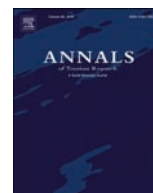


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Research note

'After glaciers?' Towards post-Arctic tourism[☆]Alix Varnajot^{a,*}, Jarkko Saarinen^{b,c,1}^a *Multidimensional Tourism Institute, University of Lapland, Rovaniemi, Finland*^b *Geography Research Unit, University of Oulu, Oulu, Finland*^c *School of Tourism and Hospitality, University of Johannesburg, Johannesburg, South Africa*

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The Arctic attracts millions of people who want to experience its pristine and rough landscapes and iconic wildlife. The region has a long history of tourism, with the first visitors being explorers and wealthy adventurers (Hall & Johnston, 1995). Their tales describing wild nature and harsh climatic conditions with freezing temperatures in uncivilised, white and icy landscapes have shaped our imaginaries about the Arctic, along with other popular literature and films (see White, Morgan, Pritchard, & Heimtun, 2019). These narratives that are mainly created by outsiders to other outsiders define what the Arctic in tourism is all about (Fjellestad, 2016; Saarinen & Varnajot, 2019). Based on these narratives, the Arctic as a tourism product usually includes activities such as snowmobiling, husky/reindeer sledding, observing the northern lights, ice-fishing and snowshoeing.

These stereotypical elements used and produced in tourism, however, are increasingly challenged by new kinds of narratives, strongly influenced by evolving global climate change impacts (Hall & Saarinen, 2010). For example, in 2019 about 100 Icelanders gathered to hold a funeral for the death of Okjokull, which 'was the first of Iceland's glaciers to disappear because of climate change' (Rice, 2019). Such incidents and changes in perspectives concerning the Arctic environment and its future relate to the current discussion on the Anthropocene, which is considered the new geological epoch in which human activity has become the dominant force and influence on climate and the environment on a global scale (Latour, 2015). The idea of the Anthropocene

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reflects the ongoing global and environmental crisis and the earth's limits to growth (Rockström & Klum, 2012), and it connects abstract global processes to regional and local concrete changes.

Due to estimated global climate change, the Arctic is expected to undergo various socio-ecological changes as the region is predicted to warm about two times faster than the global average. This would result in the melting of glaciers and loss of sea ice, for example, which will create major challenges for the existence of the region's ecosystems, wildlife and traditional livelihoods: the very core elements of the current attractiveness of the Arctic in terms of tourism (Saarinen & Varnajot, 2019). This has made some scholars think of the Arctic as a destination for so-called last chance tourism (Lemelin et al., 2010). The last chance tourism idea originates from novelist Douglas Adams and zoologist Mark Carwardine's BBC radio documentary series and resulting book 'Last Chance to See' (Adams & Carwardine, 1990), which were based on a search for various animal species that were on the edge of extinction. In tourism it refers to markets focusing on experiencing and witnessing a place or species before they disappear (Palma et al., 2019), such as the Great Barrier Reef, the Arctic's glaciers and polar bears.

As key tourist attraction elements of the Arctic may disappear in the foreseeable future, they need to be seen before they do. From this perspective, last chance tourism has been interpreted as an opportunity for Arctic communities to attract visitors in the coming decades (see Lundmark, Müller, & Bohn, 2020). Over the longer term, however, this raises interesting questions about what will happen to Arctic tourism after the last chances to see these things have gone, and what would this resulting 'post-Arctic' tourism be? The aim of this research note is to introduce and discuss the idea of post-Arctic tourism. We will do this by using a post-apocalyptic studies perspective that is typical for research on literature and films depicting the aftermaths of catastrophes, dystopian futures and (potentially) following societal regeneration (Stifflemire, 2017). In the Anthropocene and global warming context, discourses in popular media often indicate that an end – the apocalypse – is upon us (Methmann & Rothe, 2012).

Climate change is expected to have major negative impacts on snow and ice conditions in the Arctic. Forecasts indicate that these changes will create significant challenges and constraints for the current forms of tourism activities in the region (Hall & Saarinen, 2021). As a result, the future of Arctic tourism has become a concern for the tourism industry, particularly in the European Arctic. Authors like Denstadli, Jacobsen, and Lohmann (2011) have discussed how climate variables (temperatures, precipitation, visibility, cloudiness) can influence tourists' preferences and aversions regarding Arctic tourism destinations, and how a destination's attractiveness is highly vulnerable to climate change.

The impacts of the Anthropocene and the warming climate for the Arctic sit in parallel with an apocalyptic process characterised by radical and harmful changes for the conditions of human and environmental systems (Mordechai & Eisenberg, 2019). In literature, these fundamental changes originate from events such as plagues, volcanic eruptions, conflicts, industrial (nuclear) accidents or climate change (Anshelm & Hultman, 2014). What follows conceptually is a post-apocalyptic world (system) that has collapsed and is dramatically different from the pre-apocalyptic one. Here, our interest is centred on the question of what would a post-Arctic system be and, especially, what would post-Arctic tourism be when there is no marketable last chance to see glaciers, snow or polar bears.

Obviously, it is very challenging to predict this kind of future system in concrete detail, and this is not the aim here. Conceptually, however, the post-Arctic can be seen as a reference to visions of an apocalyptic aftermath linked to climate change where ice and snow – the cryosphere – have become endangered and eventually extinct. Seas and lakes that used to freeze remain ice-free all year round, the Arctic lands have lost their snowy landscapes, and glaciers have melted or retreated. These kinds of visions contrast with the current representations of the Arctic in tourism. Instead, they depict dark post-Arctic tourism destinations in which current tourism practices and imaginaries are challenged and eventually disappear due to the loss of the cryosphere. The early 2018 Christmas season in Finnish Lapland was a foretaste of this: following a mild autumn season, the region faced a lack of snow and coldness, negatively affecting the environmental aesthetics of this 'winter wonderland', which resulted in some leading British tabloids renaming the destination as 'Crapland' and tourists complaining about the darkness of the snowless northern winter (Varnajot, 2020).

According to the United Nations Office for Disaster Risk Reduction (2020), climate change represents a slow-onset disaster affecting the Arctic region at different pace in time and space, resulting in the emergence of post-Arctic environments as a process. Thus, the climate change driven apocalypse is a transition that will gradually lead to the post-Arctic situation. The loss of the previous attractiveness and the preceding last-chance-to-see phase in tourism, however, is not automatically the end of the industry, as the post-Arctic may also offer new opportunities for tourism. In addition to generally improved and extended summer season conditions for tourism activities, post-Arctic tourism could utilise similar approaches as dark tourism. Dark tourism refers to 'the presentation and consumption (by visitors) of real and commodified death and disaster sites' (Foley & Lennon, 1996, p. 198). Here, based on the environmental disaster caused by climate change, this could showcase 'how it was before' through tourist exhibitions using images and/or virtual reality of the past, for example. Furthermore, this could initiate educational and science tourism and attract visitors who would like to commemorate the loss, just like in Iceland with the Okjökull glacier (Hall & Saarinen, 2021), which gives an agency to past or still existing natural elements, such as glaciers, by personifying them.

Global climate change exceeding the levels of the 2015 Paris Climate Change Agreement would create very serious natural disasters within the Arctic. However, from the Anthropocene perspective there is nothing natural in this potential process towards the post-Arctic. In tourism, however, this human-driven process can also open up opportunities that could concur with and/or differ from the idea of the post-Arctic being mainly a destination for (limited) dark tourism. A reinvented alternative post-Arctic would call for an active rewriting and reinterpreting of the current meanings of the region in terms of tourism whereby the Arctic was not so dependent on cryospheric winter-based representations and activities in tourism imaginaries. This contrasts with the current 'arctification' process (Carson, 2020) that is based on a stereotypical production of cryospheric images and places in the north as being the Arctic. Although local tourism actors have been taking advantage of these stereotypical imaginaries, a

counter-artification would also use views and realities from the four million people living in the Arctic that is diverse in terms of seasons, climates, landscapes, cultures and livelihoods (Saarinen & Varnajot, 2019). Following this, the Arctic and emerging post-Arctic tourism would not be based so much on the (original) narratives created from the outside, by outsiders to other outsiders, making current Arctic tourism highly vulnerable to climate change. The idea of post-Arctic tourism offers novel opportunities for future research on the Arctic in tourism and especially for the re-evaluation of Arctic tourism as a concept, product and experience. These aspects are important to study before the glaciers and other key attractions have gone, as this would help the Arctic tourism industry and tourism-dependent communities to adapt to a looming apocalyptic turn.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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