Contents

Abstract vii
List of original articles ix
Foreword (alkusanat) x

1 Introduction 1
   1.1 Climate change challenges the future of tourism 1
   1.2 Quest for a comprehensive understanding of adaptation in nature-based winter tourism 3
   1.3 Structure of the thesis 6

2 The impact of climate change calls for adaptation in tourism 11
   2.1 Impacts of climate change in tourism research 11
   2.2 Changes in climate and weather 13
   2.3 Adaptation needed throughout the tourism system 16
   2.4 Nature-based tourism and sustainability in relation to climate change 18
   2.5 Nature-based winter tourism in Finland 20

3 Tourism-environmental relations, environmental perceptions and decision-making 25
   3.1 Tourism geography and tourism-environment relations 25
   3.2 Environmental perceptions guiding human action and decision-making 27

4 Research material and methods 31
   4.1 Multiple methods and data 31
   4.2 Continuum of case studies, content analyses and statistics 37

5 Emerging awareness of climate change in the tourism industry 41
   5.1 Emerging awareness of climate change and talk about local weather 41
   5.2 Diversifying adaptation strategies 43
   5.3 Operational and regional vulnerability and reliance on tourists’ decision-making 45
   5.4 Collaboration towards sustainability 48
6 Discussion and conclusions

6.1 Increasing awareness and adaptation before mitigation 51
6.2 Critical examination of adaptation methods’ feasibility is needed 52
6.3 Factors behind adaptive capacity 54
6.4 The role of the media for climate change awareness and perceptions 56
6.5 Concluding remarks and future research prospects 57

References 61

Appendices

Original articles
Abstract

Climate change awareness and adaptation in nature-based winter tourism: Regional and operational vulnerabilities in Finland

Tervo-Kankare, Kaarina, Department of Geography, University of Oulu, 2012

Keywords: nature-based tourism, winter tourism, climate change, vulnerability, adaptation, adaptive capacity, environmental perceptions, Finland

The tourism industry is highly dependent on natural resources such as climate. Besides being one of the most important motivational factors for many tourists and thus guiding the flows of tourists, climatic conditions also determine and define the attractiveness and activities of tourism destinations and influence their accessibility. Therefore, changes in any climatic elements affect the industry’s future and development. The impacts of projected climate change will have severe implications for the regional and operational structures of the tourism industry, especially in nature-based tourism which is considered one of the most vulnerable forms of tourism in relation to changing climate. In order to cope with these implications, to gain from the positive impacts and to avoid or lessen the negative consequences the industry has to implement adaptation measures while participation in mitigation activities is also required. For a fragmentary industry consisting of several stakeholders and varying types of attractions and destinations this may not be an easy task, especially when knowledge of tourism’s interrelationship with climate change is still somewhat limited.

This thesis contributes to the knowledge of the relationship between tourism and climate change by examining climate change awareness and perceptions and the adaptation processes of the nature-based winter tourism industry. Finland, a country where tourism relies heavily on natural resources, and where snow-based winter tourism consists of a variety of activities, forms an interesting context for the study. The thesis assesses the factors affecting the development of climate change perceptions and knowledge among nature-based tourism stakeholders and the adaptation processes and adaptive capacity of the industry from the perspectives of supply and demand.

The study consists of a continuum of case studies that shed light on the vulnerability and adaptive capacity of the winter tourism sector in Finland. The research process has included several stages and both qualitative and quantitative data have been used to examine the multifaceted research questions. The empirical data include thematic interviews (two sets, realised in 2005 and 2009/2010) and two questionnaire surveys (one for tourism entrepreneurs and the other for tourists). Moreover, a variety of secondary data (e.g. statistics, development documents, newspaper articles) have been utilised during the research process.

The findings of the study indicate that the tourism industry’s awareness and belief in climate change as a real phenomenon have increased and strengthened during the research process. The media and recent weather anomalies have affected tourism stakeholders’
perceptions of climate change. Consequently, the industry’s attitudes towards adaptation have changed, but not significantly. Several interrelated factors affecting the industry’s vulnerability and adaptive capacity were identified. Nevertheless, their importance varies depending on the scale of examination. In general, the geographical location, the nature and relative importance of tourism, and certain social aspects of tourism and the community (e.g. traditions of collaboration, attitudes and support of the community) together with the pursuit of sustainable and year-round tourism were considered central determinants guiding the future of tourism in a changing climate.
List of original articles

I

II

III

IV

V

* The author was responsible for collecting and analysing all data. The article was written in collaboration with Jarkko Saarinen.
** The author was responsible analysing all data. The survey was designed and the article written in collaboration with C. Michael Hall and Jarkko Saarinen.
Foreword (alkusanat)

Writing the foreword for a work that has taken quite long to prepare and write, and the writing process which has included so many phases, incidents and outputs of various people is not an easy task. Other sections of this thesis have in a sense been much easier to write as there are some guidelines to follow and examples to apply. Therefore it was no wonder that the melody and lyrics of Love Story kept returning to my head when I opened the file to write this foreword... “where do I begin”, “where do I start”?

First I have to say that writing a thesis is by no means the love story of my life. It has, nevertheless, formed an important part of my life. The path from my very first day in university to this final stage, the completion of my thesis has taken almost twelve years, more than one third of my life. When I entered the premises of the Department of Geography for the first time in September 2000 as a geography student, I did not have a clear picture of my orientation between the sub-disciplines of geography, nor did I know that I would still be here in 2012. But here I am, having succeeded in combining the two interesting aspects of geography – environmental issues and tourism – and making my living out of them. Not bad, eh?

The research process that was launched in 2005 when I started to prepare my master’s thesis in the FINADAPT project has since then included many phases. Most of my research contributing to this thesis has been funded by the Academy of Finland under the auspices of the FiDiPro programme ‘Human-Environment Relations in the North: Resource development, climate change and resilience’, but also the European Social Fund has participated in funding through the KeMMI project. The participation of diverse tourism stakeholders has been essential at all stages. I have been very lucky and happy to have so many tourism entrepreneurs participating in interviews and answering our surveys. Also other stakeholders and Christmas tourists have shared their views on climate change with me, for which I am grateful – the realisation of this study would not have been possible without them.

My three supervisors, professors Jarkko Saarinen, C. Michael Hall and Mark Nuttall have all had important roles in the research and writing process of this thesis; they have not only guided me through the processes of becoming a researcher and writing a thesis but acted, among others, as co-authors of my articles, as commentators and proof readers, as chauffeurs, as couriers, as entertainers, as chefs and as providers of accommodation services. Therefore, I wish to express my gratitude to all of you: Jarkko “the Merciful”, Michael “the Guru” and Mark “the Anthropologist”.

Both Jarkko and Michael have besides co-authoring also ghost-edited (as Michael says) my articles. Their comments and suggestions have been invaluable, and Michael’s “nativity” (Kaarina’s saying, means that someone is native speaker of English) has speeded up many writing processes when the need for outside (or paid) proof readers has been minimal. I sincerely hope that both Thule Institute and Department of Geography fully understand your true value in this sense! Mark’s and his family’s support and hospitality have been great, especially during my visit to the University of Alberta. I hope
you all have enjoyed the joys and pleasures – and sorrows – of supervising me. At least I have enjoyed my time being supervised by this magnificent trio. Hopefully the ending of this peculiar era is not the ending of all collaboration.

During the process, I have had the pleasure of getting to know, working with and learning from colleagues from different departments and institutes. I would like to thank all the staff in Department of Geography, in Thule Institute and in the Canadian Circumpolar Institute, the project members of KeMMI and Vaccia and the FiDiPro group for providing a friendly and encouraging environment for doing research.

With geography being my “home discipline” my closest colleagues can be found from the Department of Geography in Oulu. They, if anyone, deserve my gratitude for their friendship and support in various issues. With Katri Suorsa, we have become very close friends while sharing the ups and downs of becoming geographers since our very first day in the university. Tanja Löytynoja, Vilhelmiina Vainikka, Eva Kaján, Eeva-Kaisa Prokkola, Maarja Niskala and others have also engaged in several ways and offered their companionship outside the walls of this architectural miracle (a.k.a. our university). It has been a pleasure getting to know you and working with you.

Moreover, Jari Järviluoma and Jackie Dawson have done a great job as pre-examiners of this thesis. They both did their job in a relatively short time period and still managed to give many valuable tips to improve my work, for which I am very grateful.

The academic world is a tricky one in the sense that it follows you everywhere. It is not an eight-to-four day job that you leave behind when you close the door to your office to go home. No, quite the contrary, the working hours are somewhat muzzy and it is not uncommon for research-related issues to penetrate the poor doctoral student’s head in the widest possible places and moments. Therefore, also the people at home and friends outside the academy have co-experienced some of the joys of becoming a real researcher. Thank you for your participation.


Väitöskirjani tutkimusprosessi on ollut monivaiheinen ja edellyttänyt useiden eri toimijoiden osallistumista toteutukseen. Olen ollut hyvin onnekas, ja iloinen siitä, että monet matkailuyrittäjät ovat suostuneet kiireistään huolimatta osallistumaan haastatteluihin ja vastaamaan kyselyihin. Myös muut matkailualalla toimivat ja joulumatkailijat ovat jakaneet kanssani näkemyksiään ilmastonmuutoksesta. Olen erittäin kiitollinen teille kaikille ja arvostan panostustanne suuresti – ilman teitä tätä tutkimusta ei olisi ollut mahdollista toteuttaa!

Akateeminen maailma on siinä mielessä hankala, että se seuraa poloista väitöskirjan parissa pakertavaa tutkijantekelettä joka paikkaan. Työ ei rajoitu virka-aikaan, eikä usein-kaan jää työhuoneeseen odottamaan paluutani, kun suljen työhuoneen oven perässäni lähtien pieni kotiin. Ei, työajat ja -paikat vaihtuvat, eikä ole mitenkään harvinaista, että tutkimusasiat tunkevat tutkijan päähän mitä oudoimmissa paikoissa ja tilanteissa. Senpä
takia kotijoukot ja ”akatemia” ulkopuoliset ystävämäiset väitöskirjan tekemisen riemuista. Teille kuuluu myös kiitos osallistumisestanne tähän pitkään prosessiin.
