

Exploring preferable climate futures in tourism

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Abstract

The article highlights the importance of older adults as key contributors to climate change mitigation solutions. In conjunction with younger generations, their involvement is crucial for fostering sustainable tourism futures. The paper outlines a research project focused on understanding the perspectives of local residents in Finland and Japan regarding sustainable tourism in 2034. Employing a multimethod approach, including qualitative surveys, co-creation workshops, and AI-generated virtual galleries, the project seeks to inform tourism policy and business practices. The findings are expected to offer insights for community-led tourism development and the role of emerging technologies in visualizing preferable futures.

Keywords

Tourism futures
Sustainable tourism development
Older adults
Climate activism

Introduction

Climate change is perhaps the most pressing global crisis of our time, including in the context of travel and tourism. Current warming projections suggest global temperatures are likely to rise between 2.9°C and 3.4°C, breaching the +2°C tipping point needed to avoid irreversible ecological collapse (IPCC, 2022). Global temperature rises already contribute to the frequency and severity of extreme weather events such as wildfires evident in Greece, Canada and Australia, flooding events in Germany and Slovenia, extreme heat waves in Southeast Asia, and drastic ice-melt in Antarctica which has flow-on effects for global oceans. Without a doubt, climate change and planetary health are inextricably linked to societal interactions with the environment in which communities operate (Bulkeley 2019). Engaging all sections of society is therefore paramount in addressing this ‘existential threat’ to humanity in general and tourism in particular.

While efforts to combat the climate crisis have spanned generations, going forward an intergenerational approach is needed (Pillemer, Nolte & Cope 2022). To that end, this project aims to activate both young generations (defined in this project as Gen Z and Millennials) as well as older adults (defined in this project as people over 60) by fostering intergenerational unity and shared responsibility regarding tourism and tourism futures in relation to climate change. This short communication paper in *Wakayama Tourism Review* is intended to inform the overall research project goal and share updates on the current progress of the ongoing research project. The overall aim of the project is to explore Finnish and Japanese local residents’ visions of the future, with specific emphasis on better understanding how to mitigate the impacts of climate change through sustainable revitalization of local tourism destinations. For this specific communication paper, preliminary research findings from phase one of the research project will be shared as part of the updates of the on ongoing research.

Literature Review

While the climate crisis is increasingly recognized as an urgent issue in travel and tourism (Higgins-Desbiolles, 2023), previous research has highlighted a gap between presenting the general

public – such as international or national tourists – with science-based facts and mobilizing meaningful behavioural change on a large scale. This includes reducing the frequency of long-haul flights or lowering red meat consumption (Roser-Renouf et al., 2014). To address these challenges in mitigating climate impacts, it is crucial to incorporate the perspectives of local communities

Looking at the ongoing discourse around climate futures, the complexity of the crisis has led to the general public feeling disengaged and frustrated. Thus, urging the need for a more intergenerational perspective in developing solutions. Youth activism against the climate crisis is widely documented, illustrated by e.g. the media presence of Greta Thunberg or by the stunts of the global citizen activist network Extinction Rebellion. However, older adults, with their decades of lived experience, are also a vital and underutilized resource for tackling the climate crisis. In the context of super aging countries such as Finland and Japan, older adults (defined in this project as people aged 60 years or older) constitute a significant per cent of the ageing population. They offer not only leadership, wisdom, and lifelong experience but also a strong sense of responsibility toward leaving a habitable planet for future generations (Zainal Abidin et al., 2023). Their perspectives are especially relevant for sustainable tourism practices in their local areas, where their knowledge of local ecosystems may offer solutions for climate resilience.

Responding to the growing concerns of the youth, older adults have also begun to mobilize their efforts around climate futures-related advocacy and citizen activism, e.g. Activist Grannies in Finland or Senior Women for Climate Protection in Switzerland. Older adults have accumulated wisdom and life experience that transcends cultural and national boundaries. Their lived experiences provide unique insights into long-term environmental changes and societal challenges, allowing them to offer valuable perspectives and solutions to mitigate climate change. In many cultures, older adults occupy respected positions within their families and communities. In addition to their “soft” power, older adults also control a significant portion of political and economic power, exemplified e.g. by the European Union’s focus on the “silver economy” in their call for new products and services aimed at the elderly (Tuomi et al., 2023). By channelling these resources, older adults can influence corporate behaviour, e.g. tourism

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businesses and policies, particularly as they also tend to be the most active segment of society when it comes to voting in national and regional elections (Dassonneville, 2019).

Given the current and future potential impact of climate change on tourism, it is important to explore preferable tourism futures to guide business practice and policy making. Previous research on futures – also known as futurology – has used various methodological approaches to anticipate and analyse potential future developments. Key methods include trend analysis, scenario planning, Delphi method, and horizon scanning (Bell, 2003). Trend analysis involves the examination of past and current data to predict future trends, whereas scenario planning constructs diverse plausible futures to understand potential developments and their implications. The Delphi method utilizes iterative rounds of surveys among experts to reach a consensus on future forecasts. Finally, horizon scanning identifies emerging issues and signals of change across multiple domains to anticipate disruptive events (Glenn & Gordon, 2009). Applying these methods of tourism futures in the context of local tourism revitalization could reveal unique local visions for sustainable development and help mitigate climate impacts.

For instance, Ashton et al. (2024) used a Delphi approach to explore how the metaverse can add new layers to hospitality services, highlighting the potential for immersive technologies particularly in events and sales promotion. In a similar vein, Tussyadiah & Miller (2020) used a form of horizon scanning called letters of the future to imagine how travel will look like in 2039 and what role advanced technologies such as artificial intelligence might have in the future. New approaches to communicating climate-related future visions are therefore essential. In particular, research in humanities has given evidence of the usefulness of combining art and technology to create artistic interventions that spark behavioural change in participants (Sommer et al., 2022). For local destinations, such creative interventions could engage local residents and foster collective action towards sustainable practices. Researchers must increasingly consider the perspectives of local residents in crafting effective ways to communicate tourism futures.

Methods

The overall aim of the ongoing project is to explore Finnish and Japanese local residents' visions of the future, with specific emphasis on better understanding how to mitigate the impacts of climate change through sustainable revitalization of local tourism destinations. Central to this endeavour is a collaborative speculative design process using a mixed methods research design. Therefore, the project adopts a preferable futures approach, progressing through three phases to triangulate data. These phases include surveys, co-creation workshops and a virtual gallery.

First, a qualitative survey is conducted to explore older adults' views of preferable tourism futures. Purposive sampling is used to specifically target participants over 60 years old in non-metropolitan destinations. Data is collected from both Finland and Japan to facilitate cross-country comparison.

Second, a series of qualitative co-creation workshops is organised with young adults (Gen Z and Millennials) in Japan and Finland to tease out their visions for climate futures. Specific focus will be on the sustainable revitalization of their local tourism destinations, a key strategic priority for the tourism development in Finland and Japan. The workshops will use a method called Lego Serious Play. Previous research has found Lego Serious Play to be useful for exploring abstract concepts that would be otherwise difficult to explore with other qualitative methods (Tuomi, et al., 2019).

Third, using the extracted future narratives as text prompts

for state-of-the art text-to-image or text-to-video generative AI (GenAI) systems (DALL-E, SORA), a virtual art gallery is created and publicly exhibited. The virtual gallery will be created using an existing, browser-based web tool. Participants will be invited to “visit” the virtual gallery, engage with AI-generated images and videos of the future, and indicate their preferred future from the different scenarios depicted. Combining these three different phases, a better understanding of Finnish and Japanese local residents' visions of the future can be explored.

Preliminary results, discussions and conclusion

As previously mentioned, this research is ongoing. Therefore, this short communication paper will present some preliminary research findings from phase one, i.e., qualitative surveys with older adults from Finland and Japan. Preliminary findings reveal that for both nations, older adults highlighted the importance of cultural and natural preservation for the future development of their local destinations. Notably, Japanese older adults expressed significantly greater concern about the future impacts of climate change compared to their Finnish counterparts. This may be due to environmental, social, and cultural factors more pronounced in the Japanese context, such as the higher risks of natural disasters and the pressing issue of depopulation. As a result, many Finnish respondents viewed the future of tourism more positively, while Japanese respondents demonstrated more caution and reservations.

These preliminary findings suggest that local hosts' concerns regarding climate change and tourism development are context-dependent, which emphasizes the need for tailored, community-specific approaches to sustainable tourism revitalization. Overall, this research aims to inform and influence tourism businesses and policymakers by providing a comprehensive understanding of older adults', millennials', and Gen Z's perspectives on preferable tourism futures. Previous research has explored tourists' visions for preferred futures (Tussyadiah & Miller, 2020). We seek to extend this discourse by incorporating the perspectives of local residents (hosts) to guide community-led tourism development efforts.

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References

- Ashton, M., Filimonau, V., Tuomi, A. (2024). How the metaverse can add new layers of hospitality services: a perspective of senior industry practitioners. *International Journal of Contemporary Hospitality Management*. <https://doi.org/10.1108/IJCHM-08-2023-1294>
- Dassonneville, R. (2019). Age and Voting. In Arzheimer, K., Evans, J. & Lewis-Beck, M.S. (Eds.), *The Sage Handbook of Electoral Behaviour* (pp.137-158). Sage.
- Higgins-Desbiolles, F. (2023). Subsidiarity in tourism and travel circuits in the face of climate crisis. *Current Issues in Tourism*, 26(19), 3091-3101. <https://doi.org/10.1080/13683500.2022.2116306>
- Pillemer, K.A., Nolte, J., Tillema Cope, M. (2022). Promoting Climate Change Activism Among Older People. *Generations*, 46(2), 1-16.
- Roser-Renouf, C., Maibach, E., Leiserowitz, A., Zhao, X. (2014). The genesis of climate change activism: from key beliefs to political action. *Climatic Change*, 125, 163-178. <https://doi.org/10.1007/s10584-014-1173-5>
- Sommer, L.K., Löfström, E., Klöckner, C.A. (2022). Activist Art as a Motor of Change? How Emotions Fuel Change. In

Klößner, C.A. & Löfström, E., *Disruptive Environmental Communication* (pp. 43-56). Springer, Cham. https://doi.org/10.1007/978-3-031-17165-9_3

Tuomi, A., Moreira Kares, E., Zainal Abidin, H. (2023). Digital Cultural Tourism: Older Adults' Acceptance and Use of Digital Cultural Tourism Services. *Scandinavian Journal of Hospitality and Tourism*, 23(2-3), 226-247. <https://doi.org/10.1080/15022250.2023.2256698>

Tuomi, A., Tussyadiah, I., Stienmetz, J. (2019). Leveraging LEGO® Serious Play® to embrace AI and robots in tourism. *Annals of Tourism Research*, 81, 102736. <https://doi.org/10.1016/j.annals.2019.06.003>

Tussyadiah, I., Miller, G. (2020). Imagining the future of travel: technology and sustainability transitions. *e-Review of Tourism Research*, 17(5).

Zainal Abidin, H., Tuomi, A., Moreira Kares, E. (2023). Older adults' perceptions of digital cultural tourism in 'Super-Aged' nations: the case of Finland and Japan. In: Ferrer-Rosell, B., Massimo, D., Berezina, K. (eds) *Information and Communication Technologies in Tourism 2023*. ENTER 2023. Springer Proceedings in Business and Economics. Springer, Cham. https://doi.org/10.1007/978-3-031-25752-0_41



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