Towards a harmonious development between nature and culture on Walisanga religious site, Indonesia – learning from the best practices in Japan

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Abstract. Nature and culture are elements that play an important role in the development of a place. Sites of Walisanga spread all over Java since in 16 century. Muslim communities respect respect for these sites. These sites have become an attractive destination of religious tourism on the North Coast of Java. Some of these sites are very close to nature and as a part culture. Shinto shrines and Buddhist temples in Japan are the examples of the master pieces of indigenous architecture which are still maintained very well. The Japanese religious sites with the beautiful architecture and landscape in the culture format have been successfully attracting tourist from all over the world. This paper aims to determine the potency and problems associated with the development of spatial harmony between the nature and culture on the Walisanga religious sites in Indonesia by conducting a dialogue with best practices cases in Japan. This study used descriptive analysis methods. The result showed that, there are similarities between Indonesian and Japan in treating cultural heritage assets. Indonesian government gives quite significant roles to public to participate in preserving cultural heritage. Japan government has given support through the modern technology and funding, assets registration, maintenance and protection, and the assets management. Creating the harmony between nature and culture is necessary to enhance performance, facilities and infrastructure.

Keywords: nature, culture, religious sites, heritage culture.

1. Introduction

Globalization views the world is a big market, as the consequences the global expansion affects in: economic, social structure, and the built environment change [1]; [2]; [3]; [4], creating both of place and non-place [5]. Effort to strengthen the local place is required against the global expansion [6]; [7]. With that way the city identity will be stronger and the tourism benefit will be stronger too [8]. Walisanga in Indonesia are known as nine (9) saints who dedicated their life to spread Islam in Java in 14th century to 15th century. This era is the transition period from Hinduism to influence of Islam. This influence appears from the artifacts found showing mixed concept between Hinduism and Islam [9]. Nowadays the sites of Walisanga are regularly by thousands of pilgrims every day. Some of the interesting sites are in East Java Province, particularly in Surabaya and Gresik. In Surabaya, the site is located at the relics of Sunan Ampel. The Sunan Ampel Mosque was built together by Sunan Ampel and his students in 1399 in the era of Brawijaya-V King of the Majapahit Kingdom. In Gresik we can find Sunan Giri sites who which was the students of Sunan Ampel. He established the
independent sultanate of Giri Kedaton and further became the centre of Islam propagation in Java and eastern Indonesia. Both of complexes are also complemented by Muslim community, who have for lived hundreds years.

In the global era where everything is considered as a market, one needs to dig deeply to improve its potency to appeal the market. And in the case of Indonesia, a country with rich historical and cultural backgrounds, one of these treasures is the urban heritage. Walisanga is a well known urban legend. So sacred that the sites was famously known to keep host relics of the saints that are considered sacred and visited by millions of pilgrims each year. This is the potency that needs to be reviewed and developed. The sites invite people, the people invite business opportunities, the business opportunities invite expansions, and the expansions demand developments. However, these developments are far from accommodating since most of them are done with limited resources. The purpose of this study is to determine the application of the principles of socio-cultural balance and natural balance in the practice in the Indonesian religious sites development particularly of Sunan Ampel and Sunan Giri and makes a dialogue with the best practice cases in Japan namely which are Todaiji and Toji Temple.

The study used descriptive analysis methods supported by collecting of primary data and secondary data. Comparative study method was used to find the causes and effects of spatial design of religious sites in Indonesia through the best practice of religious sites in Japan complete with the concept of harmonious in culture and nature. The research focus in Indonesia included: (1) Sites of Sunan Ampel in Surabaya, which is the oldest of sites Walisanga, (2) the site of Sunan Giri in Gresik, the sites which was established sultanate of Giri Kedaton. Meanwhile, the religious sites in Japan included: (1) Todaiji Temple in Nara, and (2) Toji temple in Kyoto. The existence of Walisanga is widely known and has become the Javanese urban legend. The sites are spread all over Java, such as in East Java Province like Surabaya and Gresik, in Central Java Province like Kudus and Demak, and in West Java Province like Cirebon. There have been a myth among local inhabitant, that pilgrimage religious on Walisanga sites equals to the Haj pilgrimage activity in Mecca. While Todaiji temple is a Buddhist temple sites that was one of the 7 major temples in Nara. There is the biggest Buddha Vairocana in the world made of bronze and known as Daibutsu by the Japanese. This temple was also intended to honor the messenger of Shinto religion called the Deer which was believed to have ventured the earth. Toji temple is the centre of Buddhist learning in Shingon which preserve many excellent art. Both of temples are objects of World Heritage.

2. Result

2.1. Religious Sites of Sunan Ampel and Sunan Giri in Indonesia

Sunan Ampel site is located in Ampel Sub district in Surabaya, near Ujung Galuh port. This land was a gift from King Brawijaya V. Sunan Ampel built his first pesantren (Islamic dormitory school) and settled down with his students in this area. Handled by Walisanga, Islamic teachings were spread throughout the nation and to surrounding countries, such as Java, Kalimantan, Sulawesi, Ternate, Tidore, Ambon, Philippine, and Brunei [10]. Sunan Ampel Mosque was built in 1339 and was renovated and reconstructed several times: the first time was in 1926 by Regent R Aryo Niti Adiningrat (22.7m x 20.55m), then by KH Manaf in 1964 (50.7m x 50m), and lastly was extended to 11m x 120 m. The mosque was designed with a Javanese architecture: its roof was a three-tiered canopy roof (similar to Hinduism’s meru buildings). The roof was rested on a soko guru (main column) located right in the middle of the building. The wood was also believed to have a special spiritual function. Aside of having marble flooring, the mosque also has a cylinder minaret with cone-shaped roof. The shape of the minaret is a reminiscence of a lighthouse and it is used to broadcast the adzan as a call for prayers.

In this area, there are several historical artifacts from Sunan Ampel (see Figure 01), which are: (1) the cemetery which consists of the tomb of Sunan Ampel, his family and friends, religious leaders, and others, (2) the ever-flowing freshwater well among brackish water inside the mosque, (3) cauldron for the freshwater to drink and to do ablution, (4) the entrance towards the cemetery, consisting of 5 different gates symbolizing 5 pillars of Islam, (5) mighrab (desk for preachers) of Sunan Ampel.
Sunan Giri was the ruler of Giri Kedaton (1487 – 1517). Parts of the Sunan Giri cemetery site are: (1) Parking area in the lowest level, built in 2012, (2) staircases connecting the lower and the upper parts of the cemetery, (3) the first gate in the shape of a split candi bentar (see figure 02), (4) the walls surrounding the cemetery, creating boundaries for several cemetery terraces, (5) the cemetery cupola in a joglo roof shape, surrounded by other cemeteries, (6) Kala statue above the entrance gate and dragon head statue guarding the front of candi bentar, showcasing the influence of Javanese, Hinduism, and Chinese cultures, (7) the gate in the shape of the split candi bentar signaling the entrance to a holier space.

2.2. Religious Site Todaiji Temple & Toji Temple in Japan
The beginning of the construction of the temple was in 728 AC when Shomu Emperor implemented Kinshoen-ji (Todaiji’s early name) as the resting place for Prince Motoi. The Prince passed away a year after his birth. Inside the Todaiji Temple complex are several buildings with complementary functions, but the main building is The Great Buddha Hall as the place of Buddha Varoicana.

Important buildings in this temple are: (1) The Great Buddha Hall, which is the main hall with the largest wooden structure in the world (50.480 meter long, 57.012 meter wide, and 48.742 meter tall), (2) The Bell Tower, (3) The Great South Gate (Nandai-mon), which is the main gate of Todaiji with 18 giant pillars supporting a 21 meter roof and the structure elevated 25.46 meter above the stone foundation, (4) Nigatsu-do, also known as Second Month Hall because it is used to do rituals every second month on the lunar calendar, (5) Kaidan-in, a baptizing hall having the yard reconstructed during the Edo era, (6) Tegai-mon Gate, a lavish gate with eight pillars and the only 8th century structure left of Todaiji, (7) Daibutsu statue or the Vairocana Buddha, and (8) Nara Park, a public park formerly used as a private park in the base of Mount Wakakusa. This park was erected in 1880.

2.3. Toji Temple Kyoto
The name Toji which etymologically means ‘East Temple’ is still well preserved until today [11]. The main building was destroyed by earthquakes and fire, but it has been rebuilt to preserve its original layout and architectural style. Many excellent arts are stored in the temple, such as statues, carvings, paintings, and others. Kukai Monk in 816 AC initiated a religious community in Mount Koya as a place to meditate and then Kukai was entrusted by the king to manage the country’s temple, which was Toji. He also started the first private school in Japan. Kukai was one of the most prominent religious figures in Japan’s history. He was also known as a scholar, calligrapher, and educator. In 823 AC, Emperor Saga gave an award to Monk Kukai and gave him the temple.

Several supporting buildings in Toji temple are: (1) the Five Story Pagoda, which is 54.8 meters tall and is the tallest wooden tower in Jepang, and it is now a city icon, (2) the Kondo (main hall), which has hosted the Yakushi statue since 1903, (3) Miedo, which is the hall that was built as a dedication to Kukai or Kobo Daishi, and, (5) Flea market (Mieku)

3. Discussion
3.1. The Government Policy
Cultural heritage in Indonesia is protected by the 1945 Constitution of the Republic of Indonesia article 32, in which the country is responsible in elevating its people’s prosperity and in positioning Indonesia in equally among other nations of the world. The cultural heritage itself according to constitution no 11 year 2010 is defined as something used for improving people’s prosperity, while public has responsibility for their preservation. Moreover, the preservation efforts must allow development and utilization for people and their environments, and the government has a role in providing preservation leverage. Indonesian government manages cultural heritage buildings by registering and giving them national, provincial, and regional ranks.
Figure 1. Clockwise: The plan of the site Sunan Ampel, (1) the original mosque relics of Sunan Ampel, (2) the new mosque, (3) the wooden forty-eight doors of original mosque, (4) the row of brick columns supporting inner and outer the original mosque, (5) the teak-wood sixteen poles 17 meters high without any connection supporting the original mosque roof.

Figure 2. Left: The first gate in the shape of split candi bentar, newly constructed built by the government. (Image source: http://www.emakmbolang.com/2015/08/menapak-jejak-wali-songo-di-kota-gresik.html) Right: The cupola, with a joglo design and low ceiling.
In Indonesia, cultural heritage protection is not only about conservation and restoration, but it also about the development of information, education, and tourism. Walisanga’s religious sites are the part of the cultural heritage sites protected by The Act No. 11/2011, but the implementation is still weak. For example, in Sunan Giri’s site, the restoration done in 2012 has changed the structure of the staircases, from 100 staircases to only 52. This is a carelessness should not be done to a cultural heritage building.

Japanese Government classifies their cultural heritages into two groups: (1) intangible assets, and (2) tangible assets; and both are protected by the acts of cultural resources. The government implements various necessary steps in order to preserve and utilize their cultural resources. Tangible assets are protected through preservation and protection from natural disasters and acquisition. Intangible assets are protected by the available subsidy for training programs for the cultural sustainability. Japan’s registration system for conserved buildings includes moderate steps for protections. Based on the amendment of the 1975 Act about Cultural Heritage Protection, a system of “Preservation that are for traditional buildings” made to protect historical cities, cities and villages in Japan – including fort cities, postal cities, and cities built around temples and shrines. Additionally, Cultural Affair Office provides monetary support for city projects such as restoration, façade improvements, and disaster mitigation to preserve the area.
There are similarities between Indonesian and Japan governments in treating cultural heritage assets. However, there are several things to be emphasized. Indonesian government gives a quite significant role to the public to participate in the preservation of cultural heritages. It seems to be a good step, but needs clear policies to regulate the rights and responsibilities of both the public and the government. One thing to notice is not to give too much control to the public that it will hinder the government from releasing their policies. Japanese government has more supports from modern technology and funding for activities like the registration of the assets, maintenance and protection, and the utilization of the assets. Law enforcement in the form of rewards and punishments is needed to motivate the public to care about the cultural heritage. The regulation of classifying traditional buildings areas is enforced to assist the operation of cultural preservation.

Todaiji Temple is included in UNESCO’s world heritage as “Historic Monuments of Ancient Nara” with 7 other sites in Nara. Todaiji is also one of Japanese National Treasures included in the List of Cultural Properties of Todaiji. Architectural works that are classified as National treasures include Daibutsuden, Nandaimon, Kaizan-do, Shoro, Hokke-do, Nigatsu-do, and Tegamon. Todaiji temple itself is the biggest wooden structure building in the world. This building has witnessed the historical political and cultural changes about religion and life in Japan’s capital during the 8th century (710 – 784). During this period and after the capital was moved from Nara, this area was consolidated by the national government. Restoration has been done to these monuments since the late 19th century after the implementation of the Ancient Shrines and Temples Preservation Act in 1897.

3.2. Socio-Cultural Aspects

Social-cultural relations in which the positive aspects of disparate cultures are valued and promoted and there is widespread participation of citizens not only politically but also socially in all areas of urban life environment [12]. According to Jonge (1998), tradition of pilgrimage in Sunan Ampel was conducted with Islamic prayer. This is done by thousands of people every day [13]. People believe that he is a holy figure who can give blessings, fortunes, as well as ranks and position. The same activities are done in Sunan Giri’s site and in other Walisanga sites. In both Ampel and Giri sites can it be found traditions done by the public such as prayers done by thousands of Muslims every day, congregations every Thursday evening in both of the mosque of Sunan Ampel and Sunan Giri done by hundreds of visitors, Tarawih prayers done in every Ramadhan month, reciting Quran, night meditation, and any other religious activities.

In Todaiji, rituals are done involving the monks and temple officials, but visitors are only observers. Visitors are only welcomed to participate during certain events, such as the Taimatsu. Rituals are only done after the sunset from the first night to the last. 6 to 8 meters giant torches long are lit in the balcony of Nigatsu-do above the crowd. The cascading sparks and the burnt coal are what the crowd awaits. There is belief which says if there are many sparks; the whole year will be safe and prosperous. If one of the visitors caught the sparks, they will get plenty of harvest and prosperity.

In Ampel, cultural and religious rituals are merged. Visitors are active contributors. In Giri, the people are also the actors in the rituals. There are similarities of purposes of these rituals in Indonesia and Japan namely to get blessings and prosperity. In Ampel and Giri, these rituals are done modestly, showcasing the social cohesion among the actors and the public participation. Here people come because they want to participate in the tradition as a good member of the community. Meanwhile in Todaiji, a lot of the visitors come to watch the show and enjoy celebration.

Physically, the elements found in both of these sites are:

i) Cemetery is one the last resort of the Wali, and their friends and families. The original form of Sunan Ampel cemetery is rectangular and has two-tiered tajug roof, an adaptation of Hindu’s meru shape.

ii) The mosque is the almost original mosques built by the Wali can be found in Sunan Ampel, Sunan Kudus, Sunan Kaijaga, Sunan Bonang, Sunan Gunung Jati, and others. In the Sultanate period, many mosques were believed to be founded by Wali [14]

iii) Gate as a landmark is considered sacred. In Sunan Ampel Mosque there are five split candi bentar gates symbolizing five pillars of Islam Meanwhile in Sunan Giri site, a gate in the shape of split candi bentar was made of red bricks. This type of temple can be found a lot in the
remains of Majapahit kingdom and in the minaret in Kudus, and recently in Hindu temple in Bali.

iv) Statues do not always present, but at the Sunan Giri site are two dragon head statues in front of the gates. During the Hindu and Buddha era, statues were used as a symbol and a media for communication. After Islam came, this culture was faded due to the clash with Islamic teachings. Apparently, Sunan Giri still held influences from the Hindu and Buddha cultures and used the surrounding culture to spread Islam.

v) Wells or water springs are considered as the sources of life and related to holiness. Ampel has a freshwater spring inside the mosque, which is unique since the site is surrounded by brackish water. Water is considered a blessing, as the source of life and the media for ablution. Similar to the zam-zam spring in Mecca, this water is sought by the many visitors.

vi) Spaces for economic activity are spread in several strategic locations. In Ampel the businessmen of local people from Arabic and Madurese descendant sell Middle-Eastern praying tools which earn the name “Little Persia” for the place. Meanwhile in Giri, businessmen come from both the local people and the surrounding citizens. In both sites appear that the creative economy are less creative, it needs to encourage the local potential resources like leisure activities, clothing & culture, indigenous traditions of public life, or intellectual traditions that can be used to express the specialness of a location, although in Giri little more developed than its counterpart Ampel [15].

Viewing the elements that are compared in both sites (Ampel and Giri), there is the existence of local cultural products which becomes the symbol of transition towards Islam from the previous Hindu and Buddhist cultures. The architecture can be found in the two-tiered tajug rood and the gate shaped as a candi bentar. Tajug is an adapted shape from Hindu/Buddhist culture to Islamic culture. This is the Islamic – Javanese wisdom that teaches tolerance and inherits it to the next generation. The mosque was constructed with woods supported by 16 pillars. These mosques are a symbol of an egalitarian Islam. The existence of the five gates in the Sunan Ampel site is a symbol of the Pillars of Islam and the creative economy activities. The principles of preserving tradition and local culture are strengthening both from the tangible and intangible aspects in which [16] called it the social intensive space, a space in limited area used for many activities frequently done and qualified activities experienced by people [16]. The activities include (1) socio-cultural activities, religious activities, and economic activities. The social intensive space has been found in both Ampel and Giri sites.

Todaiji also uses original natural elements such as trees, rivers, valleys, and fauna (deers) as a unity with the temple that creates wonderful scenery. The temple buildings with their architecture peculiarity of Japan's woodwork are also spectacular, unmatched buildings, even for today. Meanwhile Toji temple uses elements like water, stone, trees, and air in their Japanese garden, temple buildings, and the world’s tallest wooden pagoda. Both Todaiji temples and Toji Temples are spectacular works of genius loci. Todaiji temple has maintained its tradition of routine reconstructions. The buildings' shapes, structures, designs, materials, tradition and technicalities are preserved exactly like the original. Japan has proven that the changes in reduced size elements can still respect the materials and technicalities of the original buildings.

A flea market is held in Toji Temple on 21st month to remember the death of Kobo Daishi Monk. This is a traditional bazaar which also serves as a media to socialize. Many craftsmen come from the surrounding cities of Kyoto to participate in this event. This event is also an attraction for the visitors of Toji Temple. Various handmade crafts are sold, such as paintings, kimonos, accessories, gifts, traditional foods, and many others.

Observing the behavior of the thousands visitors performing rituals/prayers both in in the cemetery or in the mosque, according to Pangarsa, shows that there is a rotation of energy in this place which is able to drive people to do something [17]. In this context, this space is able to move visitors to do activities such as praying, using the freshwater in Ampel while praying for blessings, expecting blessings from the religious leaders, doing charity, and others. In other words, humans establish communication with God or with the mystical existence of Sunan Ampel as a holy figure who possesses special blessings with the hope that their wishes will be realized.

Meanwhile the place created in Todaiji is one of the Historic Monuments of Ancient Nara and as the remainder of the 8th century. Todaiji is one of the 8 historical places in Nara’s Old Town. Todaiji
Temple itself is Nara’s icon, and is a fusion of different wooden buildings with Japanese architecture, open spaces, visitors, and roaming deer.

3.3. Aspect of Balance with Nature

Natural balance emphasizes two things: how to use natural resources and how to exploit it [18]. Over-exploitation will cause natural deterioration, land erosion, aquifer depletion, river swallowing, flood, and all these disasters will be counter productive for the urban development.

The natural elements in Ampel are lowlands around 0.5 meter above sea level, close to the beach. The land around Ampel is alluvial ground from the coast sediment. The city of Surabaya is generally safe from earthquakes or volcanic threats. The site is passed by Kalimas River, originated from Brantas River in the west and Pegirikan River in the east. This has made the region a strategic location since the earliest development period. River is always considered the source of life: drinking water, irrigation, water for rituals, and transportation medium. Moreover, Ampel in Surabaya is part of North Java coast that should concern the rise of sea level globally. This incident is not only due to global circumstances, but also the unbalanced development with the environment, such as the construction of industrial areas, ports, and housings [19].

Ampel is located in Semampir sub district along with 8 other sub district surrounding in the waterside area of Surabaya, with total area of 15,382 ha. Among the nine sub-regencies, Semampir has the highest population density (176,726 in 2013 with 876 ha total area), which is 202 person/ha. The waterside area is almost constantly flooded by the high tide [11]. The tendency of the water to rise constantly is a threat to the industrial complexes, housings, and the waterside tourism. Generally this condition will also harm Surabaya’s economy. So Suprijanto (2003) emphasized the importance of its anticipation by rising dams and water pumps in order to conserve the vital activities in this area, especially in Ampel, such as housing and tourism [19].

The whole environmentally friendly development needs to improve the area. On the other side, an effort of environment management needs to be done to the already built environment. Retention pools are needed to control flood, especially in areas with heavy flooding. Creating a green environment also needs to be done, especially in kampong or villages with high population density. Giving pedestrians proper facilities to access nearby housings and the religious sites can help to reduce carbon emission from motor vehicle. Visitors and the public should also be motivated to love the environment by trashing properly, reducing the use of plastics and Styrofoam, and participating actively in maintaining and conserving the environment, because when the public is participative, all efforts to maintain environmental balance will be easier to execute.

3.4. The Aspect of Land Use

Administratively, Ampel is located in Ampel sub district. This site is surrounded by settlements for Arab descents that have lived in the area since the implementation of ethnical centralization during the Dutch invasion (1841). This settlement has the characteristics and patterns of Muslim settlements [19]. The linear pattern of the settlement follows the street networks and the houses are street-oriented. Cul-de-sacs are organized from the labyrinth arrangement and the complicated street networks, which consist of several connected alleys. The mosque is the centre of the orientation. Streets and roads have hierarchy where labyrinth alleys lead to bigger roads. One of the important alleys is Ampel Mosque alley because it has been turned into a well known shopping street named Pasar Guba.

According to the data in Ampel sub district, the area comprises of 29 ha, including 2.5 ha (9%) for settlements, 5 ha for offices (17%), 2 ha for business area or shops (7%), 5 ha for industrial area (17%), 10 ha for public facilities (35%), and others including green space, blue space, and other open spaces amassing 5 ha (17%). Open green space percentage is still below the 30% standard. This will cause the depleting of water absorption area which eventually could damage the ecosystem. If this condition is not treated well, this historical site could be under threats of flooding. The area has 21,873 population in 2014, which means that it is considerably highly dense (754 person/ha). There are few open spaces in Ampel, specifically those which are visible in the site and Kalimas River. Building density is high to provide the increasing businesses and housings inasmuch as Ampel is located in a strategic downtown area. There are also open spaces in the northeast of the site, but these are used as parking areas. Open spaces developments are spontaneous; they are not well planned, not properly managed, and not integrated with the site.
Todaiji temple is located in Nara’s modern city, along with the other 78 historical buildings, comprising an area of 617.0 ha which is surrounded by a 1,962 ha area as the buffer zone and a 539.0 ha area as the zone of history and environment harmonization. Todaiji temple is located inside Nara Park which was a previously private public part in the base of Mountain Wakakusa and constructed in 1880. The materials used are cypress, tiles & stones. They avoid the traditional method, demolishing and building the new one, because they aware to conserve the forest. This timber temple was well constructed, so that it can last for long periods (chrispythoughts.wordpress.com). Forest and trees in Japan have significant roles to preserve the nature, so they should be protected and conserved as a heritage [21]. Nara Park is one of the most beautiful places awarded by the Ministry of Education, Culture, Sports, Science and Technology. More than 1,200 Shika deer roam freely in this 502 ha park. The park includes Todaiji, Kofuku-ji, and Kasuga Shrine, where all of them are included as Nara city’s natural resources. This park is open to the public, so it can now complement the temples inside it and can be accessed by visitors. Inside the park is also ‘Chaya’, traditional Japanese building which serves tea and wagashi. The existence of Nara Park as the well managed city’s lung is mesmerizing because of its natural resources, botanical resources, as well as the deer and the temples. Deer are believed to be messengers in the Shinto teachings. Nara Park is considered as the symbol of the city and the national heritage, so its existence is protected and preserved by the government of Nara Prefecture. The existence of Nara Park, not only keeping the balance between natural environment and built environment, but also being a buffer zone for Todaiji site and the surrounding sites and to reducing the environmental burden of those sites. Land use and space management by dividing visitors attention to not only focus on the main spaces is urgently needed both sites is order to protect the main spaces and to develop the buffer zone.

Figure 7. Open Space in Ampel is minimal and it is full of supporting activities Clockwise figures: The site plan of Ampel sites; Open space for parking; Open space as the yard of Ampel Mosque; Open space for the blessed freshwater springs; Open space near the Islamic dorms

4. Conclusion
Learning from cases of the best practices in preservation and conservation of historical monuments at Japan to develop Walisanga sites in Indonesia, should consider the following factors and facts:

i. Further investigation and research to find the valid boundaries of the area and objects of archaeological both Ampel and Giri sites.

ii. Development of the building and the environment to maintain the original shape, structure, design, materials, traditions and techniques as the original.

iii. Aspects of the legislation in Indonesia are still weak both in the law and its enforcement. Regulation is needed to handle these Walisanga sites, and to the base of the operational techniques implementation in conservation and preservation.
iv. Given the role of these extraordinary sites in spreading Islam in Indonesia, it is necessary to promote the Walisanga site as world heritage.

v. To keep the management runs well, it needs organizations that manage the site more professionally. These organizations include the combined elements of the central government, local government, and the community.

To get to the harmony between nature and culture is necessary to enhance performance, facilities and infrastructures. Learning from the sites like Todaiji Temple in Nara prefecture and Toji Temple in Kyoto, several efforts can be done as follows:

i. Ampel site, located at the city centre, has been mingled with the surrounding residences, which could threaten the sustainability of the sites. This condition needs restoration. Thus it will save the artifacts, which are difficult to manage because they are spread the population living in the surroundings.

ii. The Giri sites, the balance in environmental conditions that are slightly better, but it is still lack of the balance in the cultural history due to the lack of attention to the historic artefacts.

iii. Both sites have less buffer zone. A buffer zone is needed by both sites to maintain the balance of cultural historic environment and in this case, to keep these sites from the damage done by visitors.

iv. From the spatial aspects.
The required additional open spaces / public spaces are the representative to serve as buffer zones or zones of cultural and historical environment balance. It needs activity supports in order to revive the region based on creative economy as long as the placement of activity supports does not cover the sites and does not interfere with the circulation of visitors.

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6. References
[1] Zahnd, M., 2006. Urban Design-Model For Dense, Laminar-Based New Quarters For Indonesian Cities, Inta Conference Proceeding, Yogyakarta: Duta Wacana Cristian Univesity.
[2] De Blij, H., 2008. The Power of Place Geography, Destiny and Globalization’s Rough Landscape. New York, Oxford University Press.
[3] Santoso, J., 2013, Understanding Urban Transformation in Asia: Case Study of Jakarta, Journal of Tata Loka, Vol 15, No 2, May 2013.
[4] Samalavicius, A., 2017. Rethinking Modernism and the Built Environment. Cambridge, Cambridge Scholars Publishing.
[5] Tomlinson, J., 1999. Globalization and Culture, Chicago: The University of Chicago Press.
[6] Arefi, M., 1999. Non-Place and Placelessness as Narratives of Loss: Rethinking the Nations of Place. Journal of Urban Design 4 (2), pp. 179-193.
[7] Serageldin, B., 2001. The Sacred City; New York : Routledge.
[8] Rypkema,D., D., 2005. Globalization, Urban Heritage, and The 21th Century Economy, Global Urban Development, Vol 1, Issue 1 May 2005.
[9] Suprapti, A.; Indriasjario; Sardjono B., A., 2016. The Urban Heritage of Masjid Sunan Ampel Surabaya, Toward the Intelligent Urbanism Development, Procedia Social and Behavioral Sciences 227 (2016): 601-608.
[10] Suprijanto, R., 2004. Nilai Ruang Pada pada Kawasan Bersejarah Ampel Surabaya, Disertasi Program Doktor, Jogjakarta, Teknik Arsitektur Universitas Gajahmada
[11] http://www.toji.or.jp
[12] Oktay, D., 2011. Human Sustainable Urbanism: In Pursuit of Ecoholical and Sosio- Cultural Sustainability. Procedia Sosial and Behavioral Sciences 26 (2012) 16-27
[13] Jonge, de, H., 1998. Pilgrimages and Local Islam on Java, Jurnal Studia Islamika Vol V, No 2, Jakarta, IAIN Syarif Hidayatullah.

[14] Budi, S., B., 2005. A Study on the History and Development of the Javanese Mosque Part 2: The Historical Setting and Role of Javanese Mosque under the Sultanates, Journal of Asian architecture and Building Engineering Vol 4 No 1, Japan, J-Stage.

[15] Landry, C. and Bianchini B., 2000. The Creative City: A toolkit for Urban Innovators, London UK, Damos

[16] Suprapti, A.; Budihardjo E.; Pangarsa, W., G.; Kistanto, H., K., 2010. Ethnography-Architecture in Kampong Kauman Semarang, A Comprehension of Cultural Toward Space, American Journal of Engineering and Applied Sciences 3 (3).

[17] Pangarsa, W., G., 2006. Merah Putih Arsitektur Nusantara, Yogyakarta: Andi Offset.

[18] Benninger, C., (2001): “Principles of Intelligent Urbanism,” in Ekistics, Volume 69, Number 412, pp. 39 –65, Athens.

[19] Suprijanto, I., 2003. Kerentanan Kawasan Tepi Air terhadap Kenaikan Permukaan Air Laut Kasus Kawasan Tepi Air Kota Surabaya, Journal of Architecture & Built Environment 3(1).

[20] Nur, W., K.. 2010. Tipomorfologi dan Kekhasan Tata Ruang Rumah Arab di Ampel Surabaya, Semarang, Jurnal Tesa Arsitektur 8 (1).

[21] Omura, H., 2004. Trees, Forest and Religion in Japan, Mountain Research and Development 24(2): 178-182.2004, Washington DC, International Mountain Society.