Proceeding of International Joint Conference on UNESA
Homepage : https://proceeding.unesa.ac.id/index.php/pijcu
e-ISSN : 3032-3762

PIJCU, Vol. 3, No. 2, June 2026
Page XX-XX

Housing Construction Literacy for Low-Income Households: A Socio-Sustainability-Oriented Community Engagement Program in Surabaya Indonesia

Wendy Ivannal Hakim[1*], Anggi Rahmad Zulfikar[2], Siti Talitha Rachma[3], Satriana Fitri Mustika Sari[4], Suprapto[5], Irfan Prasetyo Loekito[6]
[1*,2, 3, 4, 5, 6] Universitas Negeri Surabaya, Surabaya, Indonesia

Keywords:
Housing construction literacy
Low-income households
Self-help housing
Community engagement
Social sustainability

ABSTRACT

Indonesian households encounter a housing issue that is not just one of supply and affordability since a majority of houses are self-built and adapted through household-driven processes. In this article, it will be argued that provision for adequate construction knowledge should be seen as a complementary housing resource. This paper draws from an extensive review of literature on self-help housing, incremental housing, housing adequacy, building literacy, social sustainability, participatory housing, and community-based upgrading, in addition to Indonesian policy documents and housing statistics. The paper finds a gap between housing assistance and household-based construction decisions. Housing Construction Literacy is defined in the paper as the ability to acquire, comprehend, evaluate, and use basic construction knowledge and at the same time know when professional intervention is necessary. Domains of literacy and a model of community engagement in six stages are developed. What makes this paper innovative is its treatment of construction literacy as soft housing infrastructure that can augment household empowerment, knowledge equality, safety, adaptability, and socio-sustainability without substituting housing policy, professional knowledge, and government accountability.

INTRODUCTION

The concept of adequate housing goes beyond having a shelter. It includes having enough space, security, durability, sanitation, water, health, affordability, and the ability of a house to facilitate everyday life. The same can be said for the Indonesian government's housing policy, where housing and settlement is a social issue involving safe, healthy, harmonious, and sustainable living conditions (Republic of Indonesia, 2011). In general, housing quality also relates to health and sustainable development on an international scale (UN-Habitat, 2012; WHO, 2018). Such an issue continues to be pertinent. According to the housing statistics of East Java in 2024, only 55.91% of the households in Surabaya had access to adequate housing, which means that quite a number of the dwellings did not meet one or another criterion. Furthermore, according to the same source, Surabaya turned out to be the regency/city with the highest proportion of households lacking enough living space – 20.19% were dwelling in less than 7.2 m2 floor space per capita (BPS Provinsi Jawa Timur, 2025).

Nevertheless, the matter is not only in the numbers of the houses built. It is also in the process itself of producing them. Indonesia has a history of self-help housing, especially within kampung environment, where the households use their resources,

construction workers, social connections and stage-by-stage development of the houses (Tunas & Peresthu, 2010). According to the report of the World Bank, 71% of Indonesia's housing was constructed by owners themselves (World Bank, 2017, 2023). Self-built housing is hardly a single completed occurrence. In his seminal book, Turner (1976) described housing as a process where the degree of control of users and decision making may matter as much as the resulting product. Modern research on Indonesia provides additional support for this process perspective. Research into incremental housing in Jakarta reveals that the development of houses is based on a series of changes influenced by financing, tenure, family dynamics, space requirements, and available opportunities (Armenda et al., 2022; Puspita et al., 2024).

In the event that housing is developed through an incremental process, then construction choices will always be made by households. Such choices may relate to the order in which construction will take place, the materials to use, whether a particular wall can be demolished, ventilation in a particular room, whether it is possible to have a second floor constructed, the cost of construction work, whether construction techniques are satisfactory, and when professional help is required. There is the potential that such choices may influence matters such as safety, health, cost, durability, spatial appropriateness, and adaptability. However, typical interventions relating to housing tend to focus on land, finance, subsidies, infrastructure, formalities, and housing units. The assisted self-help literature provides a valuable link. According to Bredenoord and van Lindert (2010), self-help housing projects can benefit from the combination of household labor with facilitative policy, technical assistance, and institutionality. In this regard, it can be noted that even Indonesian self-help housing schemes reveal the importance of facilitation, quality assurance, and technical assistance, and not complete autonomy in construction by households (World Bank, 2023). Such a need becomes especially obvious where the construction quality is limited due to various budget, informal construction, or lack of technical expertise reasons.

It is proposed here that the household capacity located between expertise and dwelling decisions may be described as Housing Construction Literacy (HCL). This proposition draws on Cole's (2019) notion of green building literacy in which literacy is conceived as more than an accumulation of facts, but encompasses knowledge, skills, understanding, and engagement with building-related decisions. Therefore, the notion of HCL should not be taken to mean that residents become architects, engineers, or construction contractors. HCL concerns the minimal capacity necessary to be a better client, self-builder, collaborator, maintainer, and occupier of the dwelling. In order to make the case, a social sustainability perspective is needed. In Dempsey et al.'s (2011) definition of social sustainability of urban areas, it entails equitable access and sustainability of community. According to Vallance et al. (2011), it involves the satisfaction of basic needs, social equity, social capital, and capacity of maintenance of valuable social conditions in the process of change. Thus, the unequal access to usable housing construction knowledge becomes an issue – those who have fewer resources are

more vulnerable to the negative consequences of faulty construction decisions and, at the same time, have less chances to purchase professional consultation.

The example of Surabaya is especially useful for such a proposition. This city's tradition of kampung improvement can serve as a clear example of the cooperation between the state and local communities aimed at prioritization and improvement of living conditions (Silas, 1992; Santosa, 2000). Previous literature has questioned the idea of seeing marginal neighborhoods solely as the problem, while stressing their capabilities (Silas, 1989). Recent studies of Surabaya have focused on the resilience of kampungs and community-based settlement improvements (Shirleyana et al., 2018). The issue of housing improvement programs in this city raises many questions regarding targeting, implementation, coordination, and citizen involvement (Fatwa, 2022; Norma & Mustofa, 2024).

It is thus essential to understand that HCL is the missing link between housing policy or assistance and household choices regarding progressive construction, alteration, and maintenance of the house on an ongoing basis. HCL should supplement, but not substitute for, sufficient income, affordable land, security of tenure, infrastructure, building standards, assistance, and accountability of the government. The goal of this research is to demonstrate the need, rationale, and possible scope of a community engagement program for developing Housing Construction Literacy from the perspective of socio-sustainability for low-income families in Indonesia, taking into account Surabaya as the point of reference. This research will answer three main questions: (1) what housing conditions and processes of housing production result in the need for HCL; (2) what types of knowledge and capacity for decision-making constitute HCL; and (3) how can HCL be delivered in the context of community engagement in a way beneficial for socio-sustainability?

Moreover, recent research conducted in Indonesia has provided further evidence on the timeliness of this investigation. Evaluations of affordable housing have highlighted the gap between affordability on paper and more encompassing concepts of livability, while policy-oriented researches have pointed out the importance of the relationship between affordable housing and quality, location, infrastructure, and requirements of households (Mutaqi et al., 2024; Perdamaian & Zhai, 2024). Therefore, the urgency of knowledge related to housing construction is not an alternative to the current agenda of affordable housing but a complement to it.

RESEARCH METHOD

The methodology adopted in this study includes a qualitative literature review along with the use of an archival/document analysis technique. Instead of being a background, the literature review is considered a method of research whereby scattered bodies of knowledge are integrated to form a coherent argument (Snyder, 2019). The document analysis, in turn, supplemented the academic literature with an analysis of statistics, legal frameworks, policies, programs, and organizational materials related to adequate housing, self-help housing, and housing improvement within the community

(Bowen, 2009). Two sets of sources were selected. As for the academic sources, they include peer-reviewed literature dedicated to affordable and low-income housing, self-help housing, incremental housing, assisted self-help, participatory housing, community architecture, building literacy, housing health, social sustainability, kampung improvement, and community engagement. These searches are oriented towards online databases such as Scopus, ScienceDirect, SpringerLink, Taylor & Francis, Wiley, and Google Scholar. Prioritization was given to the literature dated between 2021 and 2026. However, the classics were used if they introduced the key concepts to the argument.

The literature corpus for archival research was made up of Indonesian legal and institutional documents, housing statistics, and program reports. Important documents were Law No. 1 of 2011 concerning Housing and Settlement Areas, BPS housing statistics for East Java and Surabaya, World Bank documents on Indonesia's National Affordable Housing Program, WHO housing and health guidelines, and UN-Habitat's sustainable housing guidelines. Documents related to Surabaya were incorporated to link the conceptual synthesis to a city that has a documented record of improving its kampungs and running modern house rehabilitation programs.

A source was selected based on its relevance to any of the following seven categories of analysis: (1) housing adequacy and vulnerability, (2) provision of low-cost housing, (3) self-help and incremental construction, (4) construction knowledge and technical assistance, (5) community participation, (6) social sustainability, and (7) institutional and policy support. Analysis was done by reading all of the key sources in their entirety, finding evidence, coding against these categories, comparing different sources, and generating higher-order themes. Finally, academic findings and archival evidence were compared to identify whether the need for construction knowledge among households was mentioned explicitly, implicitly, or not mentioned at all.

The synthesis was theoretical construction and not prevalence estimation. There is no attempt to state that the reviewed literature reflects any preexisting construct, namely Housing Construction Literacy of the Surabaya population. Rather, HCL is constructed as an integrated construct on the basis of recurring issues and skills in the housing literature, the literacy literature, the participation literature, and the sustainability literature. However, domains were kept only when they reflected decisions which household members might be expected to face in constructing, improving, maintaining, or adapting their dwelling. Finally, the proposed community engagement model has been developed through a comparison of the requirements entailed by HCL with those found in precedents in assisted self-help housing, participatory design, and Surabaya's community-based settlement improvement. In doing so, the article is able to go from urgency to a program architecture, keeping in mind the following limitation: the proposed framework continues to be a hypothesis derived out of literature and documents and needs to be validated in the field.

RESULTS AND DISCUSSION

Housing Adequacy and the Self-Built Housing Context

The first synthesis theme is the way the necessity for HCL arises through the interplay of housing inadequacy and housing production by households. The case of the city of Surabaya in 2024 serves as an illustration rather than an exception: only 55.91% of the households had a composite adequate housing status, while 20.19% did not reach the sufficiency living space of 7.2 m2 per capita (BPS Provinsi Jawa Timur, 2025). At the national level, the World Bank's documentation of its housing program suggests that the self-build housing type is the predominant type of production for many homes (World Bank, 2017, 2023). The combination of the two is important because where housing is not perfect but self-built, households have a say in shaping their results.

Indonesian self-help and incremental housing literature confirms this view. Tunas and Peresthu (2010) explain the reliance of low-income families on self-help, community networks, and household initiatives. Armenda et al. (2022) prove that incremental development is linked to tenure and financial factors, whereas Puspita et al. (2024) highlight that seemingly irregular changes are based on recurring household logics. Septanti et al. (2024) link incremental housing to community involvement and settlement resilience. This means that a significant share of housing quality results from the post-occupation negotiation by small and cumulative building decisions.

This process-based interpretation complicates the reduction of housing policy to the provision of complete units. Formal housing provision is crucial, especially for those families who are not capable of constructing their own homes, but even formally delivered homes are often modified. Recent studies on Indonesian affordable housing prove the same – livability is based not only on the first occupancy of housing unit; spatial quality, services, environmental conditions, and family needs are still important (Mutaqi et al., 2024; Perdamaian & Zhai, 2024). Thus, HCL concerns the knowledge conditions of housing modification rather than the construction of the house per se.

Housing Construction Literacy as a Missing Household Capacity

Theme two relates to the discrepancy between technical construction skills and ordinary domestic decision-making skills. Literature does not employ the concept of Housing Construction Literacy, but several other literatures have noted the same problem in a consistent manner. Assisted self-help housing states that households would be able to do better with their initiative and technical knowledge (Bredenoord & van Lindert, 2010). Another example that follows from Valladares (2013) is the concept of Community Architect Program, which indicates how technical knowledge can be structured so that people remain involved in the process of designing, enlarging, and repairing their houses. The concept of green building literacy as defined by Cole (2019) constitutes an instructive conceptual precedent since it broadens the meaning of literacy beyond knowledge of facts. It involves understanding the system of buildings, evaluation of information, connecting knowledge to decisions and acting with respect to it. Applied to the issue of construction of houses for low-income households, it is not about the ability

of residents to perform professional calculations but rather their ability to understand enough in order to make safer and better decisions, communicate with builders, detect fraud, compare options, and realize that certain decisions cannot be taken beyond the scope of lay knowledge.

In accordance with such reasoning, the following definition is proposed for Housing Construction Literacy: it is the ability of household members to access, understand, evaluate, communicate and utilize construction-related information when making decisions concerning planning, constructing, improving, maintaining and incrementally transforming their dwellings, including their ability to recognize situations when they need professional or regulatory help. This definition deliberately includes both action and restraint – a literate household is not necessarily one that can do everything itself; rather, it is able to act intelligently and know when to stop.

This separation safeguards the approach from a potential policy fallacy, which would be that of shifting the blame for substandard housing on the shoulders of the poor themselves. HCLs are not substitutes for poverty, unstable tenure, substandard infrastructure, unavailability of financial resources, weak enforcement and lack of professionals. Instead, they are just one of the supporting abilities of a larger system. It is not about "households build alone" but rather about self-help or incremental building along with knowledge and technical assistance (Bredenoord & van Lindert, 2010; World Bank, 2023).

Proposed Dimensions of Housing Construction Literacy

The cross-source synthesis produced eight domains of HCL. They are organized around decisions that can realistically arise in household-led construction and are intentionally limited to literacy-level competence. The spatial/household needs literacy domain is concerned with the capacity of individuals to understand household functions, minimum space requirements, circulation, privacy, changes in the household size, and possibilities for incremental expansion. It may help in increasing compatibility of the house with the lives of its dwellers and decrease reconstruction. Basic structural and construction-safety literacy domain is associated with the identification of structural and non-structural elements, signs of danger, risks of alteration, and cases in which experts such as engineers should be involved. At the household level, it may increase the level of people's awareness about safety issues and motivate them to make safe construction decisions. Healthy-house literacy includes the issues of ventilation, daylight, moisture, indoor heat, crowding, sanitation, water supply, and basic accessibility. In turn, materials literacy domain is associated with the knowledge of material properties, their durability, maintenance, appropriateness, life-cycle costs, reuse, and environmentally responsible selection of materials.

The other domains deal with issues around management, social, regulation, and longevity in construction of housing. Cost and sequence literacy is about basic budgeting, basics of quantities, prioritizing of construction work, sequencing of construction process, purchase considerations, and non-repetitive demolition, all leading to affordable

and effective utilization of scarce resources in a household. Builder and workmanship literacy is about communicating construction requirements, comparing offers, documenting agreements, basic inspection of workmanship, and understanding the requirement for specialized knowledge. It may help in increasing household empowerment and accountability especially where informal builder-client relationships exist. Regulation and neighborhood literacy is about understanding the basics of construction requirements, boundary issues, drainage considerations, permits and approvals, and the potential impact of construction activities on other households in the neighborhood. It may contribute to reducing conflict situations and improving alignment of individual housing decisions with urban realities. Maintenance, adaptation and resilience literacy involves prevention and maintenance, safe modifications in the future, hazard awareness, and adapting to changes of household and buildings over time.

These eight literacies do not form the basis of a professional curriculum. For instance, spatial literacy does not involve understanding of architectural programming. Rather, it is all about linking the activities within a household with the spatial implications. Structural literacy does not entail calculations of loads but rather understanding that there are walls, columns, beams, foundations, roofs, and second floors that might have structural implications. Materials literacy does not entail conducting tests in a laboratory but rather involves comparing the suitability, maintenance, durability, and cost and not purchase based on the initial price alone. Healthy house literacy is particularly crucial since poor housing conditions impact the health of residents via crowding, dampness, temperature, sanitation, ventilation, among others (WHO, 2018). Cost and sequence literacy is equally important for poor households due to the nature of incremental building that ensures expenditure is spread out over time. Poor sequencing may result in demolition and replacement, causing waste of available scarce resources. In this regard, literacy has the potential to be beneficial in terms of social and environmental aspects of sustainability.

Community Engagement as a Delivery Mechanism

The third synthesis theme related to HCL concerns the use of participation as the means of delivering HCL rather than instruction. The participation ladder by Arnstein (1969) continues to help in differentiating between the levels of participation that inform residents and those that empower them. In the context of HCL, it is not about delivering information about how residents should act and what they should do according to technically accurate information but rather creating an opportunity for professional information to interact with the actual needs and practices of residents. In this respect, Valladares' (2013) analysis of the Community Architect Program in Cuba becomes particularly interesting. This program enabled people wanting to construct, extend or improve their houses to get professional advice using the institutional approach. The lesson for HCL is that professional information becomes more applicable in the process of addressing specific housing issues, exploring possible solutions, understanding

possible outcomes, and getting relevant information to particular house-related situations.

The past of Surabaya itself reinforces this idea. Silas (1992) examined collaborative efforts between the government and the community in kampung development where there was identification of needs and priorities from the kampung community, rather than imposing them on them from the outside. In a similar way, Santosa (2000) talked about community-based environmental management programs, while Shirleyana et al. (2018) later pointed out the resilience in the kampung systems of Surabaya. From these examples, we can see that a new literacy program does not have to create community participation from scratch.

Housing Construction Literacy as a Socio-Sustainability Intervention

The contributions made by HCL in social-sustainability lie in access, agency, well-being, and continuity. Equitable access and community sustainability have been pointed out by Dempsey et al. (2011) as key components of urban social sustainability, whereas Vallance et al. (2011) highlight basic needs, justice, social capital, and the ability to sustain valued social arrangements. In terms of construction of houses, the focus shifts from the content of the knowledge to access to it, its comprehensibility, and expansion of the ability to take part in decision making regarding the construction of the houses. Thus, the path in question is as follows shown in figure 1. Various financial and organizational barriers may hinder households in realizing the acquired knowledge. However, the socio-sustainability claim is much narrower: better access to understandable knowledge may help eliminate one barrier in the process of the housing.

Housing conditions & self-built housing practices	Everyday decisions regarding housing constructions	**Housing Construction Literacy**	Community engagement	Safer, healthier, adaptable housing constructions practices	Agency and knowledge equity as part of socio-sustainability

Figure 1. Conceptual pathway linking housing construction literacy with socio-sustainability.

A Proposed Community-Engagement Program

Engagement is not an extra stage of dissemination when everything has already been created by the experts in this context. Engagement is the process whereby this content is chosen, understood, experimented on, and tied to actual practices of housing. Professional knowledge, knowledge from experience of the inhabitants, practical knowledge of local builders, and knowledge from the public and regulatory sectors are considered as separate and complementary knowledge forms. This will hopefully lead to a program that enhances the household's ability to pose better questions.

Why Surabaya Is a Relevant Context

The combination of all four criteria makes Surabaya an applicable setting for studying HCL. To start with, the city suffers from an inadequacy deficit in terms of

55.91% of households being adequate housing in 2024 (BPS Provinsi Jawa Timur, 2025). Secondly, the presence of spatial pressure is noticeable since 20.19% of households are below the minimum floor area standard, making it the highest rate compared to other cities in East Java. The higher spatial pressure creates an increased probability of reorganization or extension of houses.

Thirdly, Surabaya's urban layout includes numerous areas of kampung where housing, space, and social connections are deeply interlinked. The relevance of kampung has already been confirmed in numerous studies, starting from Silas' work on marginality, improvement program, and further research on resilience of urban environments (Silas, 1989, 1992; Shirleyana et al., 2018). Therefore, household decisions might affect the neighborhood through common walls, drainage system, access paths, ventilation, fire hazard, etc. Fourthly, Surabaya has a record of efforts in improving the quality of life for its citizens through settlement improvement and rehabilitation processes. Current studies about the RSDK/uninhabitable house rehabilitation context indicate that implementation comprises beneficiary selection, community leadership, governmental bodies, land status problems, and coordination (Fatwa, 2022; Norma & Mustofa, 2024). An HCL program could thus be seen as an addition rather than a standalone awareness program in relation to housing improvement systems.

Housing Construction Literacy as Soft Infrastructure in The Field of Housing

One useful approach to understanding the framework is to view HCL as soft infrastructure. Hard infrastructure provides dwellings, materials, utilities, or financing, while soft infrastructure provides knowledge, connections, evaluative skills, and referral mechanisms for making effective use of these resources. The importance of this soft layer of the intervention is especially apparent in incremental housing, where the decision-making related to construction is distributed over time and not contained within one cycle of formal project. The idea also changes the perspective on the contribution that universities and professionals make to the engagement process. This contribution is not just in providing expert knowledge but also translating and contextualizing it. An accurate explanation that residents are unable to use will be of little use. In addition, oversimplification of the guidance can be hazardous since it will lead residents to perform construction works that may be above their capabilities. Therefore, the program should be built around the idea of bounded literacy.

Several Limits and Institutional Complementarity

The most compelling critique of the HCL approach is that it could personalize a structural issue within the housing problem by positing that poor-quality housing is the result of poor decisions made by the household. This conclusion is not supported by any of the literature reviewed. The housing situation depends on income, land markets, tenure types, infrastructure, policies, building regulations, financing, and professional service availability (Republic of Indonesia, 2011; World Bank, 2017, 2023). Poor

households can be aware of the superior alternative but simply cannot afford it. Thus, literacy should be seen as the means of empowerment rather than a replacement of redistributive mechanisms, investments, regulation, or professional expertise.

Another problem with the HCL framework is that the domains have been defined conceptually without validation among the target population of participants. Priorities may vary based on different tenure systems, morphology of kampungs, household composition, level of risk, and stage of house construction. It would, thus, be necessary to explore what kind of knowledge the residents already possess, what knowledge gaps have the most critical impact, what kind of format they can understand, and how they can involve local builders and professionals without creating hierarchies.

The third limitation relates to evaluation. The community engagement program cannot be measured based on the level of satisfaction from participants or tests for their knowledge acquisition. More realistic measurements would relate to the ability to recognize dangerous working conditions, improved quality of questions to the builders, proper sequencing of the proposed improvements, more referrals to professionals when necessary, changes in maintenance methods, reduction of unnecessary rework, and retention of knowledge among community members.

CONCLUSION

This paper suggests that HCL is needed because of the inadequacy of the housing even though many houses have been constructed, renovated, maintained, and modified by means of household initiatives. Low-income households, thus, function as users as well as construction decision-makers regularly. HCL refers to the ability to obtain, understand, appraise, communicate, and use information on construction while knowing the need for professional advice. The suggested framework includes eight domains of knowledge on spatial requirements, safety, healthy housing, materials, cost, craftsmanship, regulation, and maintenance & resilience. Through community participation, HCL can improve the household's agency, knowledge equality, health, and resilience. For Surabaya, in particular, the approach is especially important regarding kampung housing and ongoing inadequacy. However, HCL must be used together with enough income, security of tenure, infrastructure, professional service, regulation, and government accountability.

ACKNOWLEDGEMENTS

[Acknowledgement information to be completed by the authors.]

REFERENCES

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners, 35*(4), 216–224.

Armenda, S., Adianto, J., & Gabe, R. T. (2022). Growth patterns and pivotal factors of incremental housing in Kampung Cikini, Jakarta. *International Journal of Design Management and Professional Practice, 16*(1), 1–17.

Badan Pusat Statistik Provinsi Jawa Timur. (2025). *Statistik perumahan dan permukiman Provinsi Jawa Timur 2024*.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27–40.

Bredenoord, J., & van Lindert, P. (2010). Pro-poor housing policies: Rethinking the potential of assisted self-help housing. *Habitat International, 34*(3), 278–287.

Cole, L. B. (2019). Green building literacy: A framework for advancing green building education. *International Journal of STEM Education, 6*, Article 18.

Dempsey, N., Bramley, G., Power, S., & Brown, C. (2011). The social dimension of sustainable development: Defining urban social sustainability. *Sustainable Development, 19*(5), 289–300.

Fatwa, A. W. (2022). Implementasi program Rehabilitasi Sosial Daerah Kumuh (RSDK) di Kelurahan Ploso, Kecamatan Tambaksari, Kota Surabaya. *Jurnal Politik Indonesia (Indonesian Journal of Politics), 8*(2), 110–121.

Golubchikov, O., & Badyina, A. (2012). *Sustainable housing for sustainable cities: A policy framework for developing countries*. UN-Habitat.

Mutaqi, A. S., Salura, P., & Lake, R. C. (2024). Ensuring fairness: Strategies for providing affordable housing for low-income communities in urban Indonesia. *EMARA: Indonesian Journal of Architecture, 9*(1), 46–57.

Norma, E., & Mustofa, A. (2024). Analysis of the uninhabitable house social rehabilitation program at the Department of Public Housing, Settlement Areas and Land Affairs Surabaya. *Socious Journal, 1*(4), 9–22.

Perdamaian, L. G., & Zhai, Z. (2024). Status of livability in Indonesian affordable housing. *Architecture, 4*(2), 281–302.

Puspita, A., Adianto, J., Gabe, R. T., Putri, F. E., Christina, A., & Megawati, P. J. (2024). Rules of organized chaos: Patterns in self-help incremental housing in Kampung Cikini, Jakarta. *Journal of Housing and the Built Environment, 39*(4), 2009–2026.

Republik Indonesia. (2011). *Undang-Undang Republik Indonesia Nomor 1 Tahun 2011 tentang Perumahan dan Kawasan Permukiman*.

Santosa, H. (2000). Environmental management in Surabaya with reference to National Agenda 21 and the social safety net programme. *Environment and Urbanization, 12*(2), 175–184.

Septanti, D., Ula, Z. M., Sumartinah, H. R., Zahra, V. F., & Etsahandy, N. A. (2024). Incremental housing application to enhance kampung resilience. *IOP Conference Series: Earth and Environmental Science, 1353*(1), Article 012016.

Shirleyana, Hawken, S., & Sunindijo, R. Y. (2018). City of Kampung: Risk and resilience in the urban communities of Surabaya, Indonesia. *International Journal of Building Pathology and Adaptation, 36*(5), 543–568.

Silas, J. (1989). Marginal settlements in Surabaya, Indonesia: Problem or potential? *Environment and Urbanization, 1*(2), 60–70.

Silas, J. (1992). Government-community partnerships in Kampung improvement programmes in Surabaya. *Environment and Urbanization, 4*(2), 33–41.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333–339.

Tunas, D., & Peresthu, A. (2010). The self-help housing in Indonesia: The only option for the poor? *Habitat International, 34*(3), 315–322.

Turner, J. F. C. (1976). *Housing by people: Towards autonomy in building environments*. Marion Boyars.

Valladares, A. (2013). The Community Architect Program: Implementing participation-in-design to improve housing conditions in Cuba. *Habitat International, 38*, 18–24.

Vallance, S., Perkins, H. C., & Dixon, J. E. (2011). What is social sustainability? A clarification of concepts. *Geoforum, 42*(3), 342–348.

World Health Organization. (2018). *WHO housing and health guidelines*.

World Bank. (2017). *Indonesia – National Affordable Housing Program Project (P154948): Project appraisal document*.

World Bank. (2023). *Indonesia – National Affordable Housing Program (P154948): Implementation completion and results report*.