Editorial

Sustainable tourism, progress, challenges and opportunities: an introduction

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A B S T R A C T

The term sustainable tourism emerged in the late 1980s and has become firmly established in both tourism policies and strategies and tourism research (Hall, 2011). After more than 25 years of attention it is timely to consider the state of research and practice in sustainable tourism. This special volume was established with exactly that goal in mind and this introduction seeks to set the context for this critical examination and reflection on sustainable tourism. Another objective of this introduction was to briefly describe the range of contributions selected for this SV. The articles are organised into four *thematic areas* of research: community stakeholders' perspectives and business approaches to sustainability in tourism, cultural responses, and methodological challenges related to sustainability. The articles shine a light on issues of importance within sustainable tourism, and in so doing, it is hoped that researchers from other disciplines and backgrounds are encouraged to consider investigating the inter-relationships between societal sustainability and tourism more broadly. The authors of this SV also sought to do something different from the majority of previous papers, which is to bring these issues to readers primarily concerned with sustainability rather than only with tourism. Before briefly discussing the contributions that make up the SV, this introduction provides a discussion of the inter-relationships between tourism and sustainability, a consideration of the ongoing challenges inherent in tackling sustainability and tourism, and a brief overview of the potential for tourism to contribute to the transformative changes required to move to truly sustainable societies. The introduction is concluded with an optimistic look into the future of sustainability-driven work in tourism.

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1. Introduction

Tourism has a long tradition in sustainability-related initiatives, being one of the first sectors to establish definitions and principles for 'sustainable tourism', strategies and action plans (World Travel and Tourism Council, 1998). Despite the relative youth of tourism, the sector can be credited with moving quickly from its initial focus on economic benefits to a position of recognizing its wider sustainability implications. Today there is growing evidence that while a market transition is clearly underway, this transformation has not kept pace with the increasing volume of academic research on sustainable tourism (Ruhanen et al., 2015). In this context, therefore, it is reasonable to ask *whether academic research on sustainability in tourism is of value, and if it is, in which areas is it useful and how should it be done in the future?* Taking the three questions as starting points, this Special Volume (SV) explores some critical challenges posed by sustainability in tourism research and practice.

This special volume of the *Journal for Cleaner Production* (JCLP) demonstrates the breadth of engagement of the tourism sector with sustainability challenges. However, this SV also highlights the further challenges and the need for embracing an ever more critical perspective. In fact, many contributions expose the inadequacies of sustainable tourism practices today, although this needs

to be understood in context. In search of criticality, scholars often take on an overly negative position, failing to address the nuances and complexity of theory and practice (Ooi, 2013). This introduction identifies a tension between the abundance of research on the one hand, and its tendency to lack of criticality and application to practice on the other. It further looks into the role of emergent perspectives in re-channelling goals for theory and practice, as arguments that help frame the contributions included in this SV. The second half of the introduction outlines four *thematic areas* that emerged from clustering the articles. These themes reflect main areas of concern within the tourism research community, and provide insights into different levels of responses in the study of sustainability and tourism, including: community and stakeholder perspectives, business approaches, cultural perspectives, and methodological challenges. Taking an optimistic look into opportunities for further sustainability-driven work in tourism, the final statements of this introduction reaffirm the importance of inter-disciplinary research for sustainability in tourism.

From an academic perspective the subject of tourism is vulnerable to the criticism of being too myopic and being unwilling to publish outside of its own journals. This is not untypical of any new subject area, but the time to grow in confidence and reach out to academics in other disciplines in order to grow the

sophistication of the subject is firmly upon us. While this SV does indeed add to the papers produced on sustainable tourism, it also sought to do something different from the vast majority of previous publications, which is to bring these issues to readers primarily concerned with sustainability rather than tourism. In so doing, editors and authors hoped to capture the interest of readers who have hitherto perhaps given little thought to the role of tourism in supporting sustainability. If this aim was accomplished and authors from other disciplines start helping to think about the potential impact of tourism on sustainability, and sustainability on tourism, then we will have served our academy well.

2. Sustainability is central to tourism's future

Given the aim of this special issue, it is reasonable to think about what sustainable tourism research conducted so far has achieved in terms of encouraging positive change to tourism practice. Recognising the need for urgent change, it is easy to give way to impatience and expect change to be more rapid than is the case. To this end, acknowledging where tourism research has risen from, to today's position, is a cause for encouragement. An increasing volume of research and practice reports show how sustainability has become an established part of corporate and governmental agendas, while there are numerous examples from hospitality and tourism companies and destinations worldwide that have successfully implemented environmental management systems. For instance, the World Travel and Tourism Council (WTTC)'s Tourism for Tomorrow Awards recognize the best examples of sustainable tourism and now receive several hundred applications each year. Awards can be dismissed as not the best metric of progress, yet, measurement, monitoring, innovation and leadership have become the hallmarks of recent winners, demonstrating a maturity and sincerity to their sustainability performance. In many instances, these companies and destinations have established links with academic institutions and have recognised the value of using empirically based research to make commercial decisions.

Militating against progress is that tourism is still seen as a new industrial sector, constantly striving to assert its importance and to be recognised as a serious industry. The industry gives greater weight to evidence of jobs and income generated, and exhibits nervousness about admitting to some of the increasingly recognised social and environmental impacts. A simple example is the indicators used by the United Nations World Tourism Organization (UNWTO) and WTTC to describe the industry, which is almost exclusively in terms of economic metrics such as number of tourists (over one billion international tourist arrivals in 2014), direct contribution of tourism to GDP ($2.4 trillion in 2014), money invested in to the sector ($814billion in 2014) and size of direct employment (105million in 2014) (World Travel and Tourism Council, 2015).

Yet, the academic subject of tourism lends itself very well to engagement with industry, and while the language and means of communication need to be different, there is a general willingness of business to engage with academia to address challenges. As an example, an academic project to develop a wider set of indicators that do reflect the greater sustainability impacts of the industry (positive and negative) has been strongly supported by the World Economic Forum, UNWTO, WTTC and the Pacific Asia Tourism Association amongst other industry associations. In collaborating to create such a set of sustainability indicators the tourism industry will place itself ahead of many other industries and take a great leap forward in demonstrating the importance it places on sustainability. It is this engagement with sustainability challenges that indicates a market transition is underway, and also raises questions about possible compromises that may slow down progress in practice and in research.

3. Challenging opportunities ahead

Seeking durable solutions to sustainability challenges brings about a sense of adaptability and acceptability that can be beneficial for tourism research, but also raise the bar in terms of research ambitions. No desirable change in the tourism system is viable in isolation from wider societal transformations (Miller and Twining-Ward, 2006) and creative sustainable models must adapt to new challenges. Recent phenomena such as climate change, a hypermobile society, and new models of relationships through social media (Budeanu, 2013) and the shared economy (Dredge and Gyimóthy, 2015), add new layers of complexity to tourism research and practice. The influence of societal phenomena is not new to this sector, but the impetuous pace of recent social and technological developments does add a sense of urgency in developing and applying long-term solutions. In this context, sustainability becomes a fluid and adaptable concept that covers multi-level transformations and challenges (Macbeth, 2005).

A number of recent discussions of tourism and sustainability have focussed on the problems, gaps and deficiencies in tourism practice and research (Bramwell and Lane, 2013, 2012; Buckley, 2012; Hall, 2011; Moscardo and Murphy, 2016) and pointed out to a limited capability to find solutions which are acceptable to the commercial market and which respond adequately to sustainability challenges. These authors suggest that current research leaves unanswered critical questions such as the need for growth in tourism, which is assumed by default in many official statements (Hall et al., 2015, p. 26), the meaning of "balanced use" with respect to resource distribution, or the ability of tourism (in any form) to engage and benefit *all* stakeholders at the same time. With limited space available, this introduction does not aim to explore these research shortcomings further, but it is important to point out that there is a discrepancy between the abundance of research, and its uncritical character towards the soundness of proposed solutions. Lack of criticality in research can lead on the one hand to insufficiently informed policy recommendations (Wheeller, 2004) and on the other hand, to a significant loss of enthusiasm for the sustainability concept (Coles et al., 2006; Moscardo and Murphy, 2016). Therefore this discrepancy represents an opportunity for researchers, to question assumptions and purpose behind sustainable solutions put forward, which many of the authors presented in this SV have done. Collectively, the contributions to this SV highlighted both issues and opportunities for research, education and practice in sustainable tourism including enhancing adaptability to respond to and manage change and the effective engagement of empowered stakeholders.

According to Tao and Wall (2009) a viable model for sustainable communities must build strong adaptive capabilities and encourage consistent participation of all stakeholders. Stakeholder participation and empowerment are important elements for supporting change in current practices and for enhancing the ability of communities to manage and respond to both these planned changes and to unpredictable circumstances (Læssøe, 2010; Mackelworth and Carić, 2009). For example, disagreements in tourism communities about land use or resource distributions can escalate into conflicts. In such situations, diverse and collaborative communities are more prepared and reach consensus faster than groups that are functionally separated and unadjusted to collaborating. The importance of participation (or lack of) and empowerment in tourism communities is discussed more in detail in Section 5.1. At the same time, competitive destinations rely on the capability of individual businesses (especially SMEs) to measure

and monitor progress and, ultimately, to become learning organizations that thrive on connectivity and the sharing of ideas. These aspects are addressed further by some of the articles discussed in Section 5.2 that examine sustainability challenges as addressed by tourism businesses.

Unless tourism academia is to be just a by-stander to the subject, observing what happens with disinterested curiosity, then the research undertaken needs to become more effective. One recent assessment of research contributions to the study of sustainability and tourism concluded that the field is entering a stage of maturation, with increased attention to empirically driven theory building (Ruhanen et al., 2015). Consistent with earlier reviews (Lu and Nepal, 2009), the analysis points out that only one third of articles focused on broader issues of sustainable tourism development and/ or practice, and there is scope for further diversification of methods and theoretical approaches used. To be effective, sustainability-driven research needs methodological approaches that enable the identification and measurement of issues that stretch beyond boundaries of single institutions or even destinations. This is the scope of life cycle assessments (LCAs), a tool that was not much used in tourism until recently. A large share of the articles presented in Section 5.4 discusses benefits and challenges from using LCAs for analysing tourism aspects and impacts.

4. The transformative power of sustainability

Doubts about the viability of the sustainability concept are neither uncommon nor unique to tourism. They have been discussed in other fields long enough to show that focussing on the concept's shortcomings is not optimal for progress. An increased understanding of the concept's limitations, led to a wide agreement that societal transitions to sustainable patterns are multi-faceted processes with multi-layered and interconnected aspects (Huising, 2007). According to Wheeller (2012), sustainable tourism will remain a "*theoretical white elephant*" unless it is addressed in wider social contexts riddled with greed, power, economic short-termism, racism and hypocrisy. The comment, perhaps severe, suggests that sustainability lays out hard questions for tourism researchers and practitioners, and answering them could initiate a stage with a high transformative character in tourism.

In dynamic systems such as tourism, transformative change depends also on the cultural adaptability of various actors involved. Furthermore, the survival and continuation of a society depends on its ability to adapt, and this requires re-examination of core values and their expression through social institutions, processes and individual actions. Anthropologists traditionally understand the emergence of cultural values, norms and practices within the situations, circumstances and conditions of the society. Humans form different communities and cultures to find ways of managing their specific and immediate surroundings and environments. In this context, tourism has the potential to contribute to this transformative change by influencing how people around the world think about the Earth as a global community. However, evidence shows that tourism is not always making a *positive* contribution to society. Some of the articles presented in Section 5.3 examine the conditions in which sustainability can offer a platform for focussing minds and converging values that strengthen humanity.

To achieve transformative change, academia is well-placed to assist with the development in human capacity achieved through education. Graduates with interests in tasks with high social relevance, have high demands for critical thinking and reflexivity, and drive the development of educational programs dedicated to studying the conditions for adopting sustainable tourism practices (Bramwell and Lane, 2014) along with changes in pedagogy (Jamal

et al., 2011) and, curricular content and design (Busby, 2003). As a result, sustainability occupies a prime place among the topics of concern in tourism academia, and beyond (Bramwell and Lane, 2014). The Building Excellence for Sustainable Tourism Education Network (BEST EN), discussed by Moscardo (2016) in this SV has been part of this movement to transform tourism education both in and beyond the higher education sector. BEST EN activities are focussed on supporting better thinking about tourism and sustainability across all stakeholders and on supporting transformative change in tourism. An upcoming volume on education for sustainability in tourism (Moscardo and Benckendorff, 2015) has extended this mandate beyond what is needed to change tourism to include a discussion of how tourism itself might contribute to the education of people about sustainability in general.

Not only graduates but also fellow scholars from other disciplines are interested in investigating how tourism activities contribute to wider societal changes such as sustainable urbanization or sustainable mobility (Høyer, 2000). Leisure is identified as one of the top consumptive activities of individuals, along with clothing, food, shelter, travel and sport (Spaargaren, 2003) and calls for increased cross-sectoral collaboration are now emerging from non-tourism actors. Furthermore, tourism and sustainability has captured the attention of editorial boards of non-tourism publications, such as for example *Ecological Economics*, a journal dedicated to "extending and integrating the study and management of "'nature's household' (ecology) and 'humankind's household' (economics)" but the number of such papers published outside tourism journals is still far too small compared with the number published within tourism journals. Where progress has been made, the *Journal of Cleaner Production (JCLP)*, a platform dedicated to transdisciplinary enquiries that stimulate progress towards sustainable societies, recognized an opportunity for bridging different communities of researchers with similar interests, and has published at least 40 relevant, related articles to date. The Editor-in-Chief was especially encouraging of this team's efforts to examine contemporary challenges posed by sustainability research in tourism.

5. Contributions of this SV

Articles in this SV examine inadequacies and negative impacts of tourism on local communities. At the same time, they also show how tourism has improved standards of living and introduced positive cultural changes at the local level. Such change can also be seen at the global level as attempts at promoting sustainable tourism have increasingly been framed around managing climate change (Saarinen, 2013). Stakeholders holding difficult dialogues and tourism promotion authorities recognising the need for sustainable tourism products are also attempts at making tourism more sustainable. Tourists concerned with sustainability are also aiming to bring about a 'better world', as they pursue their travels with social responsibility in mind. Generally, host societies and travellers are working together to bring about a more sustainable world even though the processes are uneven and often difficult. Although the recommendations made by authors in this SV do not provide solutions that address all the current challenges, their contributions provide insights into different levels of responses in the study of sustainability and tourism, and were clustered around four thematic areas that are familiar to tourism research: communities, businesses, cultural values and investigatory methods.

5.1. Community and multi-stakeholder perspectives on sustainability in tourism

The importance of stakeholders in the implementation of sustainability in tourism is often treated as a truism in the academic

and policy literature. However, it is routinely included in descriptions of sustainability, treated as self-evident and is given little further attention. Moscardo's (2011) review of tourism planning models found that while stakeholders are often mentioned as important, little detailed direction is provided on how to identify, engage and work with stakeholders. Additionally, in many models the initial descriptions of tourism stakeholders included different groups but the stakeholders most often included and/or empowered were large tourism businesses and governmental tourism agencies. Discussions of sustainability beyond tourism include much more detailed and critical analyses of stakeholders and the challenges involved in engaging them effectively in sustainability actions (Rodin, 2005). Six papers in this SV (Balslev Clausen and Gyimóthy, 2016; Hatipoglu et al., 2016; Higham et al., 2016; Hultman and Säwe, 2016; Law et al., 2016; McLennan et al., 2016) have taken up this challenge of more critically assessing different aspects of stakeholder involvement in tourism and sustainability.

Four key issues emerged from these papers, which need to be recognised and addressed, including: the challenge of managing conflicting views and values amongst stakeholder groups, the complexity of sustainability processes involving stakeholders, the critical importance of communication and learning for effective stakeholder engagement and issues of empowerment and governance.

A consistent conclusion both in the wider sustainability literature (Gibson, 2012; Smith and Sharicz, 2011) and in many of the papers in this SV is that there is considerable confusion and conflict over what sustainability is or should be. Law et al. (2016) argument for the use of the green economy concept in sustainable tourism planning for Bali in Indonesia is partly driven by the need to find a concrete definition of what sustainable tourism might be in order to develop effective action plans and strategies. Hatipoglu et al. (2016), in their analysis of stakeholder engagement in tourism planning in Turkey, noted that a major barrier to effective stakeholder management was the problem of finding a common understanding of sustainability and common vision of what sustainable tourism could be. Similarly, Balslev Clausen and Gyimóthy (2016) reported on conflict generated about tourism development in Mexico based on incompatible visions of sustainability. The most detailed analysis of this problem was provided in Hultman and Säwe's (2016) research into how different groups of fishers in Sweden defined and interpreted sustainability in the context of a fishing tourism strategy. Their study demonstrated that sustainable tourism strategies often treat sustainability as a simple marketing strategy that can be easily implemented. Their interviews with people in the region found not only differing views on what sustainable fishing tourism might be but considerable conflict between the two groups on how it should be implemented.

These confusions and conflicts led to the second major issue in this area of communities and sustainable tourism, namely, that of recognizing the complexity of destination communities and stakeholders. Both of the papers by Hultman and Säwe (2016) and Balslev Clausen and Gyimóthy (2016) concluded that tourism planning needs to more explicitly consider the political dimensions of sustainability and to recognize the complexity of sustainability processes involving stakeholders. Similarly, Hatipoglu et al. (2016) found a number of issues that needed to be considered in stakeholder management in sustainable tourism. They particularly noted problems with the lack of institutional structures to support stakeholder engagement, a focus on outcomes rather than processes and conflict among stakeholders, especially those with short-term or self-interest driven agendas. These problems were consistent with those identified in other studies of public participation in tourism (Marzuki and Hay, 2013) and stakeholder engagement with sustainability initiatives (Hawkins and Wang, 2011).

One important tool for managing stakeholders, at all levels, and across different aspects of sustainable tourism is communication and learning (Frisk and Larson, 2011). Two papers in this SV were specifically concerned with sustainability communication and stakeholder learning. Higham et al. (2016) interviewed consumers in six nations about their perspectives on different options for limiting air travel, while McLennan et al. (2016) reported on a study of clusters of small tourism businesses and sustainability learning. Both papers provided details on the barriers to, and factors associated with, sustainability learning and adoption of more sustainable actions.

The fourth major issue identified was that of tension between voluntary, grassroots action by stakeholders and governmental regulatory interventions. A common conclusion from studies of business and community stakeholders was that empowering individuals to voluntarily adopt sustainability action is an important ingredient of success (Seyfang, 2010). This was in contrast to the studies on consumers and tourists and their responses to sustainability communications and strategies, which concluded that voluntary actions needed to be driven and supported by stronger governmental regulations. This tension was a major one in sustainability and again highlighted the complexity of the concept and its implementation (Zaccai, 2012).

Finally, one additional feature common to the SV papers on stakeholders and sustainability action and communication was the need to look outside the tourism literature for concepts and models that have been found to be of value in other areas. Law et al.'s (2016) use of the green economy concept to build a process model for strategic tourism planning, McLennan et al.'s (2016) use of concepts from organizational learning about the value of clusters and networks, and Higham et al.'s (2016) examination of behaviour change programs in public health, are all examples of the value of looking beyond the existing tourism literature for ideas and theories to assist both in the research and practice of sustainable tourism.

There are two main areas of research, which are required to further our understanding of the role of destination community stakeholders in tourism and sustainability, namely: enhancing our understanding on how to empower stakeholders to have more meaningful roles in tourism development decisions and improvements in evaluations of the effectiveness of different stakeholder engagement processes. In both areas, it is common to find statements about how destination community stakeholders should be empowered and should be more involved in tourism decision-making with little or no discussion of how these two admirable goals might be achieved. There is actually very little published research that has evaluated factors and strategies that contribute to either of these outcomes. Research into these topics needs to focus particularly on action research methodologies because it is only in practice that the complexities of real-world situations can be captured and examined. Finally, as with many other areas of tourism, it is urgently needed for tourism researchers to look at parallel research in other areas for both conceptual and methodological innovations that can be effectively applied in tourism research and enhancement of real world societal sustainable development.

5.2. Tourism business approaches to sustainability

In 2015 there are two conferences that have the potential to influence the way the tourism industry does business. Reflecting the lack of control tourism has over its key drivers, neither conference is specifically related to tourism. The first meeting is the United Nations summit on the Sustainable Development Goals in New York (United Nations, 2015a,b). This programme of work follows from the Millennium Development Goals and was one of the few positive

outcomes from the Rio +20 conference in Brazil in 2012. The second conference is the COP21 climate change conference in Paris, which seeks to limit greenhouse gas emissions and temperature rises to below an additional 2 °C (United Nations, 2015b). One of the significant developments from the original Rio conference, to Rio +20 is how business, big and small, are now considered to be part of the problem, and therefore have to be part of the solution too. Hence, these conferences will shine a light on the actions of all businesses about their behaviour, and the tourism industry will not be exempt from its need to provide a response.

Meanwhile, the organisations acting on behalf of the tourism industry are undoubtedly expansionist in their objectives. The World Travel and Tourism Council (WTTC) campaigns for an increase in the freedom to travel and to encourage policies that will allow for the growth of tourism (World Travel and Tourism Council, 2015). The World Economic Forum's Global Agenda Council for the Future of Travel and Tourism has, as one of its two key programmes of work, the objective to create 'frictionless travel' that can facilitate the movement of two billion travellers (World Economic Forum, 2015). The United Nations World Tourism Organisation also anticipates the growth of international tourism to two billion arrivals and calls for an increase in connectivity and the push for further reduction in visa requirements in order to facilitate travel (United Nations World Tourism Organization, 2015).

Yet, despite the expansionism, the UNWTO, WTTC and WEF also have sustainability as significant programmes of work within their headline objectives. Cynics will question the extent to which this is green-washing and doubt the sincerity with which sustainability is pursued in comparison with seeking further economic returns. Given the strong coupling that remains between growth and impacts, one might even question the compatibility of having growth and sustainability as parallel programmes of work for travel and tourism. A more pragmatic position might be to concede that organisations that represent the tourism industry will always support growth, and so the existence of policies to try to grow in the most sustainable manner possible is at least better than could be feared.

Traditionally, the demand side was seen as providing the financial incentive for companies to revise their product offerings to more sustainable products. However, there is only little evidence to support this thesis and the expectations of demand-led solutions have diminished, despite the enormous potential of this approach. Gössling and Buckley's (2016) paper entitled 'Carbon labels in tourism: Persuasive communication?' picked up this challenge of how to engage the tourism consumer through the use of carbon labels for tourists to change their consumption patterns if the global impacts of tourism described by Gössling and Peeters (2015) in another recent paper are to be avoided. The authors identified four criteria for eco-labels to be successful; understand the information, appreciate its significance, trust its reliability, and know how to act more sustainably. The existence of these criteria was assessed in a sample of existing tourism carbon eco-labels with the conclusion that there is much progress to be made. However, rather than present this conclusion in a negative and pessimistic way, the authors suggested that therefore, there could be considerable potential for pro-sustainability behavioural changes in tourism.

Shifting to the supply side of tourism, Cucculelli and Goffi (2016) considered the progress made towards sustainability at the destination level. Their analysis of the network of Italian 'Destinations of Excellence' concluded that those destinations with higher sustainability performance were also those that demonstrated the greatest overall competitiveness. The European Commission has long been developing a programme of work to promote sustainability in the tourism industry across European destinations, but interestingly, this programme of work was funded by the Directorate General for Enterprise and Industry. This programme led to the development of indicators to monitor sustainability (DG Enterprise and Industry, 2013) but recognised that sustainability is a way in which tourism in Europe can compete with new and larger tourism destinations. Cucculelli and Goffi's article (2016) provided evidence to support this thesis that sustainability aids competitiveness for European tourism.

The remaining three articles by Byrnes et al. (2016), Coles et al. (2016) and Pace (2016) in this SV all shared the focus of attention on how to encourage small and medium sized enterprises (SMEs) in tourism to adopt greater sustainability practices. While SMEs have many advantages over larger organisations, the lack of key resources such as capital, knowledge and time are significant obstacles for SMEs to overcome if they are to improve their sustainability and to derive competitive advantage from their sustainability activities. Byrnes et al. (2016) documented the basic level of environmental actions of boat owners in environmentally sensitive locations. While their research showed there was no significant difference across different types of operators, the research revealed that valuable improvements could be achieved without great expense or difficulty.

Coles et al. (2016) identified a need for greater energy literacy amongst small business owners in their survey. Such a lack of understanding underscored the importance of empowering the supply and demand sides with knowledge, which will empower all stakeholders to design and implement solution approaches, which will deliver sustainable benefits. Reflecting upon the wider lack of scientific and sustainability literacy of consumers, the business owners in the paper by Coles et al. (2016) were unable to understand which practices were more beneficial to undertake. Jeremy Rifkin at the biennial World Tourism Forum meeting in Lucerne took up this theme and challenged the hotel industry to form an Internet of energy through turning their hotels into micro-power generators (World Tourism Forum, 2015). The paper by Coles et al. (2016) also addressed this theme by suggesting a paradigmatic shift away from encouraging hoteliers to consider how to save energy, and instead to how they might generate energy.

Bringing such ideas into the organisation was the focus of the paper by Pace (2016), which considered the capabilities of accommodation businesses to adopt and to learn about new technologies and opportunities. Increasing their 'absorptive capacity' was a function of many aspects, and not a problem contained to small tourism businesses, but her study of tourism businesses in Malta showed the challenges, and importance of this kind of business being able to learn about the opportunities available and suggested a change in policies from only focussing on generating technology, to considering how companies are able to incorporate these developments.

Following Rifkin's thinking of an internet of energy, the original internet of ideas shows the importance of everyone having the capacity to participate in the sharing of ideas, and then receiving the benefits of having done so. The papers in this section reflected this need for everyone to be involved with addressing sustainability, and the importance of business, consumers and destinations co-working to promote greater sustainability. Business is too large a constituent of modern society to leave out of the discussion for sustainability, and this SV highlighted some of the ways in which their contribution can be made more effective, synergistic and sustainable.

For further research, one may ask what is the potential for demand-led change? This line of thinking dominated the early stages of research into sustainable tourism, but there was very little evidence that it has yielded any progress. Indeed, arguably nowhere is the disconnect between volume of academic research and changed practice so extreme as here. On the supply side,

SMEs numerically represent the vast majority of tourism businesses. In addition, there are easy, initial changes to their practices that can be made and in so doing result in significant sustainability improvements. How to reach this group and to help to empower them to overcome their capacity shortages of time, knowledge and capital is key to unlocking their potential improvements.

5.3. Cultural responses and sustainability in tourism

The stakeholder and business angles offered in the papers in this SV, point to certain 'sustainable tourism cultures.' Being more responsible and sustainable is an oft-accepted mantra in the industry and among the different stakeholders, including tourists, attraction operators, destination management organizations, hotels and host communities. The practice however seems easier said than done (Ooi and Strandgaard Pedersen, 2010). A number of papers in this SV demonstrated why this accepted principle is seldom translated into practice.

As stated previously, sustainable tourism involves people's actions, values, practices and beliefs. On one hand, tourism practices have evolved, as travellers learn how to be guests. Many of them want to have engaging experiences, and to be respectful to their hosts. Tourists should not impose on local societies and cultures. On the other hand, the position that a host society can remain unaffected by tourism is no longer tenable. Tourism is part of social and cultural change in a destination. In some places, tourism is intentionally used to transform and engineer the society, e.g. Singaporean authorities use tourism as part of the city–state's social engineering programme (Ooi, 2005). Cultures change, and tourism is part of that change-process.

Furthermore, members of host societies are not homogeneous, as there are different stakeholders with different connections to the tourism industry. Similarly, the global travelling masses are diverse and carry with them their own social, cultural and individual backgrounds. According to some observers, a consensus on sustainable tourism may be difficult or impossible to achieve. Or can sustainability and responsibility be the Durkheimian 'totem pole' (Durkheim, 2014) that can focus minds and build a global movement towards more responsible tourism?

If there were such a movement, then the example by Deville et al. (2016) in this SV would provide glimpses of things to come. Their study focused on the phenomenon of travellers and farms who have joined the, "Willing Workers on Organic Farms," global labour exchange movement. This is an example of mass tourism meeting idealism. Such a phenomenon is seen in the context of ecotourism, volunteer tourism and farm tourism. The challenges facing the hosting communities and the visiting 'workers' are plentiful. These travellers want to have more engaging experiences, to seek the authentic and ethical, freedom and flexibility but still their travels are short-termed and commodified. It creates, in Foucaldian terminology, heterotopias, where these sites are spaces of differences and conflicts (Foucault and Miskowiec, 1986). Compromises are nonetheless found, where hosts and tourists, interact and negotiate with each other. It is debatable if the compromises are satisfactory but it is an important part of the maturing process in a sustainable tourism phenomenon.

In another article, which reviewed the case of a fast growing tourist destination on the coast of Belize, Wells et al. (2016) critically examined human perceptions and practices in relation to water, wastewater, and energy management, and how those perceptions and practices enabled and constrained decision-making with regard to technology adoption. Technology can help to make a destination more sustainable but there is often resistance to technological adoption. There is inertial to change. Unfamiliarity, as well as financial interests of stakeholders, and perceived foreign-

driven agendas, complicate the acceptance of technological solutions. On the other hand, living memories and local perceptions are historically contingent, and these can nudge people towards accepting technological solutions, especially if they were affected by climate-change disasters. Bringing together the interests of multiple stakeholders is easier said than done but common experiences can draw stakeholders together.

Reflecting the vast geographic context for the study of tourism, Ren (2016) used Actor Network Theory to analyze the multiple versions of Greenlandic futures. These futures were presented through a travelling exhibition 'Possible Greenland'. Climate change is generally seen as detrimental but Greenland is considered to be a potential beneficiary in tourism terms as it is projected to become a 'new Mediterranean'. Under this projected future, Greenland will become more heavily populated and developed, although the attraction of this future is of course contested. Climate change would make Greenland more hospitable and attractive for visitors. Among other things, the authors of this article highlighted the complexity of climate change as tourists may simply adapt by travelling to other destinations that are more comfortable and attractive and away from those that have become less tolerable. Competition among tourist destinations, in this context, does not bode well for encouraging more sustainable tourism at the global level. But many people around the world would not want a warmer Greenland so that they can travel, they would prefer to live in their own home countries in the current climate.

Moving from the far North to the far South, the paper by Vila et al. (2016) looked at links among tourists, the tourism industry and wildlife in the Antarctic ecosystems. By focussing on communicative initiatives of tour operators and on tourist perceptions, the study used qualitative methodologies that combined management and biology perspectives to investigate the 'ambassadorship' role of both. Playing the supportive and advocative role of ambassador is an interesting and evolving dimension of tourism. Ambiguities in how these stakeholders see ecological practices in Antarctic tourism remain, and their actions do not necessarily work towards the preservation of the ecosystems. The authors recommended that more concerted actions from policy makers and from industry on behalf of protecting the Antarctica are urgently needed. This is a wake-up call that brings hope to the situation.

Mihalic (2016) argued that translation of the belief in sustainability into responsibility in practice is a process that has to be managed. A holistic understanding of sustainable tourism entails bringing the economic, environmental and the social cultural dimensions together. This also entails creating awareness, setting an agenda and putting responsible behaviour into action. Corporate social responsibility is gathering momentum in the business world; its success is evolving partly from simultaneously, addressing the multi-dimensional aspects of being responsible. Sustainable tourism can then also gain currency.

In these five articles that focus on the cultural dimensions in sustainability tourism, people and their behaviour, practices and values are central in promoting sustainable tourism. Sustainable tourism can serve as a totem pole to drive the different stakeholders together but only on the condition that the values and the messages are focused and salient for the different stakeholders. Tourism is a globalizing force and global tourism cultures have emerged, and there must be more concerted and focused efforts towards tourism that promotes positive change. And fortunately, cultures can change for the better.

One future direction of research on culture, society and sustainable tourism include looking at how tourism can be a driver of sustainable social change in host societies. Tourism offers resources that both guests and hosts can tap into and jointly enjoy. While

some studies have been done, more attention is needed in the context of defining sustainable social and cultural change from the impacts of tourism. Another area of research focus that deserves emphasis is the poetics and politics of marketing sustainable tourism. The danger remains that the rhetoric of sustainability does not translate beyond attractive marketing and promotion-speak. Such discourses may be seductive but facing the sustainable tourism challenges is a grubby business of bringing diverse stakeholders together. And finally, from the various studies included in this SV, the experiences of sustainable tourism must be contrasted to the actual impacts on the environment and the communities; sustainable tourism practices do not necessarily transform into immediately observable results or dramatic tourism experiences. Communicating sustainable impacts to tourists and community deserve more attention.

5.4. Methodological challenges related to sustainability research in tourism

A number of methodological challenges lie ahead when attempting to describe future sustainability scenarios, where diverse forms of social organization should co-exist in harmony. The complexity of sustainability analysis implies that evaluating progress requires inter- and trans-disciplinary methodologies that can unveil causal structures and processes that generate phenomena in open systems. Some of the contributions in this SV discussed the benefits and drawbacks of departing from traditional methodologies in tourism research in terms of scale, focus and choice of unit of analysis. In doing so, some authors highlighted that continuing to examine sustainability through lenses of singular disciplines and associated methodologies runs the risk of missing important aspects that reside at the interfaces between fields of action.

A re-evaluation of the need for novel measurements and methodologies articulated to embrace complexity, is even more relevant in the case of tourism, a sector characterized by high fragmentation and diversity of actions, actors, movements and agendas. Being highly permissive to influences from surrounding systems, tourism is constantly (re)shaped by perceptions and preferences of individuals and social groups beyond the tourism realm (Miller and Twining-Ward, 2006). Therefore, tourism realities are better captured through the use of mixed methods of investigation. Furthermore, sustainability-driven research in tourism requires the design of novel methods that can identify and measure overlaps and ambiguities (Coles et al., 2006), inherent to "wicked problems" (Hall et al., 2015).

One significant methodological challenge for sustainability research in tourism is the identification of sources of impacts and the allocation of responsibility for mitigating them. By nature, tourism products are complex combinations of economic activities (transport, entertainment, accommodation, etc); each using multiple materials flows (water, energy, land, eco-systems, bio-diversity, etc). Logically, evaluating the performance and consequences of tourism activities, requires comparable measurements along multiple material's and energy streams (Budeanu, 2007). Traditional performance measures were largely focused on single impacts and oriented at direct operational effects of tourism products. However, equally (sometimes even more important) are the indirect impacts, which originated from non-operational stages prior or after the provision and consumption of tourism products (Filimonau, 2015), such as for example, the building of attractions and tourism resorts. Studies outside of the tourism realm that use life cycle perspectives, show that up to 80% of the negative environmental impacts occur in the planning and design stage, prior to manufacturing and use of products (Dewulf et al., 2012).

Consequently, tools such as Life Cycle Assessment (LCA), Environmental Risk Assessment (ERA), Material Flow Analysis (MFA) and Ecological Footprint (EF) are tailored to assess and benchmark impacts that help individuals, public administrators and businesses make informed choices about their activities (Finnveden et al., 2009). In tourism, where such tools are seldom used, there can be a risk of overlooking significant impacts or of shifting the responsibility onto actors upstream or downstream in the supply chain. For example, in the case of long-haul mass tourism operations, indirect impacts generated by the business of tour operators can be easily overlooked as they occur in remote destinations (Budeanu, 2005). The transboundary nature of tourism activities and implicit impacts can benefit from adopting measures and monitoring processes, procedures and practices based on life cycle perspectives.

The articles by Granquist and Nilsson (2016) and Iaquinto (2016) in this SV, discussed methodological challenges encountered when using mixed methods to investigate sustainability aspects at micro level of analysis. The article by Granquist and Nilsson (2016), took a starting point by acknowledging that discipline-independent guidance can enhance the effectiveness of measures aimed at reducing disturbances caused by tourism to wildlife. Combining knowledge from biology and tourism, the authors showed synergetic gains from transferring information between different fields of research. Somewhat in contrast, Iaquinto (2016) took a self-reflective stance towards his research design in order to evaluate the effectiveness of mixed methods for investigating sustainable practices of backpackers. Following the iterative process of his methodological choices, the author described his research as a self-reflective journey and the lessons learnt from challenges encountered during the course of investigations. Complementing each other's findings, Granquist and Nilsson (2016) emphasized the benefits in terms of data gathering, while Iaquinto (2016) drew attention to the researcher's challenges in managing information collected through mixed methods.

The following five articles included in this thematic area share a particular interest in quantitative or combined methodological strategies that use life cycle thinking, and particularly of Life Cycle Assessments (LCAs). Although LCAs have been used recently in tourism research (Filimonau et al., 2011; Gössling et al., 2002) the method represents a novel way of conceptualizing the composite products that is unfamiliar in tourism research. The research presented in this SV made an important contribution by illustrating how quantitative methods used mainly outside tourism realm are useful for providing detailed information about the effects of tourism.

The combined Pollution Impact Valuation Model developed by Carić (2016), as presented in this SV, is one of the few instances where valuation methods were used for making concrete recommendations for tourism policy-making. Similar examples are the new European Tourism Indicator System and recent evaluations of tourism's impact by the UK's Travel Foundation (Travel Foundation, 2015). Looking quantitatively and qualitatively at pollution and the natural capital affected by cruise tourism, Carić (2016) illustrated how the complex goals of sustainability can be instrumentalized.

The article by Michailidou et al. (2016) addressed the possibilities of using LCA, to evaluate and compare different sources of impacts in Chalkidiki region in Greece. After identifying environmental 'hot spots' among the hotels in the area, the authors emphasised how using LCA can support policy-making procedures by simplifying strategic planning in tourism areas. Cerutti et al. (2016) used a similar method, for evaluating the environmental sustainability of holiday farms as accommodation facilities. The LCA tool was used at the facility level, for comparing

the energy consumption of different functional areas within the farm, and for identifying 'hot spots' that required the management's attention. Furthermore, Cerutti et al. (2016) developed recommendations for improving the set up of LCAs, in terms of system boundaries and functional units.

Robaina-Alves et al. (2016) presented results of a study where LCA was used at the sectoral level for analysing the CO_2 emissions of five tourism sub-sectors in Portugal. By comparing the contributions of specific managerial measures to reducing CO_2 emissions, the authors distinguished actions that made a positive difference, such as shifting towards non-polluting energy sources, from others that aggravated the impacts, such as tourist consumption of high quality accommodation services.

The article by Cadarso et al. (2016) in this SV used life cycle input—output methods to evaluate emissions generated from direct and indirect tourism activities, namely the investment in the production of capital goods required by tourism products and services. The LCA-based measurements also included the upstream supply chain, which was a rare approach in tourism research. The authors used their findings to reallocate the obligations of tourism actors by showing that one third of responsibility was related to the acquisition of infrastructure and equipment. Subsequent policy recommendations drew attention to the indirect effects of tourism investments that may increase environmental pressures elsewhere.

The recognition of the complex nature of human activities and consequent impacts is paramount to social inquiry (Coles et al., 2006). While significant progress has been made already, also by contributions to this SV, hard questions need to be asked and answered about what research designs are suitable for addressing cross-sectoral and transboundary challenges, what methods are capable of capturing multi-generational issues and what units of analysis could replace the nation-state administrative units currently used? More lessons learnt from working with environmental impacts could be transferred and adapted for studying social phenomena, such as the example of Social Life Cycle Assessments (United Nations Environment Programme, 2009). In tourism, repeated calls for adopting interdisciplinary or post-disciplinary perspectives when investigating tourism phenomena require increasing attention from researchers (Coles et al., 2006). In practice, that may involve the wider use of visualization methods, alternative methods of expressions, employment of modern communication technologies as well as collaborative methods of data collection (Munar and Bødker, 2014).

6. Conclusions

The starting point for this SV was to ask *whether academic research on sustainability in tourism is of value ,in which areas it can be most useful and how should it be done in the future?* The contributions in this SV show that there is a wide scope for sustainability research in tourism, and a broad range of challenges that researchers must face when tackling the subject. Climate change, food security and political instability are not only tourism problems, they are world-wide problems. And so are their consequences. The case of Greenland (Ren, 2016) in this SV illustrates the breath of challenges raised by uncertain futures. And while it is not possible to predict how successful a beach holiday in Greenland might be in the future, discussing such scenarios can help challenge tourism practices and assumptions. Furthermore, there is value in giving considerations of wider connections between tourism and global sustainability and of how tourism and sustainability is addressed in areas outside tourism scholarship. In this context, tourism researchers and practitioners would be ill advised to ignore the benefits of teaming up with scholars from other disciplines and experts from different sectors when addressing "wicked" global problems. While we often talk about inter-disciplinary research, we are advocating inter-industry learning.

One main objective for this SV was to foster communication and cross-fertilization of ideas among diverse stakeholders within the tourism research community and with other research groups that form the audience of the JCLP. Tourism academia is a relatively small community and certainly one that is disproportionately tiny in relation to the size of the sector and its impacts. Bringing additional academic capacity to the subject would constitute a very strong outcome from this SV. In addition, we also sought to address some of the conceptual and analytical tensions related to sustainability in tourism research. Contributions to the call for papers are very broad and the papers contained in this SV address a wide array of issues. Although, some of the contributions present less common perspectives for tourism or sustainability-specific research, the reader is invited to consider this collection as a valuable contribution to fostering inter-disciplinarity in the relevant areas of tourism research.

In a recent keynote speech at the Nordic Symposium for Tourism and Hospitality Research, professor Jafar Jafari denounced an (im) mobility of tourism knowledge across disciplinary boundaries, and called the active engagement of tourism researchers in knowledge transfer a matter of "academic and professional obligation" (Budeanu, 2015). To this end, the articles in this SV are invitations to all readers in JCLP, whether they are tourism researchers or not, to engage and contribute to the field.

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