S P E A R H E A D I N G   S U S T A I N A B I L I T Y   IN THE TRAVEL INDUSTRY

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Duke Alumni Travels

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EXECUTIVE SUMMARY

BACKGROUND AND CONTEXT

The tourism industry is one of the fastest growing industries in the world, observing a compound annual growth rate of 6.1% from the period 1950 to 2017.[1] Concurrently, there is an evident, growing demand for *sustainable* tourism. According to one Sustainable Travel Report, 87% of travelers state that they want to travel sustainably and would be willing to pay more for these options. While the demand for these sustainable travel services grows, research demonstrates that standardized metrics for sustainable tourism have not yet evolved to support these services.[2]

SIGNIFICANCE

Duke Alumni Travels offers Duke alumni, family, and friends with enriching educational and cultural travel programs across the globe. In line with Duke University's goal to become carbon neutral by 2024, Duke Alumni Travels is leading a sustainability movement by transforming how the educational travel industry approaches and measures its environmental impact. In the interest of its educational mission and institutional commitments to sustainability, Duke Alumni Travels is eager to inform travelers about its tour operators' sustainability practices both at destinations and within their own operations.

OBJECTIVES

This Master's Project (MP) Team was formed to 1) assess and report on the sustainability practices of Duke Alumni Travels' tour operators and, 2) to provide recommendations on how to communicate these practices to Duke Alumni Travels' travelers.

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[1] Kostić, M. (2014). Importance of sustainable tourism. *Sinteza*, *15*(3), 722–725. doi: 10.15308/SINTEXA-2014-722-755
[2] Bringing Sustainable Tourism to the Masses. (n.d.). Retrieved from http://www.impacttravelalliance.org/wp-content/uploads/2018/07/Impact-Travel-Alliance-2018-Thought-Leadership-Study.pdf

BENCHMARKING SUSTAINABILITY

To develop an understanding of existing industry practices around sustainable travel, the MP Team conducted a pilot study with four of Duke Alumni Travels' major tour operators: AHI Travel International, Lindblad Expeditions, Odysseys Unlimited, and Orbridge. In order to understand these Operators' sustainability practices, the MP Team created a survey adapted from the Global Sustainable Tourism Council (GSTC) Criteria and Suggested Indicators for Tour Operators. The survey's questions were structured by the three pillars of sustainability: Environmental, Economic, and Socio-Cultural. The MP Team analyzed the survey responses to find where the Operators are focusing efforts and to highlight any potential gaps in sustainability initiatives.

MARKETING & COMMUNICATIONS

The MP Team supplemented its sustainability benchmarking research with a detailed marketing communications plan for Duke Alumni Travels. This plan outlines strategies for Duke Alumni Travels to engage its travelers on sustainability and communicate the sustainability best practices of the Operators it works with.

INDUSTRY ENGAGEMENT

The MP Team's research has been complemented by opportunities to raise awareness around the need for improved travel practices. Over this year, the MP Team has brought sustainability to the forefront of the educational travel industry by: hosting a Sustainable Travel Panel with industry leaders at NSOE (Oct. '19), and leading a Keynote Presentation about the project at the annual Educational Travel Consortium Conference (Feb. '20).

CONCLUSIONS

This Master's Project contributed to bringing sustainability to the forefront of those working in educational travel. The MP Team's findings will support Duke Alumni Travels and its Operators in addressing their greatest environmental impact areas, as well as give way to future Master's Projects.

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INTRODUCTION

BACKGROUND

As a trillion dollar business, the tourism industry represents approximately 10% of global Gross Domestic Product (GDP), 7% of global exports, and 11% of the world's employment.[3,4] The tourism industry is one of the fastest growing industries in the world, observing a compound annual growth rate of 6.1% from the period 1950 to 2017 (**Figure 1**).[5] Within that time frame, travelers spent over $1.4 trillion, and demand continues to rise as more people earn disposable incomes and consequently, it becomes easier for society to access destinations (**Figure 2**).[6] Consumer's demand for travel has been observed to grow significantly faster than their consumption of other goods and services.[7] This growth places a strain on the capabilities of the tourism industry, particularly on popular and sensitive destinations, i.e. winter and coastal locations.[8] However, there is an evident, growing demand for *sustainable* tourism, specifically. According to Booking.com's 2018 Sustainable Travel Report, 87% of travelers state that they want to travel sustainably, and would be willing to pay more for these options. One study observed that 73% of tourists are willing to pay a tax to implement sustainability initiatives at a popular travel destination in Thailand.[9] However, of those tourists that want to travel sustainably, 66% believe it is the travel industry who should be responsible for sustainability, rather than the consumer.[10] This means that key industry players, such as tour operators and travel planners, need to be leaders in integrating sustainability into their current operations. While the demand for these sustainable travel services grows, research demonstrates that

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[3] "Traveling Responsibly." *Sustainable Tourism*, sustainabletourism.net.
[4] Lenzen, M., Sun, Y.Y., Faturay, F., Ting, Y.P., Geschke, A., Malik, A. 2018. The carbon footprint of global tourism. Nature Climate Change. Vol 8: 522-528.
[5] Kostić, M. (2014). Importance of sustainable tourism. *Sinteza*, *15*(3), 722–725. doi: 10.15308/SINTEXA-2014-722-755
[6] "Traveling Responsibly." *Sustainable Tourism*, sustainabletourism.net.
[7] Lenzen, M., Sun, Y.Y., Faturay, F., Ting, Y.P., Geschke, A., Malik, A. 2018. The carbon footprint of global tourism. Nature Climate Change. Vol 8: 522-528.
[8] Ibid.
[9] Dodds, R. (2013). Will tourists pay for a healthy environment? Assessing visitors' perceptions and willingness to pay for conservation and preservation in the island of Koh Phi Phi, Thailand. *International Journal Tourism Anthropology*, *3*(1). doi: 10.1504/IJTA.2013.054407
[10] Booking global. (2018, April 17). Where Sustainable Travel is Headed in 2018. Retrieved from https://globalnews.booking.com/where-sustainable-travel-is-headed-in-2018/

standardized metrics for sustainable tourism have not yet evolved to support these
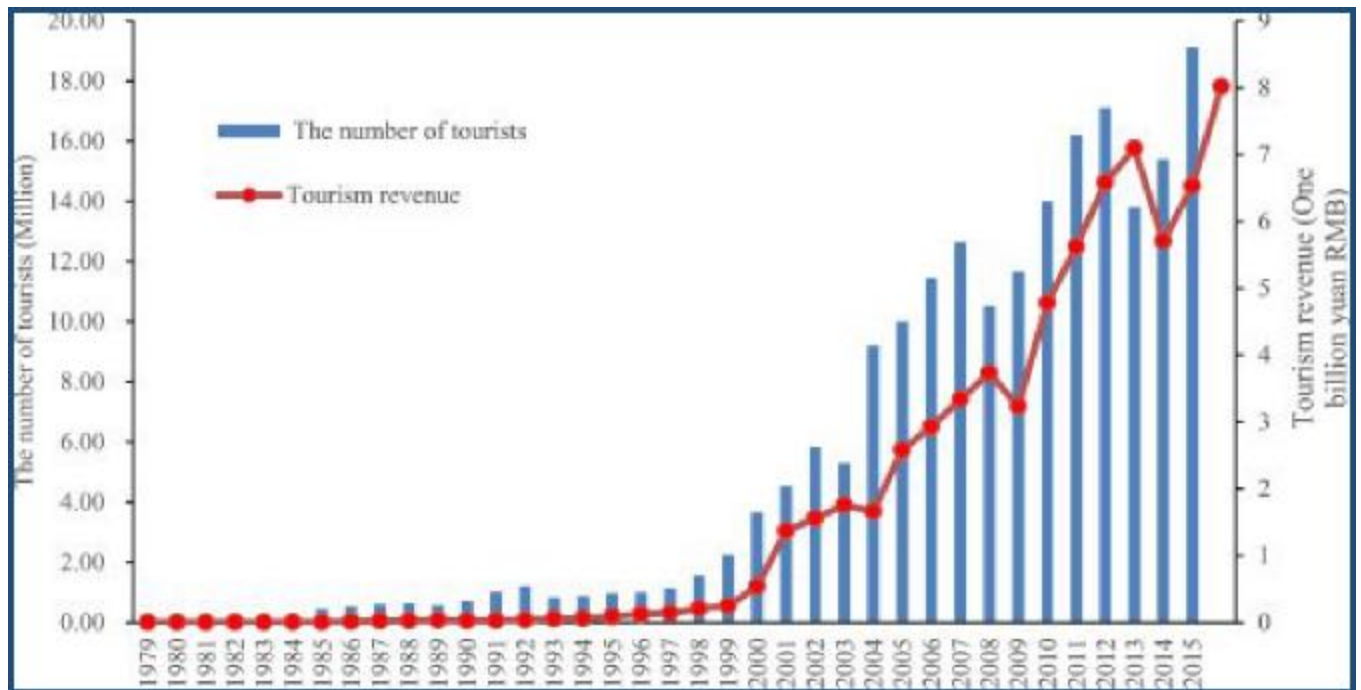
services.[11]

Figure 1. Graph demonstrating the growth of the Tourism industry from 1979 to 2015.[12]

[11] Bringing Sustainable Tourism to the Masses. (n.d.). Retrieved from
http://www.impacttravelalliance.org/wp-content/uploads/2018/07/Impact-Travel-Alliance-2018-Thought-Leadership-Study.pdf
[12] Tang, C., Zhong, L., & Ng, P. (2017). Factors that Influence the Tourism Industry's Carbon Emissions: a Tourism Area Life Cycle Model Perspective. *Energy Policy*, *109*, 704–718. doi: https://doi.org/10.1016/j.enpol.2017.07.050
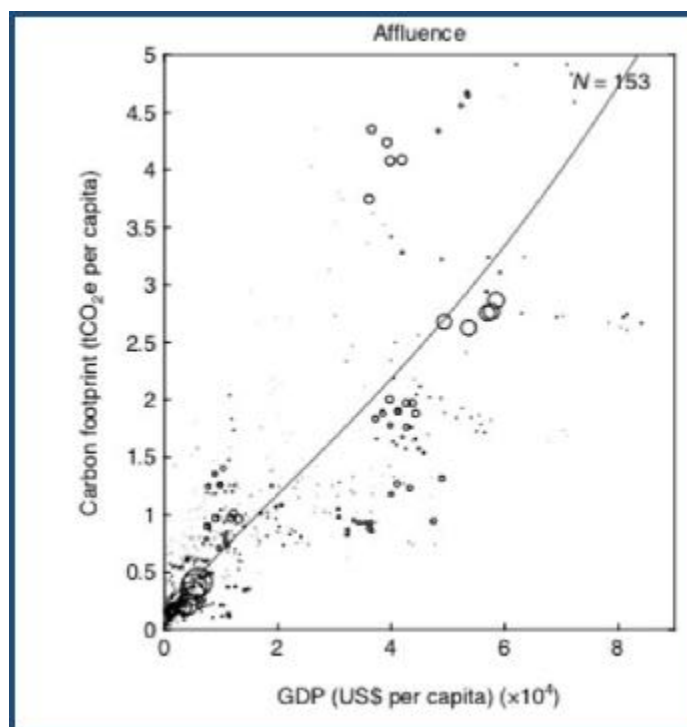
Figure 2. Affluence as a driver of the carbon footprint of global tourism[13]

It is evident that the tourism industry has a significant global impact. The scale of this economic activity and industry growth is coupled with exacerbated environmental impacts. By 2050, it is predicted that 40% of the world's carbon emissions will be generated by tourism.[14] This statistic highlights tourism as a pronounced contributor to climate change (**Figure 3**). While the WTTC, UNWTO, and other organizations have attempted to tackle this challenge through various agreements and market-based incentives, the growth of emissions remains unchecked. As an example of this, the Paris Agreement excludes at least 15% of global tourism-related emissions, as the international aviation and freight shipping are operating under non-binding reduction targets.[15]

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[13] Lenzen, M., Sun, Y.Y., Faturay, F., Ting, Y.P., Geschke, A., Malik, A. 2018. The carbon footprint of global tourism. Nature Climate Change. Vol 8: 522-528.
[14] Understanding and Governing Sustainable Tourism Mobility: Psychological and Behavioural Approaches
[15] Lenzen, M., Sun, Y.Y., Faturay, F., Ting, Y.P., Geschke, A., Malik, A. 2018. The carbon footprint of global tourism. Nature Climate Change. Vol 8: 522-528.
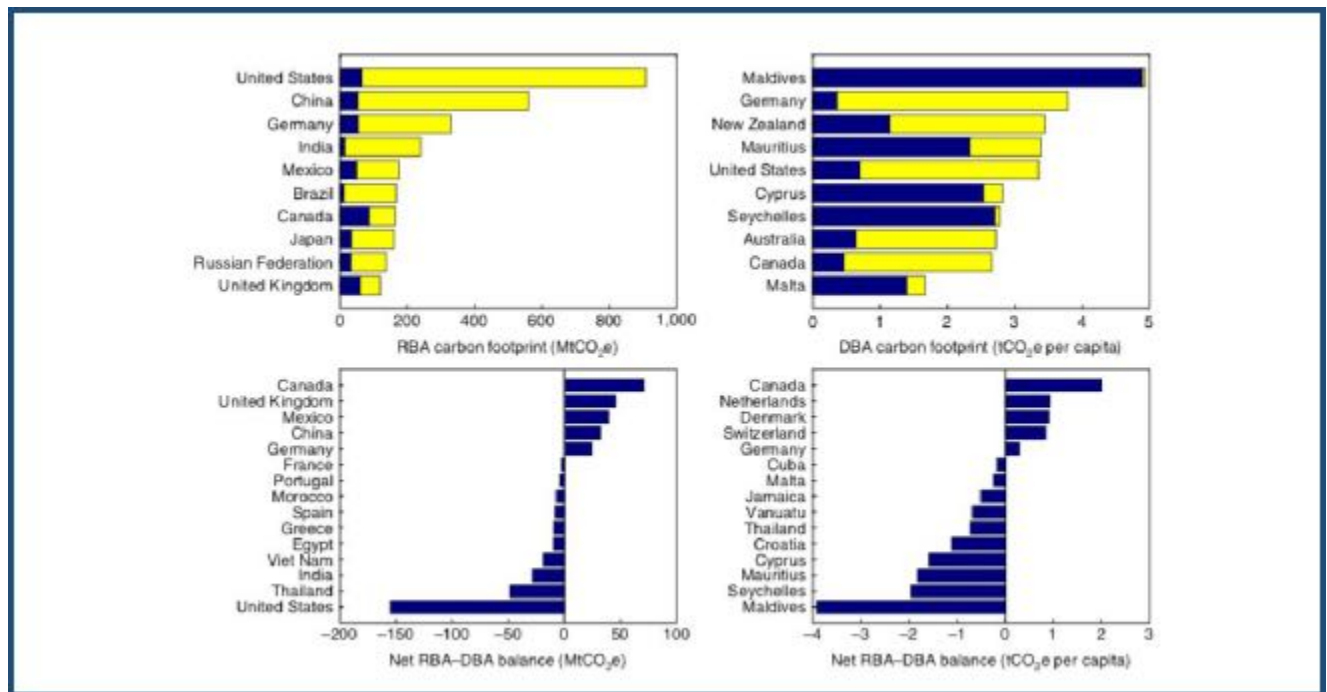
Figure 3. Carbon Footprint Measures of Top-Ranking Countries (2013).[16] The left side represents Residence Based Accounting (RBA) and the right is Destination Based Accounting (DBA). Blue is international travel and yellow is domestic travel.

One researcher conducted an emissions case study of Iceland to determine which economic sector had the biggest impact. As seen in **Figure 4**, the tourism industries emissions are growing almost exponentially. Another quantified the correlation between increased tourism arrivals in the Maldives and local emissions (**Figure 5**). In light of this, the travel industry has been largely focused on impacts of carbon emissions, and ways to mitigate these; however, global demand for tourism has largely surpassed decarbonization of tourism operations.[17]

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[16] Ibid.

[17] Ibid.
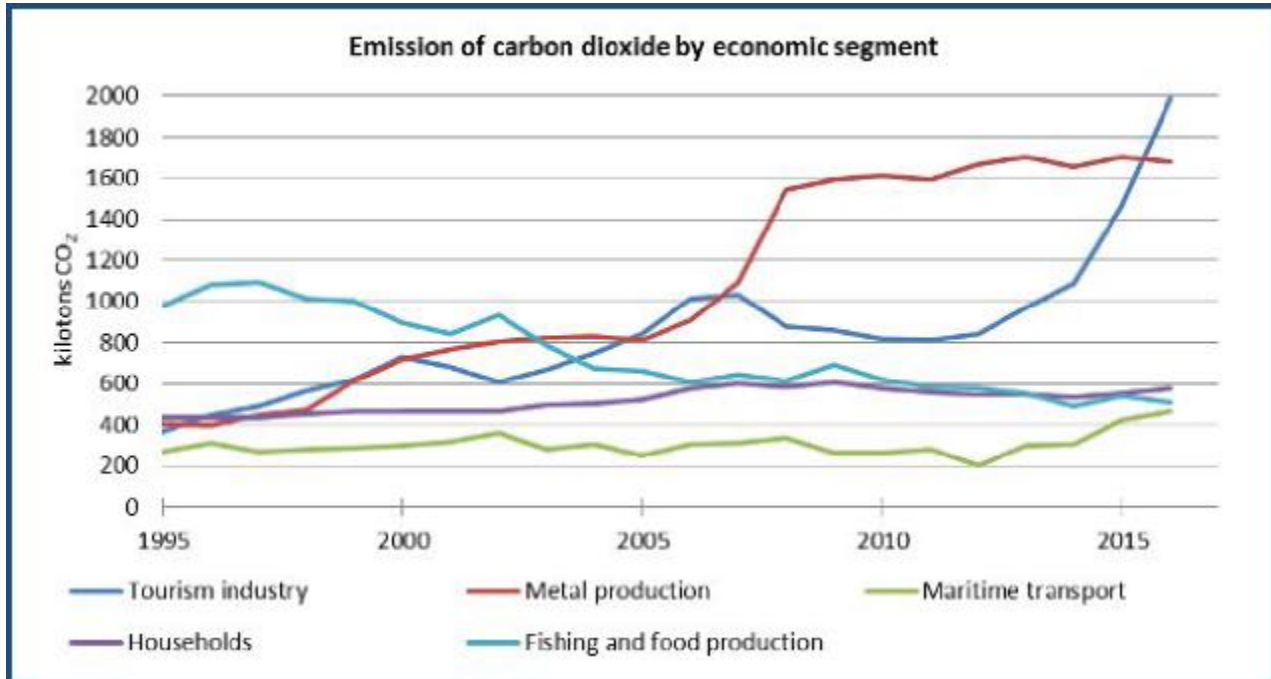
Figure 4. Largest emitting industry for Iceland[18]
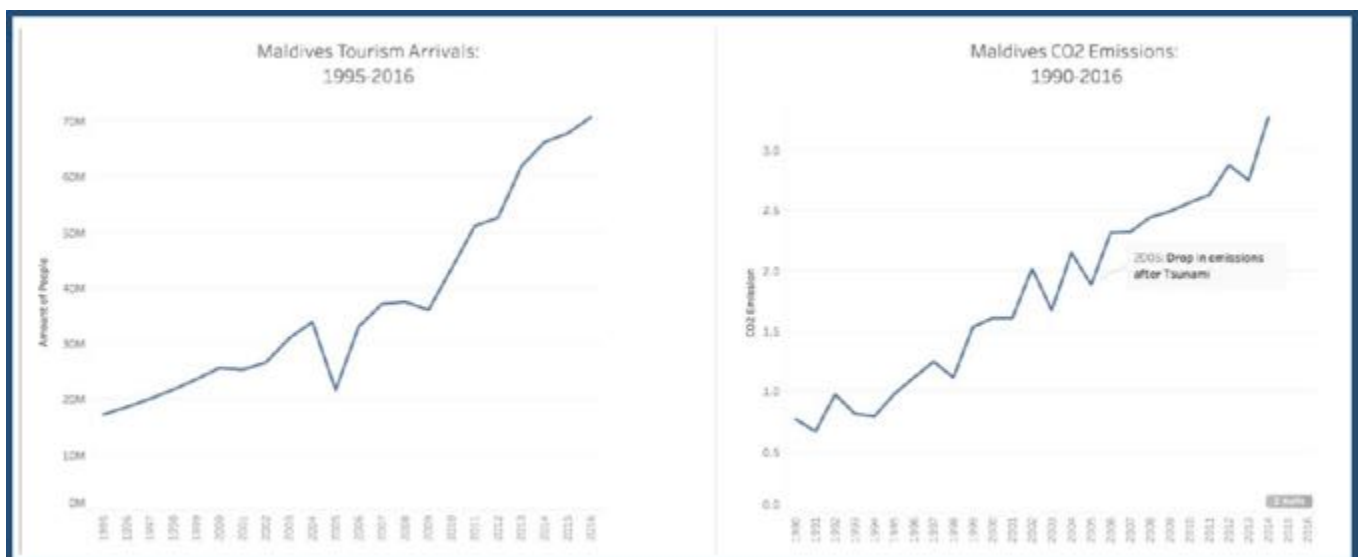
Figure 5. Correlation of Increased Tourism Arrivals to Increased Carbon Dioxide Emissions[19]

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[18] Carbon dioxide emissions from air transport increases rapidly. (2018, October 30). Retrieved from
https://www.statice.is/publications/news-archive/environment/greenhouse-gas-emission-accounts-for-the-icelandic-economy-1995-2016/
[19] Gillingham, W. (2018, May 10). The Maldivian Problem: Tourism and Its Impact on Coral Reef Systems. Retrieved from
https://medium.com/@will.gillingham/the-maldivian-problem-tourism-and-its-impact-on-coral-reef-systems-513b82
6a349f

In addition to being a significant contributor to the climate crisis, tourism can have global and local impacts on water, soil, and biota, and indirect impacts such as strain on resources, financial leakage, changing social values, and more (**Figure 6**).[20] To provide context for the scale of impact on resources, an average village of 700 individuals in a developing country uses about 500 liters of water per month. A luxury hotel room guest, in comparison, uses an average of 1800 liters of water per night. The ecosystems that support and provide for popular destination beaches, pristine waters, and breathtaking cultural sites have also been degraded and polluted by tourists. Parks and natural areas see additional impacts due to vegetation damage, soil erosion, and wildlife disturbance with limited enforcement from local authorities to protect these resources. In addition, pollution of the oceans is an ever-present issue within the tourism industry. One prominent example is the environmental degradation seen in the Caribbean. This presents a risk to local communities, natural systems, and tourism as a whole. More than 80% of the world's coral reefs are at risk, with nearly two-thirds of those being in the Caribbean. It is reported that 90% of coral reefs will die by 2050, damaging the tourism industry with it.[21] Some tourist destinations and subsectors are already affected by climate change, resulting in negative environmental impacts such as deteriorated paths to heritage sites, bleached coral reefs, and the loss of iconic scenery in place of development to support the growing tourism business.[22] This clearly defines the need to link tourism and sustainability, as the main "resources" that it uses in its business are often the most picturesque natural, cultural, and historical places in the world.[23]

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[20] Frent, Cristi. An Overview on the Negative Impacts of Tourism. Journal of tourism - studies and research in tourism. Issue 22: 32-37.

[21] Reefs at Risk in the Caribbean, WRI. (2004). Retrieved 2019, from https://www.wri.org/publication/reefs-risk-caribbean

[22] Editors, C. N. T. (2018, November 7). 15 Beloved Places Struggling With Overtourism. Retrieved from https://www.cntraveler.com/galleries/2015-06-19/barcelona-bhutan-places-that-limit-tourist-numbers

[23] Kostić, M. (2014). Importance of sustainable tourism. *Sinteza*, *15*(3), 722–725. doi: 10.15308/SINTEXA-2014-722-755
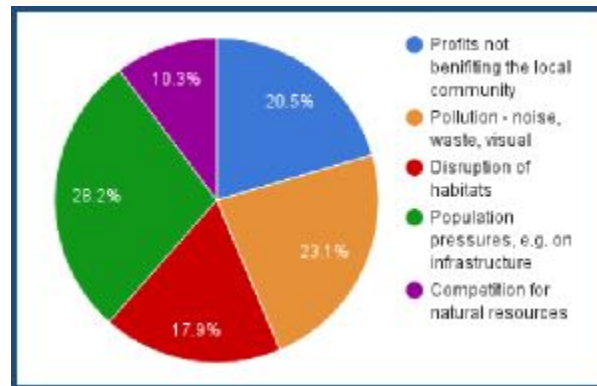
Figure 6. Local perception of the negative impacts of "ecotourism"[24]

While these negative impacts of tourism are staggering, when done correctly, tourism can provide a net positive impact. Tourism can support the environment and conservation through private reserves, community conservancies, and contributions to public protected areas. Many low-income countries have recognized that they can generate profit by setting aside undeveloped land to promote ecotourism. Integrating sustainability practices into tourism programs promotes local community development by fostering employment opportunities and makes minimal impacts on the environment and local cultures.[25] Incorporating this focus on environmental, socio-cultural, and economic sustainability into current operations recognizes the need to view the world as a connected system where one action can influence another.

The scale and diversity of environmental impacts resulting from tourism brings about the need for a standardized framework for measuring and integrating sustainability in this industry. There is a consensus that tourism growth should be sustainable, but the question of how to achieve this is still largely unknown.[26] For this Master's Project, the MP Team explored sustainability practices of four tour operators who serve Duke University's Alumni Travel Program (Duke Alumni Travels) to

[24] Public Perceptions of Ecotourism - Ecotourism or Eco-exploitation? (n.d.). Retrieved from https://sites.google.com/site/globalecotourism1/public-perceptions-of-ecotourism?overridemobile=true [25] Kostić, M. (2014). Importance of sustainable tourism. *Sinteza*, *15*(3), 722–725. doi: 10.15308/SINTEXA-2014-722-755 [26] Cai, G., Xu, L., Gao, W., Hong, Y., Ying, X., Wang, Y., & Qian, F. (2020, February 26). The Positive Impacts of Exhibition-Driven Tourism on Sustainable Tourism, Economics, and Population: The Case of the Echigo-Tsumari Art Triennale in Japan. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7084389/?tool=pmcentrez&report=abstract

benchmark best practices in the tour operator space. As seen in **Figure 7**, tour operators are central players in the tourism value chain. They serve a key role in developing the policies and actions designed to guide all of the stakeholders in the tourism value chain to make positive contributions towards achieving environmental, economic, and socio-cultural sustainability.[27] One pivotal reason that this project focused on tour operators for analysis is due to the power that they have to use their leadership roles, connections with suppliers, and direct contact with travelers to promote and implement sustainability in their own operations, while also guiding the tourism industry to adopt these practices as a whole. Tour operators are key in influencing overall industry attitudes to adopt more sustainable approaches to travel by sharing information with the goal to ultimately establish industry-wide standards.
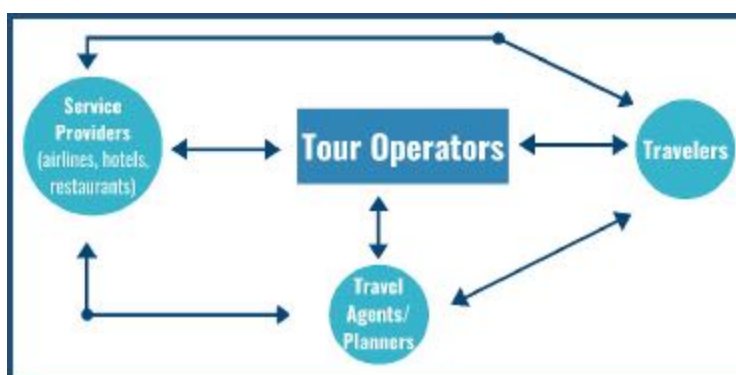
Figure 7. The Tourism Value Chain with key tourism stakeholders[28]

THE CLIENT

Duke Alumni Travels' Mission Statement

The MP Team's client, Duke Alumni Travels, plans and directs high-quality educational travel programs to strengthen the lifelong bonds and learning relationships between the University, alumni, and supporters of Duke University. Rooted in its global educational purpose, the program connects and engages them with Duke leaders, faculty, and students, and showcases Duke's global facilities and

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[27] Budeanu, Andriana. 23 December 2003. Impacts and responsibilities for sustainable tourism: a tour operator's perspective. Journal of Clean Production 13 (2005) 89-97.
[28] Ibid.

connections, while sustainably exploring and learning about the places and people visited around the world.[29]

Duke Alumni Travels' Description

Since the coordination of the first alumni trips almost 40 years ago, the Duke Alumni Travels program has grown to provide Duke alumni, family, and friends with enriching educational and cultural travel opportunities across the entire globe. Duke Alumni Travels currently hosts approximately 750 participants annually on over 45 small-group programs worldwide. Duke Alumni Travels supports the educational and global citizenship mission of Duke University. It does this by offering sustainable educational travel, accompanied by Duke faculty and leaders who augment the educational and cultural experience with a uniquely Duke perspective. Duke Alumni Travels aims to strengthen alumni loyalty and overall engagement with Duke through several initiatives, including: connecting with international alumni; connecting with students currently enrolled in Duke's Global Education and DukeENGAGE programs; providing opportunities to strengthen connections to Duke and each other by promoting fellowship for alumni, their families, and friends; providing opportunities to learn about Duke by showcasing Duke's global sites, initiatives, and faculty.

PROJECT OBJECTIVE

Duke Alumni Travels' Goal

In line with Duke University's overarching sustainability goals and commitment to becoming carbon neutral by 2024, Duke Alumni Travels is leading a sustainability movement by transforming how the travel industry approaches and measures its environmental impact.

In support of Duke's overall mission and commitment to sustainability, Duke Alumni Travels is eager to inform travelers about its tour operators' sustainability practices. Duke Alumni Travels seeks marketing materials for its travel programs that enhance

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[29] To Duke Alumni homepage. (2020, April 27). Retrieved from https://alumni.duke.edu/programs/duke-travels

its identity, showcase its value and commitment towards responsible business practices, and align with the mission of its institution. Therefore, requesting that tour operators develop and disclose their sustainability practices is both educational and responsible, and a step toward identifying what planners such as Duke Alumni Travels can do to best educate its stakeholders about sustainability initiatives on the tours it offers to alumni.

MP Team Goal and Strategy

The Nicholas School of the Environment Graduate Master's Project Team's goals are to assess Duke Alumni Travels' tour operators' sustainability practices and to provide recommendations for communicating these practices to Duke Alumni Travels' stakeholders. The MP Team conducted a pilot industry assessment of current practices and developed marketing communication strategies to disseminate information on these practices.

BENCHMARKING SUSTAINABILITY

To develop an understanding of existing industry practices around sustainable travel, the MP Team conducted a pilot study with four of Duke Alumni Travels' major tour operators: AHI Travel International, Lindblad Expeditions, Odysseys Unlimited, and Orbridge (collectively "the Operators"). In order to understand the Operators' sustainability practices, the MP Team created a survey (**Appendix A**) adapted from the Global Sustainable Tourism Council (GSTC) Criteria and Suggested Indicators for Tour Operators (**Appendix B**).[30] The survey's questions were structured by the three pillars of sustainability: Environmental, Economic, and Socio-Cultural. The MP Team analyzed the survey responses to find where the Operators are focusing efforts and to highlight any potential gaps in sustainability initiatives.

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[30] GSTC Industry Criteria for Tour Operators. (2020, March 9). Retrieved from
https://www.gstcouncil.org/gstc-criteria/gstc-industry-criteria-for-tour-operators/

OPERATOR DESCRIPTIONS

AHI Travel International

AHI Travel International (AHI) was established in 1962 as the first travel company offering programs exclusively for college and university alumni. With a strong focus on education, AHI organizes tours around the globe for numerous university alumni associations. AHI is a family business, owned and operated by the Small family, and is based in Chicago, Illinois.[31]

Lindblad Expeditions

Lindblad Expeditions (LEX) was founded in 1966 when Lars-Eric Lindblad led the first-ever citizen-explorer expedition to Antarctica. LEX invented the category of expedition travel and has since been creating adventure cruise expeditions across the globe. Today, the founder's son, Sven-Olof Lindblad, is now President and CEO of LEX and continues to champion the company's commitment to conservation and responsible travel. Lindblad Expeditions has recently received recognition for its commitment to environmental stewardship and geographic education. The company is based out of New York, NY.[32]

Odysseys Unlimited

Founded in 1989, Odysseys Unlimited creates custom tours for non-profit organizations and academic institution alumni groups, such as Duke Alumni Travels. Odysseys Unlimited is headquartered in Newton, Massachusetts, and specializes in small-group escorted tours at destinations around the globe. Odysseys is a six-time honoree for Travel + Leisure's World's Best Tour Operators Award.[33]

Orbridge

Since its founding in 2008, Orbridge has been a provider of educational travel programs to 140+ alumni associations across the United States. Orbridge specializes in a variety of intimately-sized programs, from small ship explorations to specialty

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[31] Magical Moments. (n.d.). Retrieved April 15, 2020, from https://ahitravel.com/

[32] Adventure Cruises With Lindblad Expeditions. (n.d.). Retrieved April 15, 2020, from https://www.expeditions.com/

[33] Odysseys Unlimited: The Small Group Travel Experience -. (n.d.). Retrieved April 15, 2020, from https://odysseys-unlimited.com/

land programs that span the globe. Toward its commitment to the environment, Orbridge has joined an annual reforestation program and is continuing to evolve its sustainability efforts.[34]

DEFINING SUSTAINABILITY

The MP Team assessed the Operators practices' according to the United Nations World Tourism Organization's (UNWTO) definition of sustainable tourism: "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.[35] This definition was the basis of the MP Team's assessment process described below.

SURVEY

The MP Team developed a Sustainable Tourism Survey (**Appendix A**) for Operators to self-report their sustainability actions and achievements. The Survey questions were adapted from criteria established by the Global Sustainable Tourism Council for Tourism Industry (GSTC-I / GSTC H&TO v3) (**Appendix B**). These criteria are widely recognized in the industry and align with the UNWTO definition of sustainability, incorporating economic, environmental, and socio-cultural criteria. The GSTC criteria are a publicly available online resource, increasing accessibility and opportunity for other organizations to also assess sustainability guidelines. After further discussion with Randy Durband, Chief Executive Officer of the GSTC, the Team concluded that choosing to follow the critieria's guidance would be the most comprehensive approach for assessing the sustainability practices of the Operators. The Survey, created using Cognito Forms, included:

- Three sections, one for each sustainability pillar: Environmental, Economic, and Socio-Cultural;
- A total of 61 multi-part questions to address each of the three sustainability pillars;

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[34] Homepage. (n.d.). Retrieved April 15, 2020, from https://orbridge.com/
[35] Sustainable tourism .:. Sustainable Development Knowledge Platform. (n.d.). Retrieved from https://sustainabledevelopment.un.org/topics/sustainabletourism

- The functionality to attach any pertinent documents (i.e. sustainability reports, supply chain codes of conduct, trip guides, waste tracking spreadsheets, marketing materials, etc.).

The MP Team distributed the survey to each of the four Operators. After responses were received, multiple follow-up conference call meetings were held to answer questions and gather additional information.

DATA ANALYSIS

From the survey responses, qualitative data analysis was conducted by importing the transcripts and supporting documents into NVivo 12, a well-recognized qualitative and mixed-methods data analysis software created by QSR International. This software allowed the MP Team to store, visualize, categorize, and analyze all of the survey responses, resulting in a thematic multi-case study analysis. There were three overarching objectives for data management and interpolation during this analysis:

1. The first objective was to identify a thematic framework for the coding process, which included parsing out the main themes of the survey using the GSTC criteria as a guiding reference.
2. The second objective was to code the survey responses by categorizing the Operators' responses into the main themes identified.
3. The final objective was to chart and summarize findings, which highlighted themes where each both Operators excelled and where they had gaps in sustainability practices.

Although the results of this study are only applicable to the four participating Operators, the technique used can be extrapolated to the industry as a whole.

Methodology for Developing Themes

The first step in analyzing survey response data was an exploratory analysis of the most prevalent sustainability "themes" (**Appendix C**) that were discussed in the completed surveys. From this exploratory analysis, a hierarchical coding scheme was established. The MP Team identified four overarching parent-level themes in

accordance with the GSTC criteria: *Operational Sustainability, Economic Sustainability, Environmental Sustainability,* and *Socio-Cultural Sustainability.* More specific sustainability sub-themes (i.e. *Greenhouse Gas Reduction*, *Executive Support*, and *Cultural Heritage*) were categorized under each of the parent-level themes (**Table 1**).

Table 1. Parent-Level Themes of Operator Surveys and respective sub-themes.

Parent-Level Themes	Sub-Themes
Operational Sustainability	- Destination Committees - Education - Equality - Executive Support - Office - Policies & Standards - Reporting - Sustainability Team
Economic Sustainability	- Community Development - Local Employment - Support of Local Business
Environmental Sustainability	- Biodiversity, Wildlife, & Natural Areas - Greenhouse Gas Reduction - Energy - Food - Overcrowding - Waste - Water
Socio-Cultural Sustainability	- Cultural Heritage - Frameworks - Local Relationship Management

The parent-level themes and sub-themes were then developed into a final list and designated as "codes" in NVivo to be used for further analysis. By categorizing survey responses into these themes, the MP Team was able to identify the most prevalent sustainability themes referenced both within and across the four survey responses.

The MP Team members coded each of the four surveys in NVivo through asynchronous collaboration. In order to ensure that each Team member coded the survey using the same criteria and guidelines, the Team performed an inter-rater

reliability assessment. Inter-rater reliability (IRR) is defined as the degree of agreement among raters.[36] IRR measures the extent to which each data collector assigns the same score or value to the same variable.[37] To test for inter-rater reliability, the MP Team members independently coded one operator's survey response into the predetermined themes based on individual interpretation. The coding comparison query function in NVivo was used to compare the coding and identify discrepancies. A percentage agreement, calculated as the number of units of agreement divided by the total units of measure within the data item and displayed as a percentage, was used to ensure consistency between individual coding strategies (**Figure 8**).

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[36] Galloway Emily P., Johnston, William. March 1, 2013. "Inter-Rater Reliability." Harvard Graduate School of Education.
https://www.slideserve.com/albany/inter-rater-reliability
[37] McHugh, Mary L. October 15, 2012. "Interrater reliability: the kappa statistic." Biochem Med (Zagreb). 22(3): 276-282.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900052/

Figure 8. *Example of Coding Comparison output conducted between two MP Team members in Nvivo. The "Kappa" and "Agreement" column were what was used to guide discussion around alignment.*

The literature generally recommends 80% agreement as the minimum acceptable inter-rater agreement percentage.[38] The MP Team used a conservative User Percent Agreement with a threshold of 95%, in line with standardized best practices.[39] From this threshold, discrepancies were found with values that fell below 95% user agreement. To further enhance the MP Team's coding strategies, we examined agreement discrepancies using the Kappa Statistic (**Appendix D**). Any themes with a Kappa statistic lower than 0.8 was further examined. Once the 95% User Percent Agreement and 0.8 Kappa statistic thresholds were met for each theme, each Team member individually coded one of the three remaining Operator survey responses.

Direct and Indirect Operator Activity

In addition to being coded into respective sustainability sub-themes, survey responses were categorized as *Operator's **Direct** Operations* or *Operator's **Indirect** Operations*. *Operator's Direct Operations* included actions or initiatives that the Operator had direct control over, such as purchasing carbon offsets to reduce greenhouse gas emissions. *Operator's Indirect Operations* consisted of actions or initiatives that were performed by the Operator's suppliers, such as water-saving technologies that the Operator's partner cruise line had invested in. By making this distinction, the coding strategy accounted for the fact that a substantial percentage of the sustainability initiatives referenced in survey responses were due to the efforts of suppliers. It was then possible to visualize which sustainability initiatives existed based on 1) activities the Operators had direct control over vs. 2) which activities were controlled by suppliers. It is important to note that the MP Team interpreted an Operator's *explicit* preference towards suppliers based on their commitments to sustainability as *Direct Operator Operations*.

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[38] McHugh, Mary L. October 15, 2012. "Interrater reliability: the kappa statistic." Biochem Med (Zagreb). 22(3): 276-282. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900052/
[39] Run a Coding Comparison query. (n.d.) Retrieved from http://help-nv11.qsrinternational.com/desktop/procedures/run_a_coding_comparison_query.htm

Operator Activity and Quality Scores

To enhance the quality and understanding of the survey responses, two additional parent-level themes were developed: *Operator Activity* and *Quality Score*.

The *Operator Activity* theme was created following the development of the overarching themes. This designation allowed the MP Team to categorize the Operators' sustainability initiatives as something the Operator is 1) currently 2) undertaking, 3) a goal for the future, or 4) a gap in the Operator's activity (**Table 2**).

Table 2: Operator Activity Rubric. The following Operator Activity Rubric was used to categorize Operators' stances on sustainability initiatives.

Activity	Definition	Examples from the Survey
Currently Looking At	The Operator has implemented and is executing actions to improve sustainability in regard to the theme being discussed.	"For the last five years, we have published an annual [Operator] Traveler Impact Report." "Our provisions planning is very specific. Due to the areas where we travel, some items are shipped while the majority are sourced with local purveyors. In any port where there is a food market, we encourage our chefs to buy locally."
Goal for the Future	The Operator has designated goals to improve sustainability in regard to the theme being discussed.	"Our next steps include eliminating single-use cups, plates, and bowls." "We are actively seeking ways to reduce our carbon footprint." "We will be offering a carbon offset program to our passengers in 2020."
Gap in Activity	This is something that the Operator either has no data on, or they have not considered this sustainability theme.	Q: Are any of your company's buildings (at destinations or offices) LEED certified? A: "This is unknown at our home office, and we do not own any buildings abroad." Q: What goals are in place for minimizing energy use? A: "No specific goals." "Auditing is not a formal process."

The survey responses were weighted by creating a *Quality Score* metric to account for varying levels of ambition, robustness, and effectiveness of sustainability actions and commitments (**Table 3**).

Table 3: Quality Score Rubric. The MP Team used the following Quality Score Rubric to categorize Operator initiatives according to SMART criteria: Specific, Measureable, Achievable, Relevant, and Time-bound.

Score	Definition	Examples from the Survey
1	The Operator has implemented Specific, Measureable, Achievable, Relevant, and Time-bound actions or goals to improve sustainability.	"In June 2019 we made the decision to become a 100% carbon neutral company, retroactive to January 1, 2019. We did some estimates of what our annual GHG emissions will be and will do our actual calculations for 2019 during Q1 of 2020 to ensure an accurate accounting of all 2019 activity. We anticipate offsetting between 50,000-60,000 MT for 2019...All projects are aligned with the UN's Sustainable Development Goals and contribute to combating climate change and helping ensure that the planet is on pace to limit global warming to 1.5 degrees celsius as set forth by the Paris Agreement."
2	The Operator has implemented actions to improve sustainability. The actions or goals may not be Specific, Measureable, Achievable, Relevant, or Time-bound.	"We worked with our hotel to educate our passengers in advance of arrival about the importance of conserving water use." "As an estimate, 20-30% of our suppliers use some form of renewable energy." "[Operator] provides guests with refillable water canteens to avoid using bottled water during tours."
3	The Operator recognizes the need for sustainability, but either has not put actions in place or the actions are not Specific, Measureable, Achievable, Relevant, or Time-bound.	"Our overall goal as a company is to always make an effort to be green or become greener, from our daily office habits and company lunches, to our best practices and outreach to guests." "Recycling on trips is done when available."

NVivo Queries

Once the surveys were appropriately coded into themes, the MP Team ran Matrix Coding, an analysis tool in NVivo. This query creates a table output representing the

number of references coded for by the MP Team within each respective sustainability parent-level and sub-theme (**Figure 9**).

This analysis was run for all of the parent-level themes (*Operational*, *Economic*, *Environmental*, and *Socio-Cultural*) and their respective sub-themes, and then cross-compared with the newly combined *Operator Activity* and *Quality Scores* (**Figure 9**). In addition, tables were created to reference *Indirect Operator Operations* and their respective *Quality Scores*, representing the activity of each of the Operator's suppliers. The resulting tables of survey response data for each Operator were then exported to Microsoft Excel for further analysis.
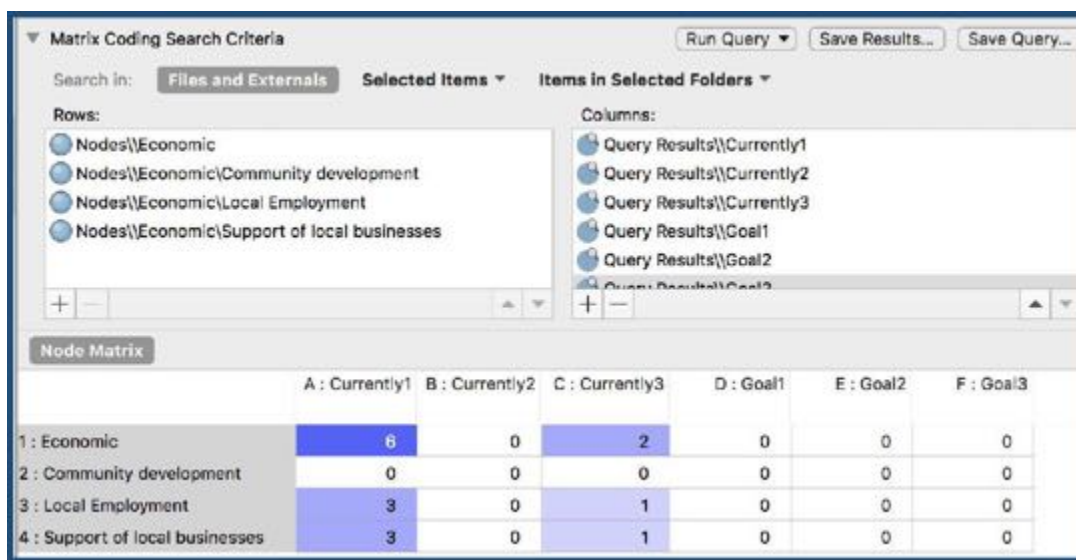
Figure 9. Example of Matrix Coding input and output in Nvivo.

Weighting and Scorecard Creation

To visualize survey responses and determine strengths and gaps for each Operator, the MP Team carried out several weighting methodologies on the number of references within each theme, ultimately producing a score for each Operator within each theme.

Survey questions were first categorized by themes, such that each theme had a corresponding number of questions asked within that topic. For example, seven survey questions were asked that were relevant to the *Greenhouse Gas Reduction* theme. (**Appendix E**).

The survey response data were then weighted following two methodologies. The first step weighted the number of references according to the number of questions asked in the survey within each theme. This weighting accounted for the unbalanced number of survey questions per theme. For example, there were 34 questions asked in the Environmental Sustainability section, and only nine questions asked in the Economic Sustainability section. By weighting the data by number of questions asked per theme, Operators that referenced themes more often than were asked by the survey received higher scores for that theme (indicative of their level of activity in that area). This weighting system also resulted in Operators that answered "No" or failed to answer the relevant survey questions to receive a score of '0' in the corresponding theme (**Appendix F**).

The second weighting methodology accounted for the varying quality in sustainability initiatives. Each score was weighted according to the average *Quality Score* the Operator received for the theme. An average *Quality Score* of 1 would result in a 0% decrease in the respective theme's score; an average *Quality Score* of 2 would result in a 50% decrease in the respective theme's score; an average *Quality Score* of 3 would result in a 66% decrease in the respective theme's score. Scores within each theme had a lower limit of 0 and no upper limit.

Operators' final weighted scores for each theme were summarized in Operator Scorecards (**Appendix F**). The Operator Scorecards were used to develop the visual representation of sustainability initiatives in the Operator Reports section below.

OPERATOR REPORTS

Each of the four Operators received an "Operator Report," detailing their respective results and recommendations by the MP Team. The following "Background" and "Survey Overview" sections were included in each Operator Report:

Background

[Operator Name], [short description of the Operator, i.e. an educational travel company], partnered with Duke Alumni Travels and a group of Master of Environmental Management students from the Duke Nicholas School of the Environment to assess its sustainability practices. It did so by carrying out a comprehensive survey developed by the graduate students, with questions adapted from criteria established by the Global Sustainable Tourism Council (GSTC). In choosing to join this project, along with three of Duke Alumni Travels' other operators, [Operator] is serving as a thought leader which has taken initiative to not only report on its achievements, but recognize and act on areas where it can improve its practices.

Survey Overview

To produce the results shown below, survey questions and responses were organized into various themes (Community Development, Greenhouse Gas Reduction, Executive Support, etc.). For each of these themes, Operators received a score based on two criteria: 1) the level of activity or commitment to initiatives in that category, and 2) the quality of those activities and initiatives. It is important to note that the scores below are based entirely off of what information was made available in survey responses. It may not be all-encompassing of what each company is working on in terms of sustainability. For more information on the methodology used to develop these results, please review the Master's Project Report "Spearheading Sustainability in the Travel Industry."

Each of the sections below will cover 1) examples of what Operators are currently working on, any commitments made, and gaps in activity, as well as 2) the MP

Team's recommendations to improve the Operators work within each pillar of sustainability.

AHI Travel International Results
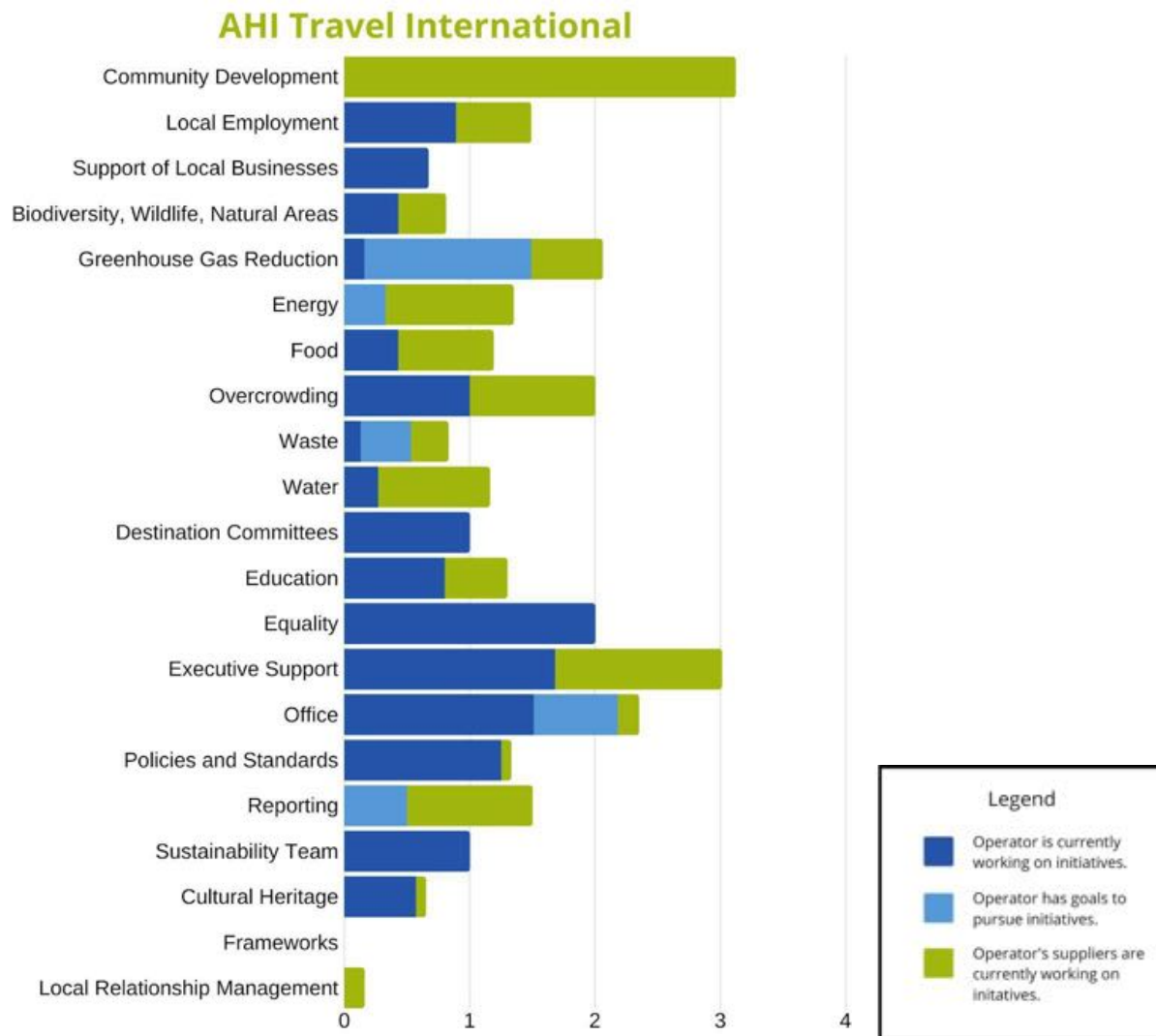
Figure 10. Demonstrates the scores AHI received in each respective Sustainability sub-theme, as determined from AHI's responses to the Sustainable Tourism Survey.

Environmental Sustainability
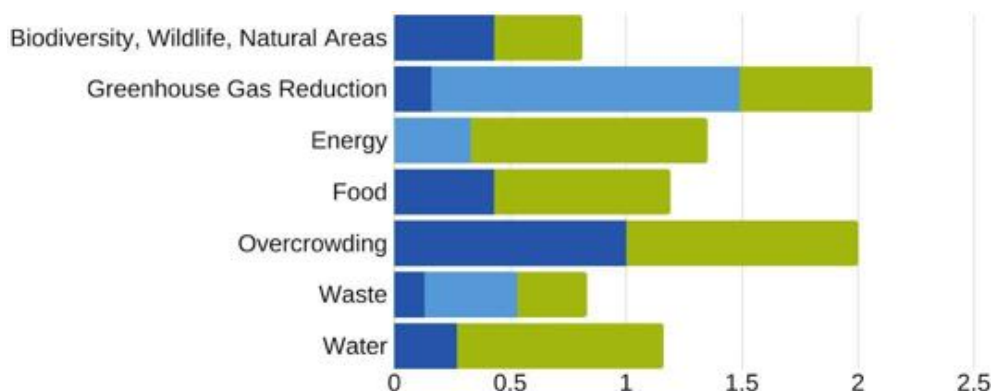
Figure 11. Demonstrates the scores AHI received in each respective Environmental Sustainability sub-theme, as determined from AHI's responses to the Sustainable Tourism Survey.

AHI indicated current initiatives in all Environmental Sustainability themes apart from Energy. AHI also reported goals pertaining to the following themes: Greenhouse Gas Reduction, Energy, and Waste. Furthermore, AHI identified supplier activities in all Environmental Sustainability themes.

It was apparent through its survey responses that AHI recognizes the impact of overcrowding on destinations, and focuses on catering towards small group sizes and traveling during the serene season. Consideration was given to the capacity of sites and the levels of pressure on those sites in determining AHI's group size and timing of visits. By traveling in the "serene seasons" and with smaller groups, AHI helps to alleviate pressure on natural areas. To augment AHI's existing overcrowding practices, further consideration should be given to the frequency of tourist visits.

AHI mentioned several Environmental Sustainability goals, including offering carbon offsets to passengers, using motor coaches that run on renewable fuels, and researching systems to reduce single-use plastic (particularly water bottle) consumption.

> *"We will be offering a carbon offset program to our passengers."*

"Energy goals include increasing the use of electric or clean fuel motorcoaches."

Overall, AHI was ambitious in setting goals; it was apparent from survey responses that AHI understands what "sustainable" practices can encompass. In addition to its own sustainable objectives, AHI intentionally partners with suppliers who adhere to notable sustainability practices. Those detailed in AHI's survey responses include suppliers who are working to eliminate plastic straws on river cruises and hotels, emphasizing fuel and energy efficient transportation (river cruises, motorcoaches), and composting/recycling close to 100% on river cruises or up to 90% in hotels..

Socio-Cultural Sustainability

Figure 12. Demonstrates the scores AHI received in each respective Socio-Cultural Sustainability sub-theme, as determined from AHI's responses to the Sustainable Tourism Survey.

Of the Socio-Cultural Sustainability themes, AHI only indicated current activities pertaining to Cultural Heritage. AHI reported that it does not currently use frameworks to monitor its socio-cultural impact, and there was no indication of any specific goals within Socio-Cultural Sustainability. AHI also indicated that it relies on its suppliers for Local Relationship Management.

AHI emphasized that most of its programs feature the cultural diversity of destinations, with all of them containing a culinary component.

"[Showcasing cultural heritage] is part of experiencing a locale. Each of our trips contains a culinary component. This can be a trip to the food market with a local chef, a cooking demo or class cooking local cuisine with local products."

Despite AHI's strong commitment to cultural heritage, it did not report any formal feedback mechanisms for local communities and indicated an overall lack of documentation around local relationships.

AHI indicated that it does not have existing measures to document its connections with local and indigenous communities. Any connection and information sharing is relied on by its suppliers. Furthermore, there is no formal mechanism in place to encourage honest sharing and feedback from local communities to ensure a mutually beneficial relationship.

> *"...locals concerned with over tourism let their local leaders know of their displeasure but most realize the local economy is somewhat dependent on tourism money."*

In order to implement relevant and beneficial initiatives around cultural heritage, AHI must ensure that there is first an emphasis on building relationships with local communities. Using frameworks (such as the UN Sustainable Development Goals or others) to guide the development of initiatives is one key way that AHI can position itself to implement effective Socio-Cultural Sustainability strategies.

Economic Sustainability
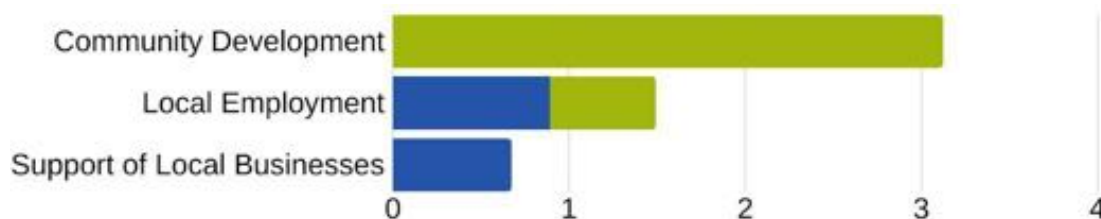
Figure 13. Demonstrates the scores AHI received in each respective Economic Sustainability sub-theme, as determined from AHI's responses to the Sustainable Tourism Survey.

100% of reported Community Development initiatives are conducted by AHI's suppliers. While working with credible suppliers can be advantageous and expand AHI's reach, it is important that AHI additionally take direct responsibility for the economic sustainability of its destinations. There was a lack of evidence in survey responses pertaining to AHI's direct involvement in Community Development initiatives.

Working with ships, hotels, and other suppliers which prioritize sustainability is crucial, and demonstrates AHI's interest in sustainable practices. As a tour operator, AHI is a pivotal player in driving this change across its other suppliers. Formal documentation around supply chain sustainability policies can add credibility to AHI's existing practices.

Of the Economic Sustainability initiatives AHI directly supports, there is particular emphasis on trips to local markets and supporting local businesses. Notably, AHI was able to provide data on the proportion of family-owned vs. large international hotels it visits on trips.

> *"Of the hotels we use around the world for 2020, 29 are family-owned or owned by a small local business group. 35 hotels are part of large chains of hotels, but many chain properties can be affiliated with the chain but run by a local management group. An estimate for how many are run by a local group would be at least 50%."*

Despite the availability of quantitative information, there was no apparent official documentation around AHI's preference for working with locally-owned businesses, further demonstrating the opportunity to formalize existing practices.

Operational Sustainability (at Home Office)
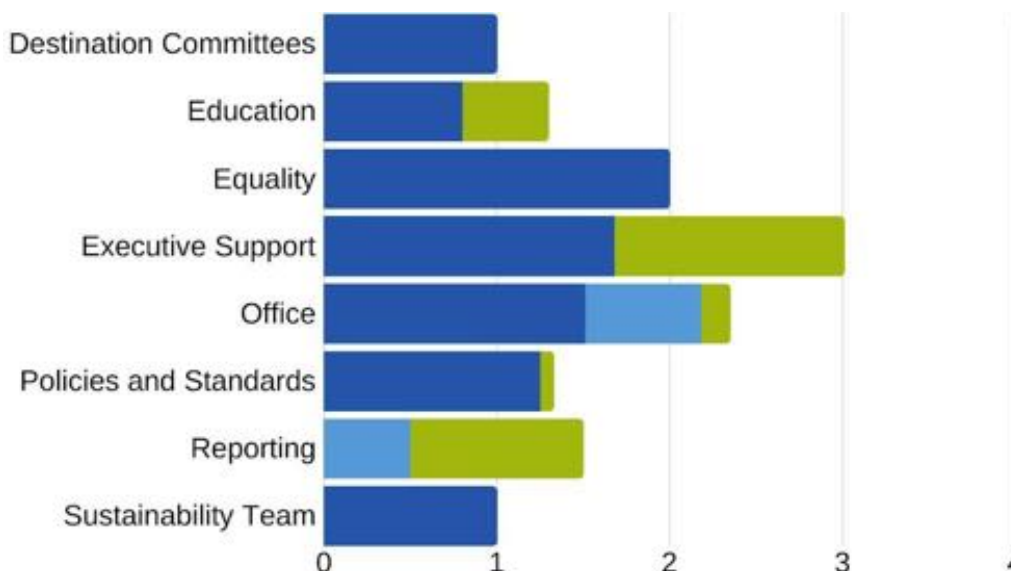
Figure 14. Demonstrates the scores AHI received in each respective Operational Sustainability sub-theme, as determined from AHI's responses to the Sustainable Tourism Survey.

Executive Support is key to implementing change, both through direct operations and at destinations and with suppliers. As a member of the USTOA and a founding member of Tourism Cares, AHI has demonstrated the executive support needed to implement sustainable practices.

AHI reported its current sustainability team consists of a conglomeration of roles throughout the company, including members from Product Development, Marketing, Sales, and company owners. Forming this team is a powerful step in AHI's sustainability journey, and exemplifies AHI's interest in integrating sustainable practices into its overall company strategy. Dedicating a team of people to such sustainability work can streamline efforts, ensure that resources are applied to priority areas, and advance the ambition of AHI's sustainability initiatives. Continuing and advancing the work of this team will be imperative to conducting the annual report that AHI has planned for 2020.

In order to maintain a holistic approach to sustainability, it can be tremendously beneficial to adopt a framework, i.e. aligning with the GSTC Criteria, UN Sustainable

Development Goals, or UN Global Compact 10 Principles. According to the UN Global Compact, "Corporate sustainability starts with a company's value system and a principles-based approach to doing business...By incorporating the Ten Principles of the UN Global Compact into strategies, policies and procedures, and establishing a culture of integrity, companies are not only upholding their basic responsibilities to people and planet, but also setting the stage for long-term success."[40]

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[40] The Ten Principles: UN Global Compact. (n.d.). Retrieved April 15, 2020, from
https://www.unglobalcompact.org/what-is-gc/mission/principles

Lindblad Expeditions Results
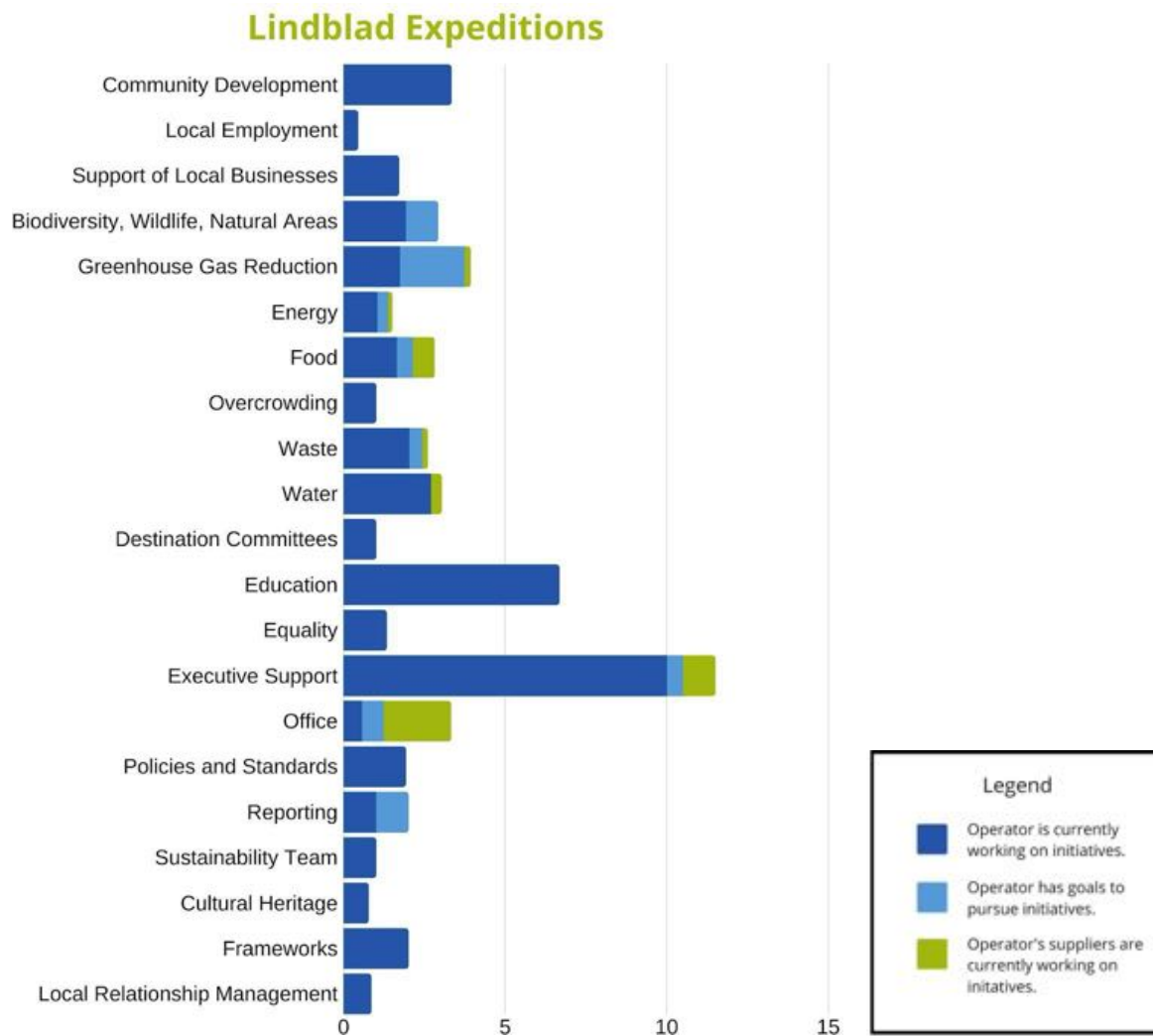
Figure 15. Demonstrates the scores Lindblad received in each respective Sustainability sub-theme, as determined from Lindblad's responses to the Sustainable Tourism Survey.

Environmental Sustainability
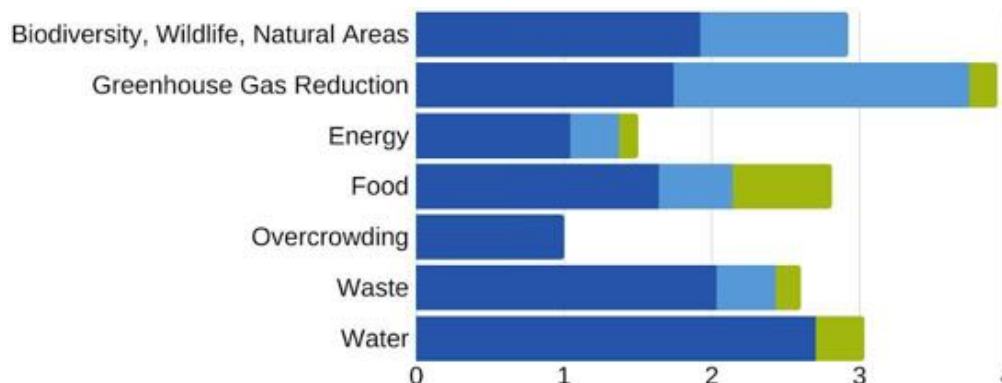
Figure 16. Demonstrates the scores Lindblad received in each respective Environmental Sustainability sub-theme, as determined from Lindblad's responses to the Sustainable Tourism Survey.

Lindblad's commitments to carbon neutrality were both apparent throughout its survey responses and considered to be progressive when compared to the current industry landscape. Lindblad has exemplified its ability to set ambitious climate targets and has demonstrated tremendous initiative to achieve those targets. Its commitment to carbon reduction is backed by a robust, metrics-based understanding of its carbon footprint.

> *"In June 2019 we made the decision to become a 100% carbon neutral company, retroactive to January 1, 2019. We did some estimates of what our annual GHG emissions will be and will do our actual calculations for 2019 during Q1 of 2020 to ensure an accurate accounting of all 2019 activity. We anticipate offsetting between 50,000-60,000 MT for 2019...All projects are aligned with the UN's Sustainable Development Goals and contribute to combating climate change and helping ensure that the planet is on pace to limit global warming to 1.5 degrees celsius as set forth by the Paris Agreement."*

Lindblad referenced that "*after [its] first year as a fully carbon neutral company, [it] will look at all sources of emissions (Scope 1, 2, and 3) from [its] data calculations and put together a plan for reducing the overall emissions of the company.*" This commitment exemplifies that Lindblad has taken the steps towards understanding its baseline in order to set informed goals for reduction. Science Based Targets Initiative (SBTi) can help guide Lindblad through this commitment as they transition to a low-carbon economy. These efforts have been reiterated by the UN Global

Compact, who has made the following call-to-action: "In light of the latest climate science and in the lead up to the Summit, the UN Global Compact calls on all companies to set their science-based targets with a new level of ambition — one that aligns with 1.5°C pathways. This is important, as such guidance helps companies understand how their scope 3 targets are affected by the new climate science."[41]

Lindblad stated that it is difficult to provide the estimated percentage of food purchased from sustainably certified suppliers in any meaningful or accurate way, as it *"works in dozens of different regions, with many different suppliers."* In regards to the following question, "Are you aware if your company's suppliers have a system to manage food waste?", Lindblad noted it provides most meals aboard the vessels, so it does not regularly work with suppliers on food waste issues. Sourcing these meals locally minimizes transportation emissions, enhances a greater understanding with and connection to the local cultures and communities, ensures the well-being of livestock, and confirms the safety of the food, among other things. Lindblad currently follows specified guidelines (i.e. Monterey Bay Aquarium's Seafood Watch Program, WWF Seafood Guide, MSC). The survey also detailed that the majority of provisions are sourced with local purveyors.

When relying on suppliers, it is imperative for Operators to both be aware and monitor the systems and certifications that its suppliers have in place. According to the UNFAO, 30% of food is wasted globally across the supply chain, contributing 8% of total greenhouse gas emissions. Beginning to tackle food waste challenges starts with understanding the breadth of Lindblad's impact through conducting a food waste audit. Using the EPA Food Waste Hierarchy, kitchens and front-line staff can be trained to manage and reduce food waste. There are many ways this can be done: manually tracking the amount, reason, and ultimate cost of the food waste in bins (How to Conduct a Food Waste Audit[42]; Why and How to Measure Food Loss and

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[41] How to Set Science-Based Target: UN Global Compact. (n.d.). Retrieved April 15, 2020, from https://www.unglobalcompact.org/academy-ungc/post-session-four

[42] How to Conduct a Food Waste Audit. (2015, July). Retrieved April 15, 2020, from http://www.hccrems.com.au/wp-content/uploads/2016/02/lfhw_how-to-conduct-a-food-waste-audit_factsheet_final1.pdf

[Waste](#)[43]), or by partnering with organizations to track through the use of technology ([LeanPath Food Waste Tool](#)[44]). By gathering this information, Lindblad will be able to not only develop a baseline understanding of its food footprint, but ultimately reduce its impact by focusing efforts on large waste impact areas.

Carbon footprints can be further reduced by developing a better understanding of the entire food value chain and by prioritizing plant-based foods. This can be accomplished through aligning food practices aboard fleets and in the galley with the IPCC Report on Climate Change and Land[45] and the EAT-Lancet Commission on Food, Planet, Health.[46] Others in the industry, such as Hurtigruten, have partnered with the EAT Foundation to "reduce food waste, expand menus, and give guests the opportunity to choose more plant-based cuisine." This Norweigan cruise line has been offering three-course vegan menus since 2017 and has also "previously abandoned industrially processed food and removed endangered species from all menus."[47]

While Lindblad did indicate it was looking into options for recycling, the survey response did not specify what these options are, which locations they are working in, nor a timeline in which they hope to implement better practices. LEX recycles aboard its fleets to the fullest extent possible, based on location, and stated: *"In locations where recycling is challenging, we are working to institute better options."*

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[43] Why and How to Measure Food Loss and Waste: A Practical Guide. (2019, March). Retrieved April 15, 2020, from http://www3.cec.org/islandora/en/item/11814-why-and-how-measure-food-loss-and-waste-practical-guide-en.pdf
[44] Leanpath Food Waste Prevention Solution. (n.d.). Retrieved April 15, 2020, from https://www.leanpath.com/

[45] IPCC Special Report on Climate Change and Land. (2019). Retrieved from
https://www.ipcc.ch/site/assets/uploads/2019/08/SRCCL-leaflet.pdf
[46] Healthy Diets From Sustainable Food Systems. (2019). Retrieved from
https://eatforum.org/content/uploads/2019/01/EAT-Lancet_Commission_Summary_Report.pdf
[47] 1052543032. (2019, March 18). Hurtigruten Partners with EAT for Sustainable Cuisine. Retrieved from
https://www.cruiseindustrynews.com/cruise-news/20528-hurtigruten-partners-with-eat-for-sustainable-cuisine.html

Socio-Cultural Sustainability

Figure 17. Demonstrates the scores Lindblad received in each respective Socio-Cultural Sustainability sub-theme, as determined from Lindblad's responses to the Sustainable Tourism Survey.

Lindblad indicated current initiatives within each of the three Socio-Cultural Sustainability themes. However, there were no goals nor specific supplier mentions listed for this section of the survey.

LEX supports "living" cultural heritage through means of art, music, theater, dance, handicrafts, and local cuisine on trips.

> *"One example is the Lindblad Expeditions--National Geographic (LEX--NG) Artisan Fund, which we created in 2010 to support artisans communities worldwide as they developed their handcraft potential more effectively. In Galápagos, the LEX--NG Artisan Fund launched the Glass Adaptive Reuse Project and Paper to Pearls Project: two programs that help local artisans realize both an environmental and economic benefit through their crafts."*

> *"When planning new trips, we work closely with informants from the communities being visited to understand all angles of operating there, and how we can bring local experts and their knowledge to our guest"*

In order to maintain a holistic approach to sustainability, it is important to adopt a framework that would do so, i.e. aligning with the UN SDGs, UN Global Compact 10 Principles. According to the UNGC, "Corporate sustainability starts with a company's value system and a principles-based approach to doing business. By incorporating the Ten Principles of the UN Global Compact into strategies, policies and procedures, and establishing a culture of integrity, companies are not only upholding their basic responsibilities to people and planet, but also setting the stage for long-term

success."[48]

Economic Sustainability

Figure 18. Demonstrates the scores Lindblad received in each respective Economic Sustainability sub-theme, as determined from Lindblad's responses to the Sustainable Tourism Survey.

Similarly to the Socio-Cultural section of the survey, Lindblad indicated existing initiatives across all three themes, but did not identify goals nor specific supplier activities within the Economic Sustainability section of the survey.

Via the LEX-NG fund, a skills-development program was launched for young adults seeking employment in the hospitality sector in Cambodia. Donations helped facilitate the ground-up construction of a training restaurant where students practice guest service, food industry, and housekeeping skills.

> *"Participants are then able to continue their studies at professional hotel schools or secure well-paying employment—reducing poverty in Kampong Cham province...The project mentioned supports educational opportunities for children through young adults in a rural Cambodian village, preparing them with skills and knowledge needed for sustainable livelihoods."*

While the skills development program is a positive initiative that has been built through the Organization for Basic Training, there should be goals in place for both expanding this program to other regions and training young adults to ultimately work, specifically, in the hotels and restaurants that you all partner with on your trips.

Lindblad has created a number of extensive education opportunities, through both the LEX-NG Fund and some Lindblad-only programs.

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[48]The Ten Principles: UN Global Compact. (n.d.). Retrieved from
https://www.unglobalcompact.org/what-is-gc/mission/principles

"For many years, we ran a program in Galapagos called "Teachers on Board" whereby local teachers from the inhabited islands were invited to join a full week's expedition to see their home islands, many for the first time, and then bring their experiences back to their students. Our goal was to host every single teacher in the archipelago."

These initiatives can be further advanced by setting a S.M.A.R.T goal. Tracking both the percentage of local employees in management positions and the number of young adults being trained to work with Lindblad's suppliers, specifically, will support the robust development of these initiatives.

Operational Sustainability (at Home Office)
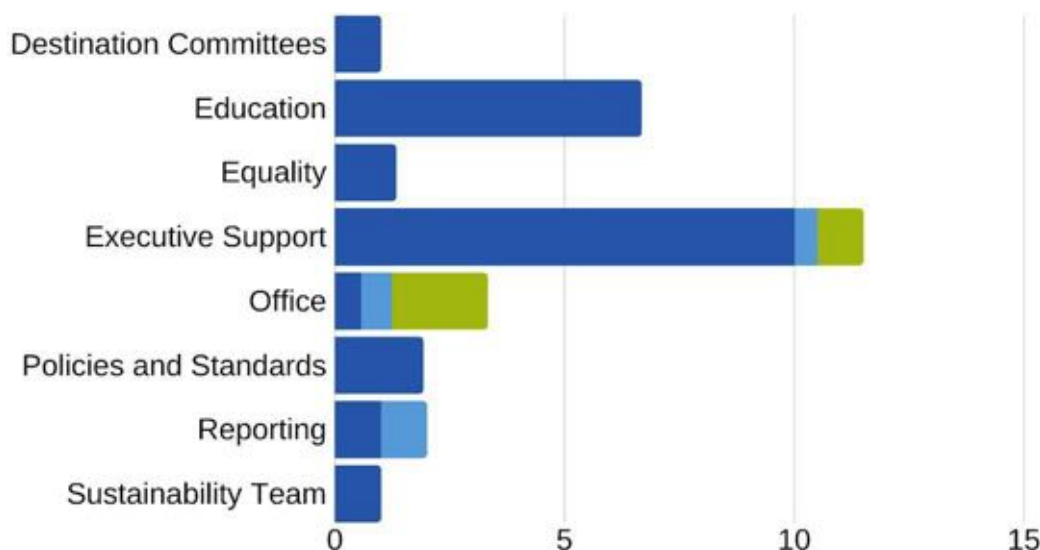
Figure 19. Demonstrates the scores Lindblad received in each respective Operational Sustainability sub-theme, as determined from Lindblad's responses to the Sustainable Tourism Survey.

Lindblad's CEO, Sven Lindblad, is well-known for making bold statements and targets around sustainability and engaging in a number of high-level speaking opportunities (i.e. UN Climate Week). In 2019, Sven created the first pillar focused on environmentally-responsible operations as a key part of the company's conservation department - *"..we've established short- and longer-term goals specifically in that area."*

Lindblad also has a three-person sustainability team in place that liaises with each

department across the company. This team has goals to *"create a sustainability pledge for employees, vendors/contractors, and guests."* as well as *"establish an internal 'Green Team' at **both** of our offices."* In addition, this team produces a yearly Impact Report. This Impact Report can be enhanced by reporting beyond LEX-NG achievements, focusing on its direct operational impacts, relationships with suppliers, and including newly formed targets and progress for specific goals toward sustainability action. In relation to these newly formed targets, there is room to set S.M.A.R.T goals, particularly in the areas of Socio-Cultural and Economic Sustainability. Commitments that are already set can be transformed to S.M.A.R.T. goals by specifying a timeframe or specific target. Some of the referenced goals lacked the details to be classified as a S.M.A.R.T. goal. (i.e. refer back to the environmental example under Waste: "LEX recycles aboard its fleets to the fullest extent possible, based on location, and stated, 'In locations where recycling is challenging, we are working to institute better options.' While Lindblad did indicate it was looking into options for recycling, the survey response did not specify what these options are, which locations they are working in, nor a timeline in which they hope to implement better practices.").

Sustainability is holistic and encompasses all three pillars - Environmental, Economic, and Socio-Cultural. Lindblad can use its Impact Report to connect the dots between the survey categories. For example, sourcing food locally minimizes transportation emissions, enhances a greater understanding with and connection to the local cultures and communities, and confirms the safety of the food, among other things.

Lindblad has developed a series of policies around sustainability and ethics to hold suppliers to a certain level of standards. On every single Purchase Order issued by its supply chain team, the following statement is included:

> *'Lindblad Expeditions' sustainability mission is focused on limiting the purchase of single-use plastic. Our goal is to partner with like-minded vendors. Please understand that the use of plastic by a vendor may influence our decision to purchase an item or select them as a supplier. We ask that you join us in this effort and strive to offer alternatives and communicate*

available options.' This is the most prolific document our supply chain team uses, so it reaches all of our suppliers, many on a weekly basis. We continue to expand and communicate this philosophy and mission whenever possible."

We recognize the challenge posed by Operators who work with thousands of suppliers. A noteworthy opportunity for Operators is to begin formally tracking and documenting supplier relationships, developing a database of suppliers and which practices those suppliers adhere to. This will likely require an annual or bi-annual survey or audit. While Lindblad has taken a step in the right direction by sending out a supplier code of conduct, the company has the responsibility to take supplier monitoring a step further. This type of tracking will prove key when it comes to measuring Scope 3 emissions in the near future. This recommendation additionally relates to Lindblad's goal of *"work[ing] with our supply chain team to improve sustainable operations."*

Via the LEX-NG fund, LEX supports a number of educational opportunities for children up to young adults in the local communities at destinations (i.e. Cambodia). Lindblad consistently demonstrates a strong commitment to traveler education, engaging and informing its own travelers through the following: an online carbon footprint calculator, on-trip presentations, and pre-departure materials (i.e. Buyer Aware Packets).

"An awareness of the threats of Over-Tourism has been part of the Lindblad family's consciousness for many decades, and has always been part of our business. Lars Eric Lindblad, the late father of our current CEO and President, Sven-Olof Lindblad, helped establish the Galapagos National Park regulations that are still in place today to regulate tourism within the archipelago."

LEX should continue to encourage its guests to contribute to the carbon discussion "*by sharing what they learn on board with their networks back at home.*" While education is one of Lindblad's strengths, this particular effort could be further strengthened by specifying where and how exactly this is being encouraged.

Following up with travelers in communication materials (i.e. email, social media) is one way to further expand Lindblad's reach.

Conclusions

The majority of these sustainability categories are interconnected. One action towards one initiative can, and often does, impact other categories. By implementing sustainability practices in one area, it can result in added positive impacts throughout Lindblad's value chain. By engaging in this project, Lindblad Expeditions will continue to lead the industry in not only thought, but action. Lindblad should leverage the fact that it has unparalleled executive support on sustainability initiatives. In the survey, LEX stated the following, "*As we further enhance our focus on sustainability topics at Lindblad Expeditions, we hope that others will join us - both in the tourism industry (which currently accounts for 7% of all global greenhouse gas emissions) and beyond.*" With that goal in mind, Lindblad should continue to lead the sustainability movement by encouraging, teaching, and supporting fellow travel operators as they navigate their own sustainability journey. Sharing these findings and recommendations not only externally and with other travel groups, but also internally as to involve different departments, will help Lindblad to build a more holistic approach to sustainability.

Odysseys Unlimited Results
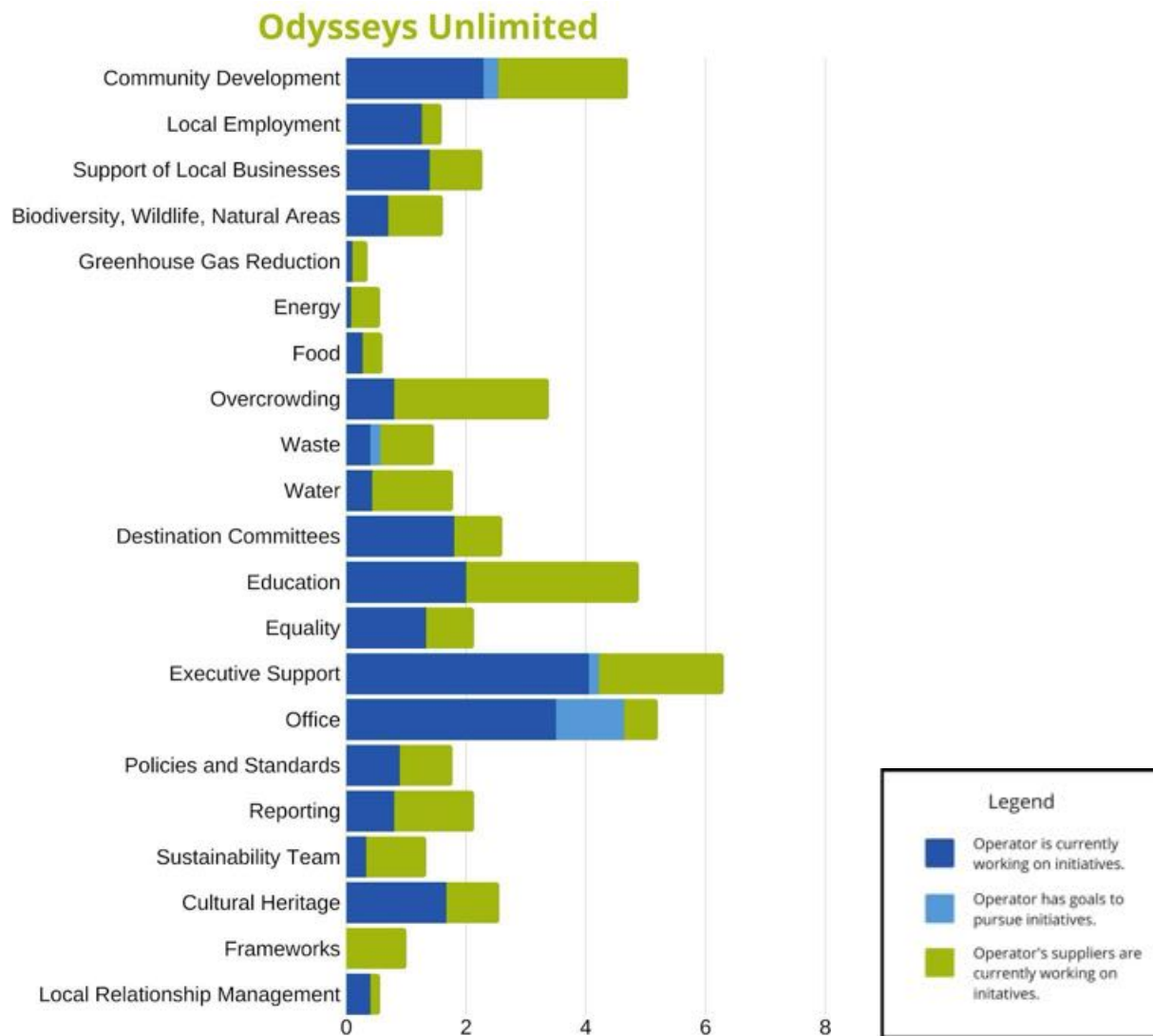
Figure 20. Demonstrates the scores Odysseys received in each respective Sustainability sub-theme, as determined from Odysseys' responses to the Sustainable Tourism Survey.

Environmental Sustainability
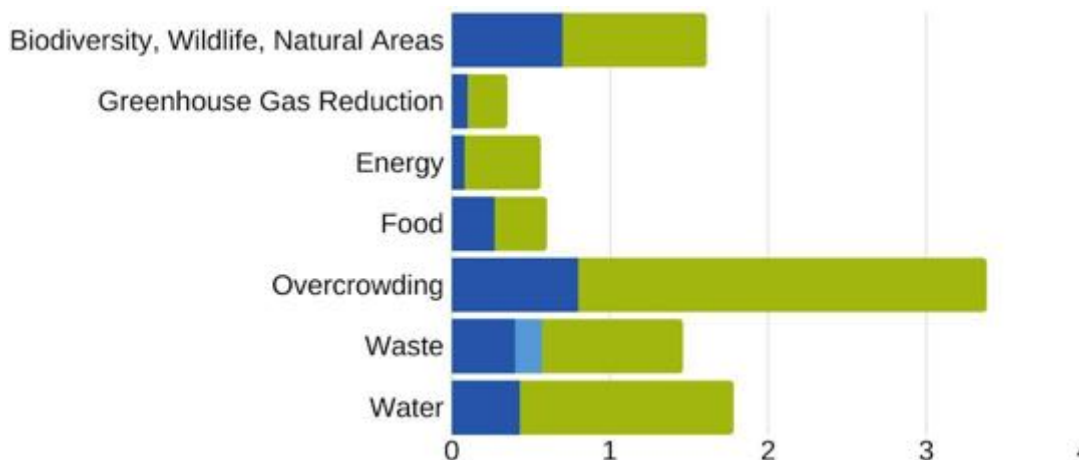
Figure 21. Demonstrates the scores Odysseys received in each respective Environmental Sustainability sub-theme, as determined from Odysseys' responses to the Sustainable Tourism Survey.

Odysseys received comparatively low scores in regard to its environmental sustainability initiatives at destinations. While 'visiting protected and natural areas' was noted as a very common experience on many of the trips, there was no apparent strategy for mitigating adverse impacts listed in the survey. Odysseys indicated its efforts to practice mindfulness at destinations, with the objective to minimize its impacts at those destinations.

> *"We are always mindful of [biodiversity]. Our goal as a small-group travel company is to leave as the smallest footprint behind, with respect for the natural world."*

To that end, Odysseys is conscious of the impacts that overcrowding has on destinations, limiting its group sizes to 24 people. Odysseys reported that it relies on suppliers to provide information on both group size limits and the state of the natural areas where its travelers visit.

> *"Our operators and suppliers will always advise what the safe group sizes and frequency are for visiting particular areas. They are extremely sensitive to the stress that our group might bring to a particular wildlife area or natural habitat."*

Odysseys also relies on its suppliers to research and engage with local conservation bodies, yet it did not express that it engages with local conservation bodies directly.

> *"We look to our operators and suppliers to include these experiences while maintaining high standards for preservation and conservation of the natural habitats that we explore."*

Greenhouse Gas Reduction and Energy are two of the categories in which Odysseys received the lowest scores. These two themes are strongly interrelated; efforts to reduce energy consumption, in general, concurrently reduce greenhouse gas emissions. To develop strategies to improve within these areas, it is essential to develop a baseline understanding by first measuring your company's impact. Measuring your company's corporate footprint, either internally or with the support of a third-party, can provide valuable insights into impact hotspots and help your company prioritize its environmental initiatives.

Odysseys only indicated one goal within Environmental Sustainability, which was to reduce water bottle usage on trips.

> *"...We are in conversations with operators, tour directors, etc., all over the globe on how we can reduce water bottle consumption or usage constantly… currently for our North American and our European programs, we are working on ways to manage water bottle usage."*

Odysseys did not demonstrate a specific or measureable strategy to achieve this goal. Setting ambitious targets is a key driver for sustainable change, and it begins with having a robust understanding of your company's environmental impact.

Odysseys' survey responses expressed strong reliance on suppliers for Environmental Sustainability themes at destinations. However, the survey also indicated that Odysseys is selective of the suppliers they work with. The Thai Elephant Care Center, the Giraffe Center in Nairobi, and the Rainbow Springs Nature Reserve are demonstrative of the high quality suppliers Odysseys chooses to work with to build initiatives around Biodiversity and Natural Area protection. Odysseys curated these wildlife-focused trips such that they contribute to the long-term preservation of species and habitats. Odysseys also ensured that trips would be highly educational, informing its guests on the importance of conservation and providing immersive experiences with suppliers that uphold wildlife care best practices.

Socio-Cultural Sustainability
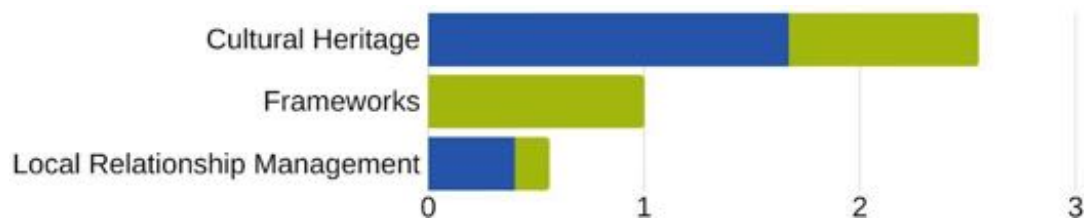
Figure 22. Demonstrates the scores Odysseys received in each respective Socio-Cultural Sustainability sub-theme, as determined from Odysseys' responses to the Sustainable Tourism Survey.

Within Socio-Cultural Sustainability, Odysseys demonstrated existing practices related to Cultural Heritage and Local Relationship Management. Odysseys reported that it does not currently use Frameworks or Certifications to monitor its Socio-Cultural impact, and there was no indication of any specific goals within Socio-Cultural Sustainability.

Odysseys emphasizes cultural heritage on trips, citing that 100% of its trips focus on cultural heritage. And while Odysseys works to positively impact local communities through supply donations and long-term projects, Odysseys did not demonstrate specifically how the local benefits of its community development projects are monitored.

> *"We would never want to foster an environment that would take advantage of them and or highlight their poverty, so we recognize that when we visit these areas, they must be experiences that are beneficial to the community; we do this by bringing goods and supplies that they would need when we visit, and that we participate in long term projects to improve life in the village."*

It is imperative Operators work with local communities, organizations, and governments to ensure that the support they provide to the local communities aligns with the needs and with the preservation of local cultures. Based on Odysseys' survey responses, they relied on suppliers to research what would benefit the local community. While working with credible suppliers to foster this relationship can be advantageous, these relationships should be documented and provide standardized guidelines for interaction.

In order to implement relevant and beneficial initiatives around cultural heritage, Odysseys must ensure that there is first an emphasis on building relationships with local communities. Using frameworks (such as the GSTC Criteria or the UN Sustainable Development Goals) to guide the development of initiatives is one pivotal way that Odysseys can position itself to implement effective Socio-Cultural Sustainability strategies. Odysseys' supplier Destination Asia uses a certification for this same purpose and this alignment has resulted in overall improved sustainability practices as they were recently presented with the Audley Responsible Tourism Award[49] .

> *"Destination Asia has partnered with the 'Travelife for Tour Operators and Travel Agents' certification scheme in order to provide structure for [its] journey down the road to greater sustainability."*

Economic Sustainability
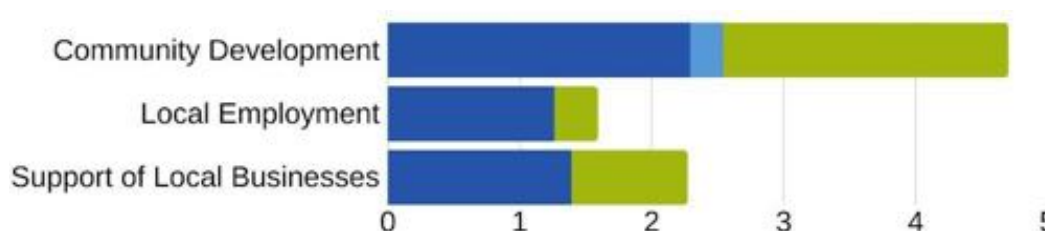
Figure 23. Demonstrates the scores Odysseys received in each respective Economic Sustainability sub-theme, as determined from Odysseys' responses to the Sustainable Tourism Survey.

Odysseys indicated initiatives in each of the Economic Sustainability themes. By integrating local craft artists, restaurants, hotels, and markets into their programs, Odysseys does contribute to the Economic Sustainability of the destinations they visit. While Odysseys reported the majority of its suppliers are locally-owned businesses, there was no official documentation or policy in place to support this claim and provide further verification.

> *"The majority of our suppliers are locally-owned businesses because as a small business, we tend to support other local and small businesses. Working with locally-owned businesses is, in general, important to small group travel.*

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[49] Audley Sustainable Tourism Award goes to Destination Asia Indonesia. (2018, November 20). Retrieved from https://news.destination-asia.com/audley-sustainable-tourism-award/

For example, wherever possible, we stay at smaller boutique-style hotels, which are usually family run or have a local owner."

Odysseys highlighted several community development initiatives throughout the survey, including a long-term project with local partner, Destination Asia. This project, which was developed to build structures between local residents' homes and the nearby river to improve economic well-being, demonstrates Odysseys' intent to leave a positive impact on the local communities they visit. It was mentioned that projects similar to this one are planned for the future, but there was no clear indication that this future project would fit S.M.A.R.T. criteria, and there was no information provided on how future community development projects are selected.

Operational Sustainability (at Home Office)
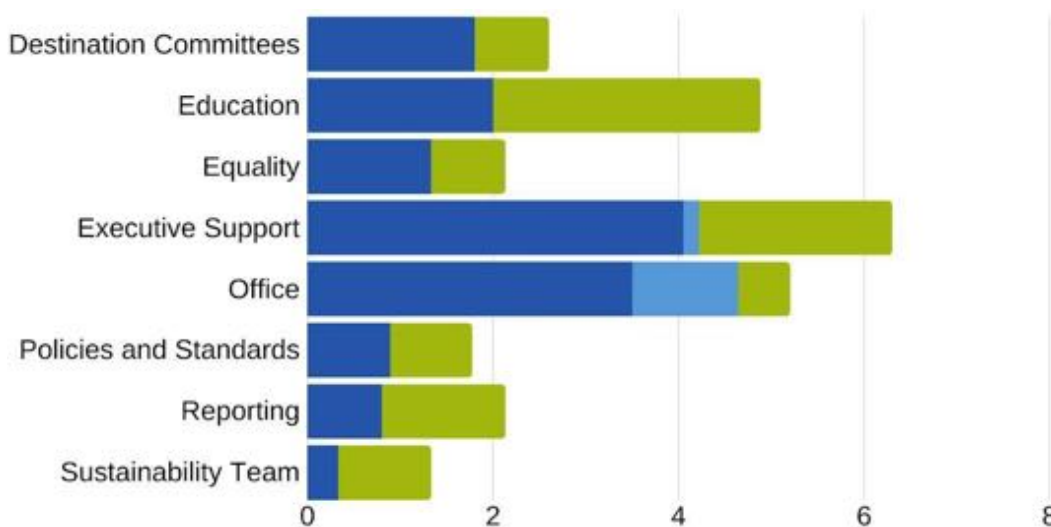
Figure 24. Demonstrates the scores Odysseys received in each respective Operational Sustainability sub-theme, as determined from Odysseys' responses to the Sustainable Tourism Survey.

Odysseys demonstrated notable sustainability efforts within its home office, including paper reduction, local sourcing, and waste prevention. These in-house efforts are expected to continue, with Odysseys citing goals around office composting and moving towards biodegradable take-out options.

Odysseys received a relatively high score within Executive Support. Executive Support is key to implementing change, and it was clear that Odysseys values sustainability and acts mindfully to ensure it leaves a positive impact on the destinations it visits. Notably, Odysseys has a significant number of philanthropic programs, facilitated by its Charitable Giving Committee. Financial support and donations such as these were categorized as Executive Support for the purposes of this study to focus more acutely on direct actions conducted by Operators. That being said, financial support is an important aspect of providing support to places that the Operator has a major presence in. Each individual philanthropic program contributes to many other sustainability themes, such as biodiversity, cultural heritage, community development etc.

Odysseys and its suppliers place a heavy emphasis on education. In survey responses, Odysseys provided information on a range of educational materials it offers to travelers.

> *"In our pre-departure materials, we work to educate our guests regarding anything that could have a negative impact on wildlife, communities, and the environment (like purchasing animal skins, inappropriate picture taking, etc.), as well as specific concerns due to natural disaster (like water scarcity)."*

At the time of responding to this survey, Odysseys did not have a designated Sustainability Team. Notably, the Operator that received the highest overall scores of the four participating Operators is also the only one to have put in place a designated Sustainability Team. Dedicating a team of people to such sustainability work can streamline efforts, ensure that resources are applied to priority areas, and advance the ambition of Odysseys' sustainability initiatives.

One of the overarching trends within Odysseys' survey responses was an enthusiasm for sustainable practices. It was apparent Odysseys understands and values the sustainability of its destinations. However, Odysseys indicated relatively few sustainability initiatives that met the S.M.A.R.T. criteria: Specific, Measurable, Ambitious, Robust, and Time-bound. Odysseys has noted many *unofficial* practices or values that it attempts to uphold, such as working with local businesses and

minimizing the environmental footprint of their programs. In order to improve the credibility and ambition of Odysseys' overall sustainability actions, we highly recommend formalizing the practices Odysseys already has in place. Creating clear documentation of existing practices, developing official policies around supplier relationships, and beginning to quantitatively track environmental impacts will be critical steps in Odysseys' sustainability journey.

Odysseys is in a prime position to further integrate sustainability into its overall business strategy.

Orbridge Results
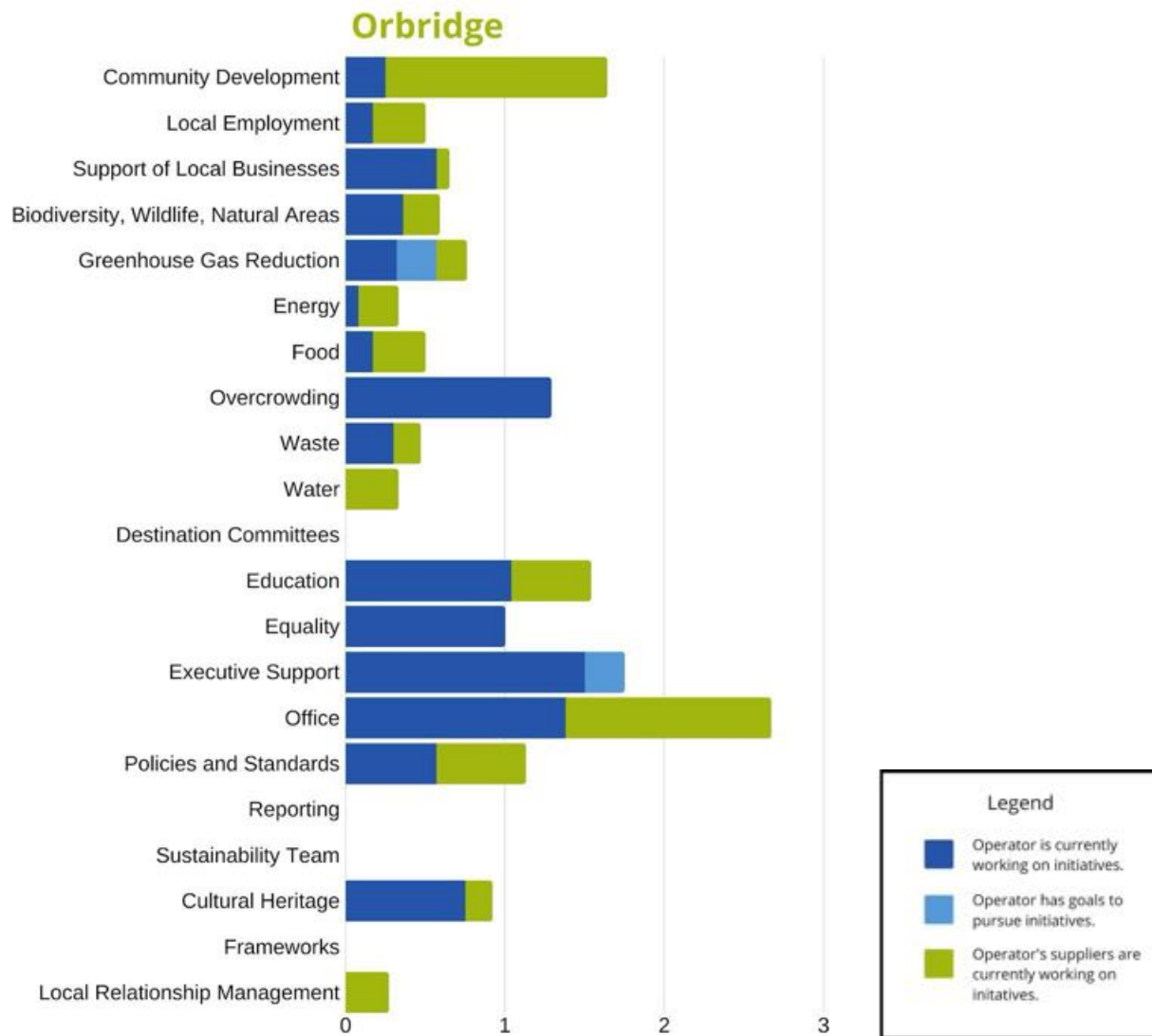
Figure 25. Demonstrates the scores Orbridge received in each respective Sustainability sub-theme, as determined from Orbridge's responses to the Sustainable Tourism Survey.

Environmental Sustainability
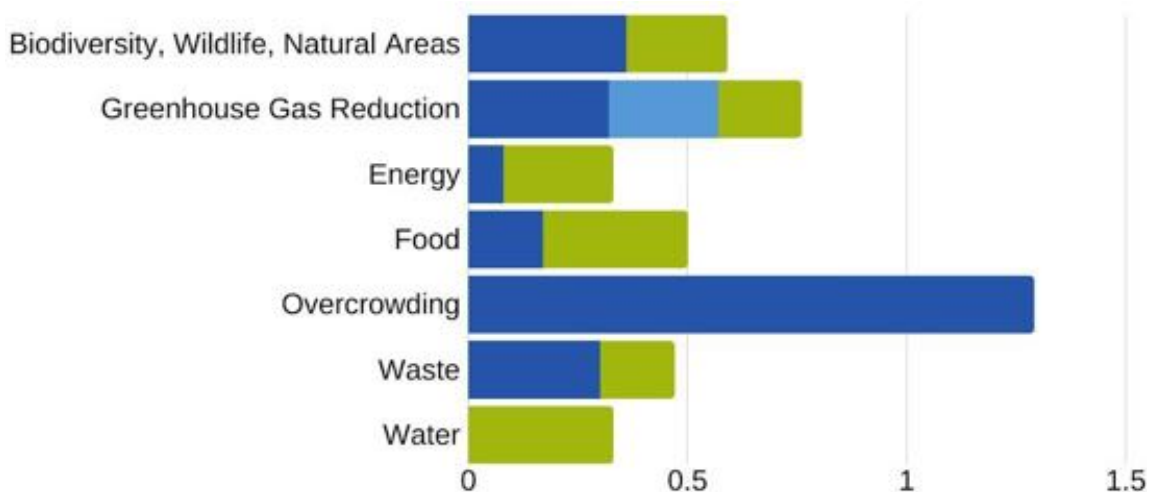
Figure 26. Demonstrates the scores Orbridge received in each respective Environmental Sustainability sub-theme, as determined from Orbridge's responses to the Sustainable Tourism Survey.

Orbridge's survey responses described various initiatives within Environmental Sustainability, most notably pertaining to the theme 'Overcrowding.' Orbridge's score in Overcrowding can be attributed to the company's emphasis on small group tours and sole use of small cruise ships.

From its survey responses, it was apparent Orbridge has recognized the need for research and education on natural areas and the importance of environmental preservation of destinations. However, when asked about the depth of research on the stability and best practices for visiting destinations, Orbridge stated that only *"general research is conducted to learn more about the area"* and there was no indication of specific criteria guiding this research. Without a standardized framework, this could result in large gaps, oversights, and inconsistent or inconclusive findings. For example, in the case of Biodiversity, Orbridge stated that "*Biodiversity education is a large part of Orbridge travel programs.*" However, there was no mention of additional initiatives to improve the biodiversity of natural areas that Orbridge visits. To strengthen the educational messaging it provides to travelers, we highly advise Orbridge engage in biodiversity conservation efforts. One opportunity to do so would involve working with natural area managers to develop visitor management policies and influence greater awareness around protection.

Providing and recording in-kind or other support for biodiversity and engaging with local conservation organizations can additionally support preservation of natural ecosystems.

Orbridge outlined a specific environmental initiative around reforestation in the state of Wisconsin, in partnership with the Department of Natural Resources.

> *"Also, in 2019, Orbridge began reforestation efforts with the state of Wisconsin's DNR, by donating funds to plan 100,000 seedlings. We are continuing that effort with the same donation for 2020 (and plan to for future years)."*

While the donation is a definite step towards integrating sustainability initiatives, it was unclear from Orbridge's survey responses why this initiative was undertaken, how it was developed, and what the expected outcomes were. This initiative was categorized as Greenhouse Gas Reduction for the purposes of this study because of its ultimate benefit of carbon sequestration; however, it was not apparent that Orbridge undertook this initiative for that purpose. Reforestation efforts such as this should also be made across all areas of its operations, such as office locations and destinations heavily visited, or in areas that are under high environmental stress, as those are the places where the company can have the greatest impact.

Socio-Cultural Sustainability
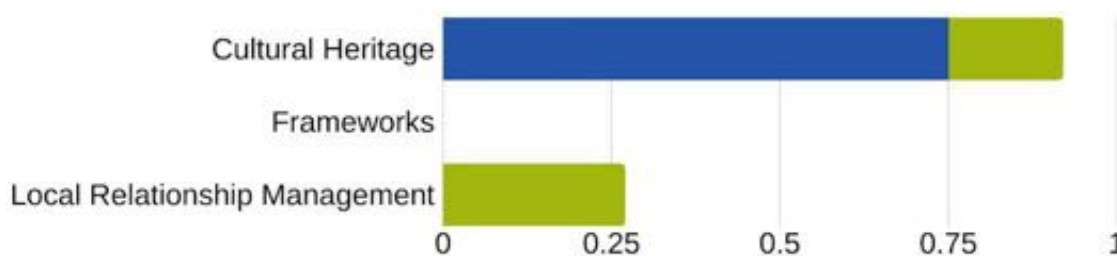
Figure 27. Demonstrates the scores Orbridge received in each respective Socio-Cultural Sustainability sub-theme, as determined from Orbridge's responses to the Sustainable Tourism Survey.

Within Socio-Cultural Sustainability, Orbridge only described direct activities that pertain to Cultural Heritage. Orbridge reported that it does not use Frameworks nor Certifications to measure its Socio-Cultural impact, and Orbridge also did not indicate any goals pertaining to Socio-Cultural Sustainability.

It was apparent from the survey responses that Orbridge places a strong emphasis on cultural heritage for its trips.

> *"We gear all of our cultural programs so guests have the experience of 'living like a local' during the program. We aim to avoid typical tourist traps, and rather focus on history and traditions of businesses, families visited. We seek out properties or businesses that are family-owned for generations, and lodging that is unique and intimate for the particular program theme."*

Seeking out these types of experiences helps preserve the local culture of a destination and is important to do so in a way that does not exploit the local community to satisfy the desires of tourists. In order to implement relevant and beneficial initiatives around cultural heritage, Orbridge must ensure that there is first an emphasis on building relationships with local communities.

Orbridge indicated that it does not currently manage local relationships, and instead relies on its suppliers for this local engagement. One supplier works directly with the local government to mitigate the impact that tourism has on the roads and on soil quality (i.e. soil erosion). Another supplier recognizes the delicate relationship between host countries' political, environmental, and social climate in being able to visit destinations. While working with credible suppliers to foster this relationship can be advantageous, these relationships should be documented and provide standardized guidelines for interaction. This feedback from local communities should expand beyond *"seek[ing] out experiences with [local] groups."* It is imperative operators build relationships with local communities, organizations, and governments to ensure that the support they provide to the communities they visit align with local needs and the preservation of cultures.

> *"No exact partnerships [with local communities, organizations or other local bodies], but we do seek out experiences with groups. For example, during our Colombia program, guests join a volunteer from the local non-profit organization, Casa Kolacho, who takes them on a tour of the local neighborhood, sharing stories of the community and the public art displays, innovative transportation improvements, and neighborhood transformation/restoration. Casa Kolacho's mission is to give district youth the opportunity to inspire others through street art and hip hop music,*

uplifting their community, preserving their stories, and beautifying places affected by the harsh recent past."

"Our vendor/partner in Machu Picchu is committed to promoting tourism in the Patacancha Valley communities successfully and sustainably. • In order to prevent the loss of cultural values, the company has developed activities in order to maintain the traditional customs.• By partnering with St. Olaf College (Minnesota), the local school is transformed into a rural health clinic, which covers dental care and specialized care for the elderly, women and children. In addition to medical attention, necessary medicine is also provided and medical records are maintained for each villager."

Economic Sustainability
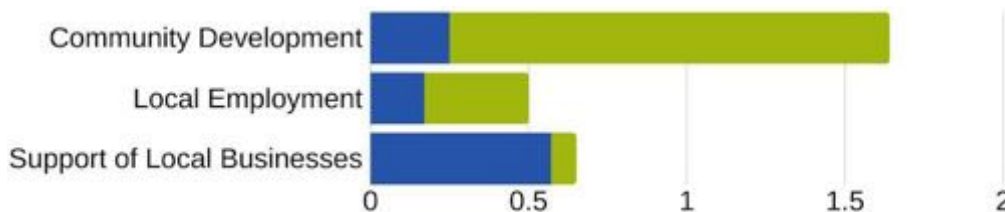
Figure 28. Demonstrates the scores Orbridge received in each respective Economic Sustainability sub-theme, as determined from Orbridge's responses to the Sustainable Tourism Survey.

Within Economic Sustainability, Orbridge did indicate several initiatives that it enacts directly, including using local transportation companies, featuring local goods and services, and supporting local businesses on trips.

"We seek out properties or businesses that are family-owned for generations, and lodging that is unique and intimate for the particular program theme."

Orbridge also expressed that it strongly selects partners by their commitments to community development at a local level.

"Our ground partnerships are definitely involved in these efforts, and Orbridge strongly selects partnerships based on vendor give-back participation at a local level."

As visible in **Figure 28** above, Orbridge relies heavily on its suppliers for community development programs. The suppliers Orbridge works with demonstrate notable initiatives, including specific focus on wildlife conservation, locally grown products

and food, and empowerment of local people. Several of Orbridge's suppliers have been recognized by organizations such as the World Travel & Tourism Council.

> *"Our vendor/partner in Ecuador has been selected by the World Travel & Tourism Council as part of a worldwide case study as an example of sustainability, good practices and commitment. The development of Metropolitan Touring's existing and new products is based on sustainability principles, preservation efforts, and social welfare support. It continuously measures its environmental performance, and also communicates results to its employees and guests."*

While working with credible suppliers can be advantageous and expand Orbridges' reach, it is important that Orbridge additionally take direct responsibility for the economic sustainability of their destinations. Of the sustainability initiatives outlined in Orbridge's survey responses, most were being carried out by Orbridge's suppliers. There was a lack of evidence in survey responses pertaining to Orbridge's direct involvement in economic sustainability initiatives, and relatively few of the overall sustainability initiatives reported were being carried out by Orbridge directly.

Operational Sustainability (at Home Office)
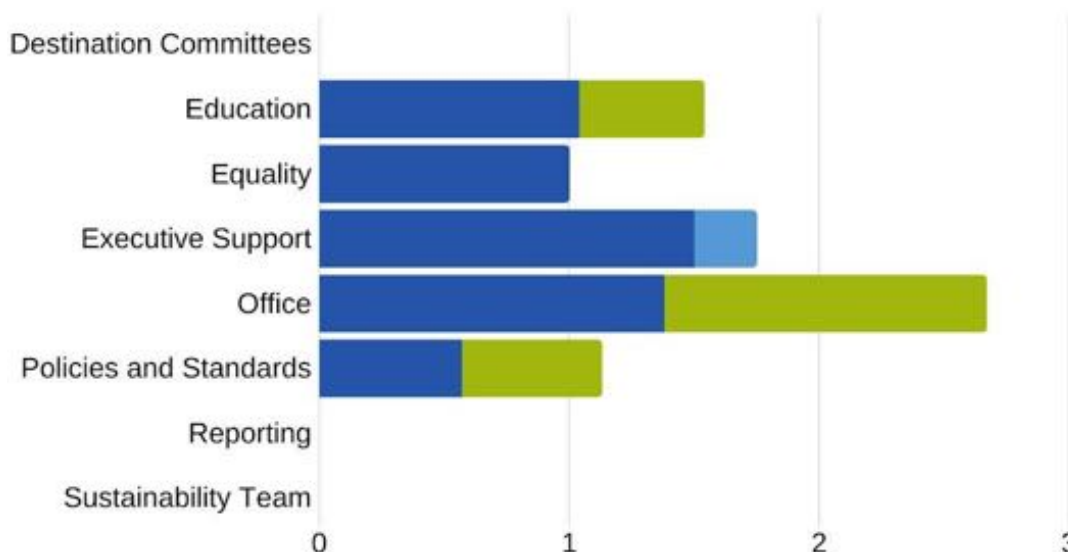
Figure 29. Demonstrates the scores Orbridge received in each respective Operational Sustainability sub-theme, as determined from Orbridge's responses to the Sustainable Tourism Survey.

Orbridge's scores across Operational Sustainability were somewhat variable. Orbridge identified practices around Education, Equality, Executive Support, Office, and Policies & Standards. Orbridge indicated that it does not have a designated Sustainability Team, formally report its sustainability initiatives, nor participate in Destination Committees.

Each of the themes within Operational Sustainability are correlated with Executive Support. Strong executive support is necessary to implement sustainability initiatives throughout an organization. Orbridge had several references in its survey that demonstrated this necessary executive support. To further its sustainability journey, we recommend Orbridge leverage this support to establish a designated Sustainability Team, which Orbridge did not have at the time of responding to this survey. Notably, the Operator which received the highest overall scores of the four participating Operators is also the only one to have a designated Sustainability Team. Having a team of people specifically dedicated to sustainability can streamline efforts, ensure resources are applied to priority areas, and advance the ambition of Orbridge' sustainability initiatives. A sustainability team will also gather initial data to baseline current practices and ultimately inform a sustainability report.

As demonstrated in **Figure 29**, Orbridge did not express any formal reporting initiatives. Transparency and communication are key aspects of sustainability. Aligning employees and suppliers with the use of clear policies, standards, and formal reporting around Orbridge's sustainability commitments can foster internal buy-in and promote the long-term success of these initiatives.

Overall, it was apparent from survey responses that Orbridge is interested in integrating sustainability into its company and communications strategies. To create a robust, credible, and compelling sustainability story, we highly recommend Orbridge begin with two steps: 1) recruit or develop a designated sustainability team to spearhead sustainable practices and communications and 2) quantitatively measure its environmental impact via a corporate footprint to visualize hotspots and prioritize initiatives.

DISCUSSION & RECOMMENDATIONS

IMPLEMENT SUSTAINABILITY/SUPPLY CHAIN MANAGEMENT SYSTEMS

Implementing long-term sustainability management systems suitable to the operator's size and scope will address environmental, socio-cultural, and economic sustainability as well as human rights, risk and crisis management issues and ultimately drive continuous improvements.[50]

Supply chains in the travel industry are convoluted and complex. This presents an immense risk to the Operators and decreases their ability to pinpoint areas where environmental, socio-cultural or economic risks have increased. One way to remove some of this ambiguity and complexity is focusing on local sourcing for goods, food, and hospitality businesses, for example. Engaging directly with these local businesses, communities, or organizations creates a more collaborative relationship and increases the ability to verify their practices. Sourcing locally and working directly with these suppliers not only increases environmental sustainability by reducing the carbon emissions needed to import goods, but also reduces the risk of money leaking out from the local communities. Using frameworks and third party standards can help your organization to track and document these supplier relationships. Through using standardized reporting methods, it makes it easier on your organization to manage and on your suppliers who can easily adopt these standards and share them with their other purchasers.[51]

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[50] B Lab Best Practice Guide. (2017, April). Creating Impact through Purchasing: Managing the Impact and Inclusion of Your Supply Chain.
[51] Ibid

Figure 30. Comparison of Preferential Policies vs. Supplier Codes of Conduct

MEASURE YOUR CARBON FOOTPRINT

Lindblad Expeditions is the only Operator who has measured their carbon footprint at the time this survey was completed. AHI has goals to offer carbon offsets for their travelers in 2020, but this is the only low carbon pledge their company has made. According to the GSTC criteria, Operators should monitor and manage total direct and indirect greenhouse gas emissions from the organization's operations and those that it has direct control over. In addition, carbon footprints of tourists per night should be monitored and managed. Once these emissions are understood, actions can then be taken to avoid, reduce, and offset these impacts.[52]

Please find below a number of resources to help calculate your company's carbon footprint:

- **Cool Climate**[53]

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[52] GSTC Industry Criteria for Tour Operators. (2020, March 9). Retrieved from
https://www.gstcouncil.org/gstc-criteria/gstc-industry-criteria-for-tour-operators/
[53] CoolClimate Network. (n.d.). Retrieved April 15, 2020, from https://coolclimate.org/business-calculator

- This calculator provides an overview of total scope 1, 2, and 3 emissions. It requires data from travel and spending procurement.

- **GHG Protocol Scope 3 Evaluator**[54]
  - This calculator provides an overview of a corporation's scope 3 emissions. It requires an input on spending and categorizes that spend to estimate associated emissions. This tool also provides an external data collection sheet to help company's gather the required information for calculation.

- **Carbon Fund**[55]
  - This calculator provides an overview of total scope 1 and 2 emissions and travel and shipment scope 3 emissions.

- **US Environmental Protection Agency** [56]
  - The EPA provides a set of tools that cover scope 1, 2, and 3 emissions. This is a more detailed process that will help companies identify emissions associated with specific aspects of their operations.

[54] Scope 3 Evaluator. (n.d.). Retrieved April 15, 2020, from https://ghgprotocol.org/scope-3-evaluator

[55] Carbon Footprint Calculators for Businesses. (n.d.). Retrieved April 15, 2020, from https://carbonfund.org/take-action/businesses/business-calculators/

[56] Center for Corporate Climate Leadership GHG Inventory Guidance for Low Emitters. (2019, November 15). Retrieved April 15, 2020, from https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-inventory-guidance-low-emitters

Figure 31. Visual representation of Scope 1, 2, and 3 emissions[57]

SUSTAINABLE SOURCING

The MP Team's literature review findings further support this recommendation: 1) "...the production of animal products generates the majority of food-related greenhouse-gas emissions -- specifically, up to 78% of total agricultural emissions, and 2) "Adopting more plant-based diets for ourselves could reduce the greenhouse gas emissions of the food system by more than half."[58] Integrating more plant-based diets should be coupled with sourcing all food locally and/or from sustainably certified vendors. Commodities such as palm oil, soy, beef, cocoa, and coffee contribute to around 80% of tropical deforestation. Deforestation is the largest
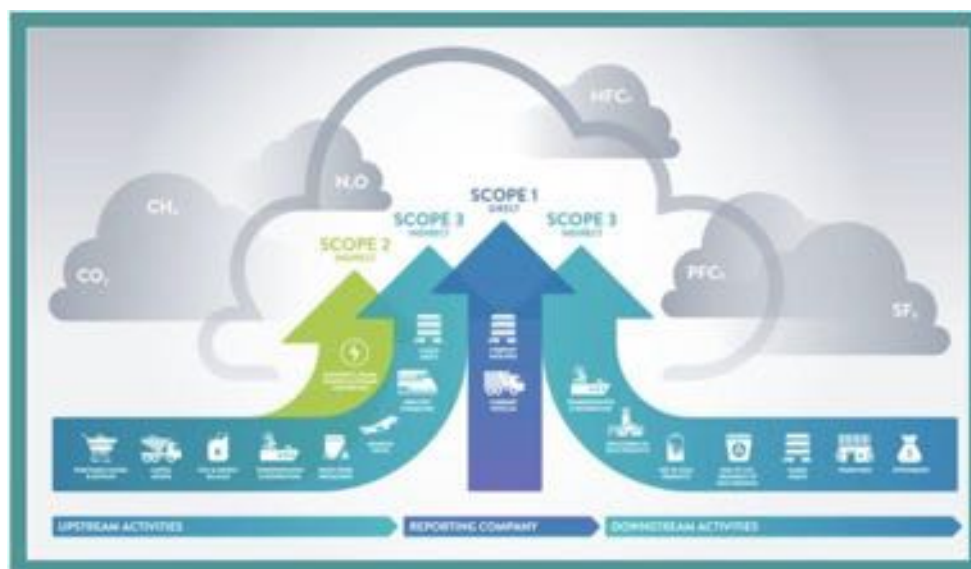
contributing factor to greenhouse gas emissions in the agricultural sector.[59] Certifications, such as the Rainforest Alliance, UTZ, RSPO, or Naturland, offer a system that ensures producers are using sustainable methods and integrates social

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[57] GHG Reporting Services. (n.d.). Retrieved from https://www.vitalmetricsgroup.com/ghg-reporting

[58] Options for keeping the food system within environment ... (2018, October). Retrieved April 15, 2020, from https://www.ncbi.nlm.nih.gov/pubmed/30305731

[59] Healthy Diets From Sustainable Food Systems. (2019). Retrieved from https://eatforum.org/content/uploads/2019/01/EAT-Lancet_Commission_Summary_Report.pdf

safeguards with environmental objectives (**Figure 32**).[60] And, unfortunately, if we do not take action to improve the food system now by implementing shifts from animal to plant protein and mindfully sourcing products, we "increase the risk of exceeding temperature goals," which refers to the GHG budget allowable under both the 2°C and 1.5°C targets by 2030.[61]

From the MP Team's research, it is evident that carbon footprints can be further reduced by developing a better understanding of the entire food value chain and by prioritizing plant-based foods. This can be accomplished through aligning food practices aboard fleets and in the galley with the IPCC Report on Climate Change and Land[62] and the EAT-Lancet Commission on Food, Planet, Health.[63] Others in the industry, such as Hurtigruten, a premium expedition cruise line, have partnered with the EAT Foundation to "reduce food waste, expand menus, and give guests the opportunity to choose more plant-based cuisine."[64] This Norweigan cruise line has been offering three-course vegan menus since 2017 and has also "previously abandoned industrially processed food and removed endangered species from all menus.[65]

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[60]Agriculture and deforestation. (2019, September 30). Retrieved from
https://theecologist.org/2019/sep/27/agriculture-and-deforestation

[61] Harwatt, H. (2018, November 26). Including animal to plant protein shifts in climate change mitigation policy: A proposed three-step strategy. Retrieved April 15, 2020, from
https://www.tandfonline.com/doi/full/10.1080/14693062.2018.1528965

[62]IPCC Special Report on Climate Change and Land. (2019). Retrieved from
https://www.ipcc.ch/site/assets/uploads/2019/08/SRCCL-leaflet.pdf

[63]Healthy Diets From Sustainable Food Systems. (2019). Retrieved from
https://eatforum.org/content/uploads/2019/01/EAT-Lancet_Commission_Summary_Report.pdf

[64] About Hurtigruten. (n.d.). Retrieved from https://www.hurtigruten.com/about-hurtigruten/

[65] 1052543032. (2019, March 18). Hurtigruten Partners with EAT for Sustainable Cuisine. Retrieved from
https://www.cruiseindustrynews.com/cruise-news/20528-hurtigruten-partners-with-eat-for-sustainable-cuisine.html

Scheme	Criteria which address forest conversion
(Fairtrade)	From the date of application for certification, farmers must avoid negative impacts on protected areas or areas with high conservation value (Criterion 3.2.33).
(Rainforest Alliance)	From the date of certification, no natural ecosystem can be destroyed (Criteria 2.1, 3.2).
	No high value ecosystems (HVE) must have been converted since November 1st 2005 and if HVEs have been converted or damaged between November 1st 1999 and November 1st 2005 then there must be a restoration plan in place (2.2).
UTZ CERTIFIED Good inside	Deforestation is restricted: it is not allowed in primary forest (Control Point GD122) and deforestation of secondary forest is allowed only with proper permits and title (GD123).
	Furthermore, the crop must be farmed on land that is classified as agricultural and/or approved for agricultural use and farming history must be demonstrated (GA1, GA2). Production and primary processing are restricted in protected areas (GD124) and biological corridors (GD125).
(Aquaculture Stewardship)	Aquaculture ponds shall be located behind mangrove areas. Hydrological conditions should not be altered (Standard 4.3) in a way that deprives or leads to the loss of wetland vegetation, including erosion and sedimentation.
	From 1999 onwards, the only allowable conversion of wetlands is for the installation of systems for access to water resources (installation of inlet and outlet canals, pump stations and docks) (4.1). If this happens, compensation must be made by restoring an area at least three times as large or making an equivalent donation to restoration projects (4.2).
asc	No farm may be certified that was established after May 1999 in mangrove or other area of ecological importance as identified in Biodiversity inclusive Environmental Impact Assessment (B-EIA, criteria 2.2 and 2.3). The B-EIA should be conducted by a person or organisation with expertise in the subject matter.
	For farms established before May 1999, farmers are required to compensate/offset impacts via rehabilitation as determined by the B-EIA, or according to national/state/ local authority requirements, or 50 per cent of the affected ecosystem (whichever is greater) (2.2).
Naturland	Clearing primary forest and cultivation of primary organic systems is prohibited (P B.I.6).
	Removing or damaging mangrove forest is not permitted for new shrimp farms (OA criterion 1.1).
	Farms that occupy former mangrove areas can be converted to organic aquaculture if the former mangrove area does not exceed 50 per cent of the farm area and if they restore mangroves to at least 50 per cent of the farm within five years (OA 1.2).
CERTIFIED SUSTAINABLE PALM OIL RSPO	Development of new plantings is subject to a social and environmental impact assessment (7.1).
	Plantings established after November 2005 must not have replaced primary forest or areas necessary to sustain high conservation values (7.3).
	The use of fire in the preparation of new planting areas is limited (7.7).
	Criterion 7.8, which mandates the design of new plantation areas to minimise net greenhouse gas emissions, requires analysis of the existing carbon stock of the proposed development area, potential major sources of emissions due to development and the creation of a plan to minimise net greenhouse gas emissions.
	An environmental impact assessment is called for in the case of (among other things) expansion of planting areas, clearing of remaining vegetation and management by burning (5.1). Mitigation of negative effects is required when they are caused by changes in the status quo. The standard does not stipulate to what extent or how the negative effects should be mitigated.
	RED criteria 2.1(i)-(iv) stipulates that land must not be converted to palm oil production after 2008. Established production on wetlands must not affect the quality of the wetland. Peatland that was partially drained in January 2008 may not experience deeper drainage.

Figure 32. Major agricultural certification and their efforts on deforestation

Limitations

There were several limitations to this sustainable tourism pilot study that should be considered for future iterations.

Survey

The survey should be adapted to allow for more qualitative responses. Initially, the MP Team developed the survey under the impression that the Operators would provide a greater amount of quantitative responses/data. The MP Team received extremely limited quantitative data that was called for the initially designed survey. By developing a survey that was better suited for quantitative data, it can be assumed that there was key qualitative data that was not fully captured. In the future, this survey should be formatted in a way that evokes more qualitative responses to ensure a greater amount of information to use.

In addition, the MP Team retrospectively recognized the importance of sending out the survey to a "test" subject. Following best practices of survey design, this would entail analyzing the responses of this test to ensure that the responses received were what was desired. Some of the received responses in the survey were off-topic or irrelevant. The MP Team then had to conduct follow-up interviews to address these questions a second time, which resulted in inefficient collection of data. Additional follow-ups would have taken considerable time that was largely unavailable during the short timeframe of this project.

Data Weighting

Because the MP Team used a survey to collect data on the practices of the Operators, an assumption was made that survey responses were all-encompassing of the tour Operator's sustainability initiatives. The data therefore may not be entirely reflective of the Operators' practices.

Furthermore, because the analysis in NVivo is based on number of references, or number of times an Operator mentioned a particular theme, Operators who provided more content in their survey responses received higher scores.

MARKETING & COMMUNICATIONS

There is little awareness today on the practices of tour operators and their efforts to achieve economic, social-cultural, and environmental sustainability. Hence, one of the MP Team's objectives was to provide Duke Alumni Travels with a marketing communications (marcoms) strategy and plan. It was Duke Alumni Travels' goal to be able to update its messaging to reflect its newer sustainability efforts (**Figure 33**) and also importantly, to communicate the work of its Operators to each of its Duke Alumni travelers. In line with creating high-quality educational travel programs, educating its travelers on sustainability has become a top priority for Duke Alumni Travels.

"I believe that creating common language and everyday discussion around sustainable practices in travel can create waves of impact in the entire industry" - Beth Ray Schroeder, Director, Duke Alumni Travels
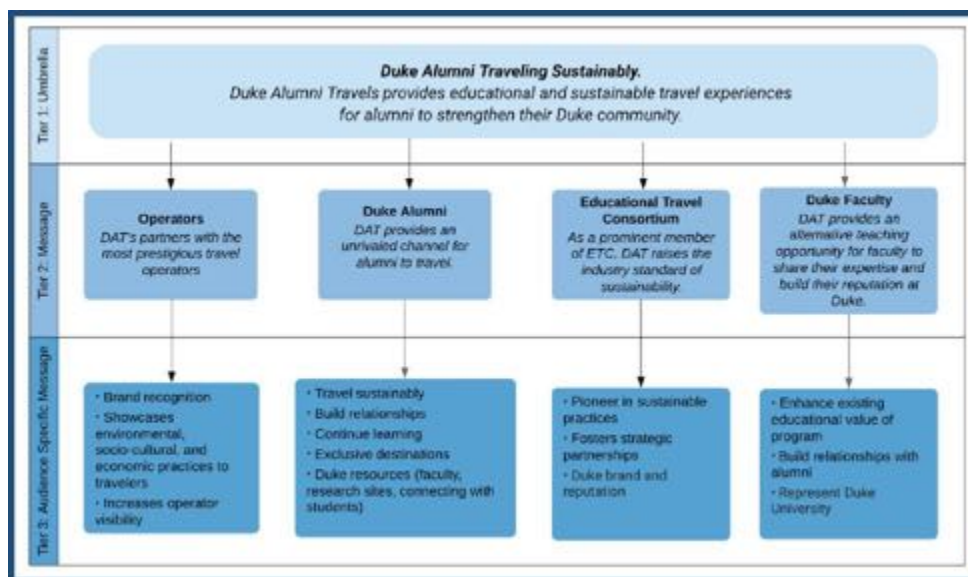
Figure 33. Messaging Map for Duke Alumni Travels

In order to increase the visibility of their operators' achievements to travelers, the MP Team recommends Duke Alumni Travels employ the following tactics via multiple communication channels (**Figure 34**).

Website Redesign
- Interactive operator module
- Booking portal
- Traveler testimonial videos

Email List
- DAT-specific email listserv
- Bi-annual email detailing DAT's summer and winter trips
- Send follow-up survey to travelers

Social Media
- Create Facebook and Instagram pages

Outreach Events
- Increase engagement at Duke Alumni events (Homecoming, Alumni Weekend)
- Lead a panel and Q&A with DAT's operators at the ETC Conference, January 2020
- Infographics detailing sustainability within travel industry and DAT's operators' practices

Figure 34. The MP Team's Marcom Tactics

Not only did the MP Team want to provide Duke Alumni Travels a plan, the MP Team also found it necessary to provide it with tangible marcoms materials that could be implemented promptly after the survey findings were disseminated. Thus, the MP Team created a redesign (**Figure 35**) of the Duke Alumni Travels website, one that exemplifies why Duke Alumni Travels has chosen to 'Spearhead Sustainability,' as well as how each of its Operators are involved in these efforts.*
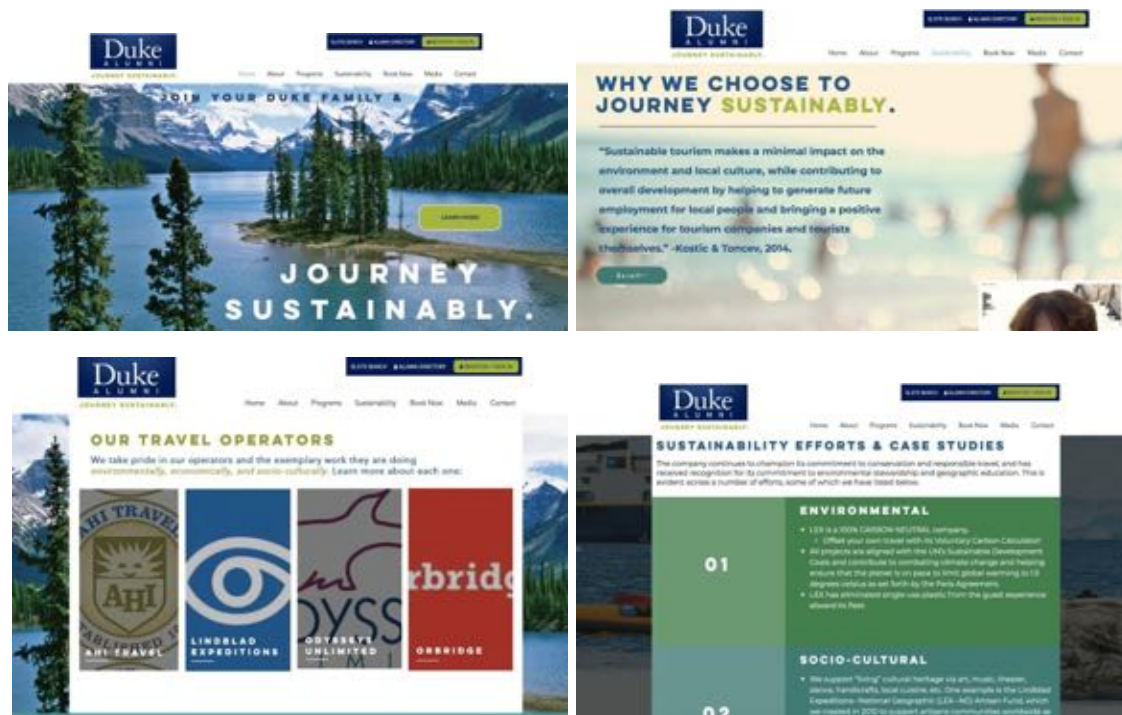
FIGURE 35. Website Redesign for Duke Alumni Travels. *Note that this redesign is one that will need to be approved first by the Duke Alumni marketing and communications team. Additionally, the content (i.e. the Operator descriptions and case studies) chosen to highlight on the site will need to be formally approved by each of the participating Operators.*

One of the challenges facing how sustainable tourism is communicated is that there is a *"perception that sustainability is expensive."* [66] It does not have to be, and according to the same source, the reality is that sustainable travel is simply not marketed enough; there is a clear need to create market access for these improved options. By choosing to both re-design the website and update all marcoms materials with accurate and transparent sustainability messaging, Duke Alumni Travels will ultimately be able to address this challenge by helping increase overall market access to sustainability. Other excerpts from the MarCom Plan can be viewed in the Appendix (**Appendix G**).

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[66] Lenoir, S. (2017, February 17). Sustainable Tourism: What It Is & How Tour Operators Can Help. Retrieved April 14, 2020, from https://www.rezdy.com/blog/sustainable-tourism-what-it-is-how-tour-operators-can-help/

INDUSTRY ENGAGEMENT

SUSTAINABLE TRAVEL PANEL

In October 2019, The MP Team hosted a panel of tourism industry experts titled "Spearheading Sustainability in the Travel Industry" at Duke University (**Appendix H**). The panel allowed the MP Team, industry leaders, Duke students, faculty, and alumni to discuss what sustainability means for the travel industry. The panelists included John Francis (*Former VP of Research, Conservation, and Exploration, National Geographic*), Jason Karas (*Senior Director, Expedia*), Karl Egloff (*Director, WWF Travel and Conservation*), and Rhea Simms (*Program Manager, Planeterra Foundation*). The conversation focused on identifying gaps in sustainability within the travel industry, discussion around carbon offsets, and opportunities to best equip students interested in this field (i.e. how the Nicholas School of the Environment, specifically, can play a pivotal role in ensuring its students learn the subject matter required to enter this field post-grad).

The Sustainable Travel Panel recording can be viewed via YouTube.[67]

EDUCATIONAL TRAVEL CONSORTIUM CONFERENCE

Duke Alumni Travels is a member of the Educational Travel Consortium (ETC), which supports lifelong learning programs through travel. As a member of the ETC's Executive Advisory Council, Beth Ray-Schroeder (Director of Duke Alumni Travels) has seen the challenges faced by travel planners, tour Operators and destinations in navigating the complexities and often confusing messaging about the sustainable travel movement. The conference in February 2020 served as a platform for both Duke Alumni Travels and its Operators to present this MP Team's results, with a goal of initiating discussion and action around the future of sustainable travel. The presentation also served as an opportunity to encourage ETC to prioritize the adoption of sustainability criteria. Please find official conference outcomes in **Appendix I**.

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[67] Spearheading Sustainability in the Travel Industry Panel. (2019, November). Retrieved April, 2020, from https://www.youtube.com/watch?v=_D3Odvny1s0

The Educational Travel Consortium BOLD Talk recording can be viewed via Vimeo.[68]

Testimonials from ETC:

"... it was the first time in ETC's history that a sustainability session captured the interest of the general alumni audience. Historically, sustainable travel conversations reached a small group of conversation organizations."

"For the very first time, the idea of sustainable travel resonated with our mainstream operators and planners and drew the attention of the community as a whole. It created a buzz and conversation on this very important topic."

"Without a doubt, this project has raised the bar and created an awareness and a level of commitment from the Planners to Operators alike and it has gotten many people to think about sustainable travel and what they can be doing in their own offices/programs."

Karen Kuttner-Dimitry, VP of Affinity and Charter Sales, Lindblad Expeditions

"...it inspired all of us in the room to think more strategically about ways in which we can contribute to the global movement toward greater sustainability - and to assess and be transparent about the ways in which we may already be contributing."

Margaret Devlin, Managing Director, Thalassa Journeys

CONCLUSION

This Master's Project establishes an understanding of four of Duke Alumni Travels' tour operators' existing sustainability actions, achievements, and gaps in current practices. These base findings can and should influence what the Operators do to ensure their success and longevity in the face of the climate crisis. As Duke Alumni Travels and its Operators continue their sustainability journeys, a key next step will be to develop strategies to fill these gaps in Operator actions and reduce overall environmental impacts by implementing new and innovative solutions. It will also be

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[68] ETC Chattanooga BOLD Talks Masters Students V2 (2020, March). Retrieved April, 2020, from https://vimeo.com/395287871/363fc906c1?utm_source=email&utm_medium=vimeo-cliptranscode-201504&utm_campaign=29220

important for the students and travel Operators/planners to think about how to implement recommendations and make positive operational change in an efficient and timely manner.

Duke Alumni Travels is at the beginning of its sustainability journey. There is an opportunity for future MEM students to continue work in this capacity, helping operators implement these recommendations, as well as further measuring and communicating Duke Alumni Travels' sustainability impacts and achievements.

Lastly, there is an opportunity here for the Nicholas School of the Environment to integrate sustainable travel subject matter into its courses, as it is clear this is a pressing topic and one that students are expressing an interest in learning more about. We look forward to following the continuation of this powerful work.

ACKNOWLEDGMENTS

APPENDICES

APPENDIX A

Sustainable Tourism Survey

Entry #: 1

Date Submitted:

What is your name?   What is your job title?   What is the name of your company?

ENVIRONMENTAL: Establishing guidelines to manage your environmental impacts

Green Operations: In-House and Overarching Sustainability

1. Does your company have any short-term and/or long-term sustainability goals?

2. Does your company report on these goals?   Sustainability Report

3. Does your company have a designated sustainability manager or team? If so, what are their specific roles?

4. What types of paper materials does your company distribute to travelers?

5. How many, on average, of the following paper items do you distribute to travelers?

5.1 Booklets	Booklets
5.2 Brochures	Brochures
5.3 Paperwork (Travel Documents)	Paperwork
5.4 Travel Catalogues	Travel Catalogues
5.5 Surveys	Surveys

6. What, if any, sustainability trainings does your company offer to its staff and suppliers? (Ex: Energy conservation, water conservation, climate friendly travel options, the importance of biodiversity conservation, species of concern on trips to avoid purchasing products such as coral jewelry or elephant tusks, etc.)

7. Are any of your company's buildings (at destinations or offices) LEED certified?

Green Operations: On Your Trips

Environmentally-Friendly Purchasing

8. To your knowledge, what percentage of your company's purchased materials comes from an   Supplier Data
environmentally sustainable supplier or product? This includes capital goods, food, beverages,
building materials, consumables, water bottles, etc.

9. Do any of your company's suppliers have environmental certifications? Please list certifications for each of the following product types: Wood (Ex: Forest Stewardship Certification), Paper (Ex: Sustainable Forestry Initiative), Seafood, Food/Produce, Products from the wild, Other.   Supplier Certification Data

10. If your company's suppliers do not have environmental certifications, is preference given to sustainable origin and methods of growing and production? Please provide examples.

Resources

Suppliers

11. Does your company have a supplier code of conduct?   Supplier Code of Conduct

12. Does your company regularly audit its sources of supply of goods and services?   Supplier Audit Data

Food

13. Does your company source food locally? Please provide examples, if applicable.   Food Sourcing Data

14. Does your company consider sustainability when sourcing food products (Ex: Reducing and/or eliminating animal products and by-products)?

15. What estimated percentage of food purchased from suppliers is sustainably certified (Ex: Rainforest Alliance, Organic, FairTrade)?   Certified Food Data

Energy

16. What goals are in place for minimizing energy use?

17. Does your company engage in energy conservation efforts? (Ex: On ships, in hotels or in the office: monitor for energy efficiency, track energy to reduce use, turn off lights, shut off air conditioning/heating systems when spaces are not in use, etc.)

18. Are any of your company's operations powered by renewable energy?   Company Renewable Energy Data

19. Are any of your company's suppliers using renewable energy?   Supplier Renewable Energy Data

Water

20. Has your company identified water stewardship goals or goals to reduce water consumption?

21. Does your company engage in water conservation efforts? (Ex: Reduce water use where possible, recycle gray water for irrigation, use rainwater catchment, etc.)

22. When planning trips, does your company consider water scarcity at destinations? Please explain.

23. What measures are in place to prevent overuse and further stress on the local areas?

Pollution

Greenhouse Gas Emissions

24. Has your company ever calculated its greenhouse gas emissions/carbon footprint? If yes, what were the results?

Emissions Data

25. Has your company set emissions reduction targets (Ex: Scope 1, 2, or 3)?

26. Does your company have an action plan to reduce greenhouse gas emissions? (Ex: Reduce and/or eliminate consumption of animal products, source food locally, use fuel efficient and/or electric, hybrid vehicles, engage in reforestation efforts, use renewable energy, have implementations in new ships, collaborations with carbon-neutral companies, purchase carbon offsets, offer incentives for employees – or guest/travelers - to carpool or use public transportation, only offer small group tours, etc.)

Emissions Reductions Plan

27. Does your company purchase carbon offsets?   27.1 If yes, how many and what types?

Carbon Offset Data

28. Out of all cruise ships that are used for your company's trips, how many of them have scrubbers installed?

Cruise Ship Scrubber Data

Noise Pollution

29. What are the boat hull types of your company's cruise ships?

Cruise Ship Data

Transportation

30. Does your company keep data on the mode of transportation (bus, train, airplane) that it uses on trips? What is the percentage breakdown? (Ex: On average, 35% of transportation on trips is by train)

Transportation Data

31. Are the transportation companies used local to your company's destinations?

Transportation Demographic Data

Waste

32. Does your company have recycling options and receptacles available? This can include both at offices and on trips, but please specify.

33. Does your company reduce, reuse, and recycle? (Ex: Reduce waste, reduce/recycle paper and plastic products, eliminate single use plastics, avoid Styrofoam, eliminate plastic straws, use non-toxic cleaning products, home offices/telecommuting, print on recycled paper, use biodegradable ink, office recycling, rechargeable batteries, donate used linens, properly dispose of shipboard waste, etc.)

34. Are you aware if your company's suppliers have a system to manage food waste? (Ex: Composting and/or recycling). What is the percentage that is composted/recycled?

Compost/Recycling Data

35. Does your company provide single-use products (plastics, styrofoam) on trips? Please list amount and type.

Single-Use Plastics Data

36. Does your company have a system to manage single-use plastics in its operations? If yes, please describe.

37. How is waste managed on cruise ships (Ex: Food, water from washing machines, solid)?

Biodiversity and Wildlife

38. Does your company have goals or initiatives pertaining to biodiversity? Please provide examples.

39. Does your company offer wildlife tourism trips?

39.1 What wildlife viewing programs does it offer? How many times a year are these offered?

39.2 What wildlife interaction programs does your company offer? How many times a year are these offered?

40. Does your company visit any natural or protected areas and habitats?

Data/List of Places Visited

41. Does your company engage with local conservation bodies to establish/identify issues concerning visits to particular sites?

42. Does your company research the natural habitats in destinations before planning trips?

42.1 What are the questions asked, or criteria used in this research?

42.2 Is consideration given to the capacity and fragility of natural sites, and to the levels of pressure on them, in determining the size, frequency and timing of group visits?

ECONOMIC: Maximizing social and economic benefits in the areas where your tours operate

43. Does your company's tourism business support community development initiatives in the destinations where it operates? (Ex: Does it support or collaborate with local organizations involved with education and micro-enterprise development, health care initiatives, educational opportunities in the destination, profit that goes back to the local community, etc.)

44. What support does your company give to local infrastructure and social community development? (Ex: Education, training, health, and sanitation projects which address the impacts of climate change). Please provide records if available.

Local Support Data

45. What percentage of your company's staff is employed locally?

Employee Demographics

46. What is the percentage of local employment in management positions?

47. Does your company offer training to local residents to enhance employment opportunities? Please provide examples, if available.

48. What percentage of your company's suppliers are locally-owned businesses?

Locally-Owned Business Data

49. Do trips take travelers to local markets/businesses?

50. What proportion of market/purchasing time spent is at handmaid local craft stores or other local businesses?

Handmaid Local Craft Data

51. Is your company a member of local Destination Management Organization or an equivalent body?

Socio-Cultural: Maximize social benefit | Support cultural and natural heritage

52. Does your tourism business promote "sense of place" and authenticity that embraces cultural heritage, either directly or through your business partners? (Ex: Visit restaurants that specialize in local culinary traditions, stay in lodges and hotels that reflect local cultural design, art, music, and blend with the natural surroundings, etc.)

53. What partnerships has your company formed between local communities, NGOs, and other local bodies at destinations?

54. What measures does your company take to document your connection with local and indigenous communities?

Please provide records, if available.

55. Does your company encourage feedback from the local communities in which you visit?

55.1 What type of communication/feedback/grievance mechanism is in place for local communities? How are responses assessed and considered in your company's business decisions?

56. What percentage of your company's trips are focused on local and cultural heritage?   Cultural Trip Data

57. What kind of informative materials does your company include about the interpretation of the natural surroundings, local culture, and cultural heritage of destinations?

58. What information does your company provide travelers about appropriate behaviors   Traveler Information
associated with local cultures?

59. What type of access does your company provide on your trips for people with disabilities?

60. Does your company use any system or framework to monitor its socio-cultural impact (UN Sustainable Development Goals, UN Global Compact 10 Principles, AIM-Progress, etc.)?

61. Does your company have any policies in place:

61.1 On Human Rights   Human Rights Policy

61.2 On Diversity and Inclusion   Diversity and Inclusion Policy

61.3 To prohibit commercial, sexual, or any other form of   Commercial, Sexual, or Explotaition/Harrassment Policy
exploitation or harassment?

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APPENDIX B

Global Sustainable Tourism Council Criteria For Tour Operators

Preamble

The Global Sustainable Tourism Council (GSTC) Criteria were created to provide a common understanding throughout the world of "sustainable tourism", and are the minimum that any tourism business should aspire to reach. They are organized around four main themes: effective sustainability planning, maximizing social and economic benefits for the local community, enhancing cultural heritage, and reducing negative impacts to the environment. They have applicability to the entire tourism industry.

The Criteria have been developed and revised while striving to adhere to the Standard-Setting Code of the ISEAL Alliance, the body recognized to provide guidance on international norms for developing sustainability standards in all sectors. The Criteria are revised every 3 to 5 years. Plans for revisions plus advance sign-up for public input into future revisions are available on www.gstcouncil.org. The website also provides information on the process and history of the Criteria development.

Some of the uses of the criteria include the following:

- Serve as the basis for certification for sustainability
- Serve as basic guidelines for businesses of all sizes to become more sustainable, and help businesses choose sustainable tourism programmes that fulfil these global criteria
- Provide greater market access in the growing market for sustainable products, serving as guidance both for travellers and for travel agencies in choosing suppliers and sustainable tourism programmes
- Help consumers identify sound sustainable tourism programmes and businesses
- Serve as a common denominator for information media to recognize sustainable tourism providers
- Help certification and other voluntary programmes ensure that their standards meet a broadly-accepted baseline

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- Offer governmental, non-governmental, and private sector programmes a starting point for developing sustainable tourism requirements
- Serve as basic guidelines for education and training bodies, such as hotel schools and universities
- Demonstrate leadership that inspires others to act

The Criteria indicate what should be done, *not how* to do it or whether the goal has been achieved. This role is fulfilled by performance indicators, associated educational materials, and access to tools for implementation, all of which are an indispensable complement to the GSTC Criteria.

Criteria Application

It is recommended that all criteria be applied to the greatest extent practical, unless for a specific situation the criterion is not applicable and this is justified. There may be circumstances in which a criterion is not applicable to a specific tourism product, given the local regulatory, environmental, social, economic or cultural conditions. In the case of micro and community-owned tourism businesses which have a small social, economic and environmental footprint, it is recognized that limited resources may prevent comprehensive application of all criteria. Further guidance on these criteria may be found from the supporting indicators and glossary, published by the GSTC.

Performance Indicators

The performance indicators presented here are designed to provide guidance in measuring compliance with the GSTC Criteria for Hotels.

This draft set of indicators will be updated periodically, as new information is developed. If you would like to suggest new indicators or other improvements, please send your suggestions to accreditation@gstcouncil.org.

Combined Indicators and Criteria

This document contains the Criteria and the Performance Indicators.

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GSTC INDUSTRY CRITERIA	INDICATORS FOR HOTELS
SECTION A: Demonstrate effective sustainable management	
A1 Sustainability management system The organization has implemented a long-term sustainability management system that is suitable to its size and scope, addresses environmental, social, cultural, economic, quality, human rights, health, safety, risk and crisis management issues and drives continuous improvement.	a. The Sustainability Management System is clearly documented. b. The SM System covers environmental, social, cultural, economic, quality, human rights, health and safety issues. c. The SM System includes consideration of risk and crisis management. d. Documentary evidence shows implementation of the SM system. e. The SM System includes a process for monitoring continuous improvement in sustainability performance.
A2 Legal compliance The organization is in compliance with all applicable local, national and international legislation and regulations including, among others, health, safety, labour and environmental aspects.	a. An up to date list of all applicable legal requirements is maintained. b. Certificates or other documentary evidence show compliance with all applicable legal requirements. c. Legal requirements in all countries of operation are understood and met.
A3 Reporting and communication The organization communicates its sustainability policy, actions and performance to stakeholders, including customers, and seeks to engage their support.	a. Regular reports are made available on sustainability performance. b. Sustainability policies and actions are reported in external and internal communication material. c. Communications contain messages inviting consumer and stakeholder support.
A4 Staff engagement Staff are engaged with development and implementation of the sustainability management system and receive periodic guidance and training regarding their roles and responsibilities in its delivery.	a. Evidence is available of staff involvement with the SM System. b. Records of courses and on-the-job training, with attendance levels, are available. c. Staff training and guidance materials are available in accessible format (including use of minority languages where needed). d. Staff hold certificates and qualifications in relevant disciplines/skills.
A5 Customer experience Customer satisfaction, including aspects of sustainability, is monitored and corrective action taken.	a. A customer feedback system is in place, together with analysis of the results. b. Negative feedback and responses made to this are recorded. c. There is evidence of corrective actions taken. d. Feedback from customers is provided to tourism businesses and destinations contracted/visited.
A6 Accurate promotion Promotional materials and marketing communications are accurate and transparent with regard to the organization and its products and services, including sustainability claims. They do not promise more than is being delivered.	a. Images used in promotion are of actual experiences offered and places visited by customers. b. Marketing about wildlife or cultural events does not promise sightings which cannot be guaranteed. c. Sustainability claims are based on records of past performance.

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A7 Buildings and infrastructure	Indicators for A7 criteria relate to the buildings and infrastructure owned and
Planning, siting, design, construction, renovation, operation and demolition of buildings and infrastructure...	operated by the organization or over which they have direct influence/control.
A7.1 Compliance ...comply with zoning requirements and laws related to protected and sensitive areas and to heritage considerations.	a. Awareness of, and compliance with, laws relating to land use and activities in the local area is demonstrated. b. All required licences and permits are up to date. c. Awareness of, and compliance with, non-statutory area management plans and guidance (e.g. for particular zones, design, etc.), is demonstrated.
A7.2 Impact and integrity ...take account of the capacity and integrity of the natural and cultural surroundings.	a. Site selection, design and access have taken account of visual amenity, landscape, cultural and natural heritage. b. Site selection, design and access have taken account of the protection of biologically sensitive areas and the assimilative capacity of ecosystems. c. The integrity of archaeological, cultural heritage, and sacred sites has been preserved. d. The integrity and connectivity of natural sites and protected areas has been preserved. e. Threatened or protected species have not been displaced and impact on all wildlife habitats has been minimised and mitigated. f. Water courses/catchments/wetlands have not been altered and run-off is reduced where possible and any residue is captured or channeled and filtered. g. Risk factors (including climate change, natural phenomena, and visitor safety) have been assessed and addressed. h. Impact assessment (including cumulative impacts) has been undertaken and documented as appropriate.
A7.3 Sustainable practices and materials ...use locally appropriate and sustainable practices and materials.	a. Local materials, practices and crafts have been used in buildings and design where practicable and appropriate. b. Native and endemic plants obtained from sustainable sources have been used in landscaping and decoration, avoiding exotic and invasive species. c. Plants have been selected for their ability to tolerate prevailing or anticipated conditions eg drought tolerant plants. d. Sustainable design, materials and construction practices have been used in buildings, with appropriate certification where possible. e. Waste from construction is sorted and disposed of in an environmentally sound manner.
A7.4 Access for all ...provide access and information for persons with special needs, where appropriate.	a. Sites, buildings and activities are accessible to persons with physical disabilities and other special needs, as appropriate to the nature of the operation. b. Clear and accurate information is provided on the level of accessibility. c. Accessibility is certified or checked with relevant experts/user bodies.

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A8 Land water and property rights Acquisition by the organization of land and water rights and of property is legal, complies with local communal and indigenous rights, including their free, prior and informed consent, and does not require involuntary resettlement.	a. On sites owned and operated by the organization or over which they have direct influence/control, land ownership and tenure rights are documented. b. User and access rights for key resources, including land and water, are documented where applicable. c. There is documentary evidence of communication, consultation and engagement with local and indigenous communities. d. Evidence of free, prior and informed consent of local communities is documented, where relevant (showing no involuntary resettlement or land acquisition).
A9 Information and interpretation The organization provides information about and interpretation of the natural surroundings, local culture, and cultural heritage, as well as an explanation of appropriate behaviour while visiting natural areas, living cultures, and cultural heritage sites.	a. Information/interpretation material about the natural and cultural heritage of areas visited is available and provided to customers. b. Staff are informed and trained about the natural and cultural heritage of the areas visited. c. Information is provided to customers about appropriate behaviour in the areas visited.
A10 Destination engagement The organization is involved with sustainable tourism planning and management in the destination, where such opportunities exist.	a. The organization is in contact with the local Destination Management Organization or equivalent body in those locations where it is most active. b. The organization engages in the planning and management of sustainable tourism in those destinations where it is most active.

SECTION B: Maximize social and economic benefits to the local community and minimize negative impacts

B1 Community support The organization actively supports initiatives for local infrastructure and social community development. Examples of initiatives include education, training, health and sanitation and projects which address the impacts of climate change.	a. The organization supports initiatives with local communities in areas where it is particularly active. b. The level and nature of contributions made to schemes in the local communities is recorded. c. In selecting service providers and products/experiences to feature in programmes, the organization favours those that engage with and support local communities.
B2 Local employment Local residents are given equal opportunities for employment and advancement, including in management positions.	a. The organization seeks to provide employment opportunities for local residents in its operations and activities. b. The organization monitors the level and proportion of employment it provides for local residents. c. Training is offered to local residents to enhance their employment opportunities.

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	d.	In selecting service providers and products/experiences to feature in programmes, the organization favours those that that provide local employment.
B3 Local purchasing When purchasing and offering goods and services, the organization gives priority to local and fair trade suppliers whenever these are available and of sufficient quality.	a. b.	The organization regularly audits its sources of supply of goods and services. In selecting service providers and products/experiences to feature in programmes, the organization favours those that are locally owned and operated.
B4 Local entrepreneurs The organization supports local entrepreneurs in the development and sale of sustainable products and services that are based on the area's nature, history and culture.	a. b.	Where appropriate, the organization provides advice and support to local service providers with whom it engages, on the quality and sustainability of their service. Opportunities for joint ventures and partnerships with local entrepreneurs are considered and pursued where appropriate.
B5 Exploitation and harassment The organization has implemented a policy against commercial, sexual or any other form of exploitation or harassment, particularly of children, adolescents, women, minorities and other vulnerable groups.	a. b. c. d. e. f.	The organization has a documented policy against exploitation and harassment of vulnerable groups. Action is taken to communicate and implement the policy. The organization engages with the local community, in destinations where it is particularly active, in working against exploitation and harassment. Records of employee ages are kept and show absence of any form of child labour (as defined by ILO). The organization supports action against child sex tourism. Services providers and premises where there is any evidence of possible exploitation are not contracted or visited.
B6 Equal opportunity The organization offers employment opportunities, including in management positions, without discrimination by gender, race, religion, disability or in other ways.	a. b. c.	The organization has identified groups at risk of discrimination, including women and local minorities. The proportion of employees drawn from each of these groups is monitored. Internal promotion includes members of these groups.
B7 Decent work Labour rights are respected, a safe and secure working environment is provided and employees are paid at least a living wage. Employees are offered regular training, experience and opportunities for advancement.	a. b. c. d. e. f. g.	The organization demonstrates awareness of, and compliance with, international labour standards and regulations. Wage levels are monitored and regularly reviewed against norms for a living wage in the countries of employment. Training records are kept for all staff, showing the level and frequency of training received. Employee contracts show support for health care and social security. Water, sanitation and hygiene facilities are provided for all onsite workers. Employee satisfaction is monitored. An employee grievance mechanism is in place.
B8 Community services The activities of the organization do not jeopardize the provision of basic services, such as	a.	The organization monitors its impact on the availability of local services in the main areas of operation/visited.

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food, water, energy, healthcare or sanitation, to neighbouring communities.	b.	A communication/feedback/grievance mechanism is in place for communities in the main areas of operation/visited.
	c.	Any reduction in availability of basic services to local communities, identified as the result of the organization's activities, is addressed.
B9 Local livelihoods The activities of the organization do not adversely affect local access to livelihoods, including land and aquatic resource use, rights-of-way, transport and housing.	a.	Local access to livelihoods is considered in decisions about development and operations.
	b.	A communication mechanism is in place for local communities to report any instance of reduced access to local livelihoods in the main areas of operation/visited.

SECTION C: Maximize benefits to cultural heritage and minimize negative impacts

C1 Cultural interactions The organization follows international and national good practice and locally agreed guidance for the management and promotion of visits to indigenous communities and culturally or historically sensitive sites in order to minimize adverse impacts and maximise local benefits and visitor fulfilment.	a.	The organization demonstrates awareness of, and compliance with, existing international, national and local good practice and guidance for tourist visits to cultural sites and indigenous communities.
	b.	The organization engages with communities/sites in reviewing guidance and creating and agreeing additional guidelines as necessary.
	c.	Guidelines are effectively used and communicated.
	d.	Particular measures are in place to avoid inappropriate interaction with children.
	e.	The organization participates in/supports training and use of local guides.
	f.	Consideration is given to the capacity and fragility of sites and communities, and to the levels of pressure on them, in determining the size, frequency and timing of group visits.
	g.	Feedback from local communities and from visitors is encouraged and acted upon.
C2 Protecting cultural heritage The organization contributes to the protection, preservation and enhancement of local properties, sites and traditions of historical, archaeological, cultural and spiritual significance and does not impede access to them by local residents.	a.	The organization makes and records monetary contributions to the protection of cultural heritage in its main areas of operation/visited.
	b.	The organization provides in-kind or other support for cultural heritage in its main areas of operation/visited.
	c.	The organization ensures that its activities do not impede local access to sites.
C3 Presenting culture and heritage The organization values and incorporates authentic elements of traditional and contemporary local culture in its operations, design, decoration, cuisine, or shops, while respecting the intellectual property rights of local communities.	a.	Sites visited and experiences offered provide an authentic experience of local culture and heritage.
	b.	Living cultural heritage and traditions are evident in cuisine, retail, events and other services offered.
	c.	Copyright and intellectual property rights have been observed and necessary permissions obtained.
	d.	The views of the local community have been sought on the presentation of local cultural heritage.

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C4 Artefacts	a.	Any use of artefacts is transparent and/or documented and reported.
Historical and archaeological artefacts are not sold, traded or displayed, except as permitted by local and international law.	b.	Where artefacts are used, laws and bylaws have been identified that permit such use.
	c.	Visitors are prevented from removing or damaging artefacts.

Section D: Maximize benefits to the environment and minimize negative impacts

D1 Conserving resources

D1.1 Environmentally preferable purchasing	a.	A documented environmental purchasing policy is in place.
Purchasing policies favour environmentally sustainable suppliers and products, including capital goods, food, beverages, building materials and consumables.	b.	Preference is given to products and suppliers with environmental certification – notably with respect to wood, paper, fish, other foods, and products from the wild.
	c.	Where certified products are not available, consideration is given to origin and methods of growing or production.
	d.	Threatened species are not used or sold.
	e.	Service providers and other operators selected and featured in tours have environmental/sustainability certification where possible.
	f.	Where certified businesses are not available, the sustainability performance of service providers is considered and required improvements are communicated and implemented.

D1.2 Efficient purchasing	a.	Purchasing favours reusable, returnable and recycled goods.
The organization carefully manages the purchasing of consumable and disposable goods, including food, in order to minimize waste.	b.	Purchasing and use of consumable and disposable goods are monitored and managed.
	c.	Unnecessary packaging (especially from plastic) is avoided, with buying in bulk as appropriate.

D1.3 Energy conservation	a.	Energy used in the organization's operations and those over which it has direct influence/control is monitored and managed.
Energy consumption is measured by type and steps are taken to minimize overall consumption. The organization makes efforts to increase its use of renewable energy.	b.	Renewable sources are favoured and the share of renewable energy in total energy supply is monitored and managed.
	c.	Equipment and practices are used that minimize energy use.
	d.	Goals for reducing energy consumption are in place.
	e.	Staff and guests are given guidance on minimizing energy use.

D1.4 Water conservation	a.	Water risk in the main destinations visited has been assessed and documented.
Water risk is assessed, water consumption is measured by type, and steps are taken to minimize overall consumption. Water sourcing is sustainable and does not adversely affect environmental flows. In areas of high water risk,	b.	In destinations visited where water risk has been assessed as high, water stewardship goals have been determined.
	c.	Water used in the organization's operations and those over which it has direct influence/control is monitored and managed.
	d.	Equipment and practices are used that minimize water consumption.

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context-based water stewardship goals are identified and pursued.	e. Water originates from a legal and sustainable source which has not previously affected, and is unlikely in future to affect, environmental flows. f. Consideration is given to cumulative impacts of tourism in the locality on water sources. g. Goals for reducing water consumption are in place. h. Staff and guests are given guidance on minimizing water use.

D2 Reducing pollution

D2.1 Greenhouse gas emissions Significant greenhouse gas emissions from all sources controlled by the organization are identified, calculated where possible and procedures implemented to avoid or to minimize them. Offsetting of the organization's remaining emissions is encouraged.	a. Total direct and indirect greenhouse gas emissions from the organization's operations and those over which it has direct influence/control are monitored and managed. b. Carbon footprint per tourist/night is monitored and managed. c. Actions are taken to avoid and reduce significant annual emissions from all sources controlled by the organization. d. Actions are taken to encourage suppliers of products and services to avoid and reduce significant annual emissions. e. Carbon offset mechanisms are used where practical.
D2.2 Transport The organization seeks to reduce transportation requirements and actively encourages the use of cleaner and more resource efficient alternatives by customers, employees, suppliers and in its own operations.	a. Where practical and feasible, the cleanest and most resource efficient transport options are used in the provision of tour programmes and excursions. b. Information is provided and promoted to customers on alternative (climate friendly) transport options, where available. c. Alternative transport options (e.g. bike rental, car sharing, pick-ups) for guests and staff are provided or facilitated. d. Markets accessible by short and more sustainable transport options are favoured. e. Local suppliers are favoured and daily operations seek to minimize transport use.
D2.3 Wastewater Wastewater, including grey water, is effectively treated and is only reused or released safely, with no adverse effects to the local population or the environment.	a. The organization is aware of wastewater treatment arrangements in the main destinations visited, and seeks to influence their improvement where necessary and practicable. b. Wastewater resulting from organization's operations and those over which it has direct influence/control is disposed of to a municipal or government approved treatment system, if available. c. If suitable municipal wastewater treatment is not available, there is a system in place on site to treat wastewater (that meets international wastewater quality requirements) and ensures no adverse effects on the local population and the environment.
D2.4 Solid waste Waste, including food waste, is measured, mechanisms are in place to reduce waste and, where reduction is not feasible, to reuse or recycle	a. The organization is aware of waste management arrangements in the main destinations visited, and seeks to influence their improvement where necessary and practicable. b. A solid waste management plan is in place for the organization's operations and those over which it has direct influence/control. c. The solid waste management plan includes actions to reduce, separate and reuse or recycle food waste where applicable.

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ii. Any residual waste disposal has no adverse effect on the local population or the environment.	d.	Waste disposal is to a government run or approved facility and there is evidence that the facility has no negative impact on the environment or local population.
	e.	Solid waste disposed is measured by type and goals are in place to minimize non-diverted solid waste.
	f.	Guidance is given to customers, staff and suppliers of products and services on minimizing waste.
D2.5 Harmful substances The use of harmful substances, including pesticides, paints, swimming pool disinfectants, and cleaning materials, is minimized, and substituted when available by innocuous products or processes. All storage, use, handling, and disposal of chemicals are properly managed.	a.	An inventory of harmful substances has been made and material safety data sheets (MSDS) are held.
	b.	Action has been taken to source more environmentally friendly alternatives.
	c.	Chemicals, especially those in bulk amounts, are stored and handled in accordance with appropriate standards.
	d.	Visitors are informed in advance to avoid use of personal toiletries and other substances which may be considered harmful to the local environment.
D2.6 Minimize pollution The organization implements practices to minimize pollution from noise, light, runoff, erosion, ozone-depleting substances, and air, water and soil contaminants.	a.	The potential sources of pollution covered in this criterion have been reviewed and identified.
	b.	The potential sources of pollution covered in the criterion are monitored.
	c.	Action is taken to minimize and where possible eliminate pollution from the sources covered in the criterion.

D3 Conserving biodiversity, ecosystems and landscapes

D3.1 Biodiversity conservation The organization supports and contributes to biodiversity conservation, including through appropriate management of its own property. Particular attention is paid to natural protected areas and areas of high biodiversity value. Any disturbance of natural ecosystems is minimized, rehabilitated and there is a compensatory contribution to conservation management.	a.	The organization demonstrates awareness of natural protected areas and areas of high biodiversity value in the areas visited.
	b.	The organization provides and records monetary support for biodiversity conservation in its main areas of operation/visited.
	c.	The organization provides and records in-kind or other support for biodiversity conservation in its main areas of operation/visited.
	d.	Properties owned or operated by the organization and those over which it has direct influence/control are actively managed to support biodiversity conservation.
	e.	The organization is aware of, and mitigates, activity with potential to disturb wildlife and habitats.
	f.	Compensation is made where any disturbance has occurred.
	g.	Action is taken to encourage visitors to support biodiversity conservation.
	h.	The organization engages with local conservation NGOs in its main areas of operation/visited.
D3.2 Invasive species The organization takes measures to avoid the introduction of invasive species. Native species are used for landscaping and restoration wherever feasible, particularly in natural landscapes.	a.	Properties owned or operated by the organization and those over which it has direct influence/control are monitored for presence of any invasive species.
	b.	Action is taken to ensure invasive species are not introduced or spread.
	c.	A programme is in place to eradicate and control invasive species.
	d.	Landscaping of sites is reviewed to consider use of native species.

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D3.3 Visits to natural sites The organization follows appropriate guidelines for the management and promotion of visits to natural sites in order to minimize adverse impacts and maximize visitor fulfilment.	a. The organization is aware of, and complies with, existing guidelines for tourist visits to natural sites. b. Guidelines are used when conducting visits and informing guests. c. The organization engages with local conservation bodies to establish/identify issues concerning visits to particular sites. d. The organization participates in/supports training and use of local guides in natural sites. e. Consideration is given to the capacity and fragility of natural sites, and to the levels of pressure on them, in determining the size, frequency and timing of group visits. f. Feedback from local communities and from visitors is encouraged and acted upon.
D3.4 Wildlife interactions Interactions with free roaming wildlife, taking into account cumulative impacts, are non-invasive and responsibly managed to avoid adverse effects on the animals concerned and on the viability and behaviour of populations in the wild.	a. The organization is aware of, and complies with, existing local, national and international regulations and guidelines concerning wildlife interactions, including wildlife viewing. b. The organization engages with the development and implementation of local codes and guidelines for wildlife interactions, including wildlife viewing, as required, based on advice of wildlife experts. c. The organization ensures that all service providers and sites visited comply with existing local, national and international regulations and guidelines concerning wildlife interactions, including wildlife viewing. d. Direct interactions, in particular feeding, should not be permitted, unless specifically sanctioned by internationally accepted standards or, where standards are not available, guided by independent wildlife expert advice. e. Measures are taken to minimize disturbance to wildlife. f. Impacts on wildlife wellbeing are regularly monitored and addressed.
D3.5 Animal welfare No species of wild animal is acquired, bred or held captive, except by authorized and suitably equipped persons and for properly regulated activities in compliance with local and international law. Housing, care and handling of all wild and domestic animals meets the highest standards of animal welfare.	a. The organization is aware of, and complies with, relevant laws and regulations concerning captive wildlife. b. Existing guidelines for specific tourism activities involving captive wildlife are implemented. c. Personnel responsible for captive wildlife have appropriate qualifications and experience and are fully licensed. d. The organization is aware of, and complies with, relevant laws and regulations concerning animal welfare. e. The organization ensures that all service providers and sites visited comply with relevant laws, regulations and guidelines concerning captive wildlife and animal welfare. f. There is regular inspection of conditions of captive wildlife and their housing. g. There is regular inspection of conditions of domestic animals and their housing and handling.
D3.6 Wildlife harvesting and trade Wildlife species are not harvested, consumed, displayed, sold, or traded, except as part of a regulated activity that ensures that their	a. The organization is aware of, and complies with, relevant laws and regulations concerning wildlife harvesting and trade. b. The organization ensures that all service providers and sites visited comply with relevant laws and regulations concerning wildlife harvesting and trade. c. Visitors and guides are informed of regulations concerning wildlife harvesting, consumption and trade and of the need to avoid buying illegal

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**GSTC Criteria & Indicators
Industry – Tour Operators**

| utilisation is sustainable, and in compliance with local and international laws. | products/souvenirs derived from threatened species of wildlife notified by IUCN or CITES. |
| | d. Where hunting activity is legal, it forms part of a scientifically based, properly managed and strictly enforced approach to conservation. |

APPENDIX C

NVivo Codebook

Name	Description
Economic	
Community development	Infrastructure, supporting community projects, aiding the local people
Local Employment	Training for locals, employing the local community Specific to the trips destinations
Support of local businesses	Includes using local suppliers, hotels, etc. But also visiting local small businesses (artisan craft markets) and incorporating them in part of the trip.
Environment or Natural resource	
Biodiversity, Wildlife, Natural Areas	Any impacts/efforts to preserve biodiversity, local flora/fauna, natural areas.
CO2 or GHG reduction	Total emission reductions, using public transportation, carbon offsets, carbon footprint
Energy	What does their current energy usage look like? Are they using renewables, is there any energy reduction strategies?
Food	Locally sourced, vegetarian/vegan diets
Noise pollution	Studies have shown that marine mammals may alter their behavior in response to ship noise. Propeller-induced aviation is the main source of underwater noise produced by ships. The International Maritime Organization (IMO) recommends propellers be designed to reduce aviation by appropriate selection or propeller diameter, blade number, and pitch. The shape of a ship's hull and resulting wake affect propeller performance.
Overcrowding	Overcrowding can be detrimental to the place visited by impacting the local environment, community, and putting a strain on its resources. By traveling in smaller groups and visiting in off-season, operators can minimize their impact Seasonal, smaller groups...
Waste	Food waste, use of single-use plastics, paper waste on trips, water waste...

Water	Anything the company does to eliminate water use, make it more efficient, water purification. This DOES NOT include water bottles
Operational Sustainability	
Destination Committees	DMO's, Tourism Cares... by participating or working with organizations and committees, operators are showing operational support for changing their actions and business to be more sustainable at destinations. Make sure they prioritize visiting places with a DMO, etc.
Educating travelers	
Equality	Access for disabled, inclusion
Executive support	Anything that demonstrates the company as a whole cares about integrating sustainable travel into their business. By giving back to foundations/nonprofits, having sustainability integrated into their mission statement/business plan, organizational commitments to non-profits/destinations, executive compensation (sustainable work in your office is tied to your salary)
Office	Any actions that the company takes towards integrating sustainability in their home office (i.e. composting/recycling receptacles, allowing employees to telecommute, not printing out meeting materials...)
Paper	Using paper on trips, sending out booklets, brochures with pre-trip information
Policies and standards	Sustainable practices for suppliers, code of conduct, supplier standards Includes environmental, socio-cultural, economic...
Reporting	Operators produce annual sustainability reports, report on their impacts at destinations, or have other reports/data that they document. Does the company actively report on what they are doing? This can be documented through annual reports or having data on certain matters.
Sustainability Team	Does the company have a designated sustainability team whose sole job is focused around integrating sustainable travel into their program?
Operator activity	Are the organizations addressing these topics, not currently, or goal for the future? Every single question should be coded in this
Currently looking at	This represents topics that the operator is currently focused on and actively putting effort towards. The Operator has implemented and is executing actions to improve sustainability in regard to the theme being discussed.

Goal for the future	Anything that the operators says "they hope…", "their goal…" , "by *a certain date*" This demonstrates actions that operators are aware of and want to work towards. The Operator has designated goals to improve sustainability in regard to the theme being discussed
Gap in Activity	This represents anything that operators do not currently do, do not have anything to say about the topic. This is something that the Operator either has no data on, or they have not considered this sustainability theme.
Quality Score	How well are operators doing these actions? Every single question should be coded in this
1	They are doing the best at this, a lot of organizational effort is put towards this. Operator has a goal, they're measuring it, they are working to improve it. Doing great, still have some recommendations to take them above and beyond; if they have strong examples that show why they choose to partner/visit an area for the benefit - if it's obvious they chose a supplier/destination BECAUSE of its sustainability. The Operator has implemented Specific, Measureable, Achievable, Relevant, and Time-bound actions or goals to improve sustainability.
2	The Operator has implemented actions to improve sustainability. The actions or goals may not be Specific, Measureable, Achievable, Relevant, or Time-bound.
3	Don't code according to their intent, code according to the impact Operator talks about, but don't have a lot to back up. "We're thinking about it", "We're trying", "Our suppliers do that, but it's difficult for our operation"… Operators are working towards a sustainable goal, but do not have the capacity, will power, or direction to apply themselves fully. The Operator recognizes the need for sustainability, but either has not put actions in place or the actions are not Specific, Measureable, Achievable, Relevant, or Time-bound
Socio-Cultural	
Cultural heritage	Company support for preserving cultural heritage and participating in programs that exemplify the local culture. Integrating the country's cultural aspects in a respectful, meaningful way.
Frameworks	Monitor socio-cultural impact through use of systems or frameworks
Local Relationship Management	Actively managing relationship with locals, long-term projects in the village
Suppliers	Choosing to work with sustainable suppliers is one way that operators with a complex supply chain can be sustainable. This node lists the actions of their suppliers. What are our suppliers doing? If they audit their suppliers and that is directly related to the influence of their sustainability, code that here and in policies
Supplier Quality Score	

1	The Supplier has implemented Specific, Measureable, Achievable, Relevant, and Time-bound actions or goals to improve sustainability.
2	The Supplier has implemented actions to improve sustainability. The actions or goals may not be Specific, Measureable, Achievable, Relevant, or Time-bound.
3	The Supplier recognizes the need for sustainability, but either has not put actions in place or the actions are not Specific, Measureable, Achievable, Relevant, or Time-bound

APPENDIX D

Data Analysis: Interpretation of Cohen's Kappa Statistic

Kappa values	Interpretation of level of agreement	Kappa values	Interpretation of level of agreement
1.00	Perfect agreement	> 0.75	Excellent agreement beyond chance
0.93–0.99	Excellent agreement		
0.81–0.92	Very good agreement	0.40–0.75	Good agreement beyond chance
It 0.61–0.80	Good agreement		
0.41–0.60	Fair/substantial agreement	< 0.40	Poor agreement beyond chance
0.21–0.40	Slight agreement		
0.01–1.20	Poor/chance agreement		
≤ 0	No agreement	-	-

Source: Dawson, B., & Trapp, R.G. (2004). *Basic and clinical biostatistics*. (4th edn.). New York: Lange Medical Books; Landis, J.R., & Koch, G.G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33, 159–174. http://dx.doi.org/10.2307/2529310

APPENDIX E

Number of Questions Per Theme

CURRENTLY LOOKING AT THEMES	NUMBER OF QUESTIONS
Economic	
Community Development	2
Local Employment	3
Support of Local Business	4
Environment or Natural Resources	
Biodiversity, Wildlife, Natural Areas	10
GHG reduction	7
Energy	4
Food	3
Overcrowding	1
Waste	6
Water	3
Operational Sustainability	
Destination Committees	1
Educating travelers	2
Equality	1
Executive support	2
Office	4
Policies and standards	4
Reporting	1
Sustainability Team	1
Socio-Cultural	

	Cultural Heritage	4
	Frameworks	1
	Local Relationship Management	5
Suppliers (Idirect Operator Operations)		12

GOAL THEMES	NUMBER OF QUESTIONS
Economic	
Community Development	2
Local Employment	2
Support of Local Business	2
Environment or Natural Resources	
Biodiversity, Wildlife, Natural Areas	3
GHG reduction	2
Energy	1
Food	2
Overcrowding	2
Waste	2
Water	1
Operational Sustainability	
Destination Committees	2
Educating travelers	2
Equality	2
Executive support	2
Office	2
Policies and standards	2
Reporting	2
Sustainability Team	2
Socio-Cultural	
Cultural Heritage	2
Frameworks	2
Local Relationship Management	2
Suppliers (in-direct operations)	2

APPENDIX F

Data Analysis: Operator Scorecards

AHI TRAVEL INTERNATIONAL

AHI TRAVEL	CURRENTLY LOOKING AT			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	6	0	2	8	9	0.89	1.50	0.59
Community Development	0	0	0	0	2	0.00	0.00	0.00
Local Employment	3	0	1	4	3	1.33	1.50	0.89
Support of Local Businesses	3	0	1	4	4	1.00	1.50	0.67
Environmental Sustainability	4	5	9	18	34	0.53	2.28	0.23
Biodiversity, Wildlife, Natural Areas	3	3	2	8	10	0.80	1.88	0.43
Greenhouse Gas Reduction	0	1	2	3	7	0.43	2.67	0.16
Energy	0	0	0	0	4	0.00	0.00	0.00
Food	1	0	2	3	3	1.00	2.33	0.43
Overcrowding	1	0	0	1	1	1.00	1.00	1.00
Waste	0	1	1	2	6	0.33	2.50	0.13
Water	0	1	1	2	3	0.67	2.50	0.27
Operational Sustainability	14	8	9	31	16	1.94	1.84	1.05
Destination Committees	1	0	0	1	1	1.00	1.00	1.00
Education	0	2	2	4	2	2.00	2.50	0.80
Equality	2	0	0	2	1	2.00	1.00	2.00
Executive Support	2	1	5	8	2	4.00	2.38	1.68
Office	4	5	2	11	4	2.75	1.82	1.51
Policies and Standards	5	0	0	5	4	1.25	1.00	1.25
Reporting	0	0	0	0	1	0.00	0.00	0.00
Sustainability Team	1	0	0	1	1	1.00	1.00	1.00
Suppliers	1	3	7	11	12	0.92	2.55	0.36
Socio-Cultural Sustainability	1	3	0	4	10	0.40	1.75	0.23
Cultural Heritage	1	3	0	4	4	1.00	1.75	0.57
Frameworks and Certifications	0	0	0	0	1	0.00	0.00	0.00
Local Relationship Management	0	0	0	0	5	0.00	0.00	0.00

AHI TRAVEL	GOAL FOR THE FUTURE			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	0	0	0	0	6	0.00	0.00	0.00
Community Development	0	0	0	0	2	0.00	0.00	0.00
Local Employment	0	0	0	0	2	0.00	0.00	0.00
Support of Local Businesses	0	0	0	0	2	0.00	0.00	0.00
Environmental Sustainability	2	3	1	6	13	0.46	1.83	0.25
Biodiversity, Wildlife, Natural Areas	0	0	0	0	1	0.00	0.00	0.00
Greenhouse Gas Reduction	2	2	0	4	2	2.00	1.50	1.33
Energy	0	0	1	1	1	1.00	3.00	0.33
Food	0	0	0	0	2	0.00	0.00	0.00
Overcrowding	0	0	0	0	2	0.00	0.00	0.00
Waste	0	1	1	2	2	1.00	2.50	0.40
Water	0	0	0	0	1	0.00	0.00	0.00
Operational Sustainability	2	1	0	3	18	0.17	1.33	0.13
Destination Committees	0	0	0	0	2	0.00	0.00	0.00
Education	0	0	0	0	2	0.00	0.00	0.00
Equality	0	0	0	0	2	0.00	0.00	0.00
Executive Support	0	0	0	0	2	0.00	0.00	0.00
Office	1	1	0	2	2	1.00	1.50	0.67
Policies and Standards	0	0	0	0	2	0.00	0.00	0.00
Reporting	1	0	0	1	2	0.50	1.00	0.50
Sustainability Team	0	0	0	0	2	0.00	0.00	0.00
Suppliers	0	0	0	0	2	0.00	0.00	0.00
Socio-Cultural Sustainability	0	0	0	0	6	0.00	0.00	0.00
Cultural Heritage	0	0	0	0	2	0.00	0.00	0.00
Frameworks and Certifications	0	0	0	0	2	0.00	0.00	0.00
Local Relationship Management	0	0	0	0	2	0.00	0.00	0.00

AHI TRAVEL	SUPPLIER ACTIVITY			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	7	2	2	11	9	1.22	1.55	**0.79**
Community Development	6	2	1	9	2	4.50	1.44	3.12
Local Employment	2	0	1	3	3	1.00	1.67	0.60
Support of Local Businesses	0	0	0	0	4	0.00	0.00	0.00
Environmental Sustainability	12	11	5	28	34	0.82	1.75	**0.47**
Biodiversity, Wildlife, Natural Areas	3	2	2	7	10	0.70	1.86	0.38
Greenhouse Gas Reduction	2	4	2	8	7	1.14	2.00	0.57
Energy	2	5	0	7	4	1.75	1.71	1.02
Food	2	1	1	4	3	1.33	1.75	0.76
Overcrowding	1	0	1	2	1	2.00	2.00	1.00
Waste	1	2	0	3	6	0.50	1.67	0.30
Water	3	0	1	4	3	1.33	1.50	0.89
Operational Sustainability	4	2	2	8	16	0.50	1.75	**0.29**
Destination Committees	0	0	0	0	1	0.00	0.00	0.00
Education	1	0	0	1	2	0.50	1.00	0.50
Equality	0	0	0	0	1	0.00	0.00	0.00
Executive Support	2	2	0	4	2	2.00	1.50	1.33
Office	0	0	1	1	2	0.50	3.00	0.17
Policies and Standards	0	0	1	1	4	0.25	3.00	0.08
Reporting	1	0	0	1	1	1.00	1.00	1.00
Sustainability Team	0	0	0	0	1	0.00	0.00	0.00
Socio-Cultural Sustainability	0	1	2	3	10	0.30	2.67	**0.11**
Cultural Heritage	0	0	1	1	4	0.25	3.00	0.08
Frameworks and Certifications	0	0	0	0	1	0.00	0.00	0.00
Local Relationship Management	0	1	1	2	5	0.40	2.50	0.16

AHI TRAVEL	Currently Looking At Final Score	Goals for the Future Final Score	Supplier Activity Final Score
Community Development	0.00	0.00	3.12
Local Employment	0.89	0.00	0.60
Support of Local Businesses	0.67	0.00	0.00
Biodiversity	0.43	0.00	0.38
CO2 or GHG Reduction	0.16	1.33	0.57
Energy	0.00	0.33	1.02
Food	0.43	0.00	0.76
Overcrowding	1.00	0.00	1.00
Waste	0.13	0.40	0.30
Water	0.27	0.00	0.89
Destination Committees	1.00	0.00	0.00
Education	0.80	0.00	0.50
Equality	2.00	0.00	0.00
Executive Support	1.68	0.00	1.33
Office	1.51	0.67	0.17
Policies and Standards	1.25	0.00	0.08
Reporting	0.00	0.50	1.00
Sustainability Team	1.00	0.00	0.00
Suppliers	0.36	0.00	0.00
Cultural Heritage	0.57	0.00	0.08
Frameworks and Certifications	0.00	0.00	0.00
Local Relationship Management	0.00	0.00	0.16

Lindblad Expeditions

LINDBLAD	CURRENTLY LOOKING AT			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	13	7	4	24	9	2.67	1.63	1.64
Community Development	6	3	1	10	2	5.00	1.50	3.33
Local Employment	1	1	0	2	3	0.67	1.50	0.44
Support of Local Businesses	6	3	3	12	4	3.00	1.75	1.71
Environmental Sustainability	49	22	5	76	34	2.24	1.42	1.57
Biodiversity, Wildlife, Natural Areas	15	13	3	31	10	3.10	1.61	1.92
Greenhouse Gas Reduction	11	5	0	16	7	2.29	1.31	1.74
Energy	4	1	0	5	4	1.25	1.20	1.04
Food	4	3	1	8	3	2.67	1.63	1.64
Overcrowding	1	0	0	1	1	1.00	1.00	1.00
Waste	13	1	2	16	6	2.67	1.31	2.03
Water	8	1	0	9	3	3.00	1.11	2.70
Operational Sustainability	34	16	5	55	16	3.44	1.47	2.33
Destination Committees	1	0	0	1	1	1.00	1.00	1.00
Education	12	6	2	20	2	10.00	1.50	6.67
Equality	1	1	0	2	1	2.00	1.50	1.33
Executive Support	18	9	3	30	2	15.00	1.50	10.00
Office	2	1	1	4	4	1.00	1.75	0.57
Policies and Standards	7	3	0	10	4	2.50	1.30	1.92
Reporting	0	2	0	2	1	2.00	2.00	1.00
Sustainability Team	1	0	0	1	1	1.00	1.00	1.00
Suppliers	10	5	2	17	12	1.42	1.53	0.93
Socio-Cultural Sustainability	5	8	4	17	10	1.70	1.94	0.88
Cultural Heritage	1	3	3	7	4	1.75	2.29	0.77
Frameworks and Certifications	2	0	0	2	1	2.00	1.00	2.00
Local Relationship Management	2	5	1	8	5	1.60	1.88	0.85

LINDBLAD	GOAL FOR THE FUTURE			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	0	0	0	0	6	0.00	0.00	0.00
Community Development	0	0	0	0	2	0.00	0.00	0.00
Local Employment	0	0	0	0	2	0.00	0.00	0.00
Support of Local Businesses	0	0	0	0	2	0.00	0.00	0.00
Environmental Sustainability	6	1	2	9	13	0.69	1.56	0.45
Biodiversity, Wildlife, Natural Areas	1	0	0	1	1	1.00	1.00	1.00
Greenhouse Gas Reduction	4	0	0	4	2	2.00	1.00	2.00
Energy	0	0	1	1	1	1.00	3.00	0.33
Food	1	0	0	1	2	0.50	1.00	0.50
Overcrowding	0	0	0	0	2	0.00	0.00	0.00
Waste	0	1	1	2	2	1.00	2.50	0.40
Water	0	0	0	0	1	0.00	0.00	0.00
Operational Sustainability	4	1	0	5	18	0.28	1.20	0.23
Destination Committees	0	0	0	0	2	0.00	0.00	0.00
Education	0	0	0	0	2	0.00	0.00	0.00
Equality	0	0	0	0	2	0.00	0.00	0.00
Executive Support	1	0	0	1	2	0.50	1.00	0.50
Office	1	1	0	2	2	1.00	1.50	0.67
Policies and Standards	0	0	0	0	2	0.00	0.00	0.00
Reporting	2	0	0	2	2	1.00	1.00	1.00
Sustainability Team	0	0	0	0	2	0.00	0.00	0.00
Suppliers	2	0	0	2	2	1.00	1.00	1.00
Socio-Cultural Sustainability	0	0	0	0	6	0.00	0.00	0.00
Cultural Heritage	0	0	0	0	2	0.00	0.00	0.00
Frameworks and Certifications	0	0	0	0	2	0.00	0.00	0.00
Local Relationship Management	0	0	0	0	2	0.00	0.00	0.00

LINDBLAD	SUPPLIER ACTIVITY			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	0	0	0	0	9	0.00	0.00	0.00
Community Development	0	0	0	0	2	0.00	0.00	0.00
Local Employment	0	0	0	0	3	0.00	0.00	0.00
Support of Local Businesses	0	0	0	0	4	0.00	0.00	0.00
Environmental Sustainability	3	1	0	4	34	0.12	1.25	0.09
Biodiversity, Wildlife, Natural Areas	0	0	0	0	10	0.00	0.00	0.00
Greenhouse Gas Reduction	1	1	0	2	7	0.29	1.50	0.19
Energy	0	1	0	1	4	0.25	2.00	0.13
Food	2	0	0	2	3	0.67	1.00	0.67
Overcrowding	0	0	0	0	1	0.00	0.00	0.00
Waste	1	0	0	1	6	0.17	1.00	0.17
Water	1	0	0	1	3	0.33	1.00	0.33
Operational Sustainability	8	4	4	16	16	1.00	1.75	0.57
Destination Committees	0	0	0	0	1	0.00	0.00	0.00
Education	0	0	0	0	2	0.00	0.00	0.00
Equality	0	0	0	0	1	0.00	0.00	0.00
Executive Support	2	0	0	2	2	1.00	1.00	1.00
Office	7	4	4	15	4	3.75	1.80	2.08
Policies and Standards	0	0	0	0	4	0.00	0.00	0.00
Reporting	0	0	0	0	1	0.00	0.00	0.00
Sustainability Team	0	0	0	0	1	0.00	0.00	0.00
Socio-Cultural Sustainability	0	0	0	0	10	0.00	0.00	0.00
Cultural Heritage	0	0	0	0	4	0.00	0.00	0.00
Frameworks and Certifications	0	0	0	0	1	0.00	0.00	0.00
Local Relationship Management	0	0	0	0	5	0.00	0.00	0.00

LINDBLAD	Currently Looking At Final Score	Goal for the Future Final Score	Supplier Activity Final Score
Community Development	3.33	0.00	0.00
Local Employment	0.44	0.00	0.00
Support of Local Businesses	1.71	0.00	0.00
Biodiversity, Wildlife, Natural Areas	1.92	1.00	0.00
Greenhouse Gas Reduction	1.74	2.00	0.19
Energy	1.04	0.33	0.13
Food	1.64	0.50	0.67
Overcrowding	1.00	0.00	0.00
Waste	2.03	0.40	0.17
Water	2.70	0.00	0.33
Destination Committees	1.00	0.00	0.00
Education	6.67	0.00	0.00
Equality	1.33	0.00	0.00
Executive Support	10.00	0.50	1.00
Office	0.57	0.67	2.08
Policies and Standards	1.92	0.00	0.00
Reporting	1.00	1.00	0.00
Sustainability Team	1.00	0.00	0.00
Suppliers	0.93	1.00	0.00
Cultural Heritage	0.77	0.00	0.00
Frameworks and Certifications	2.00	0.00	0.00
Local Relationship Management	0.85	0.00	0.00

Odysseys Unlimited

ODYSSEYS	CURRENTLY LOOKING AT			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	6	11	3	20	9	2.22	1.85	1.20
Community Development	3	4	1	8	2	4.00	1.75	2.29
Local Employment	3	2	2	7	3	2.33	1.86	1.26
Support of Local Businesses	2	8	0	10	4	2.50	1.80	1.39
Environmental Sustainability	3	14	10	27	34	0.79	2.26	0.35
Biodiversity, Wildlife, Natural Areas	2	10	2	14	10	1.40	2.00	0.70
Greenhouse Gas Reduction	0	0	2	2	7	0.29	3.00	0.10
Energy	0	0	1	1	4	0.25	3.00	0.08
Food	0	1	1	2	3	0.67	2.50	0.27
Overcrowding	0	1	1	2	1	2.00	2.50	0.80
Waste	1	1	4	6	6	1.00	2.50	0.40
Water	0	2	1	3	3	1.00	2.33	0.43
Operational Sustainability	18	36	23	77	16	4.81	2.06	2.33
Destination Committees	1	2	0	3	1	3.00	1.67	1.80
Education	0	8	0	8	2	4.00	2.00	2.00
Equality	1	1	0	2	1	2.00	1.50	1.33
Executive Support	4	6	8	18	2	9.00	2.22	4.05
Office	10	9	8	27	4	6.75	1.93	3.50
Policies and Standards	2	2	4	8	4	2.00	2.25	0.89
Reporting	0	1	1	2	1	2.00	2.50	0.80
Sustainability Team	0	0	1	1	1	1.00	3.00	0.33
Suppliers	3	13	8	24	12	2.00	2.21	0.91
Socio-Cultural Sustainability	5	7	1	13	10	1.30	1.69	0.77
Cultural Heritage	5	5	0	10	4	2.50	1.50	1.67
Frameworks and Certifications	0	0	0	0	1	0.00	0.00	0.00
Local Relationship Management	1	2	1	4	5	0.80	2.00	0.40

ODYSSEYS	GOAL FOR THE FUTURE			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	0	0	0	0	6	0.00	0.00	0.00
Community Development	0	0	0	0	2	0.00	0.00	0.00
Local Employment	0	0	0	0	2	0.00	0.00	0.00
Support of Local Businesses	0	0	0	0	2	0.00	0.00	0.00
Environmental Sustainability	0	0	1	1	13	0.08	3.00	0.03
Biodiversity, Wildlife, Natural Areas	0	0	0	0	1	0.00	0.00	0.00
Greenhouse Gas Reduction	0	0	0	0	2	0.00	0.00	0.00
Energy	0	0	0	0	1	0.00	0.00	0.00
Food	0	0	0	0	2	0.00	0.00	0.00
Overcrowding	0	0	0	0	2	0.00	0.00	0.00
Waste	0	0	1	1	2	0.50	3.00	0.17
Water	0	0	0	0	1	0.00	0.00	0.00
Operational Sustainability	2	1	2	5	18	0.28	2.00	0.14
Destination Committees	0	0	0	0	2	0.00	0.00	0.00
Education	0	0	0	0	2	0.00	0.00	0.00
Equality	0	0	0	0	2	0.00	0.00	0.00
Executive Support	0	0	1	1	2	0.50	3.00	0.17
Office	2	1	1	4	2	2.00	1.75	1.14
Policies and Standards	0	0	0	0	2	0.00	0.00	0.00
Reporting	0	0	0	0	2	0.00	0.00	0.00
Sustainability Team	0	0	0	0	2	0.00	0.00	0.00
Suppliers	0	0	1	1	2	0.50	3.00	0.17
Socio-Cultural Sustainability	0	0	0	0	6	0.00	0.00	0.00
Cultural Heritage	0	0	0	0	2	0.00	0.00	0.00
Frameworks and Certifications	0	0	0	0	2	0.00	0.00	0.00
Local Relationship Management	0	0	0	0	2	0.00	0.00	0.00

ODYSSEYS	SUPPLIER ACTIVITY			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	1	10	8	19	9	2.11	2.37	0.89
Community Development	1	3	7	11	2	5.50	2.55	2.16
Local Employment	0	2	0	2	3	0.67	2.00	0.33
Support of Local Businesses	1	5	1	7	4	1.75	2.00	0.88
Environmental Sustainability	9	21	23	53	34	1.56	2.26	0.69
Biodiversity, Wildlife, Natural Areas	5	6	9	20	10	2.00	2.20	0.91
Greenhouse Gas Reduction	0	3	1	4	7	0.57	2.25	0.25
Energy	0	2	3	5	4	1.25	2.60	0.48
Food	0	2	0	2	3	0.67	2.00	0.33
Overcrowding	0	2	5	7	1	7.00	2.71	2.58
Waste	2	5	5	12	6	2.00	2.25	0.89
Water	2	3	4	9	3	3.00	2.22	1.35
Operational Sustainability	10	16	13	39	16	2.44	2.08	1.17
Destination Committees	0	1	1	2	1	2.00	2.50	0.80
Education	4	3	5	12	2	6.00	2.08	2.88
Equality	0	1	1	2	1	2.00	2.50	0.80
Executive Support	1	4	5	10	2	5.00	2.40	2.08
Office	2	1	0	3	4	0.75	1.33	0.56
Policies and Standards	1	5	1	7	4	1.75	2.00	0.88
Reporting	1	1	0	2	1	2.00	1.50	1.33
Sustainability Team	1	0	0	1	1	1.00	1.00	1.00
Socio-Cultural Sustainability	1	4	5	10	10	1.00	2.40	0.42
Cultural Heritage	0	4	5	9	4	2.25	2.56	0.88
Frameworks and Certifications	1	0	0	1	1	1.00	1.00	1.00
Local Relationship Management	0	0	0	0	5	0.00	0.00	0.16

ODYSSEYS	Currently Looking At Final Score	Goal for the Future Final Score	Supplier Activity Final Score
Community Development	2.29	0.00	2.16
Local Employment	1.26	0.00	0.33
Support of Local Businesses	1.39	0.00	0.88
Biodiversity, Wildlife, Natural Areas	0.70	0.00	0.91
Greenhouse Gas Reduction	0.10	0.00	0.25
Energy	0.08	0.00	0.48
Food	0.27	0.00	0.33
Overcrowding	0.80	0.00	2.58
Waste	0.40	0.17	0.89
Water	0.43	0.00	1.35
Destination Committees	1.80	0.00	0.80
Education	2.00	0.00	2.88
Equality	1.33	0.00	0.80
Executive Support	4.05	0.17	2.08
Office	3.50	1.14	0.56
Policies and Standards	0.89	0.00	0.88
Reporting	0.80	0.00	1.33
Sustainability Team	0.33	0.00	1.00
Suppliers	0.91	0.17	0.00
Cultural Heritage	1.67	0.00	0.88
Frameworks and Certifications	0.00	0.00	1.00
Local Relationship Management	0.40	0.00	0.16

Orbridge

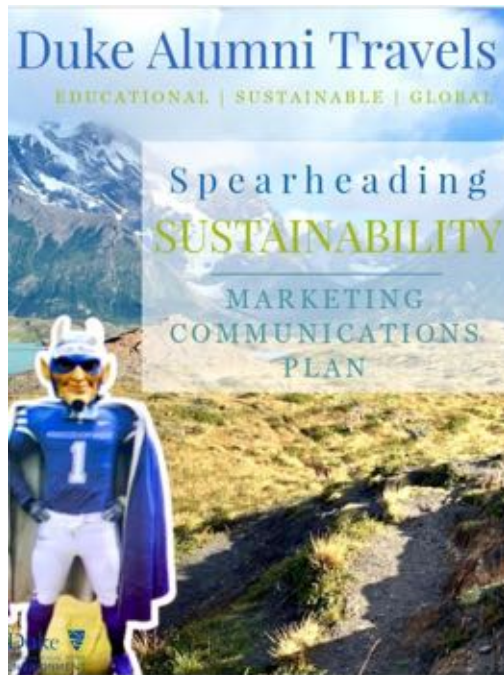| ORBRIDGE	CURRENTLY LOOKING AT			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	1	5	0	6	9	0.67	1.83	0.36
Community Development	0	1	0	1	2	0.50	2.00	0.25
Local Employment	0	1	0	1	3	0.33	2.00	0.17
Support of Local Businesses	1	3	0	4	4	1.00	1.75	0.57
Environmental Sustainability	4	7	6	17	34	0.50	2.12	0.24
Biodiversity, Wildlife, Natural Areas	1	4	3	8	10	0.80	2.25	0.36
Greenhouse Gas Reduction	1	2	2	5	7	0.71	2.20	0.32
Energy	0	0	1	1	4	0.25	3.00	0.08
Food	0	1	0	1	3	0.33	2.00	0.17
Overcrowding	1	0	2	3	1	3.00	2.33	1.29
Waste	2	0	1	3	6	0.50	1.67	0.30
Water	0	0	0	0	3	0.00	0.00	0.00
Operational Sustainability	6	13	7	26	16	1.63	2.04	0.80
Destination Committees	0	0	0	0	1	0.00	0.00	0.00
Education	0	3	2	5	2	2.50	2.40	1.04
Equality	1	0	0	1	1	1.00	1.00	1.00
Executive Support	1	4	1	6	2	3.00	2.00	1.50
Office	4	3	4	11	4	2.75	2.00	1.38
Policies and Standards	1	3	0	4	4	1.00	1.75	0.57
Reporting	0	0	0	0	1	0.00	0.00	0.00
Sustainability Team	0	0	0	0	1	0.00	0.00	0.00
Suppliers	1	2	2	5	12	0.42	2.20	0.19
Socio-Cultural Sustainability	1	4	1	6	10	0.60	2.00	0.30
Cultural Heritage	1	4	1	6	4	1.50	2.00	0.75
Frameworks and Certifications	0	0	0	0	1	0.00	0.00	0.00
Local Relationship Management	0	0	0	0	5	0.00	0.00	0.00

ORBRIDGE	GOAL FOR THE FUTURE			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	0	0	0	0	6	0.00	0.00	0.00
Community Development	0	0	0	0	2	0.00	0.00	0.00
Local Employment	0	0	0	0	2	0.00	0.00	0.00
Support of Local Businesses	0	0	0	0	2	0.00	0.00	0.00
Environmental Sustainability	0	1	0	1	13	0.08	2.00	0.04
Biodiversity, Wildlife, Natural Areas	0	0	0	0	1	0.00	0.00	0.00
Greenhouse Gas Reduction	0	1	0	1	2	0.50	2.00	0.25
Energy	0	0	0	0	1	0.00	0.00	0.00
Food	0	0	0	0	2	0.00	0.00	0.00
Overcrowding	0	0	0	0	2	0.00	0.00	0.00
Waste	0	0	0	0	2	0.00	0.00	0.00
Water	0	0	0	0	1	0.00	0.00	0.00
Operational Sustainability	0	1	0	1	18	0.06	2.00	0.03
Destination Committees	0	0	0	0	2	0.00	0.00	0.00
Education	0	0	0	0	2	0.00	0.00	0.00
Equality	0	0	0	0	2	0.00	0.00	0.00
Executive Support	0	1	0	1	2	0.50	2.00	0.25
Office	0	0	0	0	2	0.00	0.00	0.00
Policies and Standards	0	0	0	0	2	0.00	0.00	0.00
Reporting	0	0	0	0	2	0.00	0.00	0.00
Sustainability Team	0	0	0	0	2	0.00	0.00	0.00
Suppliers	0	0	0	0	2	0.00	0.00	0.00
Socio-Cultural Sustainability	0	0	0	0	6	0.00	0.00	0.00
Cultural Heritage	0	0	0	0	2	0.00	0.00	0.00
Frameworks and Certifications	0	0	0	0	2	0.00	0.00	0.00
Local Relationship Management	0	0	0	0	2	0.00	0.00	0.00

ORBRIDGE	SUPPLIER ACTIVITY			Summed References	Number of Questions Asked	Weighted by Number of Questions	Average Quality Score	Final Weighted Score
	1	2	3					
Economic Sustainability	3	2	1	6	9	0.67	1.67	0.40
Community Development	2	2	1	5	2	2.50	1.80	1.39
Local Employment	1	0	0	1	3	0.33	1.00	0.33
Support of Local Businesses	0	0	1	1	4	0.25	3.00	0.08
Environmental Sustainability	7	2	1	10	34	0.29	1.40	0.21
Biodiversity, Wildlife, Natural Areas	2	1	1	4	10	0.40	1.75	0.23
Greenhouse Gas Reduction	1	1	0	2	7	0.29	1.50	0.19
Energy	1	0	0	1	4	0.25	1.00	0.25
Food	1	0	0	1	3	0.33	1.00	0.33
Overcrowding	0	0	0	0	1	0.00	0.00	0.00
Waste	1	0	0	1	6	0.17	1.00	0.17
Water	1	0	0	1	3	0.33	1.00	0.33
Operational Sustainability	8	2	0	10	16	0.63	1.20	0.52
Destination Committees	0	0	0	0	1	0.00	0.00	0.00
Education	1	0	0	1	2	0.50	1.00	0.50
Equality	0	0	0	0	1	0.00	0.00	0.00
Executive Support	0	0	0	0	2	0.00	0.00	0.00
Office	5	1	0	6	4	1.50	1.17	1.29
Policies and Standards	2	1	0	3	4	0.75	1.33	0.56
Reporting	0	0	0	0	1	0.00	0.00	0.00
Sustainability Team	0	0	0	0	1	0.00	0.00	0.00
Socio-Cultural Sustainability	0	0	2	2	10	0.20	3.00	0.07
Cultural Heritage	0	0	0	0	4	0.00	0.00	0.17
Frameworks and Certifications	1	1	0	2	1	2.00	1.50	0.00
Local Relationship Management	0	0	0	0	5	0.00	0.00	0.27

ORBRIDGE	Currently Looking At Final Score	Goal for the Future Final Score	Supplier Activity Final Score
Community Development	0.25	0.00	1.39
Local Employment	0.17	0.00	0.33
Support of Local Businesses	0.57	0.00	0.08
Biodiversity, Wildlife, Natural Areas	0.36	0.00	0.23
Greenhouse Gas Reduction	0.32	0.25	0.19
Energy	0.08	0.00	0.25
Food	0.17	0.00	0.33
Overcrowding	1.29	0.00	0.00
Waste	0.30	0.00	0.17
Water	0.00	0.00	0.33
Destination Committees	0.00	0.00	0.00
Education	1.04	0.00	0.50
Equality	1.00	0.00	0.00
Executive Support	1.50	0.25	0.00
Office	1.38	0.00	1.29
Policies and Standards	0.57	0.00	0.56
Reporting	0.00	0.00	0.00
Sustainability Team	0.00	0.00	0.00
Suppliers	0.19	0.00	0.00
Cultural Heritage	0.75	0.00	0.17
Frameworks and Certifications	0.00	0.00	0.00
Local Relationship Management	0.00	0.00	0.27

APPENDIX G

Samples from the MarCom Plan for Duke Alumni Travels

Contents

APPENDIX H

Industry Engagement: Sustainable Travel Panel Flyer

APPENDIX I

Educational Travel Consortium Conference Outcomes

Luncheon BOLD Talk: Harnessing the Power of the ETC Community: A Duke

University Nicholas School of the Environment Master's Project

Session Totals

Attendance: 320

Evaluations: 46 (14.37%)

Average Ratings

Overall: 4.54

Match between announced focus & delivered focus: 4.54

Best take-aways:

"To see the companies take the right step, Brono, AAI, Odyssey, Orbridge, Lindblad"

"Concrete examples of sustainability"

"Sustainability = environmental and economic and socio-cultural"

"Very inspiring and poised presenters!"

"We can make a difference"

"Survey data and sustainability issues"

"Hugh topic. We need much more of this"

Should a session on this topic be repeated at future conferences?

"Intros took a bit too long but the session was on point!"

"yes. Come back next year to share results"

"Definitely"

"yes. It's trending"

Spearheading Sustainability and Innovation: Tour Operator insights within the Duke Masters Project

Session Totals

Attendance: 66

Evaluations: 31 (46.96%)

Average Ratings

Overall: 4.61

Match between announced focus & delivered focus: 4.67

Best take-aways:

"Looking at the definition of sustainability in a broader global way"

"Keep sustainability in program"

"Good to see evolution of sustainability at ETC. Nice review of the two year project."

"Great information"

"The future is now - thank you both!"

"Too many to list"

Should a session on this topic be repeated at future conferences?

"Sure, absolutely!"

"Mandatory!"