



Green Building Concept from the Islamic Perspective

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Abstract

The population density in the world has caused the demand for the physical development of the country to increase. Many developments, such as building buildings for social and business purposes, have been built. This rapid construction has caused environmental effects such as the use of many natural resources, pollution and the greenhouse effect. Therefore, the green concept was introduced as an effort to balance the needs of development and environmental preservation. However, this green requirement is often taken for granted. This research paper highlights the importance of the green concept for every individual who becomes the caliph of this earth. The systematic literature review was done by searching online databases such as Scopus and Web of Science. The results of the study found that there is still a lack of research papers that discuss the importance of going for a green approach from an Islamic perspective. Islam encourage its believers to practise sustainability and avoid harm to the humankind and also the environment.

Keywords: Building, Green Concept, Islamic Perspective, Sustainable

1. Introduction.

Green concept has been introduced to minimise the adverse impact of construction towards the environment. Over the past two decades, environmental challenges have become more serious (Arif et al., 2009). The construction sector is being pressured to adopt green concept as the world's sensitivity to global climate change and sustainable development grows (Berardi, 2012). Therefore, in the conjunction of promoting the adoption of green building best practises and a sustainable built environment, various green agenda are implemented globally (Powmya & Abidin, 2014). Industrialised Building system (IBS), green procurement and MyCREST are examples of a few initiatives introduced by government to support sustainable agenda. Sustainable construction is defined by (Abd. Hamid et al., 2012) as "The development and responsible maintenance of a healthy built environment, based on ecological principles and by means of an efficient utilisation of resources".

Construction industry is one of the biggest contributor to the negative impact on the environment (Chan e al., 2009). According to (Rostami et al., 2011), the construction, maintenance, and use of buildings has a substantial impact on the environment and is currently making a major contribution to the irreversible changes in the global climate. The largest source of hazardous gases like carbon dioxide is also produced from the construction activities. Pollution such as air pollution, waste pollution, noise pollution and water pollution are majorly contributed by construction industry (Rais



et al., 2018). In 2020 Global status report for building reports that in 2019 construction used more than half of global electrical consumption (Hamilton & Rapf, 2020). This shows that construction industry leaves a significant impact towards the environment.

However, this green practice is often seen as a more burdensome demand due to a lack of understanding regarding the importance of this green practice. Many studies and writings have been done to convince industry practitioners including studies in terms of costs, capacity building and also related technologies. Therefore, the purpose of this research is to look into religious perspective on the green initiatives, particularly those which are the most closely related to the green construction.

2. Methodology

The research methodology has been used for this study to review the existing literatures related to the existing conceptual of the subject matter. This paper is the conceptual paper in nature. The systematic literature review was conducted to review the existing literature. The term (Green building AND Islamic) was used to generate the search of related paper. The major source of existing literature was from Google Scholar as there are no related paper found on Web of science and Science Direct using the same term. Figure 1 explained on the systematic literature review process. A total of 14 papers were found between years 2012 until 2022. Eight papers were removed after undergone for title and abstract screening. The remaining six papers were entitled for full-text review and all six papers were selected for further assessment.

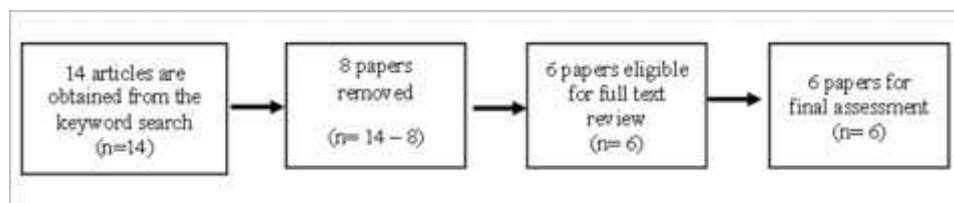


Figure 1: Systematic literature review process

3. Literature Review

3.1 The Concept of Green Building

Malaysia is seen to be catching up to the green agenda. The Malaysian government established a few green rating tools starting in 2009. Green Building Index (GBI), "Penarafan Hijau", GreenRE and pHJKR reflect Malaysia's eagerness to support the call for green development initiatives (Fauzi et al., 2018). To support the development of green technology, MyHijau programme has been introduced in 2012 by the Ministry of Energy, Green Technology and Malaysia Green Tech Corporation (MGTC) [7]. Malaysia also aims to reduce carbon dioxide emissions by 40% by 2020, as stated by Malaysia's prime minister in 2009 during the United Nations Climate Change Conference in Copenhagen, Denmark [9]. Furthermore, the government of Malaysia has included a green agenda in its 12th plan, advancing green growth for sustainability and resilience.

Green growth in Malaysia will guarantee planetary health and a higher standard of living, improve the country's resilience, and conserve and protect the environment for both the present and future generations (Economic Planning Unit, 2021). The concept of green development is considered a solution to society's demands in balancing environmental preservation while taking into account social and economic factors (Muchlis, 2021). According to the Brundtland Report, sustainable development is an approach that meets current demands without jeopardizing the ability of future generations to meet their requirements. Harlem Brundtland advocates for a new era of "sustainable development," an economic growth concerned about the environment (Umar & Khamidi, 2013). The term "green" implies accepting, integrating, and adopting environmental best practices to lessen adverse environmental effects (Rais et al., 2018).

The construction sector also recognises a trend toward green construction or green concepts. The development of green buildings is becoming increasingly on the rise globally (Fauzi et al., 2018). The discipline of "green building" involves developing buildings and adopting responsible and resource-efficient methods throughout a building's lifecycle, from site selection to design, construction, operation, maintenance, and renovation (Dania et al., 2013). Green building improves people's living and working environment and offers the owners or occupiers a life cycle savings (Weeks, 2010).



3.2 Islamic Employee Green Behaviour Model: Comparison with Green Building Concept

The concept of vicegerents or Khalifah on earth highlighting every aspect of human behavior would impact the environment and humankind. Previous research has studied the Green Five Taxonomy Model developed by [15]. The Green Five Taxonomy Model studies the behavior of humans in a working environment. Research by [16] presents the Islamic Employee Green Behavior Model of human behavior in its working environment based on the Green Five Taxonomy Model. The study compares the Green Five Taxonomy Model and the Islamic View showing the significance of Muslim behavior in their Islamic Employee Green Behavior study. Thus, the framework by [15] and [16] can be applied to the construction industry as the working environment, specifically towards the Green Building Concept. This model follows the Green Five Taxonomy Model categories: Conserving, Workings Sustainably, Avoiding Harm, Influencing Others and Taking Initiatives.

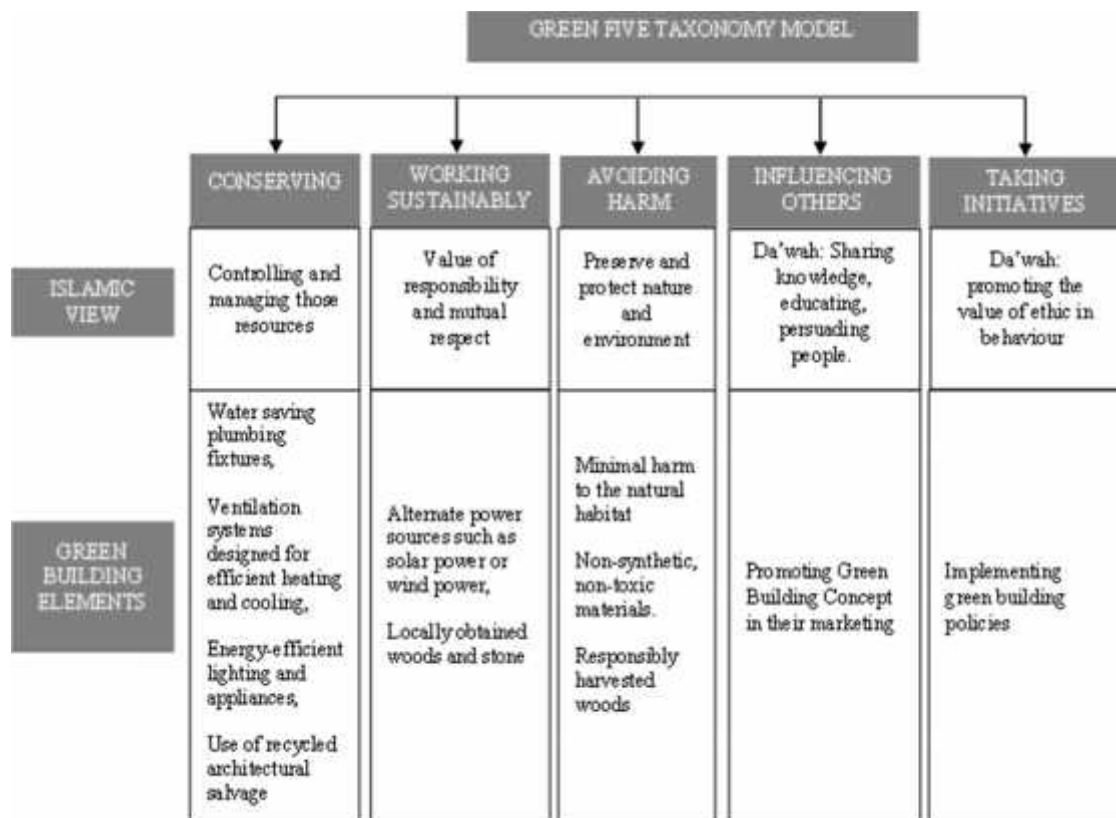


Figure 2: The Green Five Taxonomy and the Islamic View with Green Building Elements.

The first category, Conserving, reflects the behavior concerning preserving resources and reducing waste. As humans are users of the building, managing the energy usage in Green Building Concept is a significant factor. Operating efficiently, such as using water-saving plumbing features and installing efficient lighting, cooling and heating systems are crucial elements in Green Building Concept. The construction waste can also be reduced by recycling and salvaging the building materials (Ragheb, 2016).

The second category is Working Sustainably, representing behavior that helps the work process and products to be more sustainable. From Islamic View is to value responsibility and mutual respect for the earth and life surrounding it. Green building is achieved through using alternate power sources and reducing carbon footprint, whereby materials are locally obtained (Burcu, 2015).

The third category, Avoiding Harm, indicates a behavior that prevents pollution monitors environmental impact and strengthens the ecosystem. In the Islamic View, humankind must ensure a good ecosystem for a harmonious life. So, in the green buildings concept, minimal harm to the natural habitat must be ensured when undergoing site clearance. The understanding also applies when using building materials such as responsibly harvested wood (Ragheb, 2016). Using materials that are not harmful to humankind also protects living beings and the ecosystem.



The fourth category, Influencing Others, is presented in the Islamic view as sharing knowledge and persuading people or the community. The green building concept is done by educating the community on the green building concept in their buildings (Ilham, 2018) and influencing them on the positive aspects of green building concepts.

Lastly, the fifth category is Taking Initiatives, which in Islamic View, promotes the ethic in behavior by implementing policies to promote environmental interest (Rais et al., 2018). The initiatives done by the government and the construction industries to encourage the public to the green building concept presents how it promotes the value of ethic in behavior.

3.3 Green Building Concept and Islamic Perspective

From the perspective of Islam, “sustainability” was defined by Al-Jayyousi as hayat tayyibah which means “a good life” (Abdul Jabar et al., 2015). By definition (Hasan, 2006) also mentioned that sustainable seeks a balance between economy, society, and environment, and puts the satisfaction of the spiritual or non-material needs of people on the same level with the material needs. As narrated in a hadith, Abu Sa’id al-Khudri r.a. reported that the Prophet SAW said:

“The world is sweet and green, and verily Allah is going to install you as vicegerents in it in order to see how you act” (Sahih Muslim)

The driving force to achieve sustainable development objectives depends on individual awareness. As been command by Allah SWT, mankind is seen to be on earth as the vicegerants (Khalifah) to manage affairs in the world with the limits that have been set.

And when your Lord said to the angels, I am going to place in the earth a Khalifah, they said: what! Will you place in it such as shall make mischief in it and shed blood, and we celebrate your praise and extol your holiness? He said: surely I know what you do not know (Al Baqarah: 2)

The world contains all the materials for mankind to utilise, but the development must be sustainable and not cause massive destruction. Development planning is the community's need for a more comfortable life. The green concept suggests the need to provide development facilities that are environmentally friendly and also beneficial to humans. This has been clearly stated in the most popular Hadith on environment states (Zafar, 2014),

“The earth is green and beautiful, and Allah has appointed you his stewards over it”, which reiterates Quran teaching that human beings have been given the responsibility of guardianship over the natural environment (Sahih Muslim 2742).

Islam is a religion that promotes the link between humans and their environment, and it penetrates human territory as the caliphs on earth (Ansari et al., 2012). Islam provides comprehensive guidance for all aspects of life, including the environment. The Quran and Sunnah, as the primary and secondary sources of Islamic principles and values, provide the answers to all environmental problems. At the same time, they also show the proper relationship between humans and the environment (Muchlis, 2021). Each individual in society should manage the natural resources prudently and thoroughly to prevent the loss of natural resources in a controlled manner. This is to be applied to all employees in the organization to enable natural sustainability. Islam encourage its adherents to plant trees and consider it as a charity. Narrated by Anas bin Malik (RA) that Allah’s Messenger (SAW) said:

“There is none amongst the Muslims who plants a tree or sows seeds, and then a bird, or a person or an animal eats from it, but is regarded as a charitable gift for him.” (Sahih al-Bukhari 2320)

Green Building aims to protect natural environment and also reduce pollution that might danger human and also the environment. Preventing Pollution, monitoring environmental impact, strengthening ecosystems are the three categories of avoiding harm. It is the responsibility of humans to maintain the harmony of life in the world and avoid acts that oppress others. The statement below supports the human need to provide security and not harm the cycle of life in this world

Abu Zarr Al-Ghafari reported that the Prophet (peace and blessings be upon him) said, “Removing harmful things from the road is an act of charity (sadaqah).” (Authenticated by Al-Albani)

Islam forbid its adherents to be excessive attaining personal possessions and consumption. As in the practice of green, conserving reflects the behaviours related to helping to preserve resources and reduce waste. The act of conserving include act of reducing use, reusing, repurposing, and recycling. Our Prophet SAW urged for conserving natural resources even it involves performing rituals for worship such as the ablution (wudhu’). The principle of saving



water is illustrated by the opinion that during ablution (ablution) we should refrain from using water even if we have a river at our disposal.

“Do not waste even if performing ablution on the bank of a fast flowing large river” (Tirmidhi).

The nature of a human being sometimes become more greedy if he possess more than he can bear. Islamic teaching thus emphasizes the concept of moderation or *Wasatiyyah* in daily life affairs

“O Children of Adam, take your adornment at every place of prayer, eat and drink, but be not excessive – Indeed Allah likes not those who commit excess” (Al A’raf: 31)

4. Summary

The Green Building concept is held to benefit building users as well as the environment. This concept has a good motive and needs to be promoted to every developer and building user. The concept of green buildings is in accordance with what has been recommended by Islamic teachings. Being the caliph on this earth and preserving the environment that has been entrusted is the responsibility of each individual. This research paper also explains the green five taxonomy and relates it from the perspective of Islamic teachings. It is important to balance physical development to provide facilities to the community so as not to cause harm to humans and the environment. Also the need to provide life for future generations. Directing development towards green is not only required for society in general but it is a practice of Islamic teachings that has been clearly explained in the Quran and Sunnah. The Quran stated that the Muslim community as *ummatah wasatan* which translate as a just and well balanced community.

“And thus we have made you a just community (or middle most community) that you will be witness over the people and the Messenger will be a witness over you” (Al Baqarah: 143)

References

- Abd. Hamid, Z., Che Ali, M., Mohamad Kamar, K. A., Mohd Zain, M. Z., Ghani, M. K., Abdul Rahim, A. H., Dzulkalnine, N., Mohd. Noor, M. S., Mat Kilau, N., & Ambon, F. (2012). Towards a Sustainable and Green Towards a Sustainable and Green. *Malaysian Construction Research Journal*, 2(April 2015), 55–65. https://www.researchgate.net/publication/274989726_TOWARDS_A_SUSTAINABLE_AND_GREEN_CONSTRUCTION_IN_MALAYSIA
- Abdul Jabar, N. H., Ilham, Z., Saifuddeen, S. M., & Rahman, N. N. A. (2015). Green energy towards sustainability from the Islamic perspective. *International Journal of Sustainable Future for Human Security*, 3(2), 31–34
- Anandaraj, E. (2011). Green technology. A New Straits Times Special, Malaysia.
- Ansari, A. H., Jamal, P., & Oseni, U. A. (2012). “Sustainable Development: Islamic Dimension with Special Reference to Conservation of the Environment,” *Adv. Nat. Appl. Sci.*, no. January, pp. 607–619, 2012)
- Arif, M., Egbu, C., Haleem, A., Kulonda, D., & Khalfan, M. (2009). State of green construction in India: Drivers and challenges. *Journal of Engineering, Design and Technology*, 7(2), 223–234. <https://doi.org/10.1108/17260530910975005>
- Berardi U 2012. Sustainability assessment in the construction sector: rating systems and rated buildings. *Sustainable Development* 20(6): 411–424.
- Burcu, G. T., (2015). “Sustainability” Education by Sustainable School Design. *Procedia-Social Behavioral Science* (Vol. 186, p. 868–873)
- Chan, E. W. W., Qian, K. Q., & Lam, I. P. (2009). The market for green building in developed Asian cities: the perspectives of building designers. *Energy Policy*, 37, 3061–3070. <http://dx.doi.org/10.1016/j.enpol.2009.03.057>
- Dania, A.A., G.D. Larsen, and R. Yao, *Mainstreaming Sustainable Construction: Case Studies of an Indigenous and Multinational Firm in Nigeria*. 2013.
- Daud, S. R., Mukapit, M., Sehat, N. S., Jogeran, J., Suhaime, I. L., & Ahmad, K. S. (2020). The Islamic perspective to employee green behavior: a preliminary study. *ASEAN Entrepreneurship Journal (AEJ)*, 6(1), 28–35.
- Fauzi, N. S., Zainuddin, A., Nawawi, A. H., & Johari, N. (2018). *The Green Building Concept : Is it a Trend ? July*. <https://doi.org/10.6007/IJARBSS/v8-i1/3892>
- Hamilton, I., & Rapf, O. (2020). E2020 global status report for buildings and construction: towards a zero-emissions, efficient and resilient buildings and construction sector. *Global Alliance for Buildings and Construction*, 1–7.
- Hasan, Z. (2006). Sustainable development from an Islamic perspective: Meaning, implications, and policy concerns. *Journal of King Abdulaziz University: Islamic Economics*, 19(1)



- Ilham, I., Bulkani, B., & Darlan, S. (2018, November). Booster Expression in Image Building of Green Islamic Campus Program at the Promotional Brochure of Universitas Muhammadiyah Palangkaraya: Can it reach the Market Share in the Era of Industry 4.0? In *Proceedings International Conference BKSPTIS 2018*.
- Muchlis, A. F. (2021). Reaching the Understanding of the Green Building Concept in Islamic Value: Thematic Tafseer Study. *Journal of Islamic Architecture*, 6(4), 321.
- Affendy, M., Ayub, M. N., Yao, L., & Kamarudin, D. (2018). The Practices of Green Maintenance at Islamic Student Residential Building in East Coast Region. *IMDeC2018*, 188.
- Muchlis, A. F. (2021). Reaching the Understanding of the Green Building Concept in Islamic Value: Thematic Tafseer Study. *Journal of Islamic Architecture*, 6(4), 321.
- Ones, D. S., & Dilchert, S. (2012). Environmental sustainability at work: a call to action. *Industrial and Organizational Psychology*, (5), 4.
- Powmya, A., & Abidin, N. Z. (2014). The Challenges of Green Construction in Oman. *International Journal of Sustainable Construction Engineering & Technology*, 5(1), 2180–3242. <http://penerbit.uthm.edu.my/ojs/index.php/IJSCET>
- Ragheb, A., El-Shimy, H., Ragheb, G. (2016). Green Architecture: A Concept of Sustainability. *Procedia-Social Behavioral Science* (Vol. 216, p. 778-787)
- Rais, S. L. A., Bidin, Z. A., Bohari, A. A. M., & Saferi, M. M. (2018). The Possible Challenges of Green Procurement Implementation. *IOP Conference Series: Materials Science and Engineering*, 429(1). <https://doi.org/10.1088/1757-899X/429/1/012023>
- Rostami, R., Meysam Khoshnava, S., Ahankoob, A., & Rostami, R. (2011). *Green construction Trends in Malaysia meysam khoshnava Green construction Trends in Malaysia*.
- Umar, U. A., & Khamidi, M. (2003). Green and Sustainable Development in an Islamic Perspective. *Precambrian Research*, 123(1), 1689–1699. <http://dx.doi.org/10.1016/j.tecto.2012.06.047><http://www.geohaz.org/news/images/publications/gesi-report-with-prologue.pdf>http://ec.europa.eu/echo/civil_protection/civil/pdfdocs/earthquakes_en.pdf<http://dx.doi.org/10.1016/j.gr.2011.06.005>
- Weeks, J.A., Understanding the issues of project cost and time in sustainable construction from a general contractor's perspective: case study. 2010. Berardi U 2012. Sustainability assessment in the construction sector: rating systems and rated buildings. *Sustainable Development* 20(6): 411–424.
- Zafar, S. (2014). Environmental sustainability in Islam. *Source: http://www.ecomena.org/sustainability_islam*.

eISSN 2948-5045



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