

THE ONLINE PRESENCE OF UNESCO WORLD HERITAGE SITES IN EAST, SOUTH, AND SOUTH EAST ASIA

JUNE 2016



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Introduction

The United Nations Educational, Scientific, and Cultural Organization, UNESCO, is a particular UN agency that encourages international peace and human rights by promoting and enhancing collaboration among nations through education, science and culture preservation. One of its main missions concerns the protection and preservation of World Heritage Sites, which is stipulated in the Convention on the protection of the world cultural and natural heritage, signed in Paris November 16th, 1972.

Such Convention stresses the protection and preservation of cultural and natural heritage of outstanding universal value. UNESCO, together with the member states, is committed to implementing the World Heritage Convention in order to identify, preserve and communicate World Heritage Sites, especially for the next generations.

World Heritage Sites (WHSs) consist of three major categories. Natural heritage, whose outstanding universal values emphasize superlative natural phenomena consisting of physical, geological and biological formations with exceptional natural beauty and aesthetic importance. Cultural heritage signifies the exceptional human masterpieces reflected on the buildings, monuments, archeological sites, ideas, beliefs and cultural traditions. Mixed heritage is a combination between natural phenomenon and the cultural values represented in a heritage site.

In order to reinforce the support and preservation missions of world heritage sites, the UNESCO chair in ICT to develop and promote sustainable tourism in World Heritage Sites presents a research on the online presence of UNESCO sites located in the 19 member countries of World Heritage Convention within the scope of South, East, and South East Asia regions. The main objectives of this research are (i) to provide a brief overview on WHSs' online presence; (ii) to depict their representation on specific social media systems; and (iii) to map the mobile apps devoted to them.

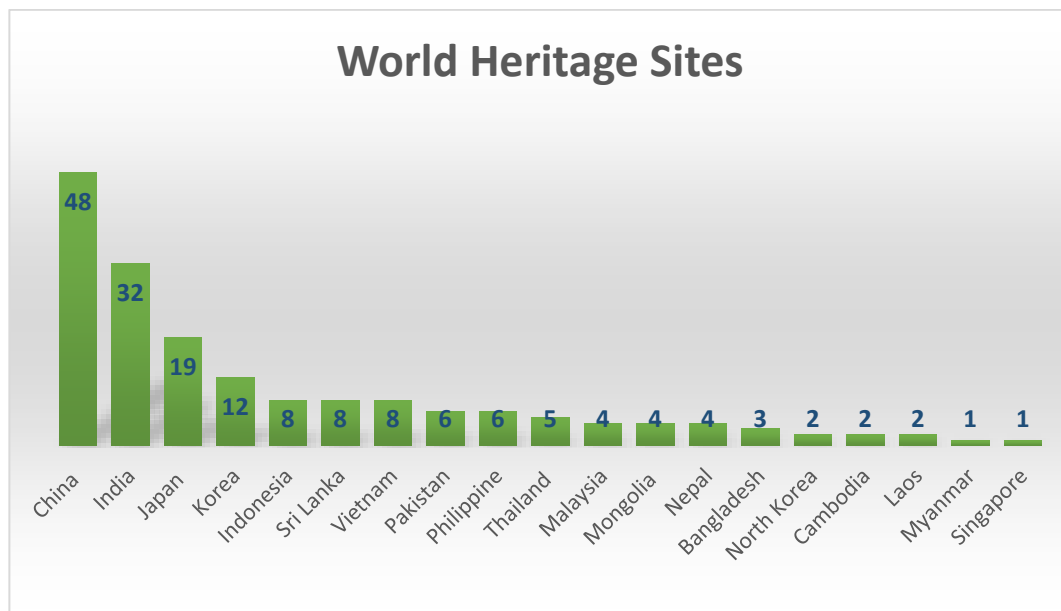
The cultural diversities and the splendid history of Asian nations have shaped extraordinary civilization traces characterized in the 175 World Heritage Sites in the Asian countries. It consists of 129 cultural sites, 41 natural sites, and 5 mixed properties. One of the natural properties has been enlisted as "in danger", while 2 properties have been cited as transboundary sites. The list of countries in each region, and of their WHSs is presented in table 1.

Table 1. List of countries and of their WHSs

Region	Country	World Heritage Sites		
		Natural	Cultural	Mixed
East Asia	China	10	34	4
	Democratic People's Republic of Korea (North Korea)		2	
	Japan	4	15	
	Mongolia	1	3	
	Republic of Korea (South Korea)	1	11	
South Asia	Bangladesh	1	2	

Region	Country	World Heritage Sites		
		Natural	Cultural	Mixed
	India	7	25	
	Nepal	2	2	
	Pakistan		6	
	Sri Lanka	2	6	
South East Asia	Cambodia		2	
	Indonesia	4	4	
	Laos		2	
	Malaysia	2	2	
	Myanmar		1	
	Philippines	3	3	
	Singapore		1	
	Thailand	2	3	
	Vietnam	2	5	1
Total		41	129	5

Figure 1. WHSs per Country



eTourism

ICTs have been extensively integrated within tourism – both the traveler’s experience as well as the related industries.

ICTs can be used at different levels to support an adequate communication of World Heritage Sites. IN particular, 5 major areas can be identified: (i) **Access**: widen access and raise awareness; (ii) **Better**: enrich the travelers’ experience once onsite; (iii) **Connect**: Increase ownership and promote interpersonal encounters; (iv) **Dis-intermediate** (some) relationships; (v) **Educate** travel & tourism players.

Research Focus

This study aims at analyzing the online presence of all WHSs situated in South, East, and South East Asia regions. It elaborates the online presence of WHSs according to websites, social media systems and applications for mobile devices.

Methodology

The research observation has been conducted for a two months period from mid-April to mid-June 2016 to generate results through three different stages. The objective of the study is to examine the diverse stakeholders who manage the websites covering WHSs, the number of social media accounts dedicated to them, and the online users participation in terms of likes and followers on social media platforms. The overall analysis contributes to enhance the understanding of how WHSs are portrayed online.

The first stage was to analyze the online presence of WHSs through organic generated results on Google. The searches were done on Google.com from Lugano, Switzerland. It was initiated by inserting WHSs English names retrieved from UNESCO List of WHSs (whc.unesco.org/en/list/). In certain cases, minor modifications were needed to generate relevant results. For instance “The Grand Canal of China” was used in Google instead of writing simply “The Grand Canal”. This was due to the fact that otherwise it would have overlapped with The Grand Canal located in Venice, Italy. After putting the official name of WHSs, all data presented on the first page of Google organic results were recorded for the next research step. It is important to note that such research did provide only English-written documents.

The second stage of the research analyzed the online contents and their respective publishers / communication senders. The aim was to classify the results into different categories in accordance with the purpose of the online content and the type of publisher (see Table 2).

Table 2. Categories of websites found as a result of the Google search

Categories	Examples
Encyclopedia	An informational resource containing articles on various topics. e.g.: www.wikipedia.org ; www.britannica.com
Research centers and museums	An institution that focuses on collecting and presenting heritage, and/or on pursuing and releasing information. e.g.: www.si.edu ; www.ancient-origins.net

DMOs and official bodies	Destination marketing and management organizations that contribute to tourism development in a destination. e.g.: http://itsmorefuninthephilippines.com ; www.indonesia.travel
UNESCO World Heritage center	The official UNESCO website dedicated to WHSs. e.g: www.whc.unesco.org
WHS ad-hoc websites	Websites specifically dedicated to a single WHS. e.g.: www.komodonationalpark.org
News & Media	A publication outlet or media that publishes news. e.g.: www.telegraph.co.uk
Online travel review	A website where individuals can write or comment about various tourist attractions and experiences. e.g.: www.tripadvisor.com
Individual blogs	Individuals's publications. e.g.: http://en.vietnamitasenmadrid.com ; www.worldheritagesite.org
Travel guides	A website containing different aspects of information about a destination. e.g.: www.lonelyplanet.com ; www.wikivoyage.org
Travel agencies & tour operators	A business that prepares and sells a travel package for travelers. e.g.: www.easytoursofindia.com ; www.travelchinaguide.com
Associations & foundations	Groups gatherings for a single purpose or for charitable reasons. e.g.: www.wmf.org ; www.wwf.org
Social media	A tool utilized to connect with others on the web. e.g.: Facebook / Twitter / YouTube
Tourism related info	Tourism related aspects that fall outside of the scope of previous categories. e.g.: Accommodation / Conferences
Other	Anything that is not related to tourism or to a WHS.

The last stage of the study was to investigate the presence of WHSs in social media and mobile applications. The social media platforms observed in this study were Youtube, Facebook and Twitter. As for mobile applications, the iOS and Android operating systems were utilized in order to examine the presence of mobile applications of the concerned WHSs.

Considering the local custom and different languages in most part of Asian countries, the research on social media was conducted using the following languages: English, Chinese, and Malay. Since Kanji characters (漢字) are considered as a typical Chinese written language as well as an element for denoting most nouns and site names in Japanese and Korean Languages, they appeared in most social media accounts created by users from East Asian countries such as Japan, Korean and China; while Malay language was mostly applied in the online content produced in the major countries such as Indonesia, Malaysia, Singapore and Brunei Darussalam in South East Asia. Thus, using these local languages helped to obtain deeper information to assess the online presence of their WHSs. The accounts/pages which were merely intended for business or tourism related services in the world

heritage sites were excluded. Those pages promoted tourism products and presented details of tour offers and their prices.

The first part of social media research focused on the exploration of Facebook accounts. A number of Facebook accounts using the name of the WHSs were examined to identify the official or unofficial pages, and the number of 'likes' presented on each page has been noted.

The second part of the research concentrated on recording the number of official channel designated to promote WHSs on YouTube platform, along with the auto-generated channels resulted from using specific keywords in the "search channel" panel. Since YouTube channels were also considered as a prime multimedia platform for promotion, the main idea of this study was to examine whether the WHSs were present on this platform. The Twitter accounts of WHS were analyzed by inserting certain key words (i.e. usually the name of the site followed by the origin country). For instance, "Kaziranga India @Kaziranga" was used to address *Kaziranga National Park* in India. Indeed, inserting the long official names copied from the list of UNESCO WHSs would have not produced satisfying results.

It is very important to underline, at this point, that the view presented in this report is mainly what might appear to an English-speaking international audience looking for online information/resources devoted to the concerned WHSs (with some exceptions when it comes to the languages, as indicated above). The very choice of the three analyzed social media systems – Facebook, Twitter, and Youtube – is fully motivated due to their international relevance, but excludes, for instance, the Chinese market, which has no access to them, and uses alternative platforms.

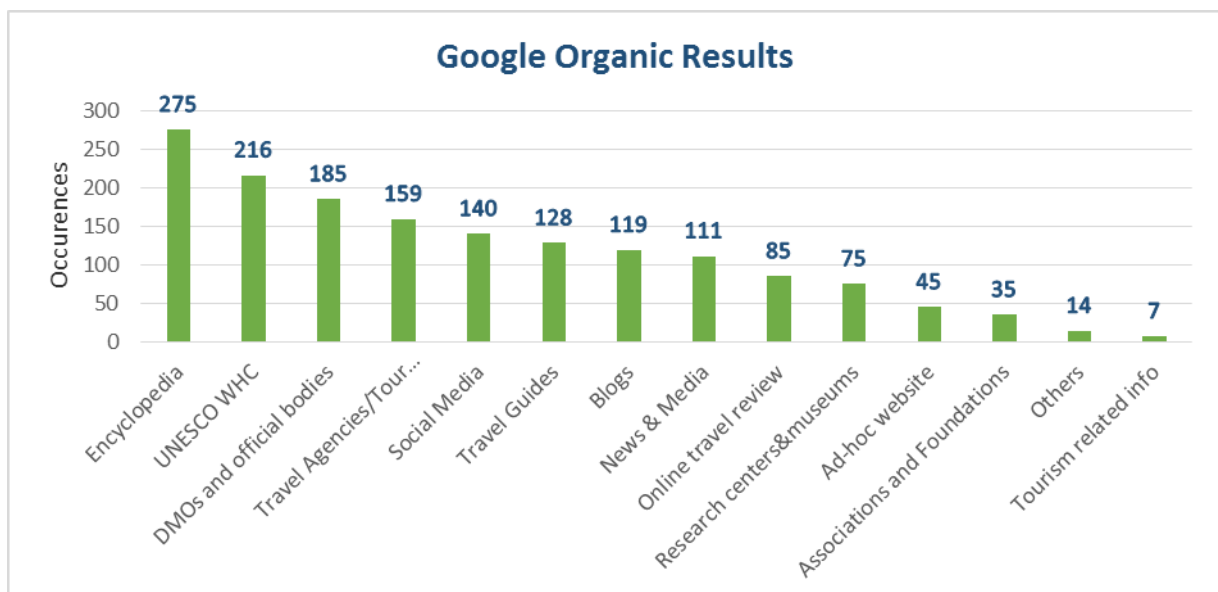
RESULTS

Websites' types

The study has investigated the online presence on Google of 175 cultural and natural WHSs spread across South, East, and South East Asia. The growing number of WHSs is bringing various stakeholders like government, Destination Management Organizations (DMOs), bloggers, national and international tourism actors to provide rich and updated information of WHSs on websites as part of their core product service. The present research analyzed 1,594 websites from the Google organic results to provide an overview of WHSs' online presence. The nature of these websites ranged from education to history, from travel information to tourism etc.

Figure 2 shows the total number of websites corresponding to each category used in the research. As shown in the graphic, *Encyclopedia*, *UNESCO WHC*, and *DMOs and Official Bodies* appeared as the most present types of websites. Among the results, the Encyclopedias (such as Wikipedia.com, Britannica.com, and www.newworldencyclopedia.org) registered the highest occurrence. These websites deliver a large scale of scientific and historical information regarding WHSs.

Figure 2. Types of websites covering WHSs



The intensive occurrences of websites managed by Asian *DMOs and Official Bodies* indicated the governmental support towards WHSs. The same tendency was also illustrated by the number of *Travel Agencies or Tour Operators* websites, as an attempt to invite travelers to the WHSs' destinations.

Despite the relatively lower occurrence in the study, websites of *Associations and Foundations* might play an important role in disseminating news and information about WHSs. Indeed, *Associations and Foundations* websites seem to address a wide variety of causes. For instance, *wwf.org* focuses on spreading awareness for environment conservation in certain natural WHSs such as *Ujung Kulon*

National Park in Indonesia, and *Sichuan Giant Panda Sanctuaries* in China. In addition to the environmental ones, other associations focus on religious communities, conservation, culture and tourism, which help facilitate sustainable development in WHSs. For instance, the website www.buddhanet.net administered by “Buddha Dharma Education Association & BuddhaNet”, is an example of website with religious purpose. Indeed, it aims at underlining the importance of “*Paharpur Buddhist Vihara*” WHS for its community; while www.shiretoko.asia shown in Figure 3 is an example of tourism association that operates in the WHS “*Shiretoko*” in Japan.

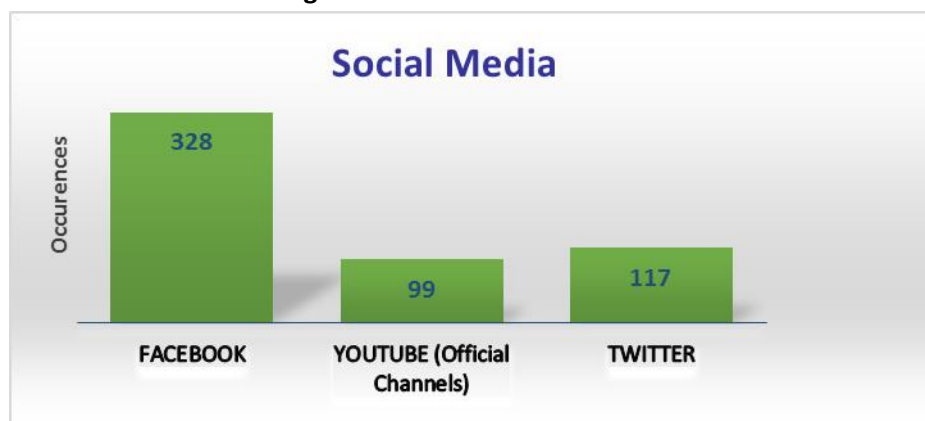
Figure 3. Examples of websites



Social Media

Results from this part of the study showed high occurrences of WHSs-related information on the three studied social media platforms – Facebook, Twitter, and YouTube. The accounts using non-English language were frequently found especially in East Asian countries. At this regard, it is important to mention that these localized accounts contribute to attracting domestic tourists as well as maintaining on-going communication with the followers. Despite this unique inclination, some English WHS accounts were set up for the purposes of increasing online visibility and reach a broader international audience. In some cases, on top of the pages, the accounts display both the English and local language name of the WHSs. Such decision is taken in order to make the online contents clearer to the visitors.

Figure 4. Social Media accounts



Facebook pages

The dynamic promotion of WHSs in Asia resulted in an impressive number of WHSs-related pages on Facebook. At least 328 Facebook pages consisting of 70 official pages and 258 unofficial pages related to the WHS were found through Facebook internal search engine (Figure 6). The official FB pages are usually run by ad-hoc institutions, DMOs and Associations dedicated to WHSs, whilst unofficial pages are usually created by individuals/groups who are concerned about WHSs. The number of “Likes” ranged from one single “Like” to relatively bigger numbers like 976’911 of “Likes” as found on the page of “*Taj Mahal*”, India.

In certain cases, some WHSs had more than one FB page that focus on different areas like education, tourism promotion, and information. In addition to that, a number of FB pages ranging from three to six were created to indicate monuments associated in a group of WHSs. For instance, the case of “*Historic Monuments of Ancient Kyoto (Kyoto, Uji and Otsu Cities)*” in Japan, “*Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining*”, and “*Seokguram Grotto and Bulguksa Temple*” in Korea. An example of localized page that employed 2 languages (English and Japanese) is presented by “富岡製糸場 @tomioka.silkmill” in Figure 5. It is an official FB account belonging to Japan’s Tomioka Silk Mill.

Figure 5.Examples of Facebook Pages

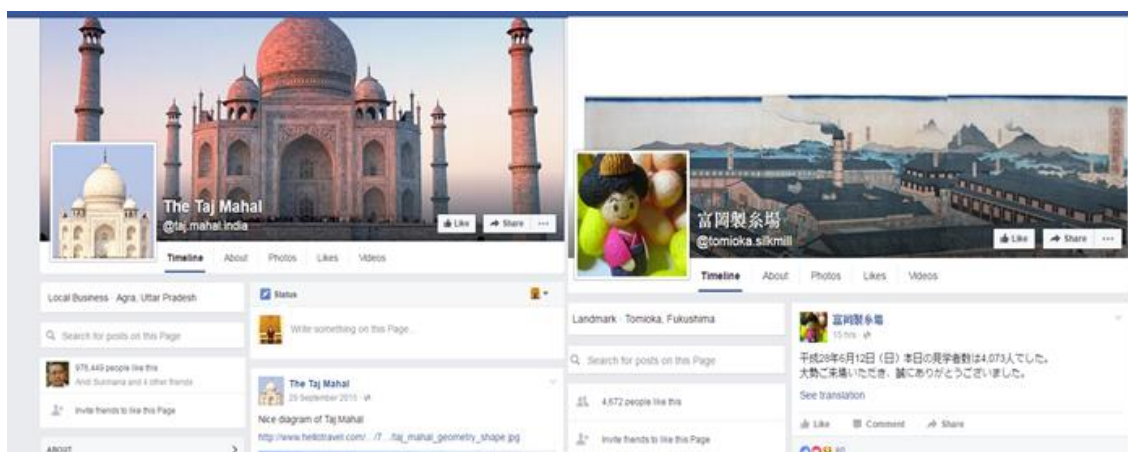
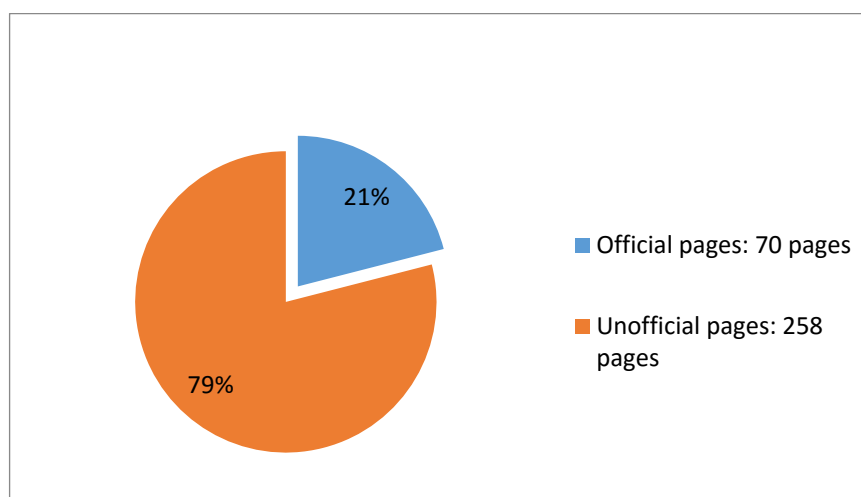


Figure 6. Official and Unofficial Facebook pages



YouTube

The study related to WHSs' online presence on YouTube was conducted by grouping the channels into 2 categories – the official channels and the auto-generated ones. The list of WHSs-related channels as well as the auto-generated ones were retrieved by inserting the official names of the WHSs in the YouTube search engine. The auto-generated channels are usually marked as “Topic” on top of the page, and consist of a collection of videos published by individuals, or other channels that match certain keywords in the query. The study narrowed the results by focusing on the consistency of the channel and its video content in relation with the purposes of the WHS. Findings pointed out that there were a number of WHSs that were still underrepresented or have no channels on YouTube. The related channels might appear on other online video platforms such as vevo.com, vimel.com, etc. Some Asian agencies were apt to create one integrated YouTube channel to combine all the WHSs along with other tourism attractions, as shown in the case of “one sri lanka”, “Vietnam Travel News”, “Visit Shandong”, and “UNESCO World Heritage in Korea”.

97 official channels represent 33% of all available 302 channels, while the auto-generated ones are relatively dominant with a total number of 205 (67%). Nevertheless, when subscribers are concerned, the official analyzed channels report 21’693 subscribers (89%), in comparison to 2’877 subscribers (11%) enjoyed by auto-generated channels.

Figure 7. Examples of WHSs' channel types in YouTube

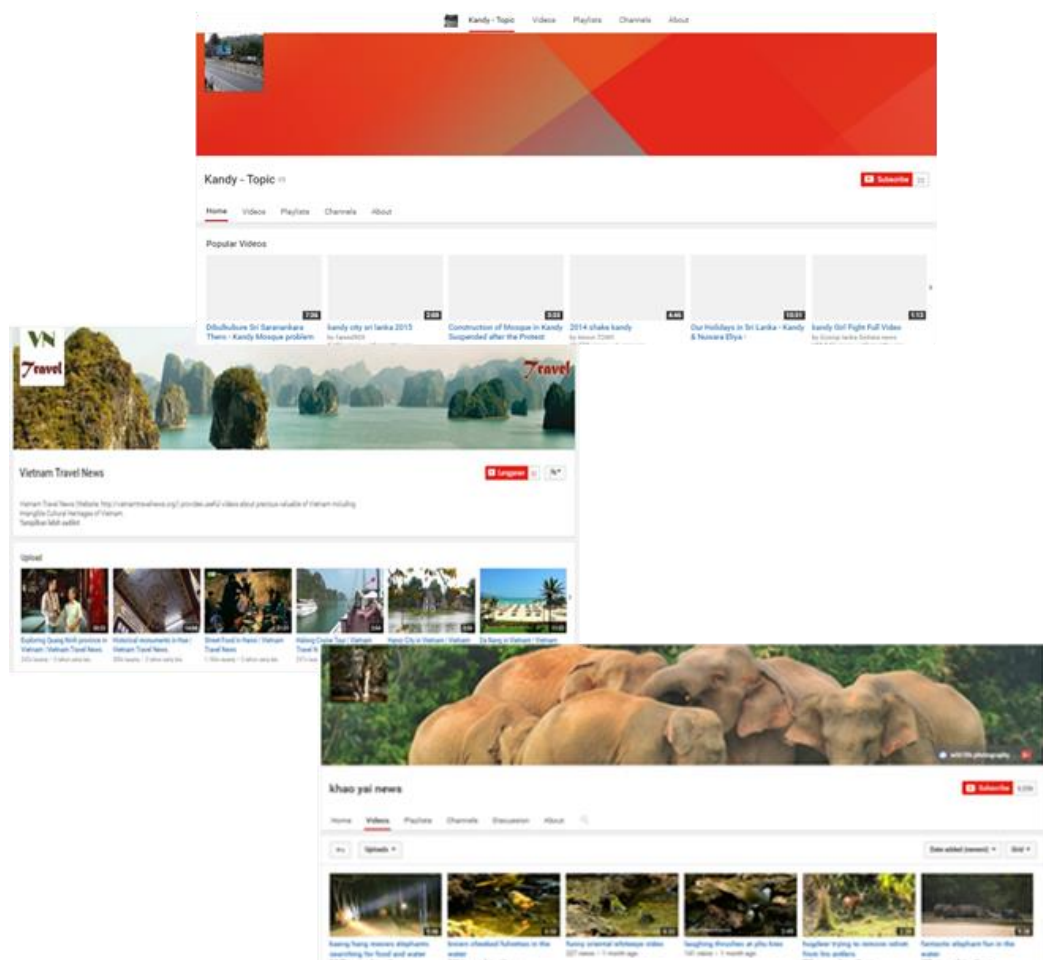


Figure 7 contains – among others – an example of an official channel: “Khao yai News” of *Thailand’s Dong Phrayayen-Khao Yai Forest Complex*, which presents the highest number with 9’569 subscribers, as of June 30th, 2016.

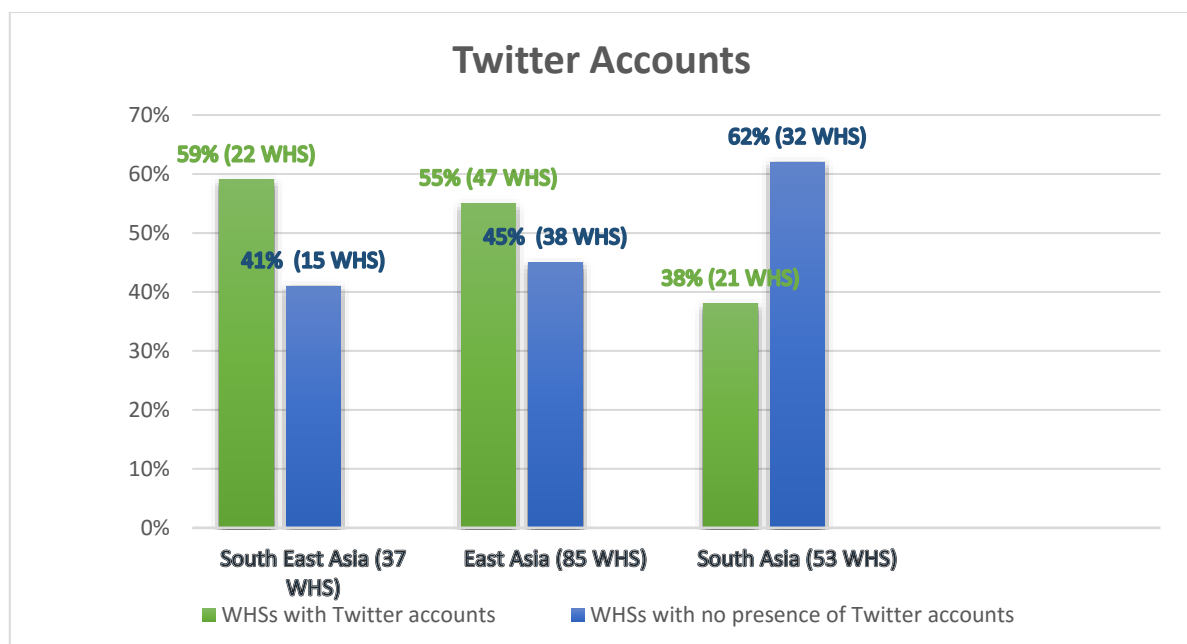
Twitter

The increasing interest of WHSs was also shown by the high number of WHSs-related accounts on Twitter. The research identified that 89 WHSs were present through 116 Twitter accounts with a total number of 307’645 followers. Account’s followers can range from below 10 to over 50’000. Indonesian WHS *Borobudur Temple* represented in the channel *Taman Wisata Candi@BorobudurPark* reports the highest figure with 76’100 followers.

The research also found numerous accounts with two languages in their profile name and hashtags respectively, yet the name of the WHS still remains in English. Such strategy was meant to help non English speakers to trace the accounts through the search engine. Examples of localized accounts are: *Konark Sun Temple @konarksuntemple* (*the Sun Temple, Konârak-India*), *知床自然センタ@shiretoko_NC* (*Shiretoko-Japan*), *中國武當 @ChinaWudang* (*Ancient Building Complex in the Wudang Mountains-China*), *남한산성@namhansanseong* (*Namhansanseong-South Korea*), *Generasi Subak @GenerasiSubak* (*Cultural Landscape of Bali Province: the Subak System as a Manifestation of the Tri Hita Karana Philosophy-Indonesia*).

Furthermore, the study found that at least 85 WHSs were mentioned on Twitter, but had no dedicated accounts. Figure 8 shows the percentage of WHSs with Twitter account in comparison with the total number of WHSs existing in each Asian region. The graphic bar illustrates that the Twitter presence of WHSs located in East Asia and South East Asia are larger rather than in South Asia.

Figure 8. Twitter accounts in each region



Certain managers of WHSs set up multiple accounts on Twitter for the purpose of channeling the users to different topics related to the WHSs, such as conservation, tourism guide, education, as well as to address those monuments associated to the WHS. For example, an account “Save Jeju Now @SaveJejuNow” is used for a campaign that aims at increasing the support for the protection of “Jeju Volcanic Island and Lava Tubes” in South Korea (Figure 9).

Figure 9. Examples of Twitter accounts



Mobile Applications

The study found that there were 144 iOS applications and 156 Android applications related to the concerned WHSs. Most of WHSs had one or two applications, however, there were certain WHSs, such as Historic city of Ayutthaya-Thailand, Angkor-Cambodia, The Great Wall-China, Historic Monuments of Ancient Nara-Japan, and Taj Mahal-India, that had from six up to ten related mobile applications on iOS and Android platforms. The research also identified that there were 64 WHSs which had no application presence, neither on iOS nor Android, yet those sites were present in integrated tourism apps combined with other tourism destinations. These applications were in a form of city guides apps, world heritages apps, tourism apps that contain all WHSs, and tourism related information, e.g.: Sri Lanka Travel Guide (Figure 12).

Figure 10. Mobile Applications Covering WHSs

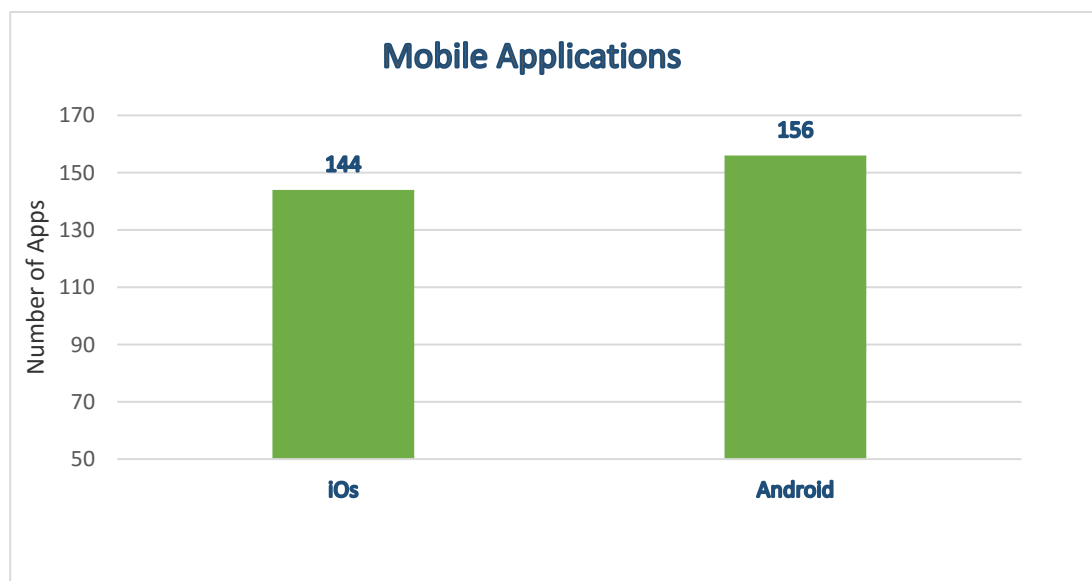


Figure 11. Android apps examples (Chitwan National Park-Nepal and Summer Palace-China)

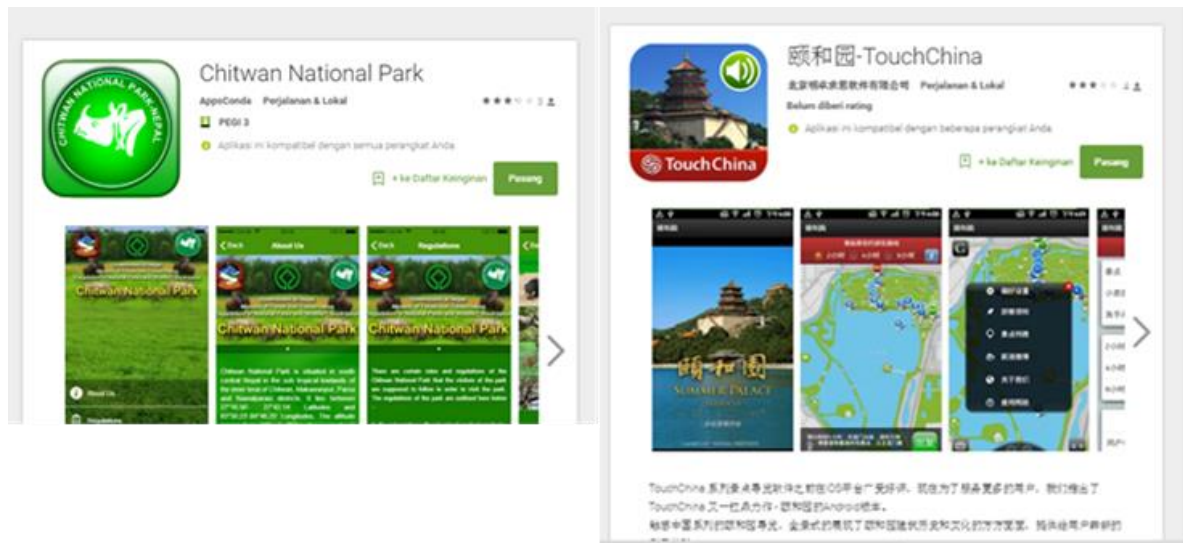
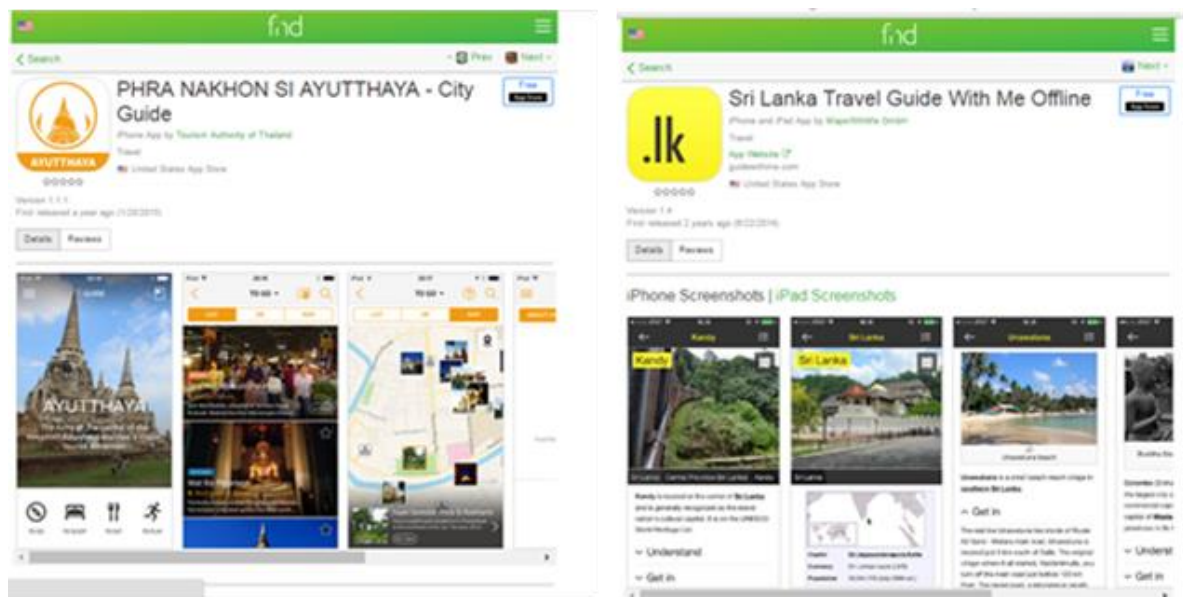


Figure 12. iOS apps examples (Historic city of Ayutthaya-Thailand and Sri Lanka Travel Guide)



Conclusions

An extensive research has been carried out in order to analyze the online presence of 175 WHSs on websites, mobile applications, and social media platforms. A number of 1'594 websites were collected from Google organic results. Those sites contain a wide range of WHSs-related information. The three highest occurring website types are *Encyclopedia*, *UNESCO WHC*, and *DMO's and official bodies*. Even though *Travel agents and tour operator*, *social media* and *travel guide* types of websites appeared as other main WHS information suppliers online, however there is also an indication that the websites managed by some Association and Foundation serve as important information sources in certain WHS. We might test it again in additional research in the next few years to observe whether this kind of websites is growing or not.

The high intensity of online presence in YouTube, Facebook and Twitter shows a growing interest towards WHSs by Asians communities and globally. Governments and appointed managers of WHSs could respond to this increasing trend by improving their online communication and promotion. In terms of social media, since the number of unofficial pages in Facebook is 3 times higher than the official ones, sites managers and DMOs are encouraged to pay attention on the occurrences of unofficial pages created for WHS by online users. The YouTube official channels as WHS promotion channels can be considered as a prime multimedia source. Hence, this multimedia platform could be better optimized by creating more official channels dedicated to WHS in order to increase the visibility and the promotion of the WHSs. More Twitter accounts could be created in an attempt to improve the presence of WHSs and reach larger online communities. The topic of the respective accounts may not necessarily be limited to tourism information, but it can be diversified based on other customized topics, as shown in some examples in this research.

It might be also recommended to develop more applications dedicated to WHSs for mobile devices with the intention to enrich tourists' experiences while onsite, and to contribute to the safeguarding and protection efforts of WHSs.

These strategies aim at improving the visibility of WHSs online as well as at strengthening the efforts to raise awareness and to spread out messages about their outstanding universal value.

Contributors



Puspita Ayu Permatasari, Indonesian, is completing a Master in the field of Management of Cultural/Natural Heritage and Tourism at IREST-University of Paris 1 Panthéon-Sorbonne (France). She obtained a Bachelor degree from the Department of Chinese Studies, University of Indonesia. Her research interest is related to the preservation of intangible cultural heritage and the marketing of tourism destinations. In 2016, she has been a visiting researcher at the UNESCO Chair in ICT to develop and promote sustainable tourism in World Heritage Sites at USI – Università della Svizzera italiana (Lugano, Switzerland).



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The **UNESCO Chair in ICT to develop and promote sustainable tourism in the World Heritage Sites** has been established at USI – Università della Svizzera italiana in 2013. The Chair is committed to perform extensive research and teaching on how digital technologies can be effectively used for development and promotion of sustainable tourism at the World Heritage Sites. Furthermore, the chair attempts to facilitate the flow of best practices and state-of-the-art information among WHSs when it comes to online communication and presence.

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