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A Comparison of Tourism Crowding Management between Tourism Sites in Cairns
and Xi'an – Based on Tourism Carrying Capacity Assessment

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September 2009

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I declare that this thesis is my own work but I acknowledge that the production of this thesis has benefited significantly from the contribution of several others. Specifically I acknowledge the tremendous assistance of Professor Philip Pearce and Dr. Laurie Murphy in the supervision of the thesis and the assistance of Professor Philip Pearce in the editing process.

I also acknowledge School of Business, James Cook University for their financial support in the surveys of this thesis.

Qian Jin

29 September 2009

Declaration on Ethics

The research presented and reported in this thesis was conducted within the guidelines for research ethics outlined in the *National Statement on Ethics Conduct in Research Involving Human* (1999), the *Joint NHMRC/AVCC Statement and Guidelines on Research Practice* (1997), the *James Cook University Policy on Experimentation Ethics. Standard Practices and Guidelines* (2001), and the *James Cook University Statement and Guidelines on Research Practice* (2001). The proposed research methodology received clearance from the James Cook University Experimentation Ethics Review Committee (Approval number H2582 and Approval number H2732).

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Abstract

Tourism crowding management is an important part of sustainable tourism development. Tourism managers are responsible for preserving the natural and cultural resources which form the bases for attractions. In addition, tourist site managers are responsible for making sure tourists can experience the sites relatively free from excessive crowds. The importance of crowding issues in tourism is reinforced by considerable previous research attention. Several researchers have investigated tourists' crowding-related norms as a way of providing suggestions to site management personnel. Previous research has identified many factors which can influence tourists' perceptions of crowding. Most researchers have tried to establish crowding specific concepts to support the sound conservation as well as the use of the resources, while at the same time supporting successful businesses and quality visitor experiences. Building on the previous literature, the central aim of this thesis is to compare crowding-related issues between different kinds of sites in order to develop a crowding management model specifically relevant to tourist attractions. In developing the crowding management model, three comparative studies were conducted; the first explored tourists' actual use levels and tourists' perceived use levels, the second studied factors influencing tourists' perceptions of crowding and the third investigated crowding managerial strategies. These comparative studies were conducted at five sites in Cairns, Australia and five sites in Xi'an, China. The sites employed in the two destinations involve very different environments. The sites in Cairns are located in a developed country and are environmentally based settings, while the cultural sites in Xi'an are located in a rapidly developing country. These differences provide important points of contrast but facilitate the construction of a broadly based understanding of crowding management at tourist attractions.

In Study One, observations were conducted to find out the visitors' actual use levels of the settings. In order to compare the actual visitor use levels and the perceived use levels, a questionnaire based survey of on-site visitors (N = 585) was used to reveal tourists' crowding-related norms. The questionnaire study was then linked to detailed observation studies conducted earlier at the sites. Several evaluative dimensions reported by previous researchers were followed to measure use levels, including

“preference”, “desirability”, and “tolerance”. The tolerance and preference data were used to undertake a comparison with the actual visitor use levels. The key findings of this study using single sample t test comparisons were that several aspects of crowding management were a problem at sites in Xi’an but not in Cairns. Moreover, the actual visitor use levels exceeded visitors’ preference at some popular sites in Xi’an in the peak season. These findings were not replicated in Cairns.

The purpose of Study Two was to investigate the relationships between tourists’ site evaluations and tourists’ use levels. Additionally, the study sought to explain the tourists’ perceptions. Data collected from the same questionnaire survey were also used in this study. The relationships among tourists’ crowding-related perceptions, including the evaluative dimensions of environment concern, crowd concern, tolerance, preference, desire and satisfaction, were tested using the independent t-tests, one-way ANOVAs, correlations and multiple regressions. A key finding was that there were relationships between the three evaluative dimensions. There were further links to visitors’ desire to stay in the settings and their satisfaction with the settings. The findings varied for the two destinations since tourists had different perceptions at sites in Cairns and Xi’an. Age, nationality and type of travel influenced the perception of crowding and other crowding relationships but gender did not.

The final study investigated the ideas, opinions and strategies to control crowding, as revealed by interviews with a number of key site managers. The semi-structured interviews were conducted by sampling CEOs and senior managers of six natural sites in Cairns and ten cultural sites in Xi’an. Data collected in this Study Three were analyzed by coding the dominant themes in the interviews in a version of the grounded theory approach. The responses of managers provided considerable information about crowding management strategies. First, several factors were identified which lead to crowding in Xi’an, but not in Cairns. These factors included seasonality, the homogeneous types of tourists, unevenly distributed numbers of tourists within the sites, facility deficiencies and poor service delivery on the busiest days. Second, managers in both destinations provided suggestions for better crowding management. These included ticketing and pricing controls, cooperation with other sectors, monitoring of problems and contingency plans for crises. The sites in Xi’an faced more difficulties in controlling tourists’ activities in the peak season, especially

in the Golden Weeks. The managers at the Chinese sites paid more attention to crowding management issues.

As a result of these three linked studies, a crowding management model for tourist sites was developed. This model provided a structured approach defining the factors to consider in the crowd management process. Finally, this thesis noted some study limitations and suggested several future study areas which could contribute to consolidating the work conducted in the present research. It can be suggested that researchers and managers need to continue to work together to deal with the increasingly troubling problem of too many people in the same tourist space.

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