

# Final Report: Understanding the Environmental Risk Information Needs of Chinese Tourists to Australia



SCHOOL OF  
PUBLIC HEALTH



**Authors: Dr Scott Hanson-Easey, Dr Michael X. Tong, and Prof Peng Bi.**

**School of Public Health. Faculty of Health and Medical Sciences. The University of Adelaide.**



## Acknowledgments

“Understanding the environmental risk information needs of Chinese tourists” is supported by the Australian Government through the Australia-China Council of the Department of Foreign Affairs and Trade (ACC2017146). The views expressed in the publication are those of the authors and not necessarily those of the Australia-China Council, Department of Foreign Affairs and Trade or the Australian Government. The Commonwealth of Australia accepts no responsibility for any loss, damage or injury resulting from reliance on any of the information or views contained in this publication.

We are deeply indebted to Prof. Yixiao Xiang from Shandong University for her generous support throughout this project and, in particular, for partnering with us on such a novel project. Similarly, we are grateful to Shandong University for allowing us to interview their students whilst in Jinan. This project has been made possible by the participants and stakeholders whom gave of their time to talk to us. We are thankful for their support.

## Contents

Executive Summary .....	1
Introduction .....	4
Methods and Methodological Approach .....	5
Australian Findings .....	6
Environmental impression of Australia .....	6
Participants' understandings of environmental risks.....	7
Insects, bugs and snakes .....	7
Lack of mobile signal.....	8
Sun exposure, heat and dryness .....	9
Summary .....	10
Tourist risk information sources and communication needs.....	10
Risk communication strategies for Chinese tourists.....	11
Summary .....	14
Chinese Findings.....	15
Environmental impressions of Australia.....	15
Participants' understanding of environmental risks .....	16
Summary .....	16
Jinan Tourism Stakeholder Workshop.....	17
Mandarin brochures and signs .....	17
Utilize websites and Chinese social media apps.....	18
Segmentation of risk messages to target different tourist cohorts.....	19
Design a Mandarin language mobile phone messaging (text) warning system app and make available to incoming passengers.....	20
Summary .....	21
Recommendations for tourism and emergency management stakeholders.....	21
Policy and strategic recommendations for the emergency management and tourism sectors .....	22
Concluding remarks .....	23
References .....	23



## Executive Summary

Australia's unique and diverse natural environment is a key drawcard attracting millions of tourists to this country every year. Images of clean beaches, untainted wilderness areas, wide open spaces, and exotic and (mostly) friendly wildlife have regularly featured in tourism marketing and the mass media for decades. The nation's climate is represented as varied and unpolluted, offering a panoply of outdoor and adventure tourism activities. However, could these representations, without being complemented with effective risk information, be leaving tourists' relatively unprepared for environmental hazards such as bushfires and heatwaves?

Research (and theory) can play an important role in understanding what environmental beliefs tourists bring with them how their travel behaviours might be informed, or at least mediated, by these beliefs. This project involves a series of interviews with Chinese nationals studying and holidaying in Australia, and 'potential tourists' in China, to explore their understanding, or 'representation' of the natural environment, and what risks it may pose (if any). We also explored how, and when, risk information could be most effectively shared with tourists to equip them for their travels.

Our findings are telling. Participants' responses in Australia and China cohered around a number of key themes. Current and future Chinese tourists held a generally benevolent and 'positive' set of beliefs about the Australian natural environment and degree of potential risk inherent within it. For a large majority of participants, the environment was conceived as 'clean', unsullied, underpopulated and, on the whole, relatively safe. Australia's native fauna, including koalas and kangaroos, characterised the environment. Far fewer respondents' recalled concepts related to any kind of environmental hazard, risk, or threat. When directly questioned about their views on what risks were present in the natural environment, a majority of respondents in Australia and China identified small bugs, spiders, snakes and lack of mobile phone signal as key hazards.

This research is a first step in enhancing the depth and breadth of knowledge on how Chinese tourists 'see' the Australian environment and how they prefer to receive risk information. Our findings provide much needed evidence upon which risk communication efforts could better designed and disseminated to inform safer

decision-making amongst Chinese tourists.

This project also conducted, in collaboration with Shandong University, a Chinese tourism stakeholder workshop in Jinan. A vibrant and positive discussion with tourism academics, government tourism officials and tourism business leaders on the risk communication needs of Chinese tourists generated a range of recommendations. These included the design and dissemination of Mandarin language risk information resources such as brochures, websites and a text alerts service to promote safe travelling, and employing Chinese social media formats, including *Weibo* and *WeChat*. Tourism stakeholders were keenly aware of the need to fashion risk messages to meet the information needs of different cohorts of tourists, especially Free and Independent Tourists (FIT).

These findings have important implications for Australia's tourism and emergency management sectors. The Chinese tourism market is growing exponentially, and a significant group of Chinese tourists are now venturing beyond the relative safety of organised tours and travelling independently into regional and remote wilderness areas. Notionally, the diversification of destination choices is positive and economically beneficial; broadening the range of tourism experiences Australia can offer will nuance the market, and thus attract greater numbers of tourists with diverse interests. Simultaneously, however, FIT introduces a new amalgam of risk management and communication challenges. Because some Chinese tourists speak little English, their capacity to engage with mainstream risk information is seriously constrained, and their lack of experiential knowledge of Australia's environment compounds this risk. A clear imperative exists to improve risk communication for Chinese tourists, simply because they can be unreasonably exposed to natural hazards because of their lack of experience with, and of, the environment.

This report recommends that a multi-component communication approach be adopted to enhance safe travel amongst Chinese tourists. Social marketing and risk communication research strongly advocates that segmented (to different audiences cohorts) messages, communicated through various channels including social media, websites, interpersonal, and text messaging, can foster greater awareness and lead to safer, self-protective behaviours.

As this research has highlighted, Australia's natural environmental 'image' amongst Chinese tourists as generally safe, clean and pristine, remains intact. Yet ironically,

perhaps, we propose that partly because of such representations, some Chinese tourists are at heightened risk – lulled into an overly optimistic, heuristic belief that the environment can similarly be deemed safe. Although the tourism industry may hold concerns about endangering its hard-won portrayal of the Australian environment as a destination of pristine beaches, koalas and kangaroos, it may wish to equivalently consider the reputational risk that accompanies uninformed travel behaviour, and the dire consequences that may arise from these. Evidence-based, targeted risk communication that aims to remedy tourists' risk does not necessarily tarnish a destination's reputation; however, it can diminish the probability of avoidable death and morbidity as a consequence of uninformed behaviour.



## Introduction

Australia is attracting an increasing volume of tourists from China, and forecasts strongly suggest that exponential growth of the Chinese Middle-class will further drive this trend. In 2016, a record 1.2 million Chinese tourists visited Australia (Australian Bureau of Statistics, 2017b), and it is estimated that by 2026, over 3.3 million Chinese tourists will visit Australia per year (Australia China Business Council, 2017). Importantly, Chinese tourists are increasingly spending more time in regional and wilderness areas, enjoying Australia's diverse natural environments.

For many Chinese visitors, Australia's unique natural environment and climate (i.e., surf beaches and extreme heat) are fascinating and novel, which can be part of these decisions for their travel. Yet, this unfamiliarity with the natural environment can lead to unintentional (and intentional) risk-taking, and poor risk evaluation and decision-making in hazardous contexts, endangering the health and safety of tourists and Australia's reputation as a safe and reliable tourist destination. For example, risks associated with swimming (drowning), bushwalking (dehydration and becoming lost), and heatwaves (dehydration and heatstroke) are not self-evident for some Chinese tourists. Recent drowning deaths of Chinese nationals in Queensland underline the grave risks posed to tourists who lack knowledge of coastal and riverine environments and requisite swimming skills.

Such risks are compounded by scant Mandarin or Cantonese-based risk information. Evidence-

based risk communication interventions with Chinese tourists can work to manage tourists' lack of experience with the environment and equip them with knowledge that could prevent accidents, injury or loss of life. Towards this end, research strongly suggests that effective intercultural risk communication strategies must consider existing systems of knowledge and sense-making if they are to be effective. In different words, understanding the many and varied environmental understandings and beliefs that tourists hold about risk is a formative step in the construction and implementation of targeted communication strategies.

Although there is an emerging literature on various facets of Chinese tourism, studies of travellers' understanding of and response to natural environmental risks are limited. Previous studies have mainly employed quantitative surveys (Brian & Sarah, 2015), with limited in-depth insights into how Chinese travellers make sense of their natural environment and potential risk factors.

The aim of this project was to develop an understanding of the natural environmental information and communication needs of Chinese tourists visiting Australia. Ultimately, the study aims to enhance Chinese tourists' capacity to keep safe whilst enjoying Australia's unique environment and climate.

## Methods and Methodological Approach

The qualitative components of the study used semi-structured interviews and focus group, and data was analysed using a social constructionist approach (Gergen, 1999). The methodology is appropriate for exploring how people make sense of, or 'represent' new phenomenon or entities *in language*. The environment, for example, is one such socially constructed entity. Although elements of what constitutes the environment (e.g. landscape, climate, wilderness, animals) are clearly tangible, how these gain meaning is always 'constructed' in language and text. Importantly, the language used to describe the environment is always variable and tied to and shared by social groups. The 'environment' and its 'risks' are fundamentally constructed through the use of language, and language sets out the boundaries of what is considered risky or safe. In essence, through the lens of a social constructionist approach to understanding how different social groups 'see' and respond to the environment, can we begin to advance our understanding of what may be driving some risk behaviours and how these may be addressed in risk communication.

Ethics approval was granted for the study by the University of Adelaide Human Research Ethics Committee (Approval No. HS-2017-182).

Three participant groups were recruited for this study: 1) Chinese tourists or students presently in Australia; 2) Potential Chinese tourists (in

Jinan) to Australia and; 3) Chinese-based tourism management academics, government tourism stakeholders and travel businesses CEOs.

A purposive sampling method was employed to recruit current travellers and potential travellers in Adelaide and Jinan, respectively. Fifteen participants from the University of Adelaide and 22 participants from Shandong University were recruited for the interviews and focus groups. Secondly, 10 key informants with expertise in the tourism management and intercultural communication fields in Jinan were identified by Shandong University and invited to participate in a stakeholder workshop.

The interview protocol (Appendix C) for the interviews and focus group was informed by a literature review and recommendations from a research reference group comprising academics and experts in China and Australia. The semi-structured nature of the interviews/focus group questions focused on exploring how participants made sense of the Australian environment; their understanding of and response to potential environmental hazards and; their ideas for effective communication strategies to raise safety awareness among Chinese tourists.

The original audio data was translated and transcribed from Mandarin into English by the bilingual (second) author, and then imported into Nvivo 11 software for qualitative data analysis. Thematic analysis was performed in an iterative process (Braun & Clarke, 2006).

The following sections of the report are structured around findings derived from: 1) Australia-based Chinese tourists' interviews; 2) Jinan (China) based 'potential tourists' focus group and; 3) Jinan tourism stakeholder workshop.

## Australian Findings

### Environmental impression of Australia

Key interview questions related to participants' impressions of the environment, its hazards and personal risk, and ideas for improved risk communication interventions.

Interviews and focus groups were initiated with a word association procedure. Word association tasks are an effective way to access spontaneous mental representations of a denoted object i.e. 'the Australian natural environment' (Wagner, Valencia, & Elejabarrieta, 1996). Participants were asked 'what are the first words or images that come to mind when thinking about Australia's natural environment?' After this task was completed, participants were subsequently asked to provide an explanation of what these words meant for them. Most participants held a very positive first impression of the natural environment (Figure 1).

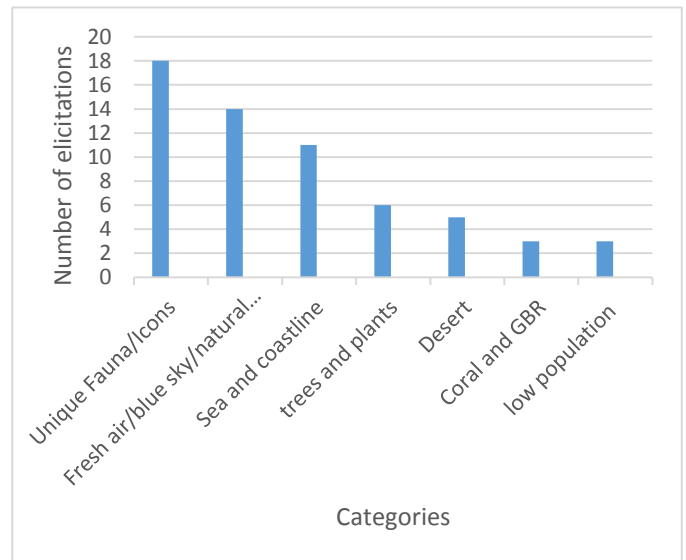


Figure 1. Word association frequency in Australia.

The most frequently elicited words were associated with Australia's unique fauna, such as kangaroos and koalas, clean air/blue sky, sea and coastline, and trees and plants. Overwhelmingly, these words and images can be associated with notions of the 'naturalness' (unspoilt by human activities) of the environment which are positively evaluated. Participants were then asked to explain what they meant by, and to elaborate on, the words and images they provided. For example, one participant stated:

*It is very natural, close to the environment, all clean, blue sky, very clean, like fresh air, close to animals, a lot of farms, and the countryside.*

Indeed, it was rare to find a negative appraisal of elicited words. One participant evaluated the Australian environment in this way:

*When I think about Australia, I will think of kangaroo and koala, because these are Australian direct*

*impression. I think the animal is special compared with others due to the separated land from other continents. This makes me more easily to think about those animals before I came to Australia. They are just special animals.*

Similarly, other participants stated:

*Beautiful was the first impression of Australia natural environment. Because I lived in the inland place (in China). I did not see the ocean when I was very young. So when I came to Australia, I am impressed by the beautiful and huge ocean.*

*I do not really know about the Australia environment before I came here. I think it is very green and clean. Different from China, because in China, very crowded, while Australia is quieter and more natural.*

Overall, these results suggest that a strong positive environmental representation (images and words) exists amongst our participants that characterises Australia's environment as ostensibly benign, natural, and 'clean'. These representations echo the imagery drawn upon in tourism advertising. Clearly, the imagery presented in these extracts omit alternative representations that could be potentially evoked. For example, there were very few mentions of extreme heat, dangerous surf or bushfire. Again, we intentionally did not use the words 'risk' or 'hazard' in this initial phase of the interview, as we did not wish to pre-empt or elicit answers framed with this gloss in mind. Thus, these results suggest that perceived risk and vulnerability are not explicitly associated with beliefs about the Australian environment.

## Participants' understandings of environmental risks

The second phase of the interviews directly queried participants' beliefs and understandings about various potential 'risks' inherent in the Australian environment. This question took a number of forms, but for the most part was formulated thus: 'do you see any risks in Australia's natural environment?' Responses to this question fell into 3 key thematic risk categories: 1. Insects, bugs and snakes; 2. Lack of mobile signal and isolation whilst driving in remote areas and, 3. Sun exposure and heat.

### Insects, bugs and snakes

The most common response to the environmental risk question related to participants' belief that spiders, snakes, and insects were most likely to present a threat than any other hazard. For example, one participant stated that:

*Spider, snakes, and some other small animals. We do not know how to address these risks. The remainder information is limited. If we meet the dangerous situation with these animals, we do not know what to do, and there is no mobile signal. You will be freezing.*

*Researcher: How did you hear about this? Do you remember?*

*Participant: I think it is from social media. Like people's experience. We have sorts of things like Facebook in China, it shows huge spiders jump into my house. It is so scary and some social media post*

*it online. Then we all know about that. We prepared for that trip.*

Another participant complained of the risk posed by ants:

*There are too many ants, they may eat our humans. Too many ants, very big. It is horrible.*

It should be noted that for our participants, the degree of perceived risk posed by small insects was not high. It was our impression that insects, such as ants and other unidentifiable 'bugs' were predominantly more of an annoyance than a serious threat to health. Contrastingly, exposure to spiders and snakes was taken more seriously.

*Before I come here, I saw Weibo: if you have a friend in Australia, you should cherish them, because they face many dangers in Australia. Then I started to worry about that. But when I came to Australia, I saw a spider, Red Back. I cannot image there are so many poisonous spiders at home. My roommate was just bitten by a spider a few days ago. I felt surprised and excited, because we do not have spiders at home. I would feel a little bit scary, snake in my yard yesterday. But the first feeling is I should take a picture.*

*Australia has many poisonous animals, e.g. all top 10 poisonous snakes are in Australia. I know this mainly from Discovery program via TV.*

As these extracts illuminate, some Chinese travellers have had little exposure to such animals or have only observed or heard about them online or on TV, where their threat and

prevalence may have been exaggerated. The magnification and dramatization of spiders' and snakes' degree of threat could lead to the amplification of subjective and group judgements about the dangerousness of insects and snakes. In and of itself, this may not be particularly problematic for risk communicators. However, what this may also imply is that more probabilistic hazards within the environment are being glossed over.

### Lack of mobile signal

Although not an environmental hazard *per se*, participants often commented on losing mobile signal in remote areas whilst driving or walking.

*If I travel far away from cities, I will not get mobile phone signal anymore. This is a big risk factor*

*At the beginning (of a trip to Uluru), there are urban areas, and then change to industrial areas, then to forests, after the forests, all deserts and rocks. And then no mobile phone signal anymore.*

*Some people told me that there were some people blocked in the lake eight due to the tide. The helicopter saved them finally via mobile phone calls. We can find the mobile phone signal, but it is very weak.*

Intermittent or complete absence of mobile signal was recurrently met with what could be interpreted as anxiety, a sense of isolation and feelings of vulnerability. The following extracts bear these experiences out.

*Inland dangerous, the main problem is driving but without mobile signal.*



*When we go to Tasmania, we mainly worried about the signal, isolated, be alone.*

*I went to Port Lincoln, but during the trip there was no signal on my mobile phone. It is a very strange feeling, isolated.*

It was our impression that tourists considered mobile phone coverage as an important tool for their travels, allowing them access to navigation aids and as a means to contact emergency services if necessary. Although our data does not spell it out, we could speculate that tourists' assumptions (and surprise that these were mistaken) that a mobile phone signal will be available in remote areas could be one factor contributing to underpreparing for breakdowns and becoming lost. Further, the notion that mobile phone signal is, or should be, universal across Australia could be associated with the fact that many Chinese tourists come from urban backgrounds where mobile signal is ubiquitous.

## Sun exposure, heat and dryness

During our interviews, 12 respondents mentioned sunburn when questioned about potential risks associated with the environment, and for some, this was explicitly attributed to Australia's levels of UV radiation. For example:

*The sunshine makes me headache, because my skin got burnt previously as I did not use the sun cream when we travelled to Kangaroo Island. The sunshine is too strong. The UV is also very strong. In addition, as I knew Australia has a higher incidence of skin cancer compared with other places.*

*Maybe top 5. The UV hurts skins seriously.*

Although sunburn was considered an environmental health risk, extreme heat was rarely construed in this way. For example, participants noted: "it was very hot", or "I feel really hot", or "the summer is too hot" and it's "quite hot, like in the desert". Another participant described that his "last holiday break I stayed in Adelaide, the temperature can reach the 40 degrees. I did not expect so hot here".

When asked about the summer heat, respondents often answered that they left Adelaide to return home to China, thus avoiding the worst of the heat.

Moreover, participants regularly commented on the lack of humidity in Australia. For instance, one participant commented on the dry conditions in the following way:

*The city is close to the coastline, but I feel my face is very dry. This is not what I expected. Previously I went to London, it was very humid, but Australia is very dry.*

Other participants expressed similar opinions, describing the climate as: "dry, damage the skin", and, "very dry during the summer, uncomfortable."

Is arguable that because most participants were young (students) and had access to adaptation resources (e.g. air-conditioning) they could use to combat extreme heat, they had not experienced any significant heat-health effects beyond feeling uncomfortable. Direct and

vicarious experiences of a threat are key mechanisms by which individuals create risk knowledge and form adaptation strategies that can be employed to mitigate threats. In a different context, perhaps, where 'common sense' adaptation resources were not available, Chinese tourists may be highly vulnerable to hazards such as heatwaves.

## Summary

For the most part, environmental risk representations amongst Chinese students /tourists were framed experientially - that is, understanding of the environment and risk were made sense of by coming into direct contact with a hazard, annoyance, or perceived risk. These experiences were sometimes made sense of vis-à-vis the media; however, overwhelming, they were based on experience. Conversely, it was rare to hear about knowledge of hazards or risks that aligned with those normally communicated by emergency management (e.g. SES) or other official sources. This may suggest that Chinese tourists, even those who have been in Australia for extended periods of time, have not come into contact with risk information disseminated by agencies that are charged with preparing communities for extreme weather events. Indeed, when asked about what channel they normally acquired information from, services such as the SES, BOM or CFS were rarely named.

## Tourist risk information sources and communication needs

We asked respondents about where they had initially sourced their knowledge about the

Australian environment, and for their recommendations and potential strategies to improve future risk communication.

Pervasively, most travellers indicated that they had searched for and received information via online channels, including travel package web pages, online travel diaries (blogs), and Chinese social media platforms (*Weibo*, *WeChat*). For instance, one participant stated that: "First, online searching. Check some travel websites, and their suggestions for the travelling. And then make our own plan to travel". Similarly, another participant stated that: "I will search for information online and find tips to keep myself safe."

Family and friends were also important sources of information for Chinese tourists. For example, participants indicated that: "mostly we searched that information online randomly, some trip guides, others' experience, diaries and friends' suggestions" and, "mainly the internet, but also ask friends". This corroboration of information with family and friends is unsurprising, especially given that research consistently shows that individuals will often validate information found on the internet and elsewhere with trusted friends or family members to test its veracity.

Most of our Australian-based Chinese participants were under 30 and hence, their overall preference was for information to be communicated through social media apps such as *WeChat* or via searches for Australian content on *Weibo*. Clearly, this pattern of information seeking behaviour may be constrained to this age demographic, and older tourists may take a

very different approach.

Although some participants received some general information about Australia before arriving, this search rarely translated into developing knowledge of environmental risks. For instance, one participant commented that: “when we came to university, we are told some about safety issues, but little about the natural environmental risks. Mainly about the fire and theft” and, “we did not have a lot of understanding of natural environment before I came here”.

Some interviewees recognised the importance of environmental risk awareness: “the infrastructure for tourists is fine, but the information promotion is not enough” and, “if we spent a 100% during our trip, we may just spend less than 2 percent on the safety” and, “the reminder information is limited. If we meet the dangerous situation with these animals, we do not know what to do”.

Taken together, these findings intimate that pre- and post- arrival risk information is not being accessed or is unavailable to some Chinese tourists. This insight corroborates findings discussed earlier in the risk representation section where we argued that experiences were central to how environmental knowledge was constructed. Without knowledge generated through experience, there appear to be few other means by which to accrue risk information. Gaps in knowledge, to put it simply, if not filled in by experience, may not be filled in at all.

## Risk communication strategies for

### Chinese tourists

Four key strategies to improve environmental risk awareness and preparedness of Chinese tourists emerged from the interviews:

- 1) Develop and promote bilingual brochures and signs for dissemination on inbound flights and on busy tourist streets and sites.
- 2) Make fuller use of online services: websites and social media platforms.
- 3) Segmentation of tourist audiences and respective messaging.
- 4) Utilise tourists’ mobile phones to disseminate preparatory information and warnings messages.

### *Develop and promote bilingual*

#### *brochures and signs*

Bilingual (Mandarin/English) brochures and signs were frequently suggested as a risk communication strategy, especially for senior or elderly tourists who may have a limited understanding of English. In addition, bilingual signs and information about Australia could enrich travellers’ experiences and improve the reputation of the Australian travel industry as accommodating tourists who speak a language other than English. The following extracts bear this out:

*To improve the safety, in some important tourist*



*places, providing bilingual signs would be better. If group tour, the guide can inform travellers, as well as the travelling website about warning message, government website, travel agency, tourist places provide signs in obvious positions with bilingual information.*

*During the trip, use signs to remind travellers, especially the Chinese signs to remind them.*

*More and more Chinese will travel to Australia, so if the tourist sites could have the Chinese signs, which would be very helpful for improving Chinese tourists' safety, and also in return, it will attract more people travel to Australia. The significant advice from me is adding the Chinese signs and reminding information for our tourists in Australia.*

*Brochure at the airport. If we combined the incoming passenger card and the brochure together, I think it will be very effective.*

### ***Make fuller use of online services:***

#### ***websites and social media platforms***

Most Chinese respondents indicated that they had employed the internet to search for travel information about a destination, and strongly advocated for the use of online services to promote environmental risk awareness for Chinese tourists. More specifically, a discrete Chinese tourism website, app, or social media channel could be designed to disseminate environmental safety information. For instance:

*Build a website to promote the information or for information dissemination, which could provide necessary knowledge about Australia. For example,*

*what we need to pay attention to, when we can travel in the desert, in the forest, on the grassland, in the city, etc., as well as what we can prepare for those travelling. This can be the website, or app, or other similar productions to disseminate the information.*

*If you can build the website successfully, everyone will check it before they go to Australia, including all information, e.g. risk information around the river, beach, and mountain. etc. I also need to search for current information online, but normally this information is not comprehensive.*

*Most Chinese travellers will check the travel diary online to prepare their trips, if these websites provide the safety information that would be great.*

*WeChat to promote that information. Because all most Chinese they have WeChat, so it is a very good way to promote the safety information. A scan code in Airport when they arrive, then they just scan, they can know what risk information or other information about Australia.*

*I think the quickest and easiest way is to use WeChat, if there is an organisation to post the risk information, then I can share with other friends and tourists. In this way, the effectiveness of information promotion will be very high.*

#### ***Segmentation of tourist audiences and respective messaging***

A 'one size fits all' approach to risk messaging was recurrently criticised. Rather than uniform information disseminated to all Chinese tourists, audience segmentation was proposed.

*I prefer to develop an app or a booklet to inform the information including the information for group tour travellers, and for free and independent travellers, and for the special travellers.*

These extracts highlight that different tourist cohorts will require different information to equip them for their particular travel activities. For example, risk information designed for organised tour-groups will clearly need to be framed differently to messages that target independent travellers. For instance, tourists who join organised bus tours do not generally require information on becoming lost; however, they may require information on keeping hydrated if they are visiting Australia during summer. Contrastingly, independent tourists motivated to explore and navigate in regional and remote areas without support from tour guides will require more detailed information on how to prepare for such trips, and how to respond if things go badly. Mismatched targeting of messaging can often do more harm than good, as individuals may become 'fatigued' by irrelevant information, and begin to ignore all information, relevant or not. Targeted messaging, resonating with receiver's needs and contexts will have a much greater likelihood of uptake. This is a theme reiterated in the Jinan stakeholder workshop, which we will elaborate upon later on in the report.

### *Text messages for incoming passengers*

Text messages could be an important approach to directly inform and warn Chinese tourists about impending environmental hazards such

as bushfire, flooding or heatwave.

Text-based travel information and environmental warnings in China are common and widespread. Travellers traditionally receive a text message that can include local weather forecast and potential warning information when they reach another city. Many Chinese travellers are familiar with this approach; thus, a similar warning system might be replicable here. For example:

*Promotion message, for example, in China when I travelled to somewhere, you will get a text message to inform local key information. Maybe you can also do this in Australia, actively send out a message when travellers are going to new areas, telling them to check some relevant information or risk factors.*

*We prefer phone message. Like you go to other places in China. If you go to Guangzhou, then you would get a message saying welcome to Guangzhou. It sends to your mobile phone. You do not need to find the information actively. This will be great. During the spring festival travelling, it tells me the Yellow Mountain is overcrowded, please do not go there.*

Modelling this strategy, the Chinese Embassy in some countries already sends text messages to incoming Chinese passengers:

*We travelled to other countries, we could receive a text message from the local China Embassy to inform us the general information about the destination countries, including the safety issues. So use mobile to remind those people who arrived in the countries would be a good way to inform free and independent travellers and international*

*students.*

Akin to the utilization of social media as a fruitful channel to disseminate risk messages, text-messaging builds upon a broadly accepted and normalised technology and communication route that can be further leveraged for the purposes of sharing key risk information. This intervention deserves serious consideration as a means to identify and communicate with Chinese tourists.

## Summary

A suite of new risk communication strategies is presented here for consideration by government tourism agencies, emergency management and consular services. In sum, these findings articulate the need for bilingual and segmented messages to be disseminated via multiple communication channels, including Chinese social media, text messages, social media apps, and dedicated Mandarin/Cantonese language web-pages and brochures. Further, our findings make plain the need for differentiated messages to be designed for the growing number of FIT who are increasingly exposed to environmental risk factors previous generations of Chinese tourists have generally not encountered in large numbers.

## Chinese Findings

The Jinan focus group comprised of 22 potential tourists (15 expressed a strong motivation to travel to Australia) from Shandong University. This group was asked for their impressions of the Australian environment and its potential for risk.



## Environmental impressions of Australia

The word association results are strikingly similar to those from the Australian study (the total elicitation figure is higher due to the higher relative number of participants). Chinese participants shared an overwhelming positive first impression of the Australian environment (Figure 2), with very few mentions of any words that could be associated with notions of 'risk' or potential threat to health or wellbeing.

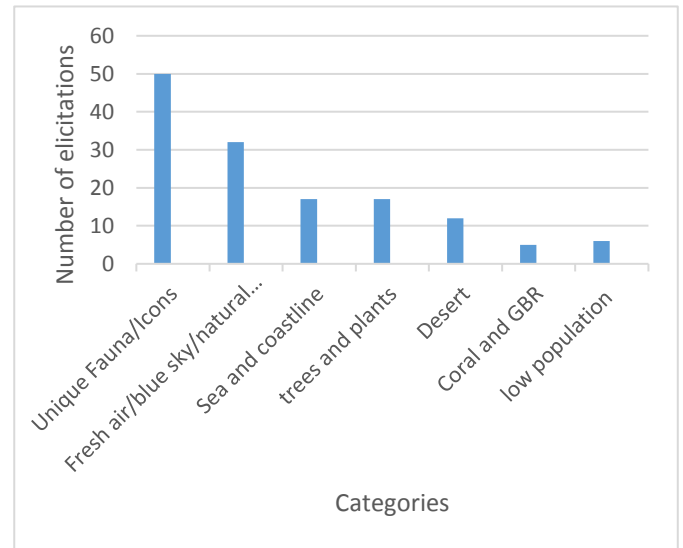


Figure 2. Word association frequency in China.

The most frequently mentioned words were categorized under 'Unique fauna/icon', e.g. (kangaroo, koala) and 'Fresh air/blue sky and natural/clean environment' (e.g., blue sky, plants, trees) and 'sea and coastline' (e.g. beaches and clean sea). Compared with participants in Australia, Chinese participants were less likely to elicit words associated with sea and coastline.

It is interesting that the word association results from both countries reveal a very similar portrayal of the environment. A number of reasons could potentially explain this finding, yet we maintain that dominant tourism and media discourses and images of Australia play a significant role in constructing this representation. Moreover, we suggest that social interaction between Chinese citizens through social media and other modalities of communication can further disseminate and embed such understandings of the environment across different communities.

## Participants' understanding of environmental risks

After administration of the word association task, participants were then asked to elaborate on their views on the Australian natural environment. Although the majority of China-based participants held favourable views of Australia's natural environment, potential risks again centred on threat to health from spiders and insects. For instance, one participant commented:

*There are also poisonous spiders, insects.*

Another participant, when asked about any negative images or ideas about the environment, reported:

*Most are from TV, some residents find big snakes in the toilet.*

Indeed, when asked directly if fears concerning snakes would stop them from going to Australia, the interpreter reported:

*Some say yes, some say no. It is difficult to find snakes at home in China, even not in the bathroom, or toilet. Spiders cannot be easy to find in the city, but there might be some small spiders.*

Some participants indicated that road safety posed a potential threat, especially in the context of native animals 'jumping' in front of cars, as noted by the following participant:

*I heard there were also kangaroos jumping out on the road.*

Apart from the threats posed by spiders, insects and other 'novel' animals (in China, anyway), the Jinan focus group did not identify more pervasive environmental threats such as extreme heat, bushfire and risks that accompany swimming in rivers and at beaches.

## Summary

Overall, findings from the Jinan focus group are comparable to those derived from the Australian interviews, except that the Jinan participants' responses were more homogenous. This is unsurprising given that the Chinese students had yet to travel to Australia, and, thus, could this not draw from direct experience to inform their views. Having said this, a large majority of the potential tourists, like our Australian-based participants, held the belief that the Australian natural environment was generally benign, with exception of potential threats from spiders and snakes.

Again, a core component of this environmental representation most likely stems from tourism marketing and mainstream/social media sources, which can either glamorise or sensationalise the environment for their particular strategic commercial needs; that is, to attract tourists. It is also unsurprising that very few respondents could not recall receiving any information about more probabilistic environmental risks e.g. heatwaves. Again, the tourism industry is not in the business of deterring tourists from travelling; however, it is in their interests to manage risk to avoid potential crisis' that can have a devastating effect on tourism destinations, businesses, brands and reputation. This apparent dilemma - balancing the benefits and potential losses



arising from preventative risk communication for tourists - will remain problematic, especially as emergencies and disasters increase in frequency and intensity as a consequence of a changing and capricious climate. With this dilemma in mind, the Jinan Tourism Workshop sought to explore how Chinese tourists could be better prepared for travel to Australia, and what pragmatic risk communication interventions could be designed and deployed to achieve this.



## Jinan Tourism Stakeholder

### Workshop

The Jinan Tourism Stakeholder Workshop was conducted on 4 April 2018. Eleven participants participated, comprising of provincial government tourism department executives, tourism academics, tourism business leaders, and researchers. After a presentation of the projects' findings thus far, and a general overview of the Australian tourism context and its environmental risk profile, a discussion focused on the need for, and strategies that could address, improved hazard awareness and preparatory risk communication for Chinese tourists visiting Australia.

Four key strategies were advanced: 1) design and promote Mandarin language brochures, flyers and signs for dissemination on inbound flights from China and at popular tourist sites; 2) utilize Mandarin language websites and Chinese social media apps; 3) segmentation of risk messages to target different tourist cohorts; 4) design a Mandarin language mobile phone messaging (text) warning system app.

### Mandarin brochures and signs

The design and provision of Mandarin brochures, flyers and signs were frequently suggested in the workshop as an important means of informing Chinese tourists. Tourists with limited English would most likely benefit from such interventions. For instance, as one participant noted:

*To improve the safety, in some important tourist places, providing bilingual signs would be better. If they are group tour, the guide can inform travellers.*

In addition, the introduction of bilingual signs and information about Australia may enrich Chinese tourists' experience in Australia and enhance the reputation of the Australian travel industry, which could contribute to attracting further tourists to the country.

*More and more Chinese will travel to Australia, so if the tourist sites could have the Chinese signs, which would be very helpful for improving Chinese tourists'*

*safety; and also in return, it will attract more people travel to Australia. The significant advice from me is adding the Chinese signs and reminding information for our tourists in Australia.*

Providing environmental risk information upon arrival was also considered an effective approach:

*Brochures at the airport. If we combined the incoming passenger card and the brochure together, I think it will be very effective.*

These suggestions speak to the importance of *when* to deliver brochures and other risks messages to tourists. The introduction of information upon arrival and them followed up with ‘reminders’ at key tourist sites hold potential for risk information to be remembered and contextualized, especially if such information can make sense of within the environment in which it is read i.e. information about heat-health at the start of bushwalks.

## Utilize websites and Chinese social media apps

A pervasive theme arising from the workshop pertained to websites and social media platforms as a means to inform Chinese tourists about the Australian environment. More specifically, the construction of environmental safety information hosted on *Weibo* and *WeChat* was deemed to have great potential in exposing tourists to vital risk information. Interestingly, this strategy resonates with findings from the previous section (pre and current tourists). For

example:

*WeChat to promote that information. Because all most Chinese they have WeChat, so it is a very good way to promote the safety information. A scan code in Airport, they can just scan the code when they arrive, then they will know what risk information or other information about Australia.*

*I think the quickest and easiest way is to use WeChat, if there is an organisation to post the risk information, then I can share with other friends and tourists. In this way, the effectiveness of information promotion will be very high.*

For other participants, the notion of a discrete website, functioning as a risk information hub was considered a viable option.

*Build a website to promote the information or for information dissemination, which could provide necessary knowledge about Australia. For example, what we need to pay attention to, when we can travel in the desert, in the forest, on the grassland, in the city, etc., as well as what we can prepare for those travelling. This can be the website, or app, or other similar productions to disseminate the information.*

*If you can build the website successfully, everyone will check it before they go to Australia, including all information, e.g. risk information around the river, beach, and mountain, etc. I also need to search for current information online, but normally this information is not comprehensive.*

Of course, the effectiveness of environmental risk websites and apps to educate and prepare tourists hangs on a number of requisite

assumptions being met. For example, how likely would the website or app be accessed in planning for, and during, a trip? How could the website or app be promoted to an increasingly diverse tourist cohort from China? These questions, and many more, would need to be carefully and strategically considered before an app or website, or a combination of both, were designed and deployed.

## Segmentation of risk messages to target different tourist cohorts

The number of Chinese travellers is increasing by 284.1% in recent years from 315,800 in 2006 to 1,213,100 in 2016 (Australian Bureau of Statistics, 2017a). In particular, there is an increasing number of free and independent travellers (FIT) who may require very different information than 'lower-risks' tour group travellers. Picking up on this diversification of Chinese tourists, our stakeholders suggested that information is segmented to target particular groups of travellers, rather than use a 'one size fits all' approach. For example:

*I prefer to develop an app or a booklet to inform the information including the information for group tour travellers, and for free and independent travellers, and for the special travellers.*

*I have two more suggestions. One is the precise information dissemination. It might not be a good idea to use the same information for all people. For example, some people may like free and independent travelling, and wish to find more focused and specific information to deal with potential events/risks/accidents on the trip. However,*

*for the first-time travellers or group tour, they may not need that information. So I think just one template for all, which might not solve the safety problem appropriately.*

It may also be necessary to consider demographic and cultural backgrounds of tourists before the environmental safety information was promoted as one stakeholder recognised:

*We need to provide the service in their [tourist] own acceptable approaches based on where they are from, what they understand and accept, to improve the safety awareness of travellers. For example, there are lots of Chinese using WeChat, so we can try to use WeChat to promote the information for our travellers. The safety information promotion should be disseminated with high quality, precision, efficiency. When we provide information, we need to consider our travellers' needs, rather than that we provide something and then leave them alone without considering their understandings and acceptability. It is necessary to consider the cultural difference between travellers' home countries and destination countries.*

Fashioning different messages to meet the needs of specific tourist groups of tourists, contingent on their type of travel and demographic background, are important considerations for the tourism and emergency management sectors. Communication, public health, and social marketing research (Atkin & Freimuth, 2001; Slater, 1995) widely regards audience segmentation as integral to effective and efficient communication efforts. Messages need to be responsive to the concerns and perspectives of specific groups and subgroups



if they are going to grab and hold receivers' attention and inform beliefs and behaviour that could enhance safer travel. Towards this end, formative research to define and characterise mutually exclusive audiences and their communication needs would need to be conducted. Pretesting of messages for different audience groups would also be required to evaluate facets of effective mass communication, including message salience, clarity, consistency, and trust in the communicator.

## Design a Mandarin language mobile phone messaging (text) warning system app and make available to incoming passengers

Mobile phone text messages are a key medium through which Chinese tourists could be directly targeted with environmental safety information, especially FIT. Chinese domestic tourists already receive automated phone messages when they reach another city/region, including local weather forecast and warnings. Thus, replicating such a strategy with tourists in Australia may afford manifold communication benefits, as our stakeholders articulated:

*Promotion message, for example, in China when I travelled to somewhere, I will get a text message to inform local key information. Maybe you can also do this in Australia, actively send out a message when travellers are going to new areas, telling them to check some relevant information or risk factors.*

*We prefer phone message. Like you go to other places in China. If you go to Guangzhou, then you would get a message saying welcome to Guangzhou. It sends to your mobile phone. You do not need to find the information actively. This will be great. During the spring festival travelling, it tells me the Yellow Mountain is overcrowded, please do not go there.*

Similarly, another stakeholder described how this system worked in other countries where the respective Chinese embassy disseminated texts to Chinese tourists:

*We travelled to other countries, we could receive a text message from the local China Embassy to inform us the general information about the destination countries, including the safety issues. So use mobile to remind those people who arrived in the countries would be a good way to inform free and independent travellers and international students.*

On the face of it, the strategy of sending Mandarin text messages to Chinese tourists' phones from an official source holds great potential. Text messages, if properly designed and evaluated for their effectiveness, could constitute one key mechanism by which risk messages could directly inform tourists. Of course, awareness and knowledge of environmental risk do not automatically lead to protective behaviours; however, it constitutes one important intervention, amongst a range of strategies that could lead to enhanced risk awareness and build resilience amongst Chinese tourists.

## Summary

Strategies and recommendations arising from the stakeholder workshop centred on the need to better engage with Chinese tourists through a *multi-component communication design* using brochures, websites, text messages and familiar Chinese social media apps to disseminate environmental risk information. Employing multiple channels and modes of risk communication is strongly supported by the academic communication literature, and is most likely to be effective in enhancing risk awareness and knowledge, fostering safer risk decision making (Campbell, 1998; Maibach, Roser-Renouf, & Leiserowitz, 2008). Research also suggests that interpersonal communication can further entrench messages, and motivate and maintain behaviour change (Hornik, 1989; Valente, 1996; Valente & Saba, 1998). Thus, because *WeChat* and *Weibo* are so deeply embedded in Chinese culture, and are inherently *social* in nature, we suggest that the use of these communication channels holds great promise. Indeed, such platforms can, and do, function as mediums whereby information is shared, discussed and reinforced, *in interaction*. Again, information shared and discussed in such forums may engender risk messages with salience, and facilitate their interpretability.

## Recommendations for tourism and emergency management stakeholders

At present, to the best of our knowledge, very few government or non-government communication interventions aim to *prepare*<sup>1</sup> Chinese travellers' (or, for that matter, any tourist group) for the environmental risks they may encounter while travelling in Australia. Moreover, no formative research has been conducted to build the evidence base upon which risk communication interventions should be designed. Our research has begun to explore the information needs and communication preferences of Chinese tourists; yet, a more systematic approach to preparing all tourists may need to be considered at a national level.

The following recommendations, then, should be treated as tentative; as a resource to guide thinking on how to progress tourism risk communication planning and conducting future research. Moreover, the recommendations should also be considered in light of the present research's scope as determined by nature of our modest aims and project budget.

---

<sup>1</sup> We do recognize the efforts of some organisations in 'warning' tourists about potential risk .e.g. Surf

Lifesaving and some councils.

## *Recommendations for message design and dissemination*

- Utilize bilingual signs, brochures, text messages, and popular Chinese social media platforms (*WeChat* and *Weibo*), which could improve the reach of interpretation of preparatory and warning information.
- Conventionalised and trusted social media (*WeChat* and *Weibo*) hold great potential for raising awareness and influencing tourists' behaviour, especially in younger and FIT cohorts. This medium could be harnessed to create new social norms around safe travel behaviours.
- Timing of preparatory messaging should be carefully considered. Preparatory messaging could be rendered more salient (relevant) if disseminated immediately after travel has been booked, just before departure, upon disembarkation and at key tourist sites.
- Preparatory messages, if they are to be effective, will need to be 'framed' in ways that address current normative understandings of the environment (e.g. as generally 'benign'), and assumptions about mobile phone coverage in regional and wilderness areas.
- Free and Independent Travellers (FIT) require specific information to equip them for higher risk travel.

## Policy and strategic recommendations for the emergency management and tourism sectors

- Enhance collaboration and communication between emergency management agencies and state and national tourism commissions. In particular, these stakeholders could find solutions to the dilemma of balancing their respective objectives: the promotion of Australian tourism and; raising awareness of, and resilience to, environmental risk.
- Strategic planning and research funding are required to develop the evidence base on how to raise resilience to environmental risks amongst Chinese tourists.
- With common, or at least overlapping strategic interests, Australia and Chinese tourism and emergency management sectors could benefit from closer collaboration.

## Concluding remarks

Without doubt, a profitable and stable tourism industry hinges on its *reputational status* (L'Etang & Lugo-Ocando, 2014). This status, in turn, is contingent upon the very real experiences of tourists, and how these experiences thus translate into a representation of a destination's relative safety, risk and overall 'image'. Take for example the 2002 'Bali bombings' and recent earthquakes in Lombok, Indonesia, and the devastating impact these events had, and will continue to have, on the lives of locals and these destination's reputations. Recovering from these events will require 'image rehabilitation' in an attempt to rebrand them as reliable and safe.

As tourism marketers well understand (McCabe, 2014), the establishment of the Internet and social media has meant that tourists are now *active actors* in tourism destination selection. Tourists are well versed and equipped to develop their own itineraries, skimming over shiny marketing discourses and images devised and diffused by government and non-government tourism agencies (think online travel forums on *Lonely Planet* and *TripAdvisor*). Hence, research has repeatedly shown that a destination's reputation is never set in stone but, rather, is sensitive to environmental, social and political events, and how these are reflected in the media and through interpersonal communication. Indeed, a tourism destination's reputation is, fundamentally, a socially constructed reality (L'Etang & Lugo-Ocando, 2013). Natural environments can, as our findings have shown,

be characterised it as 'clean', 'beautiful' and hence, ostensibly safe.

In many ways, the evidence presented here suggests that Australia's environmental 'image', as a generally 'safe' tourist destination, remains pervasive amongst Chinese tourists. Ironically, we have also argued that because of such beliefs - surely mediated by tourism marketing and mass media - some Chinese tourists may be exposed to risks that could be otherwise mitigated with improved risk communication. Although the tourism industry may be reluctant to endanger its hard-won portrayal of Australian as a place of pristine beaches, koalas and kangaroos, it may wish to similarly consider the reputational risk that accompanies uninformed travel behaviour in risky environments.

## References

- Atkin, C. K., & Freimuth, V. (2001). Formative evaluation research in campaign design. *Public communication campaigns*, 3, 125-145.
- Australia China Business Council. (2017). *The China Tourism Economy: Reaching Australia's Potential*. Retrieved from [http://acbc.com.au/admin/images/uploads/Copy6L.E.K.ChinaTourism2017\\_FINAL.pdf](http://acbc.com.au/admin/images/uploads/Copy6L.E.K.ChinaTourism2017_FINAL.pdf)
- Australian Bureau of Statistics. (2017a). *All Movements*. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/products/961B6B53B87C130ACA2574030010BD05>
- Australian Bureau of Statistics. (2017b). *Chinese visitor arrivals hit 1.2 million in 2016*. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/3401.0Media%20Release1Dec%202016?opendocument&tabname=Summary&prodno=3401.0&issue=Dec%202016&num=&view=>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*,

- 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Brian, K., & Sarah, G. (2015). Chinese International Students. An Avant- Garde of Independent Travellers? *International Journal of Tourism Research*, 17(2), 130-139. doi:10.1002/jtr.1971
- Campbell, R. G. (1998). *A communication-based model for testing the effects of empathic arousal on risk appraisals, attitudes, and behavioral intentions in response to HIV/AIDS prevention messages* (PhD Thesis). Purdue University, West Lafayette, Indiana, USA.
- Gergen, K. J. (1999). *An invitation to social construction*. Sage.
- Hornik, R. (1989). Channel effectiveness in development communication programs. In R. Rice and C. Atkin, *Public communication campaigns* (309-330) Newbury Park, California, Sage
- L'Etang, J., & Lugo-Ocando, J. (2014). Tourism and public relations: a complex relationship? In *The Routledge Handbook of Tourism Marketing* (pp. 88-102): Routledge.
- Maibach, E. W., Roser-Renouf, C., & Leiserowitz, A. (2008). Communication and marketing as climate change-intervention assets: A public health perspective. *American Journal of Preventive Medicine*, 35(5), 488-500.
- McCabe, S. (2014). *The Routledge handbook of tourism marketing*: Routledge.
- Slater, M. D. (1995). Choosing audience segmentation strategies and methods for health communication. In E. W. Maibrach & R. Parrott (Eds.), *Designing health messages: Approaches from communication theory and public health practice*. (pp. 186-198). Sage
- Valente, T. W. (1996). Mass-media-generated interpersonal communication as sources of information about family planning. *Journal of Health Communication*, 1(3), 247-266.
- Valente, T. W., & Saba, W. P. (1998). Mass media and interpersonal influence in a reproductive health communication campaign in Bolivia. *Communication Research*, 25(1), 96-124.
- Wagner, W., Valencia, J., & Elejabarrieta, F. (1996). Relevance, discourse and the 'hot' stable core social representations – A structural analysis of word associations. *British Journal of Social Psychology*, 35(3), 331-351.

