where we're kind of going out into into the world kind of thing is then from the world and into our little cosy little cabin kind of thing. And it's kind of an interesting juxtaposition. How we do that or you know, and how think tending around St Kilda as well but then because you're in the birds environment, you're not you know, they're not in our environment"</p>	<p>"I think learning about all of the kind of, of the the birds and all of the wildlife makes one think of it more. [...] It makes me think of a little bit more about one's actions and how we've got to protect some of the birds one and wildlife and nature more. But you got to be careful how lucky we are to have have the species we do have."</p>	<p>"[St. Kilda] does make one kind of very conscious of the fact that we are stewards of these environments, and we should be it's everyone's responsibility to evolve. I think that's the that's the challenge."</p>	<p>No change, but intentions: "I can't, I haven't really changed in that week, because I'm just doing the same things. I've done previously. But I think I mean, it's a thought process." "I've tried to sign up for a smart meter. Since going back so that's a that's a lot of steps. I think, seeing how much electricity I use and then finding out ways in which I can reduce it. I think and yeah, I mean, and then just trying to not use as much hours as I could probably."</p>
Interviewees 8 + 9	<p>Green Stay: "Oh yeah. The green stay door hanger has practically been there the entire time."</p> <p>Science Centre: "I'm afraid we didn't benefit much from that we were busy hiking. Anytime there's a hike or a walk, we'd be doing that instead."</p> <p>Lectures: "We went to a couple of couple of the lectures. I went to one of our lectures and you went to another one. I read but but having said that, that we didn't really participate."</p>		<p>"I don't know [if we reflected on our behaviour]. It's mostly being dropped back into the normal world and all of the same opportunities and pressures and everything are immediately back so I'm not sure how much carried over to be honest."</p>	<p>"Oh I think, I would say [my awareness level] is about the same."</p> <p>"I think that, it hasn't made me feel I mean, I'm, just, hasn't made me feel that I should do less flying because I think we were feeling that already."</p>	<p>No: "So you know, it's it's unless we stayed at home all day and grew our own vegetables, it's quite difficult not, you know, we would still like to try and go and see more of the world. And we will be, if we go, it won't just be a quick nip over there for the weekend."</p>



Appendix E: SPSS Outputs

Descriptive Statistics (Sustainable actions at home)

Statements: It is important to me:
7-point Likert Scale: 1 Extremely Disagree – 7 Extremely Agree

	N	Minimum	Maximum	Mean	Std. Deviation
Separating household waste	71	4	7	6.59	.645
Buying products and food regionally	71	4	7	6.07	.816
Buying products with sustainable certification labels	70	2	7	5.63	1.066
Eating no meat/fish	69	1	7	3.26	1.668
Planting and eating my own food	69	1	7	4.97	1.553
Taking the bike or train or walk instead of the car	71	2	7	5.11	1.369
Using Bike- or Car-Sharing options	70	2	7	4.76	1.367
Buying / selling second hand	70	2	7	5.57	1.174
Repairing broken things	70	4	7	6.23	.783
Renovating my home with eco-friendly options	71	4	7	6.00	.941
Educating myself better on the topic of sustainability	71	4	7	5.86	.930
Using the environmentally friendly option when travelling	71	3	7	5.77	.988
Valid N (listwise)	65				

Descriptive Statistics (The Cruise Industry)

Do you agree to the following statement:
7-point Likert Scale: 1 Extremely Disagree – 7 Extremely Agree

	N	Minimum	Maximum	Mean	Std. Deviation
The cruise industry is causing ocean pollution, climate change and environmental damages.	71	1	7	4.82	1.246
An environmentally responsible cruise practicing energy/water/fuel conservation, waste reduction, and diverse green activities would help to minimize environmental degradations.	71	4	7	6.11	.766
Although Hurtigruten Expeditions is more sustainable than other cruises, their efforts are not enough to mitigate climate change.	71	1	7	4.94	1.382
Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations.	71	2	7	5.14	1.086
Some say that every cruise traveller is partly responsible for environmental problems caused by the cruise industry.	71	2	7	4.58	1.272
Every cruise traveller must take responsibility for the environmental problems caused by cruise trips.	71	2	7	4.99	1.409
I feel an obligation to choose a sustainable cruise instead of a regular cruise when deciding on cruise travel.	71	2	7	5.42	1.359
Regardless of what other people do, because of my own values/principles I feel that I should behave in an environmentally friendly way while traveling on a cruise.	71	4	7	6.07	.851
I feel it is important that cruise travellers in general make eco-friendly decisions when selecting a cruise for their cruise trip.	71	3	7	5.62	1.100
People whose opinions I value would prefer me to travel with an environmentally responsible cruise instead of a conventional cruise.	71	2	7	4.99	1.368
I am aware that there might be unintended consequences of my well-intended sustainable behaviour.	71	2	7	5.32	1.053
Valid N (listwise)	71				



Descriptive Statistics (Accumulated)

	N	Minimum	Maximum	Mean	Std. Deviation
Overall awareness	71	3.40	6.80	5.2676	.61593
Overall_acription_of_responsi- bility	71	2.00	7.00	4.7817	1.20337
Overall_norms	71	3.25	7.00	5.5246	.96284
Valid N (listwise)	71				

Descriptive Statistics (Future Behaviour)

How likely is the following:
6-point Likert Scale: 1 Definitely Not – 6 Definitely

	N	Minimum	Maximum	Mean	Std. Deviation
I am willing to travel in an en- vironmentally responsible way.	70	3	6	4.90	1.009
I am planning to travel with in environmentally responsible way.	68	2	6	4.54	1.190
I am willing to adapt more sus- tainable measures in my daily life after the cruise.	68	1	6	4.56	1.286
I am planning to adapt more sustainable measures in my daily life after the cruise.	68	1	6	4.47	1.344
Valid N (listwise)	66				



Frequencies – Sustainable activities onboard

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lectures	69	97.2	100.0	100.0
Missing	System	2	2.8		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Science Center	46	64.8	100.0	100.0
Missing	System	25	35.2		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Science Boat	22	31.0	100.0	100.0
Missing	System	49	69.0		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Local guided Tour	61	85.9	100.0	100.0
Missing	System	10	14.1		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	iNaturalist	19	26.8	100.0	100.0
Missing	System	52	73.2		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	eBird	17	23.9	100.0	100.0
Missing	System	54	76.1		
Total		71	100.0		



In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Orca	8	11.3	100.0	100.0
Missing	System	63	88.7		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

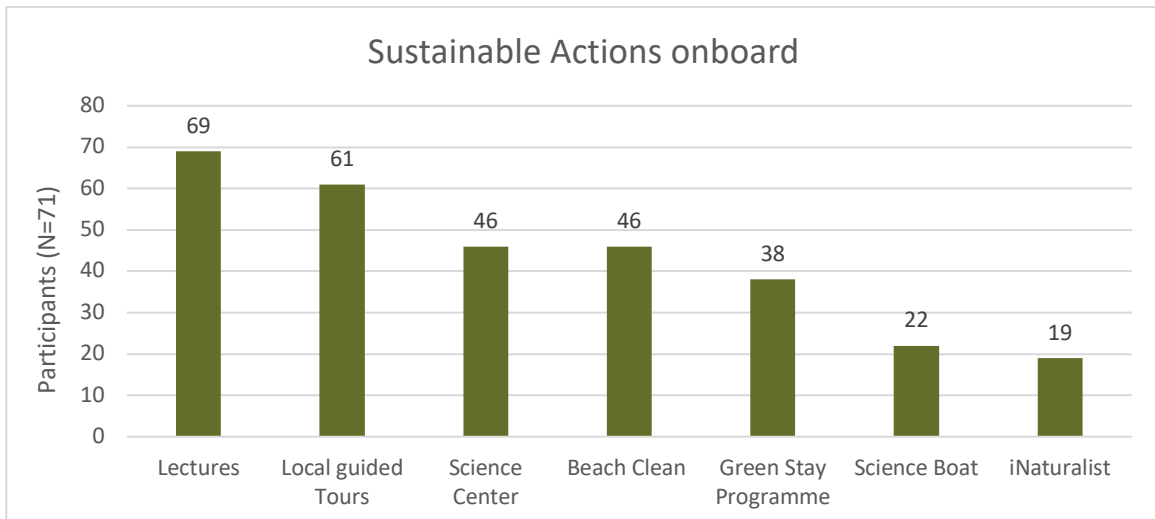
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Beach Clean	46	64.8	100.0	100.0
Missing	System	25	35.2		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Green Stay	38	53.5	100.0	100.0
Missing	System	33	46.5		
Total		71	100.0		

In which of the following are you (planning on) participating, or did you already attend?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other	1	1.4	100.0	100.0
Missing	System	70	98.6		
Total		71	100.0		





Regression analyses

Overall norm (dependent) on overall awareness and overall ascription of responsibility (independent)

→ test previous findings of Han et al.

Descriptive Statistics

	Mean	Std. Deviation	N
Overall norms	5.5246	.96284	71
Overall awareness	5.2676	.61593	71
Overall acription of responsibility	4.7817	1.20337	71

Correlations

		Overall norms	Overall aware- ness	Overall acrip- tion of responsibility
Pearson Correlation	Overall_norms	1.000	.556	.466
	Overall_awareness	.556	1.000	.371
	Overall_acription_of_responsibility	.466	.371	1.000
Sig. (1-tailed)	Overall_norms	.	<.001	<.001
	Overall_awareness	.000	.	.001
	Overall_acription_of_responsibility	.000	.001	.
N	Overall_norms	71	71	71
	Overall_awareness	71	71	71
	Overall_acription_of_responsibility	71	71	71



Variables Entered/Removed^a

Model	Variables Entered	Variables Re- moved	Method
1	Overall_acription_of_responsibility, Overall_awareness ^b	.	Enter

a. Dependent Variable: Overall_norms

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.622 ^a	.387	.369	.76480	.387	21.473	2	68	<.001

a. Predictors: (Constant), Overall_acription_of_responsibility, Overall_awareness

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.120	2	12.560	21.473	<.001 ^b
	Residual	39.774	68	.585		
	Total	64.894	70			

a. Dependent Variable: Overall_norms

b. Predictors: (Constant), Overall_acription_of_responsibility, Overall_awareness



Coefficients^a

Model		Unstandardized Coefficients		Standardized Co-	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	efficients Beta			Lower Bound	Upper Bound
1	(Constant)	.714	.791		.903	.370	-.864	2.293
	Overall awareness	.695	.160	.444	4.348	<.001	.376	1.014
	Overall acription of responsibility	.241	.082	.301	2.941	.004	.077	.404

a. Dependent Variable: Overall_norms



Accumulated willingness to change behaviour (dependent)

11 variables from the cruise industry statements (independent variables)

→ **This way the highest R-Square was achieved**

Descriptive Statistics

	Mean	Std. Deviation	N
overall_willingness_to_change_something	4.7353	.96765	68
The cruise industry is causing ocean pollution, climate change and environmental damages.	4.81	1.225	68
An environmentally responsible cruise practicing energy/water/fuel conservation, waste reduction, and diverse green activities would help to minimize environmental degradations.	6.10	.775	68
Although Hurtigruten Expeditions is more sustainable than other cruises, their efforts are not enough to mitigate climate change.	4.97	1.403	68
Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations.	5.15	1.096	68
I am aware that there might be unintended consequences of my well-intended sustainable behaviour.	5.34	1.060	68
Some say that every cruise traveller is partly responsible for environmental problems caused by the cruise industry.	4.60	1.248	68
Every cruise traveller must take responsibility for the environmental problems caused by cruise trips.	4.99	1.409	68
I feel an obligation to choose a sustainable cruise instead of a regular cruise when deciding on cruise travel.	5.41	1.374	68
Regardless of what other people do, because of my own values/principles I feel that I should behave in an environmentally friendly way while traveling on a cruise.	6.04	.854	68
I feel it is important that cruise travellers in general make eco-friendly decisions when selecting a cruise for their cruise trip.	5.60	1.108	68
People whose opinions I value would prefer me to travel with an environmentally responsible cruise instead of a conventional cruise.	4.94	1.370	68



Correlations

	overall_willingness_to_change_something	The cruise industry is causing ocean pollution, climate change and environmental damages.	An environmentally responsible cruise practicing energy/water/fuel conservation, waste reduction, and diverse green activities would help to minimize environmental degradations.	Although Hurtigruten Expeditions is more sustainable than other cruises, their efforts are not enough to mitigate climate change.	Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations.	I am aware that there might be unintended consequences of my well-intended sustainable behaviour.	Some say that every cruise traveller is partly responsible for environmental problems caused by the cruise industry.	Every cruise traveller must take responsibility for the environmental problems caused by cruise trips.	I feel an obligation to choose a sustainable cruise instead of a regular cruise when deciding on cruise travel.	Regardless of what other people do, because of my own values/principles I feel that I should behave in an environmentally friendly way while traveling on a cruise.	I feel it is important that cruise travellers in general make an eco-friendly decisions when selecting a cruise for their cruise trip.	People whose opinions I value would prefer me to travel with an environmentally responsible cruise instead of a conventional cruise.	
Pearson Correlation	overall willingness to change something	1.000	.240	.365	.220	.016	.227	.196	.282	.341	.448	.520	.236
	The cruise industry is causing ocean pollution, climate change and environmental damages.	.240	1.000	.225	.335	-.168	.304	.350	.093	.260	.336	.251	.091
	An environmentally responsible cruise practicing energy/water/fuel conservation, waste reduction, and diverse green activities would help to minimize environmental degradations.	.365	.225	1.000	.044	.456	.139	.135	.193	.436	.421	.430	.343
	Although Hurtigruten Expeditions is more sustainable than other cruises, their efforts are not enough to mitigate climate change.	.220	.335	.044	1.000	-.269	.177	.240	.083	.084	.113	.098	.147
	Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations.	.016	-.168	.456	-.269	1.000	.046	-.219	.108	.147	.105	.270	.264
	I am aware that there might be unintended consequences of my well-intended sustainable behaviour.	.227	.304	.139	.177	.046	1.000	.239	.363	.323	.528	.383	.415



	Some say that every cruise traveller is partly responsible for environmental problems caused by the cruise industry.	.196	.350	.135	.240	-.219	.239	1.000	.600	.341	.381	.338	.056
	Every cruise traveller must take responsibility for the environmental problems caused by cruise trips	.282	.093	.193	.083	.108	.363	.600	1.000	.389	.447	.484	.340
	I feel an obligation to choose a sustainable cruise instead of a regular cruise when deciding on cruise travel.	.341	.260	.436	.084	.147	.323	.341	.389	1.000	.531	.697	.536
	Regardless of what other people do, because of my own values/principles I feel that I should behave in an environmentally friendly way while traveling on a cruise.	.448	.336	.421	.113	.105	.528	.381	.447	.531	1.000	.602	.436
	I feel it is important that cruise travellers in general make eco-friendly decisions when selecting a cruise for their cruise trip.	.520	.251	.430	.098	.270	.383	.338	.484	.697	.602	1.000	.555
	People whose opinions I value would prefer me to travel with an environmentally responsible cruise instead of a conventional cruise.	.236	.091	.343	.147	.264	.415	.056	.340	.536	.436	.555	1.000
Sig. (1-tailed)	overall_willingness_to_change_something	.	.024	.001	.036	.448	.031	.055	.010	.002	<.001	<.001	.026
	The cruise industry is causing ocean pollution, climate change and environmental damages.	.024	.	.032	.003	.086	.006	.002	.224	.016	.003	.019	.230
	An environmentally responsible cruise practicing energy/water/fuel conservation, waste reduction, and diverse green activities would help to minimize environmental degradations.	.001	.032	.	.361	.000	.130	.135	.058	.000	.000	.000	.002
	Although Hurtigruten Expeditions is more sustainable than other cruises, their efforts are not enough to mitigate climate change.	.036	.003	.361	.	.013	.074	.024	.251	.248	.179	.213	.116
	Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations.	.448	.086	.000	.013	.	.353	.037	.191	.115	.198	.013	.015
	I am aware that there might be unintended consequences of my well-intended sustainable behaviour.	.031	.006	.130	.074	.353	.	.025	.001	.004	.000	.001	.000



Some say that every cruise traveller is partly responsible for environmental problems caused by the cruise industry.	.055	.002	.135	.024	.037	.025	.	.000	.002	.001	.002	.325
Every cruise traveller must take responsibility for the environmental problems caused by cruise trips.	.010	.224	.058	.251	.191	.001	.000	.	.001	.000	.000	.002
I feel an obligation to choose a sustainable cruise instead of a regular cruise when deciding on cruise travel.	.002	.016	.000	.248	.115	.004	.002	.001	.	.000	.000	.000
Regardless of what other people do, because of my own values/principles I feel that I should behave in an environmentally friendly way while traveling on a cruise.	.000	.003	.000	.179	.198	.000	.001	.000	.000	.	.000	.000
I feel it is important that cruise travellers in general make eco-friendly decisions when selecting a cruise for their cruise trip.	.000	.019	.000	.213	.013	.001	.002	.000	.000	.000	.	.000
People whose opinions I value would prefer me to travel with an environmentally responsible cruise instead of a conventional cruise.	.026	.230	.002	.116	.015	.000	.325	.002	.000	.000	.000	.

Variables Entered/Removed^a

- a. Dependent Variable: overall_willingness_to_change_something
- b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Sig. F Change	
					R Square Change	F Change	df1		df2
1	.628 ^a	.394	.275	.82373	.394	3.314	11	56	.001



Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.738	11	2.249	3.314	.001b
	Residual	37.998	56	.679		
	Total	62.735	67			

a. Dependent Variable: overall willingness to change something

b. Predictors: (Constant), People whose opinions I value would prefer me to travel with an environmentally responsible cruise instead of a conventional cruise., Some say that every cruise traveller is partly responsible for environmental problems caused by the cruise industry., Although Hurtigruten Expeditions is more sustainable than other cruises, their efforts are not enough to mitigate climate change., An environmentally responsible cruise practicing energy/water/fuel conservation, waste reduction, and diverse green activities would help to minimize environmental degradations., The cruise industry is causing ocean pollution, climate change and environmental damages., I am aware that there might be unintended consequences of my well-intended sustainable behaviour., Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations., I feel an obligation to choose a sustainable cruise instead of a regular cruise when deciding on cruise travel., Regardless of what other people do, because of my own values/principles I feel that I should behave in an environmentally friendly way while traveling on a cruise., Every cruise traveller must take responsibility for the environmental problems caused by cruise trips., I feel it is important that cruise travellers in general make an eco-friendly decisions when selecting a cruise for their cruise trip.



Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations	Correlations	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	.748	1.029		.727	.470	-1.313	2.809			
	The cruise industry is causing ocean pollution, climate change and environmental damages.	.009	.101	.011	.089	.929	-.193	.210	.240	.012	.009
	An environmentally responsible cruise practicing energy/water/fuel conservation, waste reduction, and diverse green activities would help to minimize environmental degradations.	.326	.174	.261	1.869	.067	-.023	.675	.365	.242	.194
	Although Hurtigruten Expeditions is more sustainable than other cruises, their efforts are not enough to mitigate climate change.	.101	.081	.146	1.241	.220	-.062	.264	.220	.164	.129
	Hurtigruten Expedition is doing enough to preserve nature and communities at their destinations.	-.193	.122	-.219	-1.590	.117	-.437	.050	.016	-.208	-.165
	I am aware that there might be unintended consequences of my well-intended sustainable behaviour.	-.024	.121	-.026	-.198	.844	-.267	.219	.227	-.026	-.021
	Some say that every cruise traveller is partly responsible for environmental problems caused by the cruise industry.	-.153	.121	-.197	-1.265	.211	-.396	.089	.196	-.167	-.132
	Every cruise traveller must take responsibility for the environmental problems caused by cruise trips.	.092	.105	.133	.869	.388	-.119	.302	.282	.115	.090
	I feel an obligation to choose a sustainable cruise instead of a regular cruise when deciding on cruise travel.	-.071	.112	-.101	-.638	.526	-.295	.152	.341	-.085	-.066
	Regardless of what other people do, because of my own values/principles I feel that I should behave in an environmentally friendly way while traveling on a cruise.	.210	.174	.185	1.201	.235	-.140	.559	.448	.159	.125
	I feel it is important that cruise travellers in general make eco-friendly decisions when selecting a cruise for their cruise trip.	.438	.149	.502	2.951	.005	.141	.736	.520	.367	.307
	People whose opinions I value would prefer me to travel with an environmentally responsible cruise instead of a conventional cruise.	-.104	.102	-.147	-1.014	.315	-.308	.101	.236	-.134	-.105

a. Dependent Variable: overall_willingness_to_change_something



Accumulated planning to change behaviour (dependent)
 Accumulated willingness to change (independent variables)

Descriptive Statistics

	Mean	Std. Deviation	N
overall_planning_to_change	4.5303	1.09150	66
overall_willingness_to_change_something	4.7348	.98144	66

Correlations

	overall_planning_to_change	overall_willingness_to_change_something
Pearson Correlation	overall_planning_to_change	overall_willingness_to_change_something
	1.000	.754
	.754	1.000
Sig. (1-tailed)	overall_planning_to_change	overall_willingness_to_change_something
	.	<.001
	overall_willingness_to_change_something	.
	.000	.
N	overall_planning_to_change	overall_willingness_to_change_something
	66	66
	overall_willingness_to_change_something	66
	66	66

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	overall_willingness_to_change_something ^b	.	Enter

a. Dependent Variable: overall_planning_to_change

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Sig. F Change	
					R Square Change	F Change	df1		
1	.754 ^a	.569	.562	.72204	.569	84.538	1	64	<.001

a. Predictors: (Constant), overall_willingness_to_change_something



ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.073	1	44.073	84.538	<.001 ^b
	Residual	33.366	64	.521		
	Total	77.439	65			

a. Dependent Variable: overall_planning_to_change

b. Predictors: (Constant), overall_willingness_to_change_something

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	.558	.441		1.264	.211	-.323	1.439			
	overall willingness to change something	.839	.091	.754	9.194	<.001	.657	1.021	.754	.754	.754

a. Dependent Variable: overall_planning_to_change