Management Effectiveness Evaluation of World Cultural Landscape Heritage: Case From China

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Abstract

World cultural landscape heritage (WCLH), recognized as combinations of cultural relic and natural landscape with outstanding significance and universal value, is unique in terms of differing from the human deliberate creativity of general cultural heritage and the "de-artificialization" of natural heritage. So far, the management of WCLH has become increasingly standardized. However, with the prevalence of heritage resources development activities like heritage tourism, the phenomenon of "urbanization", "commercialization", "artificialization" and other issues have gradually emerged in WCLH sites. Such that, the management issues of WCLH have turned increasingly serious, leading to intense concerns about unsustainable development of WCLH. Drawing inspirations from management effectiveness (ME) evaluation research of protected areas and acknowledging the uniqueness of WCLH, this study constructs a WCLH ME evaluation system of four general criteria (management foundation, management system, management measures and management performance), sixteen factors and thirty-four indicators. The evaluation system is applied and verified through an empirical study of five existing WCLH sites of China. The empirical results show that the ME of Chinese WCLH is at "good" level. Specifically, the management of Chinese WCLH is overall impressive in indicators of management planning making, heritage protection performance and economic performance, but shows deficiency in indicators of protection fee, management infrastructure, management assessment, management institution, social performance, etc. In the final, this study discusses the management issues of respective heritage sites so as to provide suggestions and inspirations for the development, protection and management of the sites and other cultural landscapes in China and even the world.

Introduction

As a special category of World Heritage, World Cultural Landscape Heritage (WCLH) is the combined work of the particular geographical environment and human beings [1] that were recognized as irreplaceable and rare by the United Nations Educational, Scientific and Cultural Organization and World Heritage Committee. Generally, after being inscribed on the World Heritage List, the development focus of cultural landscapes turns from application to follow-up management, which brings more serious challenge for heritage management departments in terms of management ability, management measures, management resources, et al.. Usually, it is believed that the heritage inscription would lead to higher professionalization of management bodies and considerable improvement of their awareness of heritage protection, consequently the management of WCLH becoming increasingly solid and the authenticity and integrity of the heritage being protected. However, there are a number of cases reported in individual WCLH sites that respective cultural landscapes have been seriously damaged, and serious issues like "urbanization", "commercialization", "artificialization" and "heritage-island" emerged. Unless effective management has been carried out in WCLH sites, the intrinsic contradiction between the development and the protection of heritage resources could seriously damage the sustainable development of the sites in economic, social and ecological realms. With such background, it is of considerable importance and necessity to enhance the management effectiveness (ME) of WCLH [2, 3] .

"Effective Management" was originally proposed by Drucker (1967) as a notion against inefficient or ineffective corporate management[4]. It contains five essential elements which are objectives, decision making, implementation, supervision, and managers respectively. Since then, issues surrounding effective management have been receiving increasing attention from scholars and gradually applied into fields of human resources

management, quality control, teaching management, sustainable development of natural and cultural resources, et al.[5–7]. In the field of heritage management, the World Commission on Protected Areas of International Union for Conservation of Nature first proposed the Protected Areas Management Effectiveness (PAME) evaluations framework, which lists context, planning, inputs, process, outputs and outcomes as key elements of“the assessment of how well protected areas are being managed" [8]. Since the framework can effectively evaluate “the extent to which management is protecting values and achieving goals and objectives”, it is widely applied in the practice and research of protected areas management [8]. Based on the PAME framework, a number of tools were developed by individuals and organizations to further evaluate the ME of protected areas, such as rapid assessment and prioritization of protected areas management [2, 9, 10], management effectiveness tracking tool [11, 12], et al. To date, ME evaluation has been acknowledged as a scientific way to systematically evaluate resource management status and commonly appears in the studies of nature reserves [13, 14], wetland park [15], forest park [16, 14] and other types of protected areas[17–19]. Under such rich research efforts, the technology of ME evaluation in protected areas have become increasing mature [20] and the respective tools have also been empirically applied, verified and supported internationally [21]. In the field of cultural landscapes, effective management is samely crucial for the sustainable development of heritage sites [22, 23], while a scientific and comprehensive ME evaluation system of WCLH is the key to achieving such. Unfortunately, to the best of our knowledge, there is little theoretical and empirical ME evaluation studies on cultural landscapes, except the Xu H (2013) [24] and Xu H, Yu W D, Seok M J, et al. (2018) [25]. In those works, the selection of indicators to conduct ME evaluation in the context of cultural landscapes was initially discussed, however, it is regretful that the proposed evaluation system had not been empirically applied and supported. Considering that ME evaluation research has become normative in terms of indicator systems and evaluation methods in the field of protected areas [21], and that there exist high similarity in the goals of establishment and the elements of management between protected areas cultural landscape heritage, the management practice and research of WCLH could probably draw inspirations from the ME evaluation of protected areas [3].

Under the above empirical and theoretical background, this research attempts to construct a WCLH ME evaluation system and examines its scientificity and applicability through a case study of WCLH sites of China. The purpose of the research is twofold: 1) to offer a framework for ME evaluation research of cultural landscape heritage with reference to ME evaluation research of protected areas; 2) to provide a useful guideline for the effective management of cultural landscape heritage in China and the world.

Construction of WCLH ME Evaluation System

Selection of Evaluation Indicators

Four specific steps were carried out in this study to construct the WCLH ME evaluation system. First, an indicator database with 1,686 appropriate evaluation indicators was built through extracting indicators from existing ME systems or frameworks. The systems and frameworks were search thoroughly within two kinds of sources. The first one is the documents issued by institutions and organizations relevant to the management of protected areas and cultural heritage, such as the WCPA evaluation framework, *Convention Concerning the Protection of the World Cultural and Natural Heritage*, *Operational Guidelines for the Implementation of the*

World Heritage Convention. Concerning the particularity of the Chinese context in this study, documents issued by Chinese governments and institutions were giving especial attention, for example, *Standard for Assessment of Nature Reserve Management (HJ 913—2017), Assessment Standard of National Wetland Park*, *Technical Specification for the Management of Marine Protected Areas* (GB/T19571-2004), et al. The other source is academic papers indexed in China National Knowledge Infrastructure, which is the world's largest database of Chinese knowledge resources. For the latter, 196 articles that addressed ME evaluation of protected areas were identified and made reference. Second, with the assistance of the NVivo 12 software, the indicators generated in the previous step were screened, refined, and integrated according to their correlation and logical relationship with each other. Through a process of induction and deduction analysis, a draft of general ME evaluation system was constructed. Third, the evaluation system generated in last step was revised according to the uniqueness of WCLH. Fourth, consultation to experts in the field of cultural heritage management on the built evaluation system was carried out to improve the scientificity and applicability of the system. Based on the feedback from the experts consulted, the system was further revised such that an evaluation system comprising four general criteria at the first layer, sixteen factors at the second layer, and thirty-four indicators at the third layer was built. (Figure 1).

Therefore, basing on the elements of effective management identified by Drucker (1966), referring to the findings of ME evaluation research of protected areas, and acknowledging the uniqueness of cultural landscapes, this study constructs a ME evaluation system applicable to WCLH. Through a process of screening relevant literature and extracting, refining and integrating indicators from the literature, this study proposes a ME evaluation system of WCLH that includes four general criteria of management foundation, management system, management measures and management performance. First, as the basis for the management of WCLH, management foundation provides necessary support in terms of fundings [3], facilities [3], laws and regulations [26], personnel [15], et al. Second, a reasonable management system, which consists of management institutions and management mechanisms [27], could simplify the management process and improve the management efficiency [28], therefore contributing to the sustainable development of WCLH. Third, carrying out management measures and activities is a necessary and critical means to achieve the effective management of WCLH, manifested in the effects of heritage monitoring and maintenance [28, 29], heritage interpretation and public heritage education [28], scientific research [28], management planning [15], management supervision [15], and management assessment [12] throughout the management process. Finally, management performance, which could be examined in heritage protection [30], economic[31], social [8, 32] and environmental [33, 34] dimensions, directly reflects of the level of the management effectiveness of WCLH [28].

Weight assignment of indicators

In the process of constructing evaluation system for ME of WCLH, this study comprehensively uses Analytic Hierarchy Process (AHP) method and Delphi method. AHP is a simple, practical method that has the advantages of making complex issues hierarchized and qualitative question quantified as well as systematically determining specific weight value of factors at each layer according to their importance. While, the employment of Delphi method could avoid the issue of subjectivity and increase the rationality of the weight-giving of indicators. Based on the pre- constructed indicators system, a questionnaire about ME evaluation of WCLH was designed and sent to a variety of experts for consultation. The experts that are all

professionals in the field of heritage management and protection were randomly invited. In the final, thirty-six effective questionnaires were returned from the experts. MATLAB was then utilized to analyze the questionnaire results and to calculate the weight of each indicator. The outcome of weight assignment of indicators that have passed the consistency test is shown in Figure 1.

Case Study

Study Areas

Until November 2021, there are five WCLHs in China: Lushan National Park (Lushan) (1996, Jiangxi Province), Mount Wutai (2009, Shanxi Province), West Lake Cultural Landscape of Hangzhou (West Lake) (2011, Zhejiang Province), Cultural Landscape of Honghe Hani Rice Terraces (Hani Rice Terraces) (2013, Yunnan Province), and Zuojiang Huashan Rock Art Cultural Landscape (Huashan Rock Art) (2016, Guangxi Province). Lushan, as a perfect blend of an integral scene of river, hills and lake and historic buildings and features like Taoist and Buddhist temples and landmarks of Confucianism, has inspired countless artists who developed the aesthetic approach to nature found in Chinese culture. Mount Wutai, with its five flat peaks, is a sacred Buddhist mountain that catalogues the way in which Buddhist architecture developed and influenced palace building in China for over a millennium. West Lake, comprising numerous temples, pagodas, pavilions, gardens and ornamental trees, as well as causeways and artificial islands, has influenced garden design in the rest of China as well as Japan and Korea over the centuries and bears an exceptional testimony to the cultural tradition of improving landscapes to create a series of vistas reflecting an idealized fusion between humans and nature. Hani Rice Terraces, an integrated farming system developed over the past 1,300 years, demonstrates extraordinary harmony between Hani people and their environment, both visually and ecologically, based on exceptional and long-standing social and religious structures. Huashan Rock Art, located on the steep cliffs in the border regions of southwest China, comprise 38 sites of rock art that illustrate the life and rituals of the Luoyue people. Each of these WCLHs is unique in terms of representing the natural environment, socioeconomic development, and cultural evolution of associated regions. The ME of these WCLHs may also vary in relation to their differences in heritage features, management bodies, history of world heritage listing, as wells as modes and levels of development activities, in particular heritage tourism. Therefore, this study conducts a comparative analysis of ME of the five Chinese WCLHs with the constructed evaluation system with the aims of making a rigorous examination on the applicability of the evaluation system and offering an overall investigation on the status quo of the management of WCLHs in China. the paper will apply the constructed evaluation system to five WCLH sites respectively, and comprehensively compare the adaptability of the development status and the evaluation results, which can further verify the operability and.

Data Collection and Analysis

To make a systematic and comprehensive examination on the ME of the case WCLHs, a variety of data sources were collected and utilized in this study. First, field studies to the sites of the WCLHs were undertaken respectively between August 2020 to October 2021. On-site observations that focused on the facilities, management measures and management performance of individual heritage sites were carried out and interviews surrounding key items of the evaluation system were conducted with local residents, governmental

officials, and tourists. Second, second-hand resources, another major data source of this study, were used to offer more nuanced understanding on the ME of the WCLHs. On the one hand, journal articles, thesis, newspapers, reports, books and other materials that are relevant to the management and protection of respective heritage sites were collected through China National Knowledge Infrastructure, the aforementioned largest database of Chinese knowledge resources in the world and search engines. On the other hand, government reports, management policies, planning documents and other materials that are related to heritage management and protection were collected through the official websites of individual WCLH and their administrative departments. Last, online tourist reviews of respective WCLH sites on Ctrip and Tuniu, two major online service platforms in China, were collected and analyzed to offer supplementary views on the management status of the case WCLHs. Word frequency analysis, semantic network analysis, and sentiment analysis of the reviews were through the software of ROST.

Afterwards, six researchers that are associated to this research project independently scored individual evaluation indicators of each case WCLH based on the data generated in previous stage. The Likert 5-point scale is used for scoring, and 1 to 5 points are assigned according to the ME of case WCLHs from low to high. According to the scores the WCLHs achieved, their overall ME and performance in regard to different criteria, factors and indicators are classified into four grades: outstanding (not less than 4 and not bigger than 5), good (not less than 3 and less than 4), barely satisfactory (not less than 2 and less than 3), deficient (not less than 1 and less than 2 point) and poor (less than 1). The overall score of the ME of each individual WCLH was calculated according to formula 1, where M represents the overall score, i signifies individual evaluation indicators, Ai signifies the weight of indicator i, and Wi denotes the average score that the six researchers assigned to each indicator.

$$\mathrm{M} = \sum_{i=1}^{34} Ai * Wi \qquad (1)$$

Results

The ME evaluation of the five WCLHs in China based on the evaluation system constructed shows that, the overall ME scores of Lushan, West Lake, Mount Wutai, Hani Rice Terraces, and Huashan Rock Art are 3.75, 4.13, 3.48, 3.48 and 3.11 respectively, with an average score of 3.59 (Table 2). Among them, the ME grade of West Lake is excellent, and the ME grades of the other WCLHs is good, indicating that the management of these WCLHs still have much room to improve. The evaluation result is in line with the overall management status of the five WCLHs in China reported by interviewees, in the second data collected, and in the online tourist reviews, indicating that the ME evaluation system of WCLH constructed is practically operable and relatively scientific.

With regard to the ME evaluation result at general criteria layer, the average score of the five Chinese WCLHs in terms of management foundation, management system, management measures and management performance are 3.69, 3.45, 3.74 and 3.58 respectively. It indicates that the management of WCLHs in China is overall at good level in the aspects of “management foundation”, “management system”, “management measures” and “management performance”, and thus still have large room for improvement especially in the

area of “management system”, consistent with the development and management of world heritage in China in the past decades. First, world heritage listing has often been considered as an effective way to boost regional development in the context of China. Be they in the process of listing application or subsequent development initiatives, local government of associated heritage sites, especially those at prefecture and county levels, usually invest a lot of personnel, material and financial resources to lay a good foundation of for further development activities like heritage tourism. Second, except for Hani Rice Terraces, the other WCLH sites have long been listed as national protected areas and developed as tourist attractions before taking initiatives of listing application. Therefore, rich legacies in terms of personnel, facilities, regulations, as well as experiences in heritage monitoring and maintenance, heritage interpretation and public heritage education, scientific research, and so forth were left for associated WCLH sites. Third, after successfully listing as World Heritage, relative heritage soon became renowned. In the meanwhile, the strong development initiatives made by local government and respective agents, for example heritage tourism, may generate considerable economic benefits. For such reasons, the management performance of WCLHs more often than not keep at a satisfactory level. Last, institutional and administrative issues especially regarding those caused by multiple management bodies as well as their overlapping functions and conflicting interest, have been reported in a number of cases of world heritage in China, including the case sties of this study. China has recently endeavored to carry out management institution reform. However, the substantial change in regarding of management system and perfection solution of related matters may still require more time and effort to get happened. It is worthy to point out that the ME evaluation result of West Lake is outstanding in all general criteria, that other WCLHs are evaluated as good in most criteria, and that Huashan Rock Art is rated as barely satisfactory in the criteria of “management system”. That evaluation result could offer implications for the management departments of individual WCLHs to carry out criterion-targeted strategies to improve the ME of respective heritage sites.

In aspect of the ME evaluation result at factors layer, overall the ME of WCLHs in China is rated as outstanding only in the factors of “heritage motoring and maintenance” and “management planning” and as good in all other factors. To better protect the cultural landscape heritage, China has made great investments be they in ways of providing personnel, founding or regulational support. In most heritage sites, an all-round motoring system that are connected to provincial and national motoring platforms is built to offer 24h motoring on not only the landscapes and the environment they embedded but also the activities of actors like tourists. Besides, particular departments that are responsible for carrying out daily management and maintenance duties are arrange in majority of heritage sites. Regarding the specific situation of case WCLHs, West Lake stands out for receiving 11 outstanding grades out of 16 factors. Being evaluated as outstanding in 3 factors, Lushan is relatively moderate. The situation of Mount Wutai, Hani Rice Terraces, and Huashan Rock Art are to some extent worrying as they only get 1 outstanding grade but are scored barely satisfactory in 2, 1, 4 factors respectively. Overall, the evaluation result of the factor of “management institutions” (3.06) is far from excellent, with Mount Wutai, Hani Rice Terraces, and Huashan Rock Art all get barely satisfactory in this factor. The situation may be directly related to the institutional and administrative issues discussed in previous section. Regarding the factor of “management assessment”, West Lake and Hani Rice Terraces receive outstanding grade while Mount Wutai and Huashan Rock Art are rated as barely satisfactory, indicating that the latter should learn from the valid experience of the former. West Lake made a very first attempt in China to conduct an expert review on the implement of its development and management plans. The local government of Hani Rice Terraces initiated a self-assessment the management of the heritage and issued the assessment

report to public for supervision. The result that Huashan Rock Art is rated as barely satisfactory in the factor of “management supervision” is also noteworthy.

Considering the ME evaluation result at indicators layer, the ME of WCLHs in China overall is evaluated as outstanding in indicators of "general funds", “monitoring system”, “interpretation and education activities”, and “management plans”, and good in all other indicators. With respect to the specific results of case WCLHs, Lushan, West Lake, Mount Wutai, Hani Rice Terraces, and Huashan Rock Art are rated as outstanding in 10, 24, 4, 4, 2 out of 34 indicators, and as barely satisfactory in 0, 0, 3, 2, 9 indicators respectively. To be more nuanced, Huashan Rock Art gets barely satisfactory in all indicators under the factors of “management institutions”, “management mechanisms”, “management supervision”, and “management assessment” as well as in the indicator of “infrastructure”. According to field observation, the development activities surrounding Huashan Rock Art has remained very rough. For example, tourism products derived from the heritage have been limited to a boat tour of sightseeing the rock art and a live performance themed at the rock art. Besides, with a meager score of 3.05, it’s evaluation result in the indicators of “personnel support” and “community attitude” is also worrisome. In that case, a serious campaign seems necessary to better develop, protect and manage the cultural landscape of Huashan Rock Art. Another issue that needs to pay more attention is the management bodies of Mount Wutai, Hani Rice Terraces, and Huashan Rock Art have been granted limited authority, revealed in their barely satisfactory evaluation result in the indicator of “authority granted”. These indicator-based evaluation results point out concrete and detailed directions for the WCHLs in China to advance their ME in future management practices.

Conclusion And Discussion

This study makes a preliminary attempt in terms of developing a ME evaluation system applicable to the context of WCLH. With reference to the ME evaluation of protected areas and acknowledging the uniqueness of WCLH, an evaluation system that comprises four general criteria (management foundation, management system, management measures and management performance), sixteen factors, and thirty-four indicators is constructed. The scienticity and operationality of the system is verified through an examination of WCLHs in China, namely Lushan, West Lake, Mount Wutai, Hani Rice Terraces, and Huashan Rock Art. The ME evaluation results of the case WCLHs are West Lake (4.13 points, outstanding), Lushan (3.75 points, good), Hani Rice Terraces (3.48 points, good), Mount Wutai (3.48 points, good), and Huashan Rock Art (3.11 points, good). Those results show that the management of WCLHs in China is overall effective but has large room to optimize.

The findings also demonstrate that overall the management of WCLHs in China acts well in indicators of "general funds", “monitoring system”, “interpretation and education activities”, and “management plans”, as well as factors of "heritage monitoring and maintenance" and "management planning." It is rated as good in other indicators and factors as well as all criteria of management foundation, management system, management measures and management performance. The scores Lushan, West Lake, Mount Wutai, Hani Rice Terraces, and Huashan Rock Art achieved in each particular criteria, factor, and indicator may vary a lot to an extent that they are assigned to different grades. Out of 34 indicators, Lushan, West Lake, Mount Wutai, Hani Rice Terraces, and Huashan Rock Art are rated as outstanding in 10, 24, 4, 4, 2 indicators and as barely satisfactory in 0, 0, 3, 2, 9 indicators respectively. Overall, the management of WCLHs in China has made

considerable achievements on the one hand and has much room for improvement on the other hand, particularly in terms of laying more solid management foundations, building more efficient management systems, and carrying out more systematic management measures.

The ME evaluation system constructed is significant in terms of providing a scientific and useful tool that can be adopted in ME evaluation of cultural landscape heritage in different contexts. To our best knowledge, it is a first empirical attempt in the area. The system could offer rich implications for the development, protection and management of cultural landscape heritage in terms of carrying our practices that could lead to high ME. The case study of the WCLHs in China in this study is also meaningful regarding presenting an overall picture of the management status quo of WCLHs in China, revealing the serious management issues existing in each WCLH and offering inspirations for the management practices of respective WCLH sites. Though a variety of data collection methods have been employed to gather as rich research sources, there are still some data that are not readily accessible or not yet open for public, which may to a slight extent affect the evaluations result of the WCLHs in China. Besides, the management visions and practices of cultural landscape heritage may vary in different geographical contexts. Considering these limitations, more theoretical and empirical studies of ME evaluation of cultural landscape heritage are called to advance our knowledge in the field.

Abbreviations

WCLH: World cultural landscape heritage; ME: Management Effectiveness; AHP: Analytic Hierarchy Process.

Declarations

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Authors' contributions

Conceptualization: WW; methodology: WW; data collection and analysis: JZ, WW, ZZ, ZL and ZG; writing-original draft: JZ, ZZ, ZL; writing-review and editing: WW, JZ, and ZG; supervision: WW, ZG; funding acquisition: ZG.

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Table

Table 1 Score Table for ME Evaluation of WCLH in China

Criteria (A), Factors (B), Indicators (C)	Actual score					
	Lushan	West Lake	Mount Wutai	Hani Rice Terraces	Huashan Rock Art	Overall Average
Management Foundation A1	**3.69**	**4.25**	**3.73**	**3.54**	**3.25**	**3.69**
Funding Support B1	4.13	4.31	3.74	3.60	3.23	3.80
General Funds C1	4.23	4.35	3.93	3.90	3.75	4.03
Special Funds for Protection and Management C2	4.10	4.30	3.68	3.50	3.05	3.73
Facilities B2	3.66	4.13	3.39	2.88	3.04	3.42
Infrastructure C3	4.05	4.30	3.45	3.13	2.73	3.53
Particular Facilities for Protection and Management C4	3.58	4.10	3.38	2.83	3.10	3.40
Laws and Regulations B3	3.86	4.37	3.98	4.06	3.49	3.95
Laws and Regulations Designated for Respective Heritage C5	3.88	4.33	3.98	4.13	3.48	3.96
Related Laws and Regulations C6	3.83	4.50	3.98	3.83	3.53	3.93
Personnel Support B4	3.28	4.13	3.58	3.17	3.05	3.44
Personnel Support C7	3.28	4.13	3.58	3.17	3.05	3.44
Management System A2	**3.77**	**4.03**	**3.39**	**3.20**	**2.86**	**3.45**
Management Institutions B5	3.58	3.69	2.80	2.56	2.65	3.06
Administrative Level C8	3.63	3.63	3.18	3.03	2.78	3.25
Authority Granted C9	3.58	3.70	2.73	2.47	2.63	3.02
Management Mechanism B6	3.84	4.15	3.59	3.41	2.93	3.58
Management Structure C10	3.95	4.30	3.73	3.50	2.93	3.68
Management Institution C11	3.38	3.55	3.05	3.03	2.95	3.19
Management Measures A3	**3.90**	**4.25**	**3.44**	**3.84**	**3.29**	**3.74**
Heritage Monitoring and Maintenance B7	4.10	4.40	4.06	3.94	3.67	4.03
Monitoring System C12	4.15	4.43	4.15	4.03	3.75	4.10
Daily Management and Maintenance C13	3.83	4.28	3.60	3.50	3.30	3.70
Scientific Research B8	3.46	3.79	3.23	3.43	3.25	3.43
Research Outputs C14	4.03	4.45	3.18	3.10	3.68	3.69

Criteria (A), Factors (B), Indicators (C)	Actual score					
	Lushan	West Lake	Mount Wutai	Hani Rice Terraces	Huashan Rock Art	Overall Average
Research Activities C15	3.60	4.10	3.25	2.97	3.13	3.41
Investigation and Evaluation of Heritage Resources C16	3.33	3.55	3.23	3.67	3.23	3.40
Heritage Interpretation and Public Heritage Education B9	3.80	4.22	3.64	3.97	3.52	3.83
Interpretation System C17	3.75	4.13	3.60	3.97	3.33	3.76
Interpretation and Education Media C18	3.65	4.38	3.35	3.73	3.48	3.72
Interpretation and Education Activities C19	4.20	4.33	4.23	4.33	4.30	4.28
Management Planning B10	4.32	4.42	3.92	3.93	4.00	4.12
Management Plans C20	4.33	4.43	3.88	3.97	4.15	4.15
Implementation of Planned Items C21	4.28	4.38	4.10	3.80	3.38	3.99
Management Supervision B11	3.26	3.99	2.98	3.38	2.26	3.17
Community Supervision C22	3.20	3.93	2.95	3.33	2.08	3.10
External Supervision C23	3.58	3.78	3.23	3.10	2.50	3.24
Internal Supervision C24	3.23	4.18	2.93	3.57	2.45	3.27
Management Assessment B12	3.60	4.15	2.38	4.00	2.25	3.28
Management Assessment C25	3.60	4.15	2.38	4.00	2.25	3.28
Management Performance A4	**3.58**	**4.04**	**3.35**	**3.60**	**3.34**	**3.58**
Heritage Protection Performance B13	3.34	3.92	3.24	3.51	3.33	3.47
Authenticity and Integrity C26	3.30	3.98	3.33	3.73	3.40	3.55
Quality of Heritage Resources C27	3.38	3.90	3.18	3.37	3.33	3.43
Congruence of Facilities C28	3.13	3.90	3.48	3.90	3.08	3.50
Economic Performance B14	4.24	4.41	3.99	3.62	3.23	3.90
Contributions to Local and Regional Economy C29	4.30	4.45	4.00	3.63	3.20	3.92
Employment Opportunities Provided C30	4.05	4.30	3.95	3.60	3.30	3.84
Social Performance B15	3.72	4.07	3.57	3.69	3.22	3.65

Criteria (A), Factors (B), Indicators (C)	Actual score					
	Lushan	West Lake	Mount Wutai	Hani Rice Terraces	Huashan Rock Art	Overall Average
Public Awareness of Heritage Value C31	4.03	4.33	3.78	3.70	3.45	3.86
Tourist Satisfaction C32	3.60	4.33	3.48	3.63	3.28	3.66
Community Attitude C33	3.55	3.83	3.45	3.70	3.05	3.52
Ecological Performance B16	3.65	4.08	3.20	3.67	3.45	3.61
Ecological Performance C34	3.65	4.08	3.20	3.67	3.45	3.61
Overall weighted score	**3.75**	**4.13**	**3.48**	**3.48**	**3.11**	**3.59**
Level	**Good**	**Excellent**	**Good**	**Good**	**Good**	**Good**

Figures

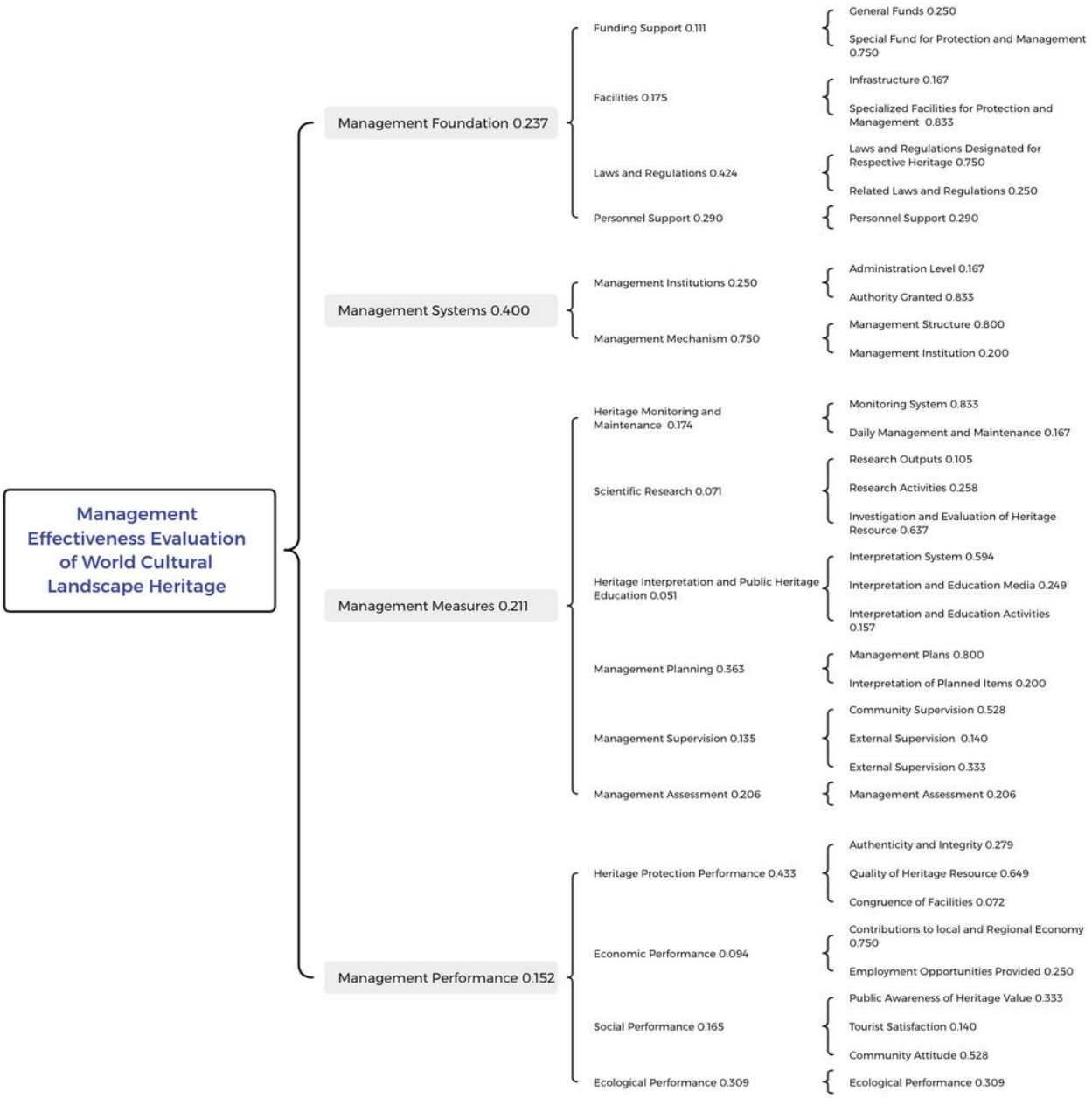

Figure 1

ME Evaluation System of WCLH