

The Key Principles of Social Sustainability from the Sustainable Development Perspective: A Comparative Review

Mohamad Hafizuddin Syafiq Abd Rashid^{a,*}, Rozana Zakaria^a, Eeydzah Aminudin^a, Jeffryl Azniel Adzar^b, Siti Mazzuana Shamsuddin^c, Vikneswaran Munikanan^d, Nur Ainina Mustafa^d

^a School of Civil Engineering, Faculty of Engineering, Universiti Teknologi Malaysia, 81310, Skudai, Johor, Malaysia.

^b Public Works Department, Jalan Sultan Salahuddin, 50480 Kuala Lumpur, Malaysia.

^c Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Shah Alam, Malaysia.

^d Faculty of Civil Engineering, National Defence University of Malaysia, 57000 Kuala Lumpur, Malaysia.
hafizuddinsyafiq92@gmail.com

The concept of sustainable development, which stands on the three pillars of sustainability, termed as environment, social, and economy has been gaining global attention recently. Yet, the efforts in implementing sustainable development concept seemed to be imbalanced, since the environmental and economic aspects receiving more attention than the social aspects. This matter needs to be addressed promptly as the principal aspirations of sustainable development were triggered by the issues associated with all three pillars of sustainability. The failure to pay attention to the social pillar of sustainability is a real mistake, as this pillar directly impacts the quality of life and well-being of individuals, as compared to environmental issues. To resolve this issue in a systematic approach, this paper explores the principles of social sustainability from the sustainable development perspective. A total of 81 scholarly literature regarding social sustainability have been reviewed by adapting the Systematic Literature Review (SLR) method. Subsequently, ten clusters of social sustainability key principles have been established to cluster 245 social elements identified from the reviewed scholarly literature.

1. Introduction

The term "sustainability" has become widely used across a variety of platforms. This concept has become the stepping stone towards a better development philosophy. The term sustainability is often quoted according to Brundtland's (1987) report as a development that meets current needs without compromising the future needs. Shortly after this policy began to be announced, Pearce et al. (1990) explained that sustainable development is simply a development that takes into account the needs of humans with a focus on improving quality of life. Sustainable development has been defined by three pillars or the triple bottom line, namely environment, social, and economy. As noted by the United Nations (UN) (2005) during the World Summit on sustainability, the concept of sustainability requires a balanced adaptation of the three pillars of sustainability. McKenzie (2004) indicated that the terms "sustainability", "sustainable development" and "triple bottom line" are being used interchangeably. The concept of three bottom lines seems to be generally agreed upon as an important element in defining sustainability. Waas et al. (2011) remarked that there is considerable agreement among sustainability scholars and practitioners in defining sustainable development. The phrase three pillars or the triple bottom line of sustainability was introduced by Elkington (1998). Boström (2012) in his study mentioned that the three pillars of sustainability are also known as the three "Ps" (People, Planet, and Profit) or the three "Es" (Environment, Economy, and Equity). These phrases have been widely used globally to express sustainability to this day.

2. The misconceptions in defining sustainable development – Imbalance attention

The author of Understanding Sustainable Development (Blewitt, 2008) claims that although most people are aware of the sustainable development concept, they do not really understand how it works. He shared that one of the major misconceptions about sustainable development is that the concept refers only to environmental aspects. Considering the imbalance adoption of social elements in the application of sustainable development, Landorf (2011) proposes that this phenomenon derives from the early debates about sustainable development in the 1960s environmental movement and the basic needs approach to economic development in the 1970s. Misunderstandings of sustainable development are made even worse by the uncertainty and ambiguity in defining one of its pillars; the social pillar. The understanding crisis of social sustainability in the built environment is believed to arise from the complexity of justifying the concept of social sustainability itself (McKenzie, 2004). Lehtonen (2004) in elaborating this issue mentioned that there is no consensus in defining the social aspect in sustainable development. Vallance et al. (2011) in elaborating this issue mentioned that the “conceptual chaos” in defining social sustainability is due to inconclusive definition of social sustainability. Atanda (2019) in his literature on social criteria for sustainable building mentioned that there is an urgent need for an effective approach to develop a clearer understanding towards social criteria in building assessment tools. The similar issue has been also articulated earlier by several scholars in their publications. Among the issues that require the effective approach towards the better understanding of social sustainability in the built environment or sustainable development perspective are the unclear theoretical concept of social sustainability (Littig and Grießler, 2005), the obstacles to define and practice the social sustainability (Boström, 2012), lack of attention towards the implementation of social aspects within the sustainable development context (Almahmoud and Doloi, 2018) and low awareness on the application of social aspects under the sustainable development concept (Kamaruddin et al., 2020). Since there is clear evidence of ambiguity in defining the concept of social sustainability as articulated in the reviewed literature, authors decided to trace the basic principles of social sustainability from the development perspectives.

3. Methodology

Based on a methodological analysis of Systematic Literature Review (SLR) by Shaffril et al. (2021) in discussing the selection of databases, it was concluded that there is no perfect database (Xiao and Watson, 2019). Accordingly, authors decided to use two main databases which are Scopus and Google Scholars for the advance searching, and other selected databases for the manual searching in this study. Firstly, specific keywords were selected based on the purpose of this study. This includes "Social Sustainability", and "Social Sustainability AND Development". When keywords are entered into the database's search string, literature documents containing these keywords will be displayed in the database's interface. From this point on, the process of filtering information will begin, leading to the final selection of literature sources. A majority of the scholarly literature was drawn from publications that discussed social sustainability in the context of development or the built environment. The literature reviews have led to the discovery of more than 200 principles of social sustainability. To facilitate the comparative review process, these principles have been organized into several clusters. The Named Entity Linking (NEL) concept (Zhu and Iglesias, 2018) has been adopted for clustering the social sustainability principles into several specific clusters based on three criteria; context similarities, entity-entity relatedness and word-category. Figure 1 illustrates this study's methodology flow.

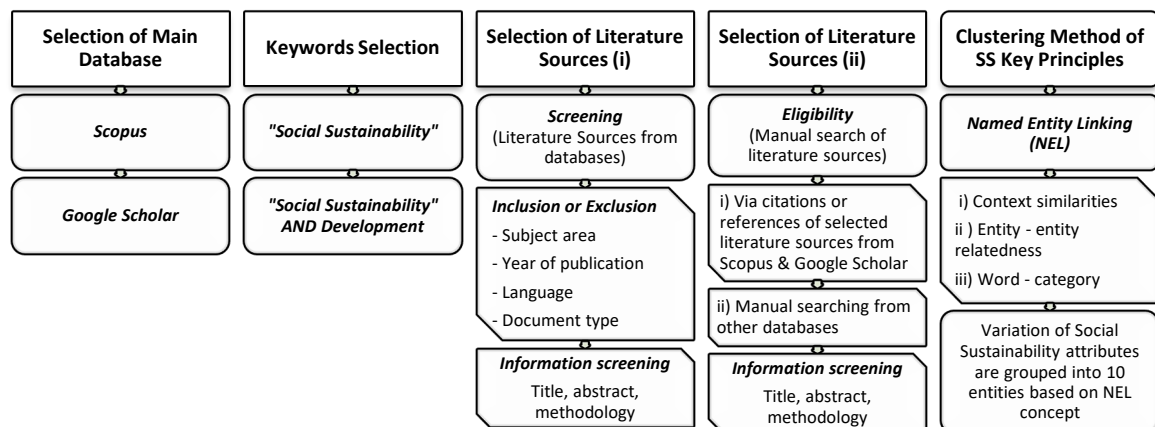


Figure 1: The summary of the methodology

4. Results and discussion

The searching techniques adopted in this study led to the review of 81 publications related to social sustainability. Among this total, 56 literature selections were made through the screening technique in literature databases, while the remaining 25 were found through eligibility or manual searches.

4.1 Different approaches in defining social sustainability principles

The majority of scholars who examined social sustainability from a development perspective discussed its attributes without specifying the specific area of development. Most of the reviewed literature outlined the general principles, themes, indicators, frameworks, and factors associated with social requirements in sustainable development. Several scholars discussed this overlooked pillar of sustainability from a specific area of development such as social sustainability in the construction stage, infrastructure development, urban or rural development and housing or neighborhood development. Figure 2 illustrates the percentage distribution of the social sustainability themes discussed in the 81 reviewed literature. The literature that focuses on social sustainability from general development are dominating the chart with almost half of the total number of the literature.

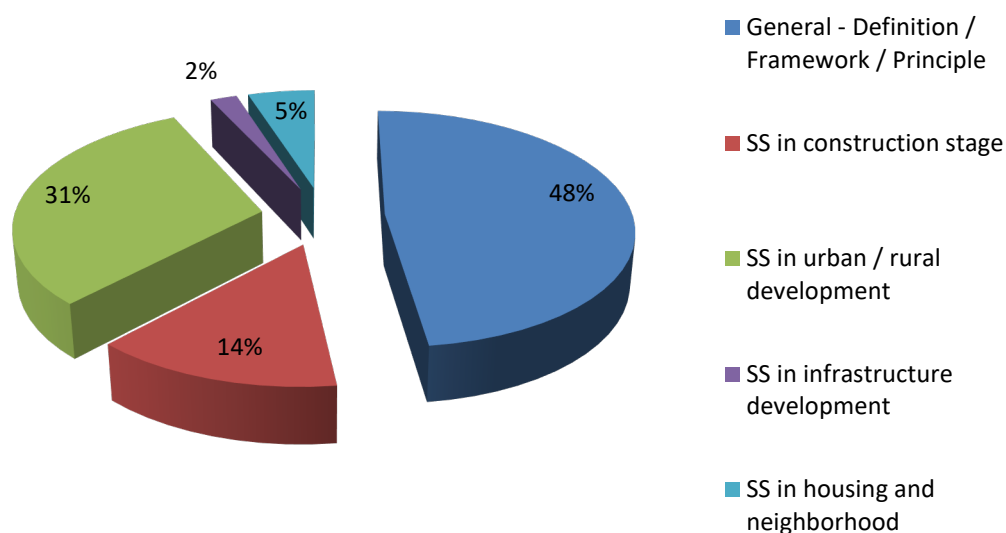


Figure 2: The percentage distribution of social sustainability (SS) themes discussed in 81 reviewed literatures

Regardless of the sub-area or theme of discussion in defining social sustainability, authors found some common convergence points of social sustainability principles in the discussion of this topic. This is parallel with a statement by Vallance et al. (2011) which indicated that there are common social sustainability elements can be found across the range of sustainability dimensions. There are few keywords or principles, or themes, or factors, or indicators that are frequently used by scholars in discussing social sustainability, regardless of which topic interests them. Authors name these convergence points or commonalities as "key principles of social sustainability".

4.2 Key Principles of Social Sustainability

According to Glavič and Lukman (2007), who discussed in detail the principle of sustainable development, principles are essential elements that structured the framework of a complex system. A total of 81 scholarly publications have been reviewed to identify the principles, themes, components, or factors that are associated with social sustainability in the development context. Based on the comparative review, several meeting points or convergence points between these principles were identified. As mentioned in the previous section, authors translated these convergence points into ten clusters based on the Named Entity Linking (NEL) concept. The ten clusters of social sustainability key principles are; Equity (EQ), Community and Participation (CP), Basic Needs (BN), Safety and Health (SH), Infrastructure and Facilities (IF), Local Characteristics and Cultural Value (LC), Livelihood and Satisfaction (LS), Social Capital (SC), Governance and Politics (GP) and Employment and Job

Opportunities (EP). The summarization of descriptions, indicators and associated keywords that define the key principles of social sustainability are as tabulated in Table 1.

Table 1: The key principles of social sustainability in development context

Key Principles	Description	Example of Indicator	Associated Keywords
Equity (EQ)	Equity is found certainly synonymous with social sustainability. Equity refers to justice, fairness and equitable provision of services, facilities and opportunity for the community system.	Equity is recognized when the elements associate with human needs, facilities, wealth distribution and opportunity are equally benefited by the entire community system without any bias.	equity, equality, fair distribution, justice, social justice, equal opportunity, equal wealth distribution
Community and Participation (CP)	This cluster is concerned with aspects of community and belonging, intercommunity relations, and other elements that promote unification and interaction between community members.	The development agenda should not affect the existing community interaction or cause segregation among community members. The development agenda should serve as a platform for encouraging interaction between its members.	community, social cohesion, local interaction, participation, community spirit
Basic Needs (BN)	Generally defined as an essential list of elements that human beings must possess in order to meet their basic needs and live a good life.	The provision or state of improvement of basic needs for the community.	basic needs, accessibility, access, education, food, house, water, health services, employment
Safety and Health (SH)	Safety is related to feelings of security, tranquillity, fearlessness, peace, and low or zero crime rates. Health relates to health facilities, living environments that are free from disasters and hazards, mental peace, and physical resilience.	The provision or improvement of a safe and healthy living environment, facilities, or infrastructure for the community. Assessing how particular developments will affect community safety and health.	security, safety, physical health, psychological needs, crime rate, workers and public safety and health, safety features, safety training
Livelihood and Satisfaction (LS)	It is found that this scope overlaps with other components like basic needs, facilities, safety and health, etc which contribute to the sense of well-being, tranquillity, comfort, happiness, and satisfaction in life for the whole community.	The fulfilment of another cluster's indicators will also satisfy the requirements for this cluster.	livelihood, well-being, satisfaction, happiness
Local Characteristic and Cultural Value (LC)	Clusters in this category include the preservation of special values of a certain place and community, such as historical structures, socio-economic activity, cultural and historical heritage, and tourist attractions.	Development agenda that preserves and strengthens the existing social values of a community by not affecting the existing local characters or cultural values.	local characteristics, local identity, heritage, cultural, pride, local values, historical, sense of belongings
Employment and Job Opportunity (EMP)	This cluster represents the job opportunities for local community as a result of the development.	The job opportunity for the community during and post-development.	employment, job opportunity, job satisfaction, local labour

Table 1: The key principles of social sustainability in development context (continue)

Key Principles	Description	Example of Indicator	Associated Keywords
Infrastructure and Facilities (IF)	The provision of physical facilities and amenities that support social functions and community activities, as well as meeting daily needs.	Provide public amenities and facilities for the enhancement of social interaction and cohesion within a community, as well as infrastructure suited to fulfilling the fundamental needs of society.	infrastructure, facilities, public amenities, road, electricity, communication network, public recreational park, community social area
Social Capital (SC)	Promotes positive values among community members. The agenda for development should focus on the impact of development on the mental and physical development of the community.	The adaptation of mechanisms or systems that allow for the development of personal skills, abilities, and attitudes among community members.	participation and involvement, diversity, independent community, empowerment, willingness, tolerant
Governance and Politics (GV)	Describes the way stakeholders govern an organization. In decisions, rulings, and policy-making processes, community interests and acceptance must be taken into account. Participation of the local community in the political system and governance system is also included in the attributes discussed. This cluster imposed the impact on the institutional stability.	The involvement, acceptance and consideration of community interest during the planning and execution of a particular development. Governance policies should always adhere to the acceptable norms of a particular community.	community participation in governance and politics, involvement, public acceptance, public interest, democracy

5. Conclusion

In principle, previous scholars have outlined frameworks for social sustainability that are sufficiently clear to serve as a basis for understanding social sustainability. However, it is anticipated that specific indicators for a specific area of development should be expanded. From the literature reviews, it became apparent that addressing social sustainability from a specific area of development context such as construction activity, urban or rural development, housing or neighborhood development, and, infrastructure development led to a better understanding of the implementation of this pillar of sustainable development. There are few scholars that merge the discussion of social sustainability with more than one aspects like Bramley and Power (2009) who discussed social sustainability principles in terms of urban and housing development perspectives and Chan and Lee (2008) who explained the social sustainability factors in construction project in the urban area.

Even though this has been initiated by some scholars, the number of literature discussing social sustainability within the general context of development has dominated the chart. Authors anticipate that the discussions of a specific area of development provided clearer views of the implementation of social sustainability. Authors also anticipate that the complexity of understanding and defining the social sustainability attributes can be resolved by providing specific sub-attributes of social sustainability indicators for each area of development. Overall, this study managed to track the trend of social sustainability interpretation by exploring the key principles or themes associated with social sustainability from 81 scholarly literature. A set of ten key principles of social sustainability from 245 elements associated with the built environment or the development perspective have been derived to narrow down the range of variables. This is expected to facilitate a better understanding and resolve the understanding crisis of this overlooked pillar of sustainable development as highlighted by previous scholars. It is observed that some principles of social sustainability overlapped and even complimented each other. For example, the implementing and upgrading the social elements under the clusters of Infrastructure and Facilities, Safety and Health, and Basic Needs will simultaneously fulfil the aspects related to Livelihoods and Satisfaction. This circumstance suggests that there are interdependencies between social sustainability

principles to achieve complete sustainability where this is found similar to the concept of interdependence between the three pillars of sustainability, as proposed by previous scholars.

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Reference

- Almahmoud, E., Doloi, H.K., 2018, Assessment of social sustainability in construction projects using social network analysis, *Journal of International Business Research and Marketing*, 3(6), 35-46.
- Atanda, J.O., 2019, Developing a social sustainability assessment framework, *Sustainable Cities and Society*, 44, 237-252.
- Blewitt, J., 2008, *Understanding sustainable development*, Earthscan Publications Ltd, London, UK.
- Boström, M., 2012, A missing pillar? Challenges in theorizing and practicing social sustainability: Introduction to the special issue, *Sustainability: Science, Practice and Policy*, 8(1), 3-14.
- Bramley, G., Power, S., 2009, Urban form and social sustainability: the role of density and housing type, *Environment and Planning B: Planning and Design*, 36(1), 30-48.
- Brundtland, G., 1987, Report of the world commission on environment and development: our common future, United Nations General Assembly Document A/42/427, Geneva, Switzerland.
- Chan, E., Lee, G.K.L., 2008, Critical factors for improving social sustainability of urban renewal projects, *Social Indicators Research*, 85(2), 243-256.
- Elkington, J., 1998, Partnerships from cannibals with forks: the triple bottom line of 21st-century business, *Environmental Quality Management*, 8(1), 37-51.
- Glavič, P., Lukman, R., 2007, Review of sustainability terms and their definitions, *Journal of Cleaner Production*, 15(18), 1875-1885.
- Kamaruddin, T., Hamid, R.A., Ghani, S.A., 2020, Social aspect implementation in sustainable construction, IOP Conference Series Materials Science Engineering, 849, 4th International Conference on Construction and Building Engineering & 12th Regional Conference in Civil Engineering (ICONBUILD & RCCE 2019) 20th-22nd August, Langkawi, Malaysia, 012036.
- Landorf, C., 2011, Evaluating social sustainability in historic urban environments, *International Journal of Heritage Studies*, 17(5), 463-477.
- Lehtonen, M., 2004, The environmental-social interface of sustainable development: capabilities, social capital, institutions, *Ecological Economics*, 49(2), 199-214.
- Littig, B., Griebler, E., 2005, Social sustainability: a catchword between political pragmatism and social theory, *International Journal of Sustainable Development*, 8(1-2), 65-79.
- McKenzie, S., 2004. *Social sustainability: towards some definitions*, Working Paper Series (27), Hawke Research Institute, University of South Australia, Magill, South Australia.
- Pearce, D., Barbier, E., Markandya, A., 1990, *Sustainable development. Economics and environment in the third world*, Earthscan Publication Ltd, London, UK.
- Shaffril, H.A.M., Samsuddin, S.F., Samah, A.A., 2021, The ABC of systematic literature review: the basic methodological guidance for beginners, *Quality & Quantity*. 55(11), 1-28.
- UN, 2005, World summit outcome: resolution, United Nations General Assembly <www.refworld.org/docid/44168a910.html>accessed 21.08.2021.
- Vallance, S., Perkins, H.C., Dixon, J.E., 2011, What is social sustainability? A clarification of concepts, *Geoforum*, 42(3), 342-348.
- Waas, T., Hugé, J., Verbruggen, A., Wright, T., 2011, Sustainable development: a bird's eye view, *Sustainability*, 3(10), 1637-1661.
- Xiao, Y., Watson, M., 2019, Guidance on conducting a systematic literature review, *Journal of Planning Education*, 39(1), 93-112.
- Zhu, G., Iglesias, C.A., 2018, Exploiting semantic similarity for named entity disambiguation in knowledge graphs, *Expert Systems With Applications*, 101, 8-24.