

**An analysis of the development of “green” hotels in a small to  
medium-sized city - Kunming, China**

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## **Attestation of Authorship**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledges), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of high learning.

Signature of Candidate: .....

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## **Abstract**

As the global emphasis on sustainable development has increased, several international green organisations have emerged, such as Green Global and the World Green Design Organisation. Environmental protection has become the focus of many countries' efforts. One of the products of “green” development is the “green hotel”, the benefits of which have been valued and explored by numerous countries, such as Germany and Canada. However, in China, research on green hotels in small and medium-sized cities is limited. This small exploratory study selected Kunming as a case to study the criteria for a green hotel, the benefits of green hotels, and the opportunities and challenges in the development process. This research summarises the requirements for a hotel to become a green hotel and provides some measures for the development of green hotels in small and medium-sized cities in China.

This research used a qualitative methodology, taking green hotels in Kunming as an example of the development of green hotels in small and medium-sized cities in China. A total of 48 green hotels in Kunming were selected as the samples to analyse. The data were analysed by content analysis, and the results show that China's green hotels have developed remarkably in recent years. However, compared with developed countries, China's green hotel movement started late and developed slowly. Kunming is a small to medium-sized city in a remote area, and the auditing standards for green hotels in Kunming are based on Chinese standards. As in other developed countries, this standard is mainly employed to guide and evaluate green hotels. Besides being environmentally friendly, green hotels have advantages over traditional hotels, mainly in terms of economic, environmental and social benefits, and the hotels' reputations. In the process of development, opportunities and challenges coexist, which means that seizing opportunities and solving problems is an essential task for the long-term development of green hotels.

The findings of this study provide recommendations for developing strategies for existing green hotels, involving government support, developing technologies, increasing advocacy, and green design. Based on China's national conditions, the results of this study provide examples for other small and medium-sized cities to help their local hotel industry develop in an ecological, environmentally friendly, and sustainable direction.

# **Chapter 1: Introduction**

This research focuses on the development of green hotels; green hotels in Kunming, China, are the case and focus of the study. This study compares the similarities and differences between green hotels in Kunming and green hotels elsewhere that are mentioned in the literature, examining the evaluation criteria, benefits, opportunities, and challenges. This chapter begins by discussing the background of green hotels, including the history and definition, and then illustrates the significance of green hotels. The research aims and questions that explain the main directions and scope are then proposed, and then the significance of this research is discussed, followed by the methodology and methods. Finally, the structure of the dissertation is outlined.

## **1.1 Background to green hotels**

In the 1980s, leaders of some European countries, such as in Germany and France, realised the importance of environmental protection for the development of hotels (Jones, Hillier, & Comfort, 2014). Green hotels first emerged in response to people's demands for environmental protection. For example, the Accor Group in France developed the AccorHotels Environmental Management Guide for its 2,400 hotels and the Inland Hotel Group is one of the first companies to try to transform hotels into green hotels (Shao, Yu, Hu, & Chen, 2012). Since then, the concept of green hotels has gradually spread around the world, having an impact on the traditional hotel operating model (Choi, Jang, & Kandampully, 2015). Green hotels adhere to clean production, maintain hotel quality, rationally use resources, advocate green consumption, and protect the ecological environment (China Tourist Hotel Association, n.d.). Green hotels aim to set sustainable strategic goals and prioritise the protection of the environment (Hui, 2013). Yadav, Balaji and Jebarajakirthy (2019) pointed out that green hotels need green management and operations, building green products and services, and providing a green environment to enhance travellers' green trust. Taking a green hotel human resource management perspective, Kim, Kim, Choi and Phetvaroon (2019), compared the different modes of management of green and traditional hotels, and proposed that green hotels are developed by green management to change employees' environmental behaviour and environmental performance. There are many definitions of green hotels in the literature, which are described in detail in Chapter 2.

Two main factors have resulted in the emergence and development of the increase in green hotels (Han, Lee, Ho Le Thu Trang, & Kim, 2018). First, from the external environment perspective, people's awareness of environmental protection has gradually improved, and sustainable development has become a vital core concept for the development of society (Juvan & Dolnicar, 2017). Therefore, the green hotel has emerged as an environmentally friendly, energy-efficient hotel type (Han, Lee, Ho Le Thu Trang, & Kim, 2018). Secondly, as green hotels meet the needs of society and consumers for environmental protection, this helps to enhance the reputation of the hotels and promote their long-term development (Verma & Chandra, 2018). Therefore, in the hotel industry, the transformation to sustainable development is believed to be a productive direction for the future development of hospitality (Verma & Chandra, 2018).

In terms of the importance of green hotels, the primary factor is that the establishment of green hotels can be a win-win situation offering both environmental and economic benefits (Shao, Yu, Hu, & Chen, 2012). Building a green hotel can help a hotel company save costs and increase profits while protecting the environment, which may be beneficial for improving the hotel's public image and social influence (Han, Hsu, & Sheu, 2010). This can result in enhancing the hotel's reputation and thus attracting more consumers (Zhang, 2010). For example, the establishment of a green hotel can help enterprises to save an average of 15% on electricity consumption and 10% on water consumption (Jiang, 2013). If more than 10,000 star-rated hotels in China had been created as green hotels in 2014, the annual water-saving capacity would be equivalent to the water volume of nearly 20 West Lakes (China's famous inland lake in Hangzhou), which can service 180 small and medium-sized cities (China Tourist Hotel Association, n.d.). The electricity saving over one year would be equivalent to the power generation of the "Three Gorges" Power Station within one month, which could provide electricity for nearly 170 small and medium-sized cities for one year (China Tourist Hotel Association, n.d.). The development of green hotels not only plays a vital role in environmental protection, energy conservation, and emission reduction, but also promotes the application of energy-saving products and technologies, and drives the development of new industries (Hui, 2013).

## **1.2 Significance of the research**

Because of China's sustainable development goals, the concept of green hotels was

introduced to China from Europe in the 1990s (Shao, Yu, Hu, & Chen, 2012). Some of China's developed coastal cities, such as Shanghai, have been pioneers, as they accepted the concept of green hotels more quickly, establishing and developing green hotels (Kang, 2012). The concept of a green hotel was gradually adopted by other regions in China, such as Kunming. Kunming located in southwest China and is a small to medium-sized city in a remote location. The primary division of China's urban types mentioned in this study is based on political status and economic strength. The four largest (and fastest-growing) cities in China are Beijing, Shanghai, Shenzhen, and Guangzhou. Among them, the total Gross Domestic Profit (GDP) of Shanghai in 2018 was 3,267.987 billion yuan, whereas the total GDP of Kunming in 2018, was only 520.69 billion yuan (China Customer Network, n.d.). After the concept of green hotels reached Kunming, some hotels, such as the Kunming Hotel, began to develop into green hotels (Shao, Yu, Hu, & Chen, 2012). The experience of small and medium-sized cities following the lead of more developed cities has led to the transformation of traditional hotels into green hotels (Cheng, 2007). This research therefore chose Kunming as a case study to explore the development of green hotels in China. In addition to economically developed cities such as Shanghai and Shenzhen, the development of green hotels in most cities in China is relatively slow (Li, Huang, Mo, & Yang, 2010). Kunming is representative of slower development, in that it can reflect the general situation of green hotel development in most cities in China (Li, Huang, Mo, & Yang, 2010).

This research highlights the theory and practice of the development of green hotels by analysing the development, market, and standards of green hotels in Kunming and the benefits of becoming a green hotel. Firstly, the study contributes to research in the green hotel field by paying particular attention to the development of green hotels in Kunming, China. Secondly, this study examines the green hotel market and identifies the benefits of becoming a green hotel, thus providing a reference for more hotel companies to help them decide whether to build and develop a green hotel. Thirdly, the study explored the ecological standards of Chinese green hotels and the criteria of existing green hotels in Kunming, overviewing the opportunities and challenges. Finally, this research explores the development measures of the existing green hotels in Kunming.

### **1.3 Research aims and questions**

The purpose of this research was to explore the development of green hotels in Kunming.

It aimed to identify which hotels currently promote themselves as green and explore the measures they developed to comply with existing 'green' accreditation. The green hotel auditing standards and the internal and external factors of green hotel development were the main directions of research. In order to achieve the research aims, the following research questions were presented:

1. What are the criteria for being a green hotel in Kunming, China?
2. What are the benefits of being a green hotel?
3. What are the opportunities and challenges encountered in the development of green hotels in Kunming, China?
4. How can green hotels meet these opportunities and challenges?

## **1.4 Research methodology and methods**

This study used a qualitative research approach to explore the development of green hotels in Kunming. A case study approach was used to collect data and conduct the research, using 48 green hotels in Kunming as the samples. A case study can be used to study social phenomena (Burawoy, 2009). Creswell (2014) explained that a case study is an in-depth study of a subject through an empirical investigation. This study used Kunming as an environmental background to investigate the development of green hotels. Kunming is a small to medium-sized city on the southwestern side of China. The reason for choosing Kunming as a case is described in detail in the methodology chapter.

The study utilised secondary data collected through a comprehensive literature review of material from the China tourism website, China Hotel Association, Kunming government reports and news, Kunming Hotel Industry Association, Kunming Tourism Association, Hotel websites, and China Green Hotel meeting announcements. According to recent statistics (2018), there are 383 hotels in Kunming (China Customer Network, n.d.). Among them, according to the Kunming Hotel Industry Association, 48 hotels were labelled as green hotels. This study also collected data related to the marketing of green hotels and promotion measures such as the criteria for being a green hotel and the benefits of becoming a green hotel in Kunming. Data on the hotels were collected through hotel and government websites, such as the Kunming Tourism Network, the Kunming Hotel Industry Association, and the China Customer Network.

## **1.5 Dissertation structure**

This dissertation consists of five chapters: the introduction, literature review, methodology, findings and discussion, and conclusion.

Chapter One introduced background information about green hotels, including the definition, appearance and development of green hotels. The primary purpose and problems of this study were described. In addition, it outlined a brief overview of the research objects and methods of the study, that is, using a case study approach to explore the development of green hotels in Kunming, China. The significance and necessity of exploring green hotels was explained, and the methodology and structure of the study was overviewed.

Chapter Two is a literature review that provides more comprehensive background information and theoretical support for this research by reviewing relevant literature on green hotels. The chapter introduces the definition and development of green hotels in detail and compares the evaluation criteria of green hotels globally with those of China, to deepen the understanding of green hotels. This is followed by a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of green hotels.

Chapter Three explains the methodology and methods used in this research, and the application of the philosophical foundation of the study: the ontology, epistemology, and paradigm. This chapter introduces the qualitative case study method used in this study taking Kunming as a case and selecting 48 local green hotels as the samples. The process and method of data collection and analysis are included.

Chapter Four combines the findings and discussion and presents the results of the research by analysing and summarising the data. It then discusses relevant information regarding the development of green hotels in Kunming, including the specific requirements of applicable green evaluation standards and the classification of green hotels. The benefits, opportunities and challenges of 48 hotels in Kunming are analysed. These are then combined with information from the green hotels worldwide mentioned in the literature, to analyse and compare the similarities and differences between them.

Chapter Five summarises the content of the dissertation by drawing a conclusion that answers the aims and questions of this research. This research has both theoretical and

practical implications that are discussed in this chapter. It also lists the limitations and provides recommendations for future research.

The next chapter is the literature review related to green hotels.

## **Chapter 2: Literature review**

### **2.1 Introduction**

This chapter reviews academic literature regarding the development of green hotels to provide more background information and theoretical support for this research. Firstly, using various studies, the concept of green hotels is explained from different angles, including the emergence, development and specific content of the green concept. This is followed by a discussion on the development and application of green hotel standards globally and in China. A SWOT analysis is employed to discuss the internal and external environment in the development of green hotels (strengths, weaknesses, opportunities and threats). A summary of the chapter follows this.

### **2.2 Definitions of green hotels**

#### **2.2.1 Green hotels worldwide**

In the 1980s, with the emergence of the "green wave," many people gradually realised the importance of getting along with nature and strengthened their awareness of the need for environmental protection and building a green civilisation (Schwartz, 1998). The green hotel is one of the results. Some hoteliers in Europe, such as the French Accor Group and the Inland Hotel Group, began to change the way that their hotels operated, developing along green lines (Holjevac, 2003). In 1991, the Prince of Wales Business Leadership Forum (PWBLF) in the United Kingdom (UK) created an organisation called the International Hotel Environmental Initiative (IHEI). This organisation is made up of eleven hotel groups in the world, such as Accor, Ford, and Hilton, and is chaired by Prince Charles of the UK (Bohdanowicz, 2005). In 1993, Prince Charles proposed an International Conference on Tourism Environmental Protection. At this conference, IHEI members discussed the matter, and finally published the book "Hotel Environmental Management." The concept of the green hotel is derived from this book (Bohdanowicz, 2005).

Graci (2010) believed that a green hotel means an environmentally friendly eco-hotel, reflected in several dimensions, such as green production, green services, green culture, green products and green promotion. In terms of safety, green hotels should pay attention

to fire safety, public security and food safety. In terms of health, green hotels should highlight green rooms, green catering and sanitary operations as well as focusing on energy conservation, consumption reduction and waste disposal that protects the environment. Choi, Jang and Kandampully (2015) analysed consumers' intentions to visit a green hotel and explained the concept of a green hotel from another perspective. Their study found that green hotels incorporate environmental protection into their operations, creating green consumer behaviour to increase consumers' green trust and meet the needs of environmentally conscious consumers.

Petrevska, Cingoski and Serafimova (2016) proposed that the core of the green hotel philosophy is to strengthen protection of the environment and the rational use of resources in the production and operation process by providing customers with green rooms and green catering that meets the requirements of safety, health and environmental protection. Similarly, based on consumer demand, Trang, Lee, and Han (2019) argued that green hotel attributes are divided into five dimensions: customer benefit, energy efficiency, water efficiency, recycling policy, and green characteristics generally. These factors that affect customers' willingness to stay in a green hotel are also necessary conditions for a hotel's long-term green development. China's understanding of the concept of green hotels originated in Europe.

### **2.2.2 Green hotels in China**

The concept of the green hotel was introduced to China from Europe in the 1990s. The concept of the green hotel is consistent with the goal of sustainable development in China. With the emergence of green hotels, this concept has been valued and explored by the Chinese hotel industry (Lu & Chen, 2002). The literature reveals different emphases on the definitions of green hotels; whereas the definitions of green hotels around the world are very similar, different scholars have different perspectives (Lin, 2008).

Lin (2008) believed that the creation of green hotels is through the construction and operation of hotels. On the basis of protecting the environment, creating green hotels can bring economic benefits and focus on the interests of consumers. A green hotel can be defined as a product that provides safety and comfort to society and benefits for human health (Shao, Yu, Hu, & Chen, 2012). Kang (2012) stated that the concept of a green hotel is mainly used to clarify the direction of the hotel in terms of environmental protection

and environmental management. Further, Shen and Chen (2018) emphasised that green hotels should be responsible for the environment, society and customers. The next section will discuss the criteria for being a green hotel.

## **2.3 Criteria for green hotels**

### **2.3.1 Criteria for green hotels around the world**

As hotels increasingly begin to implement environmental protection strategies and transform into green hotels, hotel associations and industry organisations in several developed countries have begun to organise and develop evaluation criteria for green hotels (Shieh, Hu, & Shen, 2012). The international certification for green hotels appeared in 1995 when the Canada Hotel Association developed the world's first criteria, the “Green Leaf Eco-Classification System” for green hotels (Strick & Fenich, 2013). This standard mainly examines resource conservation, pollution reduction, and environmental protection of green hotels from the perspectives of hotel facilities and management, and reviews green hotels (Strick & Fenich, 2013). This set of assessment criteria then flowed into the United States of America (USA), as a standard for many hotels in North America (Rahman, Reynolds, & Svaren, 2012).

Due to the different levels of economic development, consumption and environmental protection policies among diverse countries and regions, the criteria for being a green hotel are different (Shieh, Hu, & Shen, 2012). With the expansion of green hotels, the advancement of environmental technologies and the improvement of environmental regulations, the criteria for green hotels in different countries are constantly being revised (Hsiao, Chuang, Kuo, & Yu, 2014). Table 1 shows the emergence and foundation of green hotel standards.

Table 1 Emergence of standards in green hotels

<b>Time</b>	<b>Event</b>	<b>Achievement</b>
1995	Canada's "Green Leaf Eco-Classification System"	The first criteria for green hotels in the world.
1995	Denmark's "Green Key" certificate	Introduced to numerous countries in Europe, such as Poland
1996	Thailand's "Thailand Tourism Environmental Protection Promotion Agency"	34 hotels were awarded "Green Leaf" certificates
1998	"Green Global" environmental certification standard was announced	Many hotels registered with this, and used the logo
1998	United Nations Environment Programme (UNEP) announced the tourism "eco-label" report.	Used by governments and nongovernmental organisations
2000	"Green Global" expansion to the global alliance.	Developed into an international environmental certification system

### 2.3.2 Criteria for green hotels in China

Chinese green hotels are still in the exploration stage, as the number of green hotels is small, and the criteria and mechanisms are not yet perfect, especially in small and medium-sized cities (Chen, Chen, Zhang, & Xu, 2018). China's first green standards were drawn from existing standards in other countries, and some progress has been made with the development of China's green hotels. In 2001, the China Hotel Association issued the "Green Hotel Evaluation Standard," which was officially implemented in 2003 (SB / T10356-2002) (Feng, Hou, Qian, & Zhao, 2011). The standard defines the classification and assessment criteria for green hotels, and sets out management requirements based on the concept of "green", including eight significant aspects: green sales, water conservation, energy management, environmental protection, waste management, green

rooms, green catering, and green management (Feng, Hou, Qian, & Zhao, 2011).

On this basis, the China National Tourism Administration officially released and implemented the "Green Travel Hotel" (LB/T007-2006) in 2006 as a new industry standard. This standard has improved the evaluation system for green hotels, requiring hotels to integrate environmental management into their hotel management processes, taking environmental protection as the starting point, and providing consumers with high quality products that meet environmental requirements (China Tourist Hotel Association, n.d.). The standard evaluates the hotel's completion according to its requirements and classifies hotels into five grades from A to AAAA, which are described in detail in Chapter 4.

In China, according to Shen and Chen (2018), the "Green Hotel" standard can be broadly applied to all types of hotels and is not limited by size or star rating. Environmental protection is a common problem in all regions and is not restricted by geography or development. The standards of green hotels need to be widely recognised in order to promote social, environmental protection, and transform consumer perceptions (Shen & Chen, 2018).

The concept and criteria of a green hotel must be analysed. First of all, the concept of a "green hotel" reflects the needs and direction of hotel development based on the needs of environmental protection and coordinated economic development (Jiang, 2013). That is, green hotels are as profitable as traditional hotels, creating economic benefits, while the green concept indicates that green hotels must take into account environmental protection in the development process (Shen & Chen, 2018). The concept of a green hotel provides direction and ideas for a hotel. When the hotel targets green development, it needs to understand the concept of a green hotel and change the operating modes of all aspects of the hotel (Shen & Chen, 2018). The standards of a green hotel are designed to guide and help hotels carry out environmental work effectively. In addition to the reference standards, the construction of green hotels must be updated to meet actual conditions such as the hotel's economic condition and external environment, to develop an implementation plan for green hotel development (Jiang, 2013).

The next section discusses how a SWOT analysis can be used to analyse the marketing of green hotels.

## **2.4 SWOT analysis of green hotels**

The letters "SWOT" stand for strength, weakness, opportunity and threat, respectively. A SWOT analysis is a strategic analysis of the competitive conditions and the competitive environment inside and outside a research object (Helms & Nixon, 2010). The internal factors are the strength and weaknesses, and the external factors are the opportunities and threats (Hung, 2013). A SWOT analysis helps a research target determine the development strategy and goals, understand the market environment, and select appropriate methods for developing development strategies (Helms & Nixon, 2010). For example, a SWOT can comprehensively analyse the development of green hotels and provide adequate support for their construction, management, and long-term development.

Based on an understanding of the strengths and weaknesses of green hotels, the opportunities and threats that green hotels may encounter in the development process can be found (Chan, 2013). A SWOT analysis can help green hotels adjust their internal structure and resources, find favourable factors, solve existing problems, and achieve long-term development goals (Punitha & Rasdi, 2013)

### **2.4.1 Strengths of green hotels**

Strengths are the internal factors of green hotels, such as cost advantage, corporate image, and market share (Helms & Nixon, 2010). Green hotels are models of environmentally friendly hotels that have great significance to society, businesses, and consumers (Butler, 2008). Therefore, green hotels are attracting increasing attention from businesses and many traditional hotels are expected to transform into green hotels (Graci & Dodds, 2008).

In terms of economic efficiency, green hotels have a cost strength that is conducive to reducing operating costs (Ge, Chen, & Chen, 2018). Green hotels reduce the daily consumption of hotels while reducing waste, such as energy, water, and room supplies (Han, Lee, Ho Le Thu Trang, & Kim, 2018). At the same time, the hotels utilise green environmental protection equipment such as energy-efficient LED lighting, water-saving sanitary appliances and sewage treatment to save energy and reduce consumption and maximise resource utilisation (Hsiao & Chuang, 2016). These green initiatives have saved green hotels the costs of investment in resources and energy, reduce expenses and waste, and have a cost advantage over traditional hotels.

Becoming a green hotel helps find new market opportunities, expands market share, and enhances core competitiveness (Hui, 2013). Green hotels meet new trends in consumption that can help companies expand their markets (Ge, Chen, & Chen, 2018). Green products, green services and the green environments provided by green hotels are in line with real demands, for example, gaining market share and improving hotel operating profit, as well as potential demands, such as catering to environmental protection needs, and improving the hotel's reputation. Becoming green can also create new business opportunities for a hotel and improve the intangible assets and brand benefits (Graci, 2010).

For the reputation of a hotel, becoming green is conducive to improving its public image and popularity (Huang, Liu, & Poulston, 2016). According to a report published by the China Environmental Protection Association (CEPA) in 2018, China attaches more importance to and emphasises environmental protection. Environmental products and green development comply with the needs of society and can survive and develop in a green market. Green hotel activities have enabled customers to feel that a hotel is committed to providing quality services while also protecting the environment, which can win respect and trust from customers, enhancing its public image and popularity by forming a green brand (Huang, Liu, & Poulston, 2016).

Finally, in terms of social benefits, the development of green hotels has effectively helped consumers better understand the concept of green environmental protection and created a healthy, safe and environmentally friendly environment for consumers (Strick & Fenich, 2013). For most green hotels globally or in China, the strengths are similar (Hung, 2013).

#### **2.4.2 Weaknesses of green hotels**

There are some shortcomings in green hotels, such as a lack of critical technologies, backward research and development, and shortage of funds (Helms & Nixon, 2010). The weakness of a specific green hotel varies according to the hotel's conditions (Hung, 2013).

Firstly, green hotels have an operational cost advantage as mentioned in the previous section, which can reduce costs by saving resources. However, the initial construction cost of green hotels is high, and the process of reducing recycling costs is relatively slow (Graci, 2010). Because the price of green products is often several times or even ten times that of ordinary products, more investment is needed to update and purchase products in

the early period of building a green hotel (Jiang, 2013). In order to obtain profits quickly, some hotels use the green hotel identity as a gimmick to lower service standards, while using polluting products, lowering the credibility of green hotels generally (Zhang, 2010). According to Chan (2013), there are still many traditional hotel companies around the world that do not build green hotels. They believe that the environmental pollution problem will be dealt with by the state and society. In addition, numerous green hotels lack advanced green technology, and innovation capabilities are weak (Zhu, 2009). This weakness is not apparent in developed countries, as many of them attach importance to technology investment in green hotels. However, innovation in green hotels is still insufficient compared to that of traditional hotels (Chan, 2013).

In contrast, China draws on the green technology and management model of developed countries, but has made weak investment in new green technology research and development, and lacks planning and guidance for green technology innovation, which has led to a lack of technological innovation capabilities in green hotels (Kang, 2012). As a result, the weaknesses are difficult to change in a short period, which may hinder the process of converting hotels into green hotels (Chen, Chen, Zhang, & Xu, 2018). Jiang (2013) also mentioned that several green hotels in China utilise proximity to nature as a means of propaganda, and the use of low-cost green products does not guarantee the health status of the hotel. As of 2019, these problems still existed in the green hotel market in China, which restricts their development (Li, 2019).

### **2.4.3 Opportunities for green hotels**

Opportunities in green hotels are external factors. That is, they describe the impact of the external environment on green hotels, such as market trends, external demands, and market barriers (Helms & Nixon, 2010). With the deterioration of the global ecological environment and people's increasing emphasis on environmental protection, the sustainable development strategy of green production and green consumption with the theme of environment and resource protection has received global attention (Bela, Jasmina, Dušan, & Rade, 2013). This has brought various opportunities, such as market space and consumption trends, which are opportunities for the development of green hotels. The question of how to seize opportunities has an impact on the operation and long-term development of green hotels (Jones, Hillier, & Comfort, 2014).

Due to the growing demand for greenness, the development of green hotels has become a requirement of social development and an essential part of sustainable development (Liu, 2015). With the frequent occurrence of natural disasters, the importance of environmental protection has attracted increasing attention. The need to "save our planet" advocated by green hotels has been recognised by many people (Shen & Zheng, 2010). Internationally, several organisations focusing on green dimensions have been established, such as the international "Green Hotel Association" and "Green Global." This has provided opportunities for the development of green hotels, and many forward-thinking hoteliers have actively participated in these international organisations (Jones, Hillier, & Comfort, 2014).

Hotels are a vital part of the tourism industry, and the sustainable development of tourism has promoted the development of green hotels (Liu, 2015). For the global tourism industry, a hotel is a place for tourists to rest during their trips, as a temporary home concerned with their health and safety (Liu, 2015). People are increasingly demanding both material and spiritual aspects to life, and green hotels are part of their requirements for the development of society (Shen & Chen, 2018).

Furthermore, in the international market, numerous countries have taken active measures for environmental protection, formulated corresponding environmental protection standards, and strictly restricted import and export trade (Verma & Chandra, 2018). Improving the competitiveness of green hotels may enable hotels to expand their visibility and develop into internationally renowned brands to achieve the strategic goal of transnational operations, which is a development opportunity for green hotels (Zhu, 2009).

Consistent with the development opportunities of international green hotels, China also has corresponding green organisations such as "Greenpeace" (Liu, 2015). This organisation established and conducted environmental monitoring work in China in 1997 in order to develop China into an environmentally sound country (Liu, 2015). In addition, as a significant tourist destination, China actively promotes eco-tourism and green travel as an essential part of its sustainable development (Kang, 2012).

#### **2.4.4 Threats to green hotels**

Threats are external factors that reduce opportunities and are challenges that green hotels

may receive from the external economic environment during the development process, such as policy changes, or customer preferences (Helms & Nixon, 2010). In addition to opportunities, there are numerous problems with the development of green hotels. The threats facing green hotels vary according to the situation and regions. Overcoming problems and threats is one of the priorities for the long-term development of green hotels (Jones, Hillier, & Comfort, 2014).

Several countries, such as Canada, the USA, and France, have implemented green labelling systems. In the context of globalisation, the green symbol has become an advantage for green hotels to open up the international market (Punitha & Rasdi, 2013). However, compared to traditional hotels, the popularity of green hotels is still low. As mentioned, the Chinese Government supports and encourages the development of green hotels, but there is still a lack of publicity (Jiang, 2013). Many well-known international hotel companies, such as InterContinental Hotels, are committed to the development of eco-friendly hotels. However, most consumers appear to be attracted by the reputation for luxury of these hotels, as the hotels have little publicity related to their environmentally friendly products (Chan, 2013).

Due to the later development of green hotels in China, several factors such as the Government's low degree of attention, have led to fewer green hotels in China's hotel industry than in developed countries (Kang, 2012). Although green development has been focused on by many industries, the green concept has not spread to all hotels (Kang, 2012). Even if green development were to become a major goal, China still has a large number of cities and complex national conditions. China's external environment is still at the stage of "polluting and then re-treating," and the general development of green hotels is a long-term process (Zhang, 2010). China's tourism market is significant. However, environmental awareness started late, and the policy measures for green management are not perfect; for example, green hotel certification and grading standards should refer to existing standards in other countries, and summarise China's standards (Kang, 2012).

Chinese consumers have a wait-and-see attitude toward green hotels (Chen & Fu, 2015). That is to say, they compare green hotels with traditional hotels, observe the facilities in green hotels, evaluate whether the green hotel can meet their demand, and whether it is better than the traditional hotel, and then decide whether to support the development of green hotels (Chen & Fu, 2015). Paying more attention to the concept of convenience

than that of environmental protection restricts the development of green hotels (Huang, Liu, & Poulston, 2016).

### 2.4.5 Summary

Table 2 SWOT analysis of green hotels

<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• In the later operations, green hotels gain operational cost advantages by saving resources and reducing waste</li> <li>• Green hotels help find new market opportunities, expand market share and enhance core competitiveness</li> <li>• Building a green hotel helps to improve its public image and popularity of the hotel</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>• The initial cost of building a green hotel is high, so it is necessary to invest more funds.</li> <li>• A lack of advanced green technology, and low innovation capability</li> </ul>
<p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Global demand for green environmental protection</li> <li>• Sustainable development of tourism</li> <li>• Being green helps hotels increase their visibility and open up the international market</li> </ul>	<p><b>Threats:</b></p> <ul style="list-style-type: none"> <li>• The popularity of green hotels is still low</li> <li>• Green hotels lack Chinese government publicity.</li> <li>• Environmental factors are still not the primary consideration for consumers</li> </ul>

## 2.5 Chapter summary

According to the literature review, a green hotel is an eco-friendly hotel that meets the requirements of health and environmental protection in all aspects of the hotel, such as service, products and production. The definition of a green hotel is used to clarify the direction of the hotel in terms of environmental protection and green management, while the standard for green hotels is to guide the hotel's green building and evaluate the hotel's green rating. Various countries have established appropriate standards based on their domestic green hotels' development. All regions in China have adopted a unified national standard (LB/T007-2006) to evaluate green hotels. A SWOT analysis was used to discuss

the internal conditions and external environments of green hotels as found in the literature. Internal conditions include strengths, such as cost advantages and hotel reputations, as well as weaknesses such as, in the early stages, investment costs in the design of the hotel, renovation costs of the facilities, and the purchase prices of the products, which are all relatively high. The external environment includes opportunities such as environmental trends and threats, such as consumers not paying enough attention to environmental protection.

Most of the studies discussed in the literature review were based on a national perspective and focused on the development of green hotels in a global environment. This research takes a specific city - Kunming - as a case, and analyses data from its green hotels to obtain detailed information on the development of green hotels. The next chapter will discuss the methodology and methods utilised in this research.

## **Chapter 3: Methodology**

### **3.1 Introduction**

This chapter introduces the methodology and method used in this study, starting with a brief overview of the aims and the research questions. This is followed by an explanation of its philosophical foundation, which is a relativistic ontology, subjectivist epistemology and interpretivist paradigm. The qualitative method used in this study is explained. Then this chapter outlines the case study method that utilised 48 green hotels in Kunming as the samples and the use of content analysis in analysing the data. The source of data, the process of collection and data analysis are introduced, then a summary of the chapter provided.

### **3.2 Research objectives and questions**

Research is a knowledge-generating activity that explores past unknowns to study the world and discover new knowledge (Scotland, 2012). The purpose of this research was to explore the development of green hotels in Kunming. It identifies which hotels currently promote themselves as green and explores the measures they were developing to comply with existing green accreditation. The standards for and benefits of green hotels were the main focus of the research. In order to achieve the research aims, the research questions are:

1. What are the criteria for being a green hotel in Kunming, China?
2. What are the benefits of being a green hotel?
3. What are the opportunities and challenges encountered in the development of green hotels in Kunming, China?
4. How can green hotels meet these opportunities and challenges?

### **3.3 Research philosophy**

This study selected a relativist ontology as the ontology, subjectivism as the epistemology and interpretivism as the paradigm, for studying the development of green hotels. In philosophy, ontology, and epistemology are the main factors that make up the research paradigm (Gray, 2018). "Ontology" is defined as "what is", which refers to the nature of

things in reality. “Epistemology” is defined as “knowing” and refers to people's understanding and research of things (Byrne, 2016). In academic research, the ontology provides the object of research, and epistemology provides the direction and method of research. That is, researchers can use different research methods to explore objectively existing things based on subjective knowledge (Gray, 2014). In this research, the ontology refers to the object of research, that is, green hotels, and the epistemology is the exploration of the development of green hotels.

### **3.3.1 Paradigm**

The paradigm is a thought framework that guides researchers to create the world using different methods (Fossey, Harvey, McDermott, & Davidson, 2002). Positivism, post-positivism, interpretivism and critical theory are four types of paradigm. Among them, interpretivism and critical theory are associated with relativism and subjectivism. Relativism and subjectivism pay more attention to interpreting research results than focusing on objective facts (Gray, 2018).

This research used interpretivism as its paradigm. Interpretative paradigms and qualitative methods can be understood as consistent with one another because interpretivists mainly use interpretation and analysis to understand different social phenomena (Scotland, 2012). Researchers explore and recognise the meaning of social phenomena through interpretivism, paying more attention to the results of research rather than to objective facts (Wahyuni, 2012).

In this research, the research focus is green hotels, and its purpose is to understand the standards of green hotels in Kunming, their advantages, and the opportunities and challenges they have encountered. The problems related to the development of green hotels are complex as a result of the diverse situations of different hotels (Hsiao & Chuang, 2016). Therefore, this research focuses on interpreting the results and understanding the phenomenon of green hotel development using Kunming as a case study.

### **3.3.2 Ontology and epistemology**

Barnett (2017) stated that ontologies can be divided into two categories; a realist ontology means that objective things and human understandings exist independently. In contrast, a relativist ontology states that the existence of things is not independent of a researcher's

perception, and researchers can have different ways of thinking (Barnett, 2017). Three parts are included in epistemology: constructivism, subjectivism, and objectivism. Constructivism is the belief that knowledge does not exist independently, but is created by people and gives meaning. Subjectivism is the belief that knowledge is imposed on objective existence and objectivism is the belief that knowledge exists independently (Byrne, 2016). This study discusses the development of green hotels through the research of green hotels by researchers. Therefore, the relativistic ontology and subjectivism apply to this study, which is associated with interpretivism.

### **3. 4 Qualitative method**

Qualitative and quantitative methods are two common methods in social research (Paleček & Risjord, 2013). The qualitative method is a process of presenting and researching problems and then collecting and analysing data to guide the potential development of theories (Myers, 2013). Qualitative methods mainly utilise the induction method, that is, researchers discover new phenomena by summarising the collected data (Yanow & Schwartz-Shea, 2012). In contrast, quantitative methods usually analyse statistical data and utilise the deductive method, which is a process of proposing hypotheses and testing the rationality of those hypotheses (Myers, 2013).

This research studied the criteria for a green hotel, explored the benefits of becoming green hotels, and analysed the opportunities and challenges faced by green hotels in the development process. Therefore, a qualitative method was considered suitable, as it collects narrative data and reveals research results. The utilisation of the qualitative method in this study brought several advantages. For example, the collection of information and data can be flexible, as researchers may be subjective in understanding the development of green hotels and choose data that are useful for research (Vartanian, 2010). As a result, qualitative research is conducive to exploring specific issues based on the diverse backgrounds of green hotels. This study did not make prior assumptions or predictions and did not collect statistical data, which meant that a quantitative method was neither used nor suitable for this research (see Gray, 2018).

### **3. 5 Choice of methodology - case study**

The selection of a particular research methodology guides the research design. According

to Adams (2015), the methodology provides an experimental and theoretical basis for scientific inquiry through systematic analysis. That is to say, the methodology leads researchers to understand and transform the world through systematic methods by observing the research problems and studying them (Hammersley, 2011).

### **3.5.1 Case study approach**

Yin (2014) defined a case study as an empirical survey method that investigates contemporary phenomena in real life based on various data sources. The case study is based on the fact that the boundaries of the phenomenon and background of the survey are not obvious; that is, the researchers expect to understand complex phenomena in the natural context (Yin, 2014). Case studies are also a study of specific samples of complexity and specificity used to gain an understanding of a particular phenomenon in a particular situation (Creswell, 2014).

The case study method is consistent with the qualitative research method used in this research, and the case selection is representative, unlike that of a quantitative study (Baxter & Jack, 2008). In case studies, researchers cannot use a single perspective or data to explore the case, but utilise a variety of data to investigate through disparate perspectives (Baxter & Jack, 2008). Sources of data such as direct observations, archives, documents, interviews, and surveys, can help researchers further understand the case, to increase the credibility of the findings. This research selected Kunming as a case study, to explore the development of green hotels, and the main data are from website information related to Kunming green hotels such as that of the Kunming Hotel Industry Association. These are described in detail in the data collection section.

There are several reasons this research chose a case study approach to examine green hotels in Kunming. Firstly, case studies are mainly used to describe, explore or illustrate a social phenomenon (Stake, 1995). Green hotels are increasingly recognised by consumers for their environmental protection and sustainable development characteristics (Hsiao & Chuang, 2016). This study, through the exploration of green hotels in Kunming, can help understand and explain the factors and benefits of becoming a green hotel, and provide a reference point for traditional hotels that are planning to transform into green hotels, which is consistent with the characteristics of the case study. Furthermore, another feature of the case study is complexity, in that researchers cannot determine the

circumstances of the event (Yin, 2014). That is, the development of green hotels is not controlled by researchers, and the choice of a case study as a methodology allows researchers to understand a complex phenomenon based on individual subjectivity. In addition, according to Stake's (1995) case study, researchers can also assume the role of evaluators to assess whether the advantages of green hotels or measures to solve problems are effective.

### **3.5.2 The case – Kunming**

This study selected Kunming, the hometown of the researcher, as a case study, to facilitate a more comprehensive understanding of the current situation. Kunming is the capital city of Yunnan Province, located in the southwestern part of China and one of the central cities in western China. By 2018, the built-up area of Kunming City was 435.81 square kilometres, and the urbanisation rate of the urban areas was 72.85%. Known for its climate and scenery, Kunming is one of China's well-known tourist destinations (Kunming Municipality, n.d.).

As noted in Chapter 2, in the Chinese green hotel market, green hotels are still in the exploration stage, as the number of green hotels is small, and the criteria and mechanisms are not yet perfected, especially in small and medium-sized cities such as Kunming (Chen, Chen, Zhang, & Xu, 2018). There are good reasons for choosing Kunming as a case.

Firstly, there are more significant differences to be analysed in small cities, because green hotels developed earlier in China's large cities, such as in Shanghai (Wang, Wang, Xue, Wang, & Li, 2018). Secondly, small and medium-sized cities such as Kunming, are the mainstay of Chinese urban types, and demonstrate the criteria of green hotels more representatively (Li, Huang, Mo, & Yang, 2010). In the development of green hotels, small and medium-sized cities need more theoretical and practical experience to face and solve problems (Shao, Yu, Hu, & Chen, 2012). Therefore, the choice of Kunming as a case study is representative. Thirdly, Kunming is a well-known tourist city with a large number of hotels. Several hotel companies in Kunming have explored and developed green hotels, consistent with the goals of sustainable development and ecological construction in Kunming (Kunming Municipality, n.d.).

## **3.6 Method**

### **3.6.1 Data collection**

The data collected in this research were secondary data. Unlike primary data collection, such as that using questionnaires and interviews, secondary data are obtained directly from the study subjects (Gray, 2018). Secondary data comes from the information after the original data was studied by researchers, that is, multiple processing and reference on the original information (Gray, 2018). Compared to collecting primary data, collecting secondary data offers several advantages. For example, due to the absence of surveys and interviews required for primary data collection, secondary data acquisition is easier and faster, and the costs of collection are relatively low. Secondary data sources such as websites, online materials, publications, and archives, are increasingly used by researchers for data (Connelly, 2017).

The main data collection time for the Kunming green hotels was from December 2018 to February 2019, during which time the researcher was in Kunming. The time period for adding supplementary data was from February 2019 to June 2019. The data for this research mainly came from websites and online materials, utilising Baidu and Google as search engines to obtain information. The most significant data were obtained from Kunming hotel industry related websites such as that of the Kunming Hotel Industry Association, Kunming Municipal Government official website, and the official website of each green hotel. The Chinese literature came from China's well-known paid academic databases such as China National Knowledge Infrastructure (CNKI), China Dissertation Database (CDDDB) and Baidu Xueshu. The English literature came from the Auckland University of Technology (AUT) library and Google Scholar. The data collected by the research were derived from publicly available secondary data, and therefore, the research did not require ethical approval.

### **3.6.2 Sample selection**

This study used purposeful sampling; that is, the samples were selected based on pre-set characteristics, a popular content analysis method (see Gray, 2009). Among the data collected by this research related to green hotels, green hotels from Kunming were selected as samples. There are 383 hotels in Kunming, of which 48 are certified as green

hotels. This study collected information on these 48 green hotels through the hotels' official websites. Firstly, some websites related to the Kunming hotel industry were found through Baidu search engines, for example, that of the Kunming Hotel Industry Association. According to the public announcements and documents on this website, relevant information could be obtained on the development of Kunming green hotels, along with the evaluation criteria and opportunities and challenges. Relevant information on promoting ecotourism and hotel construction in Kunming was collected from the Kunming Government reports and news and the Kunming Tourism Association. Additionally, from the information published by the Kunming Municipal Government, the researcher collected the measures used to promote green hotel construction.

However, in the process of collecting data, the researcher encountered restrictions in that some website information was not detailed, and some data were missing. For example, several green hotels in Kunming had little information, so it was difficult to ascertain their specific green behaviours. Since the data were derived from extracted website information, they contained obvious limitations. For example, online information is complex and the authenticity of data is difficult to distinguish. Publicly published information is time-sensitive and misleading and may have a negative impact on research results (Connelly, 2017).

### **3.6.3 Content analysis**

This study used qualitative content analysis as an analytical method. Content analysis is used to analyse the meaning of textual data by explaining it and is often employed to interpret written text information (Schreier, 2012). Holsti (1969) defined content analysis as a systematic and objective identification of the specific characteristics of data, utilising any technique to analyse it. In addition, Weber (1990) indicated that content analysis is the effective inference of text using a set of programmes.

Qualitative content analysis requires that the collected data be divided into categories that represent specific meanings. Researchers use content analysis not only to explore large amounts of data and textual information but also to discover the underlying patterns and structures within the information, and study its potential meaning (Schreier, 2012). A common method of content analysis is to use a system of thematic coding to analyse keywords or word frequency counts in textual content (Grbich, 2007). This study used

content analysis to identify and interpret the textual information on the Kunming green hotels collected on the websites mentioned in the previous section.

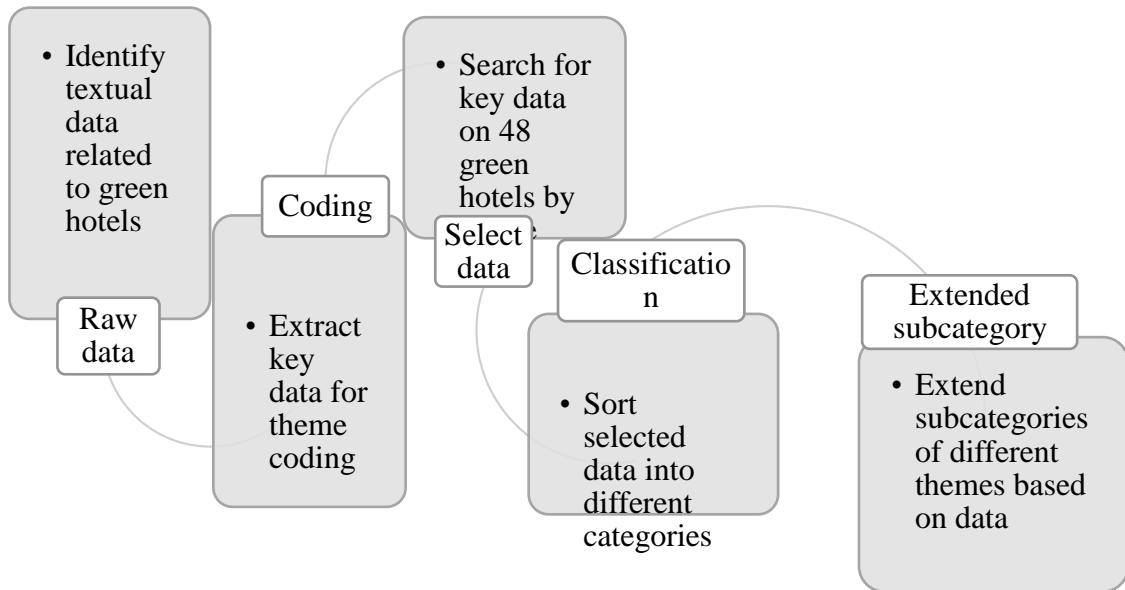
#### **3.6.4 Data analysis**

In this study, the keywords on the websites about Kunming's green hotels were coded into categories to identify and explain the development of green hotels in Kunming. The categories were based on the keywords in the literature review to establish the framework: the criteria, benefits, opportunities, and challenges of green hotels. Content analysis is a flexible research method (Krippendorff, 2013). During the research process, content analysis can be used to flexibly extract information keywords and classify them into different categories after collecting text information related to the topic. Each theme related to green hotels had a detailed explanation. After determining the keywords for the topic, subcategories in the topic categories were identified. For example, after determining the evaluation criteria of green hotels as keywords, each detailed requirement in the criteria was analysed and the subcategories was summarised to compare and discuss the development of green hotels in China and globally.

#### **3.6.5 Analysis process**

Schreier (2012) stated that to accurately identify the research content and confirm the validity of the research, a well-designed coding framework is required. He also pointed out that a content analysis should be carried out in the coding framework and the research environment because there is no clear standard to evaluate the validity of the research content. The coding framework of this study is based on the evaluation of the development of green hotels. The specific analysis process is as follows:

Table 3 Analysis process



As shown in Table 3, firstly, after carefully reviewing the collected textual information, the keywords were coded into categories based on the content (Schreier, 2012). In this study, the researcher used 48 green hotels in Kunming as the base, and the keywords in the information on green hotel websites were coded into relevant categories: the standards, benefits, opportunities, and challenges of green hotels. This was consistent with the focus of the literature review.

Secondly, in the website information browsing, the text information consistent with the coding framework was selected as the critical data, and the text materials in the 48 hotel websites were divided into different categories as a case to explain the content of each theme.

Finally, the coding framework was extended by extracting information from the 48 green hotels' official websites to identify the critical text information of each theme, then referring to relevant websites such as that of the Kunming Hotel Industry Association, and summarising the most crucial and frequently mentioned information to expand the subcategories under each theme. This study combined the specific green measures and achievements of the 48 hotels in subcategories to improve the analysis of green hotel development in this study.

The data collection and the results of the analysis were described in detail. Data were presented using tables to show the themes and classifications. In Chapter 4, examples of corroboration were used to illustrate specific measures for typical green hotels in different categories.

### **3.7 Chapter summary**

This chapter described the methodology and methods used in this research. This research aimed to explore the development of green hotels in Kunming, which involved the standards, opportunities and challenges of becoming a green hotel. The ontology of this research was relativistic and the epistemology was subjectivism. The paradigm was interpretivism, and a qualitative method was selected to explore the development of 48 green hotels in Kunming as a case study. Data on green hotels were collected from websites using Baidu and Google search engines. The research used these secondary data and categorised them into four themes using a content analysis: standards for green hotels, benefits, opportunities, and challenges. The next chapter outlines the results of the data analysis. Website data and online materials were the primary sources of data used in this study, with some limitations, which are discussed in the final chapter.

## **Chapter 4: Findings and discussion**

### **4.1 Introduction**

The purpose of this chapter is to present and discuss the findings on the benefits, opportunities, and challenges of developing green hotels in small and medium-sized cities such as Kunming. The sample of 48 green hotels in Kunming is discussed in the first part, then the chapter categorises the data into four themes: criteria of green hotels, benefits, development opportunities and challenges encountered. This chapter compares the findings with the literature, to examine the similarities and differences between green hotels around the world, in China, and in Kunming.

### **4.2 Case study of green hotels in Kunming**

As highlighted in Chapter 3, this research selected Kunming as a case study to understand the development of green hotels in small and medium-sized cities in China. In 2006, Kunming launched a "green hotel" creation project as a model city for environmental protection in China. Departments at all levels in Kunming regard energy conservation and emission reduction as essential measures to transform development, in order to promote the hotel industry's "Creating Green" plan in combination with the implementation of hotel industry standards (Kunming Municipality, n.d.). According to statistics from the Kunming Industry Hotel Association, 85% of star-rated hotels in Kunming use green lighting, and 82% use water-saving appliances. In 2009, 33 hotels in Kunming applied to the Kunming Hotel Industry Association for green certification, to eventually be called green hotels. As of 2018, 48 hotels in Kunming were awarded the title of "Green Hotel" (Kunming Hotel Industry Association, n.d.). Of these, 24 hotels conformed to the national certification criteria and were certified as 'National-Level Green Hotels.' The other half conformed only to the green certification criteria of Kunming and were certified as 'Kunming-Level Green Hotels.'

A National-Level Green hotel is a hotel that has passed the national standard certification of Chinese hotels. The China Hotel Association holds a meeting every year to consider the evidence of green hotels that have applied for national certification and review their applications against the green hotel evaluation criteria and conduct field investigations before publicly certifying hotels that meet the green standards at the annual meeting. In

contrast, the Kunming-Level green hotels are visited and evaluated by the "Green Hotel" assessment and acceptance team comprising the Kunming Environmental Protection Bureau, the Municipal Bureau of Commerce, the Municipal Bureau of Quality Supervision, the Municipal Bureau of Health and the Municipal Hotel Association.

Since Kunming uses and continues to use China's green hotel evaluation criteria, these hotels were evaluated as 'green' according to uniform standards, with the difference being that the organisations involved in the assessment were different. Green hotels in Kunming can only submit applications to participate in the evaluation of National-Level Green hotels after they have obtained the Kunming-Level certification. According to individual hotel applications, the Kunming Hotel Industry Association selects green hotels each year that are more complex, more well-known and have already passed the Kunming-level certification, to be representatives participating in the national selection process at the annual meeting of the China Hotel Association. Compared to the Kunming-Level green hotel process, the certification of the national-level green hotels is slower and more complicated, but also more authoritative and better regarded. The 48 hotels are presented in Table 4.

Table 4 Certified 48 Green hotels in Kunming

<b>Kunming-Level Green Hotels (24)</b>	<b>National-Level Green Hotels (24)</b>
Haitian Hotel	Soluxe Hotel
New Nanjiang Hotel	Kunming Crowne Plaza
Kunming New Era Hotel	Holiday Inn Kunming City Centre
Jiahe Hotel	Sofitel Kunming
Royal Garden Hotel	Lotus Hotel
Spring Soul Garden Spa & Resort	Howard Johnson City of Flower Hotel Kunming
Yunchu Hotel	Green Lake Hotel
Mansion Hotel	Intercontinental Kunming
Shengshi Qianhe Hotel Kunming	Hualuxe Kunming
Tianhe Hotel	Yijing Garden Resort & Spa Hotel
Sanye Hotel	Kai Wah Plaza Hotel
Yunan Hotel	Kunming Hotel
Chennong Hotel	Longteng Hotel
Yangguang Garden Hotel	Empark Grand Hotel
Dynasty International Hotel	Green Land Hotel
Zhong Huang Hotel	Linhu Wetland Holiday Hotel
Liyuan Hotel	Zhongyu Hotel
Tai Long Hong Rui Hotel	Golden Spring Hotel
Telecom International Hotel	King World Hotel
Uchoice Hotel Kunming	Green Lake View Hotel
Jinmao Hotel	Yunnan Weilong Hotel
Innhouse	Expo Garden Hotel
Dianchi Garden Hotel & Spa	Wenhui Hotel
Guan Du Hotel	Wyndham Grand Plaza Royale Colorful Yunnan Kunming

### **4.3 Criteria for green hotels**

Hsiao et al. (2014) noted that as the number of hotel groups implementing environmental strategies increases, countries, especially developed countries, improve the standards of green hotels. The green standards employed vary according to the political conditions and economic performance of different countries. The China Hotel Association implemented the first green hotel national industry standard (SB/T10356-2002) in the Chinese hotel industry in 2003 (China Tourist Hotel Association, n.d.). The development of its criteria drew on the more advanced experiences of countries such as Canada and combined the operating conditions and consumption levels of green hotels in China to guide the creation, implementation and management of green hotels (Chen & Fu, 2015). After extensive revision and improvement of the standards, the China National Tourism Administration officially released and implemented the new industry standard "Green Travel Hotel" (LB / T007-2006) in 2006. This standard complements the Green Hotel's assessment system for all cities in China (China Tourist Hotel Association, n.d.).

#### **4.3.1 Criteria of green hotels in Kunming**

The standard of Kunming Green Hotels divides green hotels into five grades, from A to AAAAAA, with a total potential score of 300 points. Different levels correspond to different scores: level 5A represents the highest level of green hotels, while A means the lowest level. Green hotels in all cities in China use a unified scoring system (China Tourist Hotel Association, n.d.). The scoring system is presented in Table 5.

Table 5 5A to A levels of green hotels in Kunming

<b>Level</b>	<b>Meaning</b>	<b>Hotel</b>
AAAAA (251-280)	The highest level of green hotels. The hotel's eco-efficiency and green measures are at the optimal level of green hotels.	Golden Spring Hotel, Innhouse, Dianchi Garden Hotel & Spa, Soluxe Hotel, Kunming Crowne Plaza, Holiday Inn Kunming City Centre, Sofitel Kunming, Green Lake Hotel, Intercontinental Kunming, Hualuxe Kunming, Kunming Hotel, Empark Grand Hotel, Expo Garden Hotel (13)
AAAA (221-250)	The hotel's green services and facilities are highly recognised by Kunming, constantly innovating and leading the country's hospitality industry.	Haitian Hotel, Kunming New Era Hotel, Spring Soul Garden Spa & Resort, Dynasty International Hotel, Zhong Huang Hotel, Tai Long Hong Rui Hotel, Telecom International Hotel, Jinmao Hotel, Lotus Hotel, Howard Johnson City of Flower Hotel Kunming, Yijing Garden Resort & Spa Hotel, Kai Wah Plaza Hotel, Longteng Hotel, Green Land Hotel, Mansion Hotel, Yunnan Weilong Hotel, Wyndham Grand Plaza Royale Colorful Yunnan Kunming (17)
AAA (201-220)	Through continuous practice and hard work, the hotel has made significant progress with ecological benefits and is in a leading position in the hotel industry in the region.	New Nanjiang Hotel, Jiahe Hotel, Royal Garden Hotel, Yunchu Hotel, Tianhe Hotel, Yunan Hotel, Yangguang Garden Hotel, Liyuan Hotel, Uchoice Hotel Kunming, Linhu Wetland Holiday Hotel, Shengshi Qianhe Hotel Kunming, Zhongyu Hotel, King World Hotel, Green Lake View Hotel, Wenhui Hotel (15)
AA (181-200)	The hotel has achieved some initial results in providing green services and environmental protection to consumers.	Sanye Hotel, Chennong Hotel, Guan Du Hotel (3)
A (0-180)	The hotel complies with national environmental laws and regulations and has started to implement some measures to improve the environment.	

As can be seen from information in Table 5, in Kunming, there are no green hotels rated as level A and only three rated as level 2A. Almost 31.2% of the hotels are in the 3A category, 35.4% are in the 4A category, and 27.1% are in the 5A category. Most of the green hotels in Kunming are rated level 3A and level 4A, accounting for 67% of the total. Among them, most of the green hotels rated 5A are international brands and well-known Chinese brands, and only a few Kunming local garden hotels have been selected as 5A.

#### **4.3.2 Detailed criteria for green hotels in Kunming**

In Kunming, the Green Hotel scoring system (see Table 5) calculates scores primarily through a six-part evaluation, each of which contains specific audit items and requirements and scores, as shown in Table 6 (300 points in total). The “Green Hotel” assessment and acceptance team in Kunming evaluates hotels according to the specific requirements in Table 6, and scores them (Kunming Municipality, n.d.).

Table 6 Detailed requirements for the criteria of green hotels in Kunming:

	<b>Project</b>	<b>Score (300)</b>	<b>Requirements</b>
Green design (40)	Environmental design	6	Located away from polluted areas to protect the local natural landscape and ecological environment
	Architectural design	18	Uses environmentally friendly materials and utilises renewable resources and materials
	Process design	16	Uses new energy
Energy management (60)	Energy metering	7	Has installed metering with regular monitoring
	Plan control	16	Has quota management and energy saving tests
	Equipment and energy saving	32	Uses energy saving sign equipment
	Renewable energy use	5	Uses renewable energy such as solar or wind energy
Health management (102)	Indoor ventilation	3	Is well ventilated and features an efficient mechanical ventilation system
	Fresh air system	6	Ventilation system complies with public site ventilation regulations
	Green room	39	All equipment and facilities in the rooms meet safety requirements and are clean and tidy. Room design is healthy and environmentally friendly, and no disposable consumables are provided
	Green dining	54	Has complete kitchen facilities, green production, healthy green food and green service, no disposable tableware, etc.

Safety management (17)	Safety management	17	Is equipped with a sound safety system, fire protection measures, emergency plans, clear safety instructions and emergency evacuation procedures
Environment protection (50)	Environmental protection	50	Treats harmful pollutants such as sewage, noise, waste, and garbage, as well as water used for washing and cleaning.
Green propaganda (31)	Green propaganda	31	Actively promotes and participates in hotel-related environmental activities in the "Creating Green" work, guides and encourages consumers to green consumption, and establishes an effective green management system.

Table 6 listed in detail, the specific scoring projects of the Kunming Green Hotel Evaluation Standard. Among them, health management has the highest score, accounting for 34% of the total score. Each aspect included in health management has technical details specified, such as the equipment in the room (e.g. smoke alarms, automatic sprinklers, safety door locks, gas masks, soundproofing, humidity controllers, green plants, and disinfection equipment). In addition, energy management and environmental protection accounted for a high score of 20% and 16.7%, respectively. The higher the score, the higher the evaluation requirements are, which means that the hotel needs to address improvements and upgrading. The inspection team in Kunming evaluates the rates of the hotel's level based on the scores to assess whether the hotel can be certified as a green hotel (Kunming Hotel Industry Association, n.d.).

The 48 green hotels in this study scored high scores in the assessment and were certified as green hotels. This means that these hotels achieved the goal of "Creating Green" plan in all aspects of the hotel following the requirements listed in Table 6 (see Kunming Hotel Industry Association, n.d.). The 3A-level three hotels still needed to improve their scores and improve their green levels through further improvement. For example, Sanye Hotel still provided customers with single-use consumables, such as disposable hygiene products and disposable tableware, that did not meet health management requirements. In contrast, 5A-level hotels reached high standards in all aspects. For example, in terms of green design, Innhouse was designed using bamboo as a design element. This hotel is

the first multi-story bamboo building in the world, with natural ventilation and natural light that makes the hotel's external environment appear close to nature and provide environmental protection. In protecting the environment, the noise emission of the Kunming Hotel complies with international hotel standards, and is 80% below the emission standard limit. The hotel is equipped with a dry waste room and a closed wet waste room. The temperature of the wet waste room is controlled to below 12° centigrade.

### 4.3.3 Different criteria for green hotels around the world

Table 7 Different standards around the world

AREA	TIME	STANDARDS
Worldwide	1995 – 2019	Green Leaf Eco-Rating Program (Canada Hotel Association) Green Key (Denmark Hotel Association) Green Globe Tourism “eco-label” report by UNEP
China	2001 – 2019	China Green Hotel Industry Standard
Kunming	2006 – 2019	Use “China Green Hotel Industry Standard”

After drawing on and referring to the green standards of developed countries, China established its own standards system as introduced in the previous section. Of the green hotels in Kunming, six are internationally renowned chain hotels. Of them, Hualuxe Kunming, Crowne Plaza and Holiday Inn Kunming City Centre are all under the umbrella of InterContinental Hotels. The Wyndham Grand Plaza Royale Colorful hotel and the Howard Johnson City of Flower Hotel belong to the Wyndham Hotel Group, and the Sofitel Hotel belongs to the Accor Group. These international brand hotels have their international green certification when they enter the Kunming market (e.g. the IHG Green Engage programme), and all hotels in the InterContinental Hotels Group have achieved the highest level of certification. That is, these hotels can implement tested measures that can quickly reduce energy consumption and save costs. These include tracking energy consumption data, setting up a hotel environmental team and installing energy-efficient lighting in the rooms. However, after entering Kunming, internationally branded hotels, in addition to their international certification, also need to meet the standards of the

Kunming Green Hotel classification system, in order to be assessed as a local green hotel in Kunming. To achieve National-Level certification, hotels need to be certified by the China Hotel Association, based on Kunming-level. Compared to other green hotels, these international hotel brands are better known and more popular (Kunming Hotel Industry Association, n.d.).

Whether in international cities or small cities of China, the evaluation of green hotels is based on the standards of different regions (Hui, 2013). Therefore, the establishment of a unified standard to regulate the development of green hotels is very significant, as it establishes the healthy development of the green hotel market (Shieh, Hu, & Shen, 2012). Chen and Fu (2015) observed that the establishment of green hotel standards laid the foundation for improved management of green hotels, guiding the development direction of hotels through specific requirements, and providing clear indications for green hotels. The findings of this study indicate that the creation of green hotels in Kunming follows green hotel industry standards, and the standard of green hotels is the only factor that can be used to evaluate whether a hotel can be certified as a green hotel.

#### **4.3.4 Comparison of criteria for green hotels around the world**

By reviewing the global green hotel standards revealed in the literature and the Kunming green hotel standards, it can be seen that different countries have different standards for evaluating green hotels. First of all, in terms of the establishment time and maturity of the standard, the findings are consistent with Chen et al.'s (2018) finding, that compared with the establishment of green hotel standards by some international hotel associations elsewhere in the world, the green hotels movement in China started late and the evaluation criteria of green hotels are still not mature. This means that Chinese green hotels are still in the exploration stage due to uneven development between regions. Compared with a developed city such as Shanghai, Kunming is a small to medium-sized city in a remote area, so the development of green hotels has been slower (Kunming Municipality, n.d.). For example, there were only 48 green hotels in Kunming in 2019, while the number of green hotels in Shanghai had already exceeded 100 in 2010. Support also comes from another perspective. Lu and Chen (2002) confirmed that under the common goal of protecting the environment and pursuing ecological development, the more evolved industry standards of China Green Hotels now apply to green hotels in all the cities of China, including Kunming.

As mentioned in the literature review, of all countries, Canada's Green Leaf Eco-Rating Program is the most complete and scientific evaluation of green hotel content, with 600 different assessment indicators (Shieh, Hu, & Shen, 2012). The Danish Green Key Ecolabel also arranges a series of controlled standards to assess green hotels (Shieh, Hu, & Shen, 2012). When comparing these standards with those of Chinese green hotels, it can be found that the evaluation content of green hotels is basically similar, in that all the standards consider resource conservation, environmental protection and pollution reduction to be the most important development standards for green hotels. China Green Hotel Industry Standards also draw on the standards of international green hotels such as Canada's Green Leaf Eco-Rating Program, and the content is relatively simple, but fully considers the differences in economic levels and natural conditions between various regions within China (Feng, Hou, Qian, & Zhao, 2011). It can be seen from the findings that Kunming as a remote region, also conforms to the green hotel standards developed by China Hotel Association. Not only have 24 hotels been certified as Kunming-level green hotels, but 24 have also been certified at the national level.

Although there are different green hotel standards globally, the establishment of these standards has laid the foundation for local green hotel construction. As Jiang (2013) stated, the green hotel standard can provide specific requirements for a hotel and guide the hotel's work to help improve its economic and environmental benefits. The findings show that under the guidance of green standards, Kunming green hotels have clear objectives and development requirements, and are objectively evaluated as green hotels by improving various aspects of green measures.

## **4.4 Benefits of green hotels**

### **4.4.1 Benefits of green hotels in Kunming**

Becoming a green hotel has brought different benefits to the 48 hotels in Kunming, helping them gain an advantage over their competitors in the hotel market and attract more consumers. A further advantage is that 50% of the green hotels in Kunming mentioned cost savings in the hotel announcement from the Kunming Hotel Association. Almost all green hotels observed that they had gained advantages in terms of better resource utilisation, pollution reduction and increased hotel reputation.

#### **4.4.1.1 Resource utilisation**

For Kunming, the traditional hotel has a high consumption rate of resources (Zheng, 2014). According to the statistics of the Kunming Hotel Industry Association, electricity, gas and water account for 70% of hotel industry resources consumed. Green hotels have responded to Kunming's call for resource conservation, improving the efficiency of resource use and increasing income (Cheng, 2017). Using the Tianhe Hotel and the Soluxe Hotel as examples, it can be seen that their construction as green hotels and the use of environmentally friendly equipment have enabled these two hotels improve resources and reduce losses.

The hotel replaced its 128-room electric light with an energy-saving lamp, reducing power and extending the service life. The replacement cycle is extended from two months to once a year, improving the efficiency of resource use. (Tianhe Hotel)

Since its establishment as a green hotel, the use of water, electricity and other energy sources has decreased by 3% in 2015 compared to 2014. (Soluxe Hotel)

#### **4.4.1.2 Pollution reduction**

Kunming is also committed to strengthening the ecological environment, as the hotel industry is a major producer of pollution. According to statistics released by the Kunming Government, the hotel industry in Kunming used more than 18 million sets of disposable toiletries in 2018, causing major pollution to the environment (Kunming Municipality, n.d.). The construction of more green hotels in Kunming could reduce pollution and realise the scientific development of the hotel industry (Cheng, 2017).

The average amount of garbage generated per room per day is 1.5 kg, and the average amount of garbage generated by a consumer is nearly 1 kg. Hotel supplies such as bedsheets and bath towels are changed daily, and a large amount of detergent causes water pollution. These conditions have been greatly improved since becoming a green hotel. (Soluxe Hotel)

Compared with 2014, the disposable consumer supplies and detergent consumption decreased by 5% in 2015, and paper usage decreased by 10%. (Soluxe Hotel)

Since its conversion to a green hotel, the Haitian Hotel's tableware has been changed from one-time use to being recycled by waiters, using a unified disinfection and reuse process. The hotel cancelled the disposable snack boxes and non-degradable packing bags used in the restaurant, and changed to paper

boxes and degradable packing boxes. (Haitian Hotel)

#### **4.4.1.3 Hotel reputation**

The findings show that Kunming, as a well-known tourist city, promotes the development of green hotels and the development of green eco-tourism to provide consumers with the experience of the culture of green hotels, which can enhance the green tourism brand image (Kunming Municipality, n.d.). Accordingly, the construction of green hotels is conducive to improving the reputation of the hotels and gaining an advantage in the eco-tourism market.

Since the adoption of the Green Hotel Assessment, more and more consumers have come here. In the past, our hotel was not famous. The green label has improved the popularity and reputation of the hotel and has been loved by more consumers. (Haitian Hotel)

#### **4.4.2 Comparing the benefits of green hotels globally**

By comparing the benefits of green hotels in Kunming with the strength of green hotels analysed in the literature review, it can be seen that global green hotels have similar benefits over traditional hotels because of a global shift to sustainable development and environmental protection. As Butler (2008) concluded, green hotels are important for all aspects of society and are the ideal type of hotel. Based on the results of studying Kunming's green hotel industry and the literature reviewed, the benefits of green hotels can be summarised into three major categories: economic benefits, environmental benefits, and hotel reputation.

##### **4.4.2.1 Economic benefits**

Consistent with the findings in the previous section, in the "Creating Green" plan and associated actions, 48 hotels in Kunming implemented a series of measures to meet the requirements of green hotels, such as installing energy-saving lamps and adjusting the hotel's operations to improve the efficiency of resource use. Han et al. (2018) concluded that green hotels can save costs in terms of equipment and energy, which in many cases could help the hotel reduce costs in other operations, save money, and increase the hotel's operating returns.

#### **4.4.2.2 Environmental benefits**

In terms of the environment, as mentioned, the 48 Kunming hotels utilised green design to develop green hotels and provide green service products to meet the requirements of “Creating Green”, which greatly reduces the pollution caused by traditional hotels in terms of energy and disposable products usage, to achieve the purpose of protecting the environment. Consistent with Graci's (2010) point of view, as part of the global pursuit of sustainable development, green hotels have truly improved their environmental benefits and provided environmental advantages.

#### **4.4.2.3 Hotel reputation**

Compared with other hotels, the 48 green hotels in Kunming have a good reputation, with good customer reviews and ratings. In the top 50 hotels recommended by the Kunming “Mei Tuan” website, which is a hotel booking site similar to “Booking.com”, these green hotels account for 70% of the top listings. Hotel reputation is a core factor in a hotel's competitiveness. As a result, enhancing the image of a hotel appears to improve competitive advantages in Kunming, supporting Huang, Liu and Poulston's (2016) findings, that being green can enhance the popularity of hotels and gain the respect and trust of consumers.

### **4.5 Opportunities for green hotels in Kunming**

In Kunming, green hotels have responded to the city's need for environmental protection and met the requirements of sustainable development. Compared with traditional hotels, green hotels not only meet the needs of consumers and government in Kunming, but also the requirements of the market. Accordingly, green hotels have greater development opportunities (Kunming Municipality, n.d.).

#### **4.5.1 Consumers and governments' needs of green hotels**

According to a survey by the Kunming Tourism Association, more than 50% of visitors to Kunming call themselves “ecotourists”, and spend 8% more on green products and services (Kunming Tourism Association, n.d.). This means that the promoting of an ecological environment affects the development of a hotel, leading to an increase in consumer demand (Shen & Chen, 2018). The green factors of hotels have gradually

become an important reference for influencing consumer purchasing decisions (Kunming Municipality, n.d.). For example:

Yijing Garden Resort & Spa Hotel has started to “Create Green” in seven aspects: water conservation, energy management, environmental protection, garbage management, green rooms, green catering, and green management. The hotel staff said that the green action of the hotel was recognised by society, and customer satisfaction with the hotel has reached more than 80%. (Yijing Garden Resort & Spa Hotel)

In 2006, Kunming started to build green hotels, but until 2009, no hotel had met the Green Hotel Assessment criteria. Therefore, on July 29, 2009, Kunming held the “Green Hotel Founder Training Conference” and requested the Kunming Municipal Bureau of Commerce to set up a green organisation evaluation agency to implement the promotion of green hotels (Kunming Municipality, n.d.). Findings show that 48 green hotels have now been certified, and the development of green hotels meets the needs of the government to have a more sustainable environment. Therefore, the Kunming Hotel Industry Association has promoted the development of green hotels and created opportunities for the development of more green hotels (Shen & Chen, 2018).

#### **4.5.2 Market demand for green hotels**

In Kunming, 40% of the certified green hotels are built near the natural landscapes of Kunming. For example, the Green Lake Hotel is built on the edge of Green Lake, which is known as the central lake of Kunming, and the Dianchi Garden Hotel and Spa is close to Dianchi Lake, which is known as the “Pearl on the Plateau”. It not only meets the requirements of the low-carbon eco-tourism model but also closely links the green hotel industry with eco-tourism.

Chennong Hotel chooses a location close to the park and establishes a garden-style courtyard. By combining the natural scenery of the countryside with the unique location advantages, it has attracted many consumers. (Chengnong Hotel)

Kunming's eco-tourism is famous in China. Most of the scenic spots attract tourists with the beauty of their natural scenery, which means environmental issues could become an important factor affecting the relationship between supply and demand in the tourism market (Ming, Chen, & Li, 2010). Green hotels are consistent with the requirements of low-carbon eco-tourism model, and the status of green hotels in the future market may become increasingly prominent (Ming, Chen, & Li, 2010). Therefore, developing more

green hotels can effectively promote the development of ecotourism in Kunming.

#### **4.6 Challenges of green hotels in Kunming**

According to the report of the Kunming Hotel Industry Association, and after evaluating and reviewing the 48 green hotels in Kunming, in terms of the green hotel's auditing standards, some problems are evident in these hotels (Kunming Hotel Industry Association, n.d.). For example, there is too much emphasis on service features, and even over-service, that ignores savings and environmental protection, such as using too many decorations (e.g. wallpaper and plastic toys) to highlight hotel features. Those hotels over-emphasise customer needs, while ignoring the green consumption preferences of customers by providing disposable supplies, packaging products, and over-selling goods. In Kunming, 25% of hotels are still using technology, equipment, materials and products that are outdated, such as lamps, water appliances, sanitary ware, and appliances. In addition, other challenges in green hotels in Kunming are illustrated in individual examples from websites:

As a green hotel, Kunming Holiday Inn is not well known for its environmental protection. Many consumers are attracted by the five-star rating and the pursuit of luxury and comfort, without knowing our green label. The hotel has received the highest level of green certification, but still lacks enough green publicity. (Kunming Holiday Inn)

Green hotels are not well known to the public without adequate publicity. Green hotels in Kunming are still in a critical period of development, and require multiple hotel departments to integrate, manage and promote them.

The hotel food and beverage department is offering freshly squeezed juice in order to pursue green food, the price of which is 3-5 times higher than the previously used canned drinks. The high investment into being a green hotel in the early stages restricted the pace of the hotel's rapid greening. (Kunming Hotel)

In order to pursue other benefits, some hotels in Kunming use cheap and polluting products such as disposable plastic tableware and inferior detergents, which reduce the reputation of green hotels. (Kunming Hotel Industry Association)

In addition, consumers' knowledge of green hotels in Kunming needs to be improved. Many consumers lack a green concept and the demand for green products and services is low (Cheng, 2017). The green awareness of hotel managers is relatively undeveloped,

hindering the development of green hotels (Shao, Yu, Hu, & Chen, 2012).

## **4.7 Comparing opportunities and challenges of green hotels globally**

When reviewing the literature, it is apparent that in a globalised environment, the opportunities and challenges encountered by green hotels are similar. For example, green hotel organisations (for example, Green Global, China Green Association) are being established around the world to create more opportunities for the development of green hotels. However, in various contexts, the opportunities and challenges encountered by green hotels differ due to the different economic levels and natural conditions in different regions.

### **4.7.1 Opportunities for green hotels**

One of the goals of the Kunming government is to establish a green image and build Kunming into an environmentally friendly city. Green hotels are one of the important ways to achieve this goal. (Kunming Municipality)

The findings indicate that Kunming's government and consumers support the development of green hotels, and consumers expect to stay in clean and environmentally friendly hotels. This situation provides an opportunity for the construction of green hotels. For green hotels around the world, as illustrated by Bela, Jasmina, Dušan, and Rade (2013), contributing to sustainable development and environmental protection is part of the global development trend. A number of organisations (e.g. Green Globe) have also been established internationally to support the development of green hotels. However, as mentioned in the previous section, opportunities for green hotels in different regions still depend on the attitudes of local governments and consumers as well as on the natural landscape.

Eco-tourism is the pillar industry of Kunming, and determines the demand for green hotels in the tourism market, providing opportunities for the development of green hotels. (Kunming Tourism Bureau)

As mentioned previously, Shen and Chen (2015) also explained that the rapid development of global tourism and the increase in consumer demand have driven the development of green hotels in China.

#### **4.7.2 Challenges for green hotels**

In contrast to opportunities, green hotels encounter numerous challenges in the development process. As with opportunities, the difficulties facing green hotels vary from region to region. Compared with other countries such as Canada and France, China's green hotels started late and developed slowly, and a large number of hotels have not yet joined the transition to being green hotels (Kang, 2012). For example, even in Kunming, there are only 48 green hotels.

Kunming is located in a remote region in China. The government's lack of publicity in terms of green hotels has kept the popularity of the green concept at a low level, which has greatly hindered the development of green hotels in Kunming. (China Green Hotel Annual Meeting)

For green hotels in Kunming, capital costs and technology restrictions are also factors that hinder their development (Liu, 2015). Some hotels are too intent on economic benefits, ignoring the requirements of environmental protection and being green. In the international arena, the high cost of green hotel construction in the early stages, and the high prices of green products, are common challenges for green hotels (Jiang, 2013).

Furthermore, although the Chinese green hotel industry has made a good start, hoteliers still do not have a green business sense, so that traditional and non-sustainable business concepts and management methods still dominate (Cheng, 2017). This is also evident from the Kunming Hotel Associations website:

Green awareness in Kunming is backward and lacks the concept of environmental protection. (Kunming Hotel Association)

Compared with those of the Chinese, people's consumption concepts and environmental awareness are stronger in some developed countries, which reduces obstacles in the development of green hotels (Shieh, Hu, & Shen, 2012).

#### **4.8 Possible recommendations for green hotels**

In response to the problems and challenges encountered in the development of green hotels, this study combines measures implemented by Kunming hotels set out in the “Creating Green” activities, with suggestions from the literature. The study summarises a number of effective recommendations to help green hotels meet challenges.

Firstly, due to a lack of government promotion of the development of green hotels, development is slow. The government could provide support and guidance on various aspects, such as technology and publicity, to promote the development of green hotels (Hui, 2013). For example, a green hotel has high investment in the early stages and cost recovery is slow. The government could develop green technology so that hotels can apply it to hotel operations, and at the same time increase publicity to enhance the popularity of green hotels (Hui, 2013). This could help green hotels survive the difficulties of the pre-operational period (Jiang, 2013). The Kunming Municipal Government helped publicise the Haitian Hotel, as explained on its website:

As the first green hotel in Kunming to be rated as Kunming-Level, the Haitian Hotel has received support from the Kunming Municipal Government. On the website and news reports, the Kunming government vigorously promoted and praised the green measures of Haitian Hotel. (Haitian Hotel)

At the same time, the government should increase penalties for environmental damage such as using legal sanctions and fines, and increase funds for protecting the environment (Liu, 2015). This would lead more hotels to reduce waste and pollution. For example, the government could provide policy incentives for the green industry to encourage hotels to move towards green development (Liu, 2015). The Kunming Municipal Government has taken action in this regard, for example:

The Kunming Municipal Government strongly encourages and builds low-carbon eco-tourism while strengthening the emphasis on green hotels, which lays the foundation for the development of green hotels in the hotel industry. (Kunming Municipality)

Secondly, although consumers are increasingly green aware, consumer habits have not changed as much as expected, due to traditional attitudes and lifestyle restrictions (Li & Ouyang, 2014.). For green hotels, enlightened consumers are their business foundation (Zheng, 2014). As a result, green hotels have increased their publicity efforts to increase their visibility and reputation, which will increase consumer acceptance of green hotels, and in turn, increase their audience and market (Li & Ouyang, 2014). For example, some hotels increase advertising spending to promote the advantages of green hotels, encourage consumers to participate in the construction of a green civilisation, and use green hotels as the preferred destination for travel (Li & Ouyang, 2014).

Finally, green hotels also need proactive measures to change traditional hotel patterns,

such as hotel building design and hotel equipment and facilities updates, to help them meet challenges, and expand their markets and influence (Shao, Yu, Hu, & Chen, 2012). For example, the Innhouse hotel used a lot of environmentally friendly technology during the construction process to make the hotel greener:

The green projects of Innhouse hotel include solar hot water technology, high insulation exterior walls, double LOW-E windows, roof planting, eco-friendly building materials, permeable floors, LED lights, ecological diversity and native vegetation landscape, fresh air heat recovery system, high efficiency heat pump, rainwater recycling for landscape, water treatment, and green intelligent management. (Innhouse Hotel)

Hotels should not only use environmental protection as a feature to attract consumers, but in the interior design, management and operation of hotels, hoteliers should strictly implement the standards of green hotels that provide consumers with real green environments. This enables hotels to achieve true green ecology, rather than just using the green label as a gimmick (Liu, 2015).

#### **4.9 Chapter summary**

The study findings revealed that 48 hotels in Kunming are identified as green hotels, 24 of which are certified at Kunming-Level and the rest at National-Level. This study conducted research on these 48 green hotels in Kunming using four major themes: the evaluation criteria, advantages, opportunities and challenges of Kunming green hotels.

In terms of standards for green hotels, different countries have different standards for green hotels, such as Canada's Green Leaf Eco-Rating Program, the Danish Green Key Ecolabel, and China Green Hotel Industry Standards. There are 48 Kunming hotels that use the China Green Hotel Industry Standards and are certified as green hotels. Among them, almost 6.2% are rated as 2A level, 31.3% as 3A level, the hotels rated as 4A level account for 35.4% while 5A level accounts for 27.1%. By comparing internationally recognised standards with the China Green Hotel Industry Standards, it can be concluded that different standards have the same purpose of providing hotels with specific measures to create green hotels and help hotels meet green standards.

The findings also show that green hotels have advantages over traditional hotels. The 48 green hotels in Kunming have obvious advantages in terms of resource utilisation, pollution reduction, and hotel reputation. In summary, this case study shows that green

hotels have economic and environmental benefits, which can create advantages and enhance the reputation of the hotels. Moreover, there are opportunities and challenges in the development of green hotels. The literature review revealed, and this case study highlights, that due to the different external environments in different regions, the opportunities and challenges facing green hotels are not exactly the same.

## Chapter 5: Conclusion

This study explored the development of green hotels in Kunming, China, the criteria for green hotels, the benefits of a green hotel, and the opportunities and challenges that green hotels face in their process of development. The research utilised a qualitative approach to study the data, in order to answer the research problems:

1. What are the criteria for being a green hotel in Kunming, China?
2. What are the benefits of being a green hotel?
3. What are the opportunities and challenges encountered in the development of green hotels in Kunming, China?
4. How can green hotels meet these opportunities and challenges?

To achieve the research goals that aimed to identify which hotels currently promote themselves as green, and explore the measures they developed to comply with existing green accreditation, this study took Kunming as a case study, and selected 48 green hotels as reference points to address the research questions. Data analysis was by means of content analysis.

By reviewing the existing literature, the study found that green hotels in many developed countries have progressed rapidly. There are many mature green hotel auditing standards in the world as discussed in this study, such as Canada's Green Leaf Eco-Classification System and Denmark's Green Key certificate. However, China's green hotels are still in the development stage due to their late start and slow development. The China Hotel Association's grading standards have referenced the standards of other countries such as Canada and established an evaluation system for cities in China. This study used a SWOT analysis to analyse the strengths, weaknesses, opportunities and challenges of green hotels. The strengths and weaknesses of global green hotels are similar, but the impact of external factors on green hotels varies from country to country.

As a small to medium-sized city in China, Kunming was selected as a case to research the development of green hotels. In Kunming, 48 hotels are green hotels, 24 of which are certified as Kunming-Level and the rest as National-Level. This study took these 48 green hotels as a sample. The findings showed that the standard for green hotels in Kunming is derived from the China Hotel Association's "Green Hotel Industry Standards". This

standard provides recommendations for the improvement and upgrading of traditional hotels that want to transform into green hotels. It is also the only standard for assessing green hotel levels. In addition, no matter which area the green hotel is located in, there are advantages to ‘being green’, such as cost advantages, environmental benefits, and increased hotel reputation. At the same time, in the process of development, green hotels also encounter further opportunities and challenges from the external environment as the opportunities and challenges in different regions are different. This research showed that seizing opportunities and solving problems is one of the priorities of the long-term development of green hotels.

## **5.1 Theoretical implications**

From a theoretical point of view, this exploratory study fills some of the gaps identified in existing research on green hotel development in Kunming, because in China, most of the research on green hotels has selected cities with rapid economic development, such as in Shanghai and Guangzhou. This study selected the development of green hotels in Kunming as an example to provide theoretical experience and guidance for the development of green hotels in Kunming. In addition, China's green hotels are still in the development stage. Small and medium-sized cities are numerous in China, and have similar external environments. This study provides some effective recommendations for the development of green hotels in small and medium-sized cities. In addition, this study details and analyses the evaluation criteria for green hotels in China that provides direction and goals for traditional hotels that aim to transform into green hotels, helping hotels identify how they can meet the standards of green hotels and at which level.

## **5.2 Practical implications**

This study analysed the challenges of green hotels and what they may encounter, providing information about the development of green hotels in the specific case of green hotels in Kunming. Green hotels may have insufficient funds in the early stage of construction and a lack of technology and innovation. Therefore, in planning the construction of a green hotel, the hotel can fully consider the potential issues, try to avoid the related risks, and reduce the obstacles in the building process. In addition, this study refers to cases of 48 successful green hotels and summarises the corresponding measures for the problems and challenges that green hotels may encounter, such as increasing

publicity for green hotels, strengthening environmental awareness, and strengthening government supervision. The research provides a reference for the long-term development of green policies.

### **5.3 Limitations of the research**

This study used a qualitative approach, and the number of samples was the first limitation of the case study approach, because in this study, only 48 green hotels in Kunming were selected as a sample. A small number of samples limits the universality of the research and may influence the objectivity of the results (Gray, 2018). In addition, Gray (2018) acknowledged that the findings of qualitative research are subjective, and related to the understanding of the researchers, which may be influenced by their subjective consciousness. Furthermore, the use of secondary data, data sources and network resources in this study may be subject to error because content from the internet may have been inaccurate (see Connelly, 2017). The cases and samples of this study are not representative of all regions that have limitations. Accordingly, more research on the development of green hotels in different contexts is needed in the future.

### **5.4 Recommendations for future research**

Based on the limitations of the research, recommendations are made to guide future research. First, future research could increase the number of samples, expand the range of sample selection, for example, select more than 48 green hotels as the sample, and not limit the scope of selection to a city, but select a whole province as the research target to enrich and improve the research on green hotel development.

In addition, this study used secondary data, as the data were collected mostly from online sources. Future research could utilise field research and questionnaires to collect data and increase the authenticity and accuracy of the research results to provide a more comprehensive understanding of green hotels. The green hotel standards and grading mentioned in this study can be used as a reference for future research. Future researchers could compare the new standards that may emerge in the future and analyse the progress and improvement of the green evaluation system in the development process.

This study focused on exploring the internal and external environment of green hotel

development. Future research could focus more on exploring the specific management measures and development methods of individual green hotels to provide strategic and financial guidelines for the development of green hotels.

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