



Revitalizing Urban Slum through Community-Based Program: Evidence from Makassar, Indonesia

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Abstract This study aims to analyze the implementation strategy of a community-based program aimed at revitalizing slums in Makassar City, Indonesia. To examine the revitalization process in Tallo and Buloa Village, located in Sub-district Tallo, which are priority areas for slum upgrading using qualitative methodology, specifically a case study design. Data collection methods used were observation, interview, documentation, and literature study. The implementation of the revitalization program begins with the preparation of an Urban Slum Prevention and Quality Improvement Plan (RP2KPKP) or Slum Quality Improvement Action Plan (SIAP) that focuses on improving residents' access to basic facilities. These basic facilities include residential building standards, availability of clean water and sanitation services, environmentally friendly road infrastructure, fire extinguishers, and green open spaces. According to the findings, the success of this program relies on an emphasis on community participation, collaboration with stakeholders, and effective monitoring, leading to long-term benefits for urban communities living in slums.

Keywords: Implementation, Revitalizing Program, Urban Slums, Community

1 Introduction

The rapid population growth has significantly impacted various aspects of the nation's life, particularly in urban areas. An evident consequence is the mounting challenge of meeting the population's housing or shelter needs [1], [2]. This is attributed to the restricted capacity to construct suitable housing, and the urban land shortage to build qualified settlements [3]. Public housing development is a top priority for the government in meeting one of the fundamental needs of the community. With the urgent need for shelter in urban areas, public housing development is given the highest priority for low-income individuals, particularly those in the most vulnerable situations. Unfortunately, the growth of slums has become inevitable, leading to a significant challenge in numerous major cities across Indonesia [4]–[6]. The management of slums presents a complex challenge for city and regency governments. On one hand, they are a problem,

but on the other hand, they serve as one of the foundations of the city's economy. Address this issue, the government has implemented a national strategic plan to address housing and slums, considering the challenges that exist and departing from the ideals of the nation [7]. Almost all major cities in Indonesia face the problem of slums. Makassar City is a major metropolitan area in Indonesia that continues to experience steady population growth.

However, this growth is accompanied by high levels of urbanization, leading to inadequate development of settlement facilities [8]. As a result, the demand for housing and settlement areas has increased, despite limited available land, resulting in the creation of numerous slum areas throughout Makassar City. This program is a significant accomplishment for the Regional Government in enhancing the quality of residential neighborhoods by increasing accessibility to infrastructure and basic services in urban slums to sustain the creation of habitable, productive, and sustainable urban settlements [9]. This study is of great interest to academics, who can delve deeper into the strategies and revitalization processes implemented by the city government to better the state of urban slums.

2 Research Method

This research uses qualitative methodology, specifically a case study design, to examine slum revitalization in Tallo and Buloa urban villages located in Tallo sub-district. The data collection techniques used were observation, interview, documentation, and literature study. The determination of informants was conducted using purposive sampling technique, which is a specific and directed approach with the assumption that the informants have the information needed and relevant to the research location. The informants in this study include 1 Head of the Makassar City Public Works Office, 1 Head of the Tallo sub-district community empowerment section, Tallo Village Head, 1 Buloa Village Head, 2 Heads of Buloa and Tallo Community Empowerment Institutions, 5 people from the Buloa village community and 5 people from the Tallo village community in the research location. Qualitative data analysis uses a method that involves several stages of identification based on groups of research objectives, data management and interpretation. These stages included abstraction, reduction and validation of data collected in the field.

3 Results and Discussion

3.1 Implementation Strategy of Community-Based Slum Revitalization Program in Makassar City

Implementation Strategy of Community-Based Slum Revitalization Program in Makassar City This study aims to analyze the implementation strategy of community-based revitalization Tallo priority area is an area that has the largest number of villages (15 villages), with an area of 5.83 km² or 3.32% of the total area of Makassar City. The

area is situated in a lowland topography with an elevation of 1-3 masl. Agriculture occupies 25 hectares of paddy fields and farms, and inland fisheries encompass 293 hectares of ponds. Potential hazards in Tallo Sub-district are flooding. This is due to it being the Tallo River Watershed, which has the potential for overflow into nearby settlements.

Additionally, there could be pollution and siltation at the mouth of the Tallo River, resulting from uncontrolled industrial waste in the Tallo River's tributaries. The Tallo sub-district beach is situated alongside both the sea and the Tallo River estuary. This location is primarily characterized by muddy beaches with sparse mangrove vegetation and a gradient shoreline. Notably, there has been beach reclamation activity along the western coast of this sub-district, extending up to 200 meters, to support wood processing industry operations. The stability of this beach can be considered relatively intact, despite its tendency to expand towards the sea and extend Tanjung Tallo due to sediment buildup at the mouth of the Tallo River. The area around Tallo is a priority location for the upgrade of slums, including the Tallo and Buloa villages, where the majority of residents live in poverty.

Population growth that is not matched by economic stability, coupled with inadequate government facilities, is a key driver of slums [10]. Slums reflect social inequality in the community due to inadequate access to infrastructure services that are essential for securing housing. Makassar City is one of the large urban areas that still has many densely populated slums [11]–[13]. The Makassar City government has implemented several housing prevention and quality improvement policies, facilitated by central government initiated and local government implemented. programmes, in line with the provisions of Article 28 H paragraph 1 of the 1945 Constitution as well as Law No. 1 of 2011 on Housing and Residential Areas. The implementation strategy of slum revitalisation in Makassar city begins with comprehensive planning covering all economic, environmental and social aspects. The planning is outlined in the Urban Slum Prevention and Quality Improvement Plan (RP2KPKP) or SIAP (Slum Improvement Action Plan) document which refers to the RPJMD, and Regional Spatial Planning for handling at the city and district levels. In the preparation of the RP2KP-KP or SIAP document, the city government, namely the Mayor, issued a Slum Handling Policy in Makassar City, which contains the condition of slum areas indicated as areas for handling slum prevention and quality improvement in Makassar city.

The area that becomes the dominant slum management by the Makassar city government is the area located in coastal slums or as found in Tallo urban village included in coastal slums and Buloa urban village settlement conditions are in the watershed (DAS). The process of implementing revitalisation in the Tallo priority area is in Tallo and Buloa urban villages as priority areas with a pattern of handling Prevention and Quality improvement and sustainable management. the following is an overview of the Slum Improvement Action Plan (SIAP) document Tallo priority area.

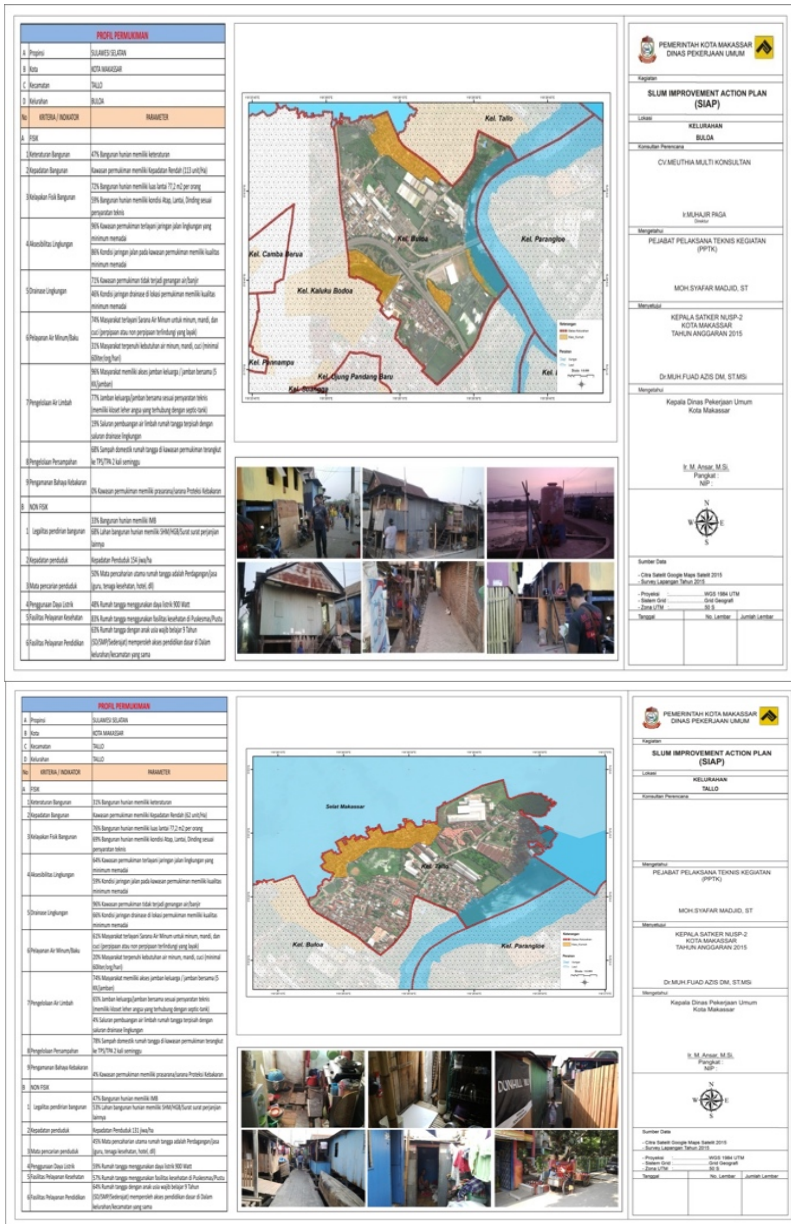


Fig. 1. Slum Improvement Action Plan (SIAP) Document Priority Areas Tallo and Buloa

3.1.1 Prevention

Prevention is an effort or early action in reducing, stopping all impacts that arise in a disaster [14]. prevention can also be an effort to instil awareness to avoid all forms of risk that will occur [15], [16]. The Makassar City Government aims to prevent the reemergence of slums by employing a combination of supervision, control, and community empowerment strategies. Supervision and control by the city government, including the construction of girders and the spatial arrangement of settlements, aims to halt or decrease the expansion of new slums in the priority Buloa and Tallo areas. In addition, community empowerment in slum prevention efforts by forming mentoring activities in the form of counselling or socialization by involving stakeholders and self-help groups at the village level. This is an introductory activity aimed at informing the community about the objectives and purpose of the program to be executed. It is essential for community involvement to play a crucial role in the development process.

The process of community empowerment is initiated by community institutions that have a vital role and are the driving force for the implementation of revitalization [17]–[19]. Empowerment is also very important in community development, therefore coaching is a form of activity that provides instructions or explanations on how to do an activity. The pattern of empowerment carried out through the Community-Based Settlement Environmental Management (PLPBK) activity approach is aimed at the community as an active actor in structuring the settlement environment. the initial process of community development is self-help mapping needed to form a participatory Planning Core Team as an initial process of compiling baseline data (Baseline) of the existing conditions of the slums settlement environment. this is intended to determine the description of the location of settlements and settlement infrastructure needs that will be done. The implementation of coaching activities is also supported by the community as a direct actor in the implementation of these activities, therefore a Community Self-Help Group is needed. The group is formed by the Community Self-Help Agency on the basis of an agreement consisting of residents who want to contribute ideas, ideas and energy voluntarily. The purpose of this group is to empower people who are able to solve their problems independently and are able to achieve goals through joint action.

3.1.2 Quality Improvement

Quality improvement is an effort made to fulfil a need for people's lives such as house buildings that have decreased the quality of function as a place of residence, infrastructure facilities that are not in accordance with technical requirements and public open space specifically in slum [20]–[24]. these conditions are the duties and authority of the Makassar city government in carrying out quality improvement of slum areas which can be viewed from several aspects, namely residential buildings, environmental roads, sanitation, clean water, fire safety and green open space. To be more specific, it can be described as follows:

Firstly, a residential or dwelling unit is classified as an uninhabitable building or house (RTLH) if it fails to meet the technical and non-technical occupancy standards. Essentially, RTLHs are strongly associated with slums. the condition of residential buildings (RTLH) in the buloa area is intended for settlements. the number of people living in the area makes this area look slum. The Municipal Government aims to transform the Buloa region into a productive hub by providing facilities that boost the income of its residents. There are several houses that are not habitable, especially for the poor. buildings that are not habitable are adjusted to the terms and conditions such as building irregularities, building density and non-compliance with technical requirements.

These are the criteria for reviewing the condition of community residential buildings, especially for the poor in Buloa village, there are still many residents who have uninhabitable house conditions. It can be seen that the number of houses that received revitalisation of residential buildings was only 6 units of the total number of unfit residential buildings of 40 units due to the limited revitalisation budget with the type of total house repair and repair of roofs, floors and walls. Meanwhile, in the Tallo area also experienced the same conditions in the repair of residential buildings for the poor as many as 14 units that underwent total repair and repair of the quality of the roof, floor and wall functions of 46 units. this was done to improve the quality of the function of residential buildings that were decent, healthy and comfortable to live in.

Second, Neighbourhood Roads are environmental infrastructure in the form of a network. The main function of the road network is to facilitate the movement of people and vehicles [25], [26]. The road network has an important function as access to rescue in an emergency. the road network is built to connect one place to another [27], [28]. Neighbourhood roads are the most important thing in improving the quality of housing and settlement infrastructure, because neighbourhood roads are a necessity intended to improve the quality and accessibility of road structures [29]. So, the neighbourhood road can be used for residents' activities. in practice. road improvements in the tallo area, especially Buloa and Tallo villages, have been carried out well in accordance with the plan. based on observations of the study in the field, the construction of the road network built by the Buloa and Tallo community is road improvements using paving block material which makes the road quality good and easily accessible to residents. for workmanship is fairly easy and does not burden many residents in working on the construction of the road.

Third, Sanitation is a deliberate behaviour in the culture of clean living with the intention of preventing humans from coming into direct contact with dirt and other hazardous waste materials in the hope that this effort will maintain and improve human health [30], [31]. Sanitation in terms of improving the quality of the settlement environment relates to drainage, family latrines (bathing, washing and toilet) and waste. The provision of sanitation in Buloa and Tallo areas is the construction of drainage in residential areas intended to maintain and prevent water runoff and reduce water discharge so as to avoid flooding or puddles around residential areas. The government also provides family latrine assistance for Buloa and Tallo residents who do not have proper sanitation to be utilized. The assistance makes it easier for the community to meet the needs of proper sanitation so as to avoid the danger of disease and no longer pollute the

environment where they live. Waste management is one of the things that needs attention. Waste management is a systematic, comprehensive, and sustainable activity that includes waste reduction and handling aimed at improving public health. Household waste management in the Buloa and Tallo areas is carried out by individual waste management by the people who live in the area.

Fourth, the provision of clean water is one of the most important facilities, namely clean water. clean water networks are indispensable for settlements and housing environments [32], [33]. Basically, every household must receive access to clean water services that satisfy health requirements and ensure safe human consumption [34]–[36]. However, the provision of clean water provided by the city government is still limited and is not fully utilised by the community. as a result, the community has other alternatives to get water for daily needs by buying from certain sales places.

Fifth, fire safety or fire protection is a means to support settlements [37], [38] Given the high population density in the areas of Buloa and Tallo, the risk of fire is elevated. Observations in the field only Tallo area is equipped with fire extinguishers while Buloa area is not available. The provision of fire extinguishers is crucial in all residential environments due to the high risk of fire disasters in areas like Buloa, which lack any fire safety equipment to anticipate such events. Objective measures to ensure adequate fire safety should be implemented in order to mitigate future risks.

Sixth, Green Open Space or public open space is a need for the community to fulfil ecological functions that are intended in a residential area [39]–[41]. In accordance with the mandate of Law No. 26 Year 2007 on Spatial Planning to fulfil the achievement of 30% green open space in residential areas which is divided into 20% public green space and 10% private green space. The aims of developing green open spaces in the Buloa and Tallo areas is to provide areas for community activities. According to the observations, the green spaces in the Buloa region are not strategically located and accessible to residents due to the density of residential buildings. The green or public open space is situated at the edge of the canal, given the limited land conditions. The private open space is intended to enhance the beauty of the residential environment, particularly on the streets. Some houses' gardens exhibit flowers and plant varieties that can contribute to the area's economic value. However, the residents haven't maximized its potential use. Moreover, the green open space located on the beachfront of Tallo area provides an opportunity for community activity due to its strategic location and accessibility.

3.1.3 Management

Management is a utilization activity carried out to maintain the residential environment [42], [43]. The community as the user of the residential environment is obliged to maintain and maintain the facilities and infrastructure that have been built and continuously improve their quality [44]–[46]. Management is also a stage of sustainability of the revitalisation implementation. If the infrastructure built does not provide long-term benefits due to weak management, it will result in not achieving the expectations of the community and the objectives of the programme. The author's observations in the field can be seen that the condition of facilities and infrastructure in the buloa and Tallo areas is less utilised and maintained by the community or local residents who live in the area.

Especially for drainage and green open spaces in the buloa area, the drainage conditions cannot be functioned again due to the lack of initiative of residents to maintain and repair infrastructure.

Therefore, it needs attention from the community to manage and maintain existing infrastructure in a way that facilities and infrastructure must be carried out by the participation of residents of users, both in terms of financing and implementation of maintenance which aims to carry out operational and maintenance activities by raising funds sourced from residents on a voluntary basis, the village government and the local government, so the formation of the group is based on community needs in improving the quality of residential environmental facilities and infrastructure. The implementation of the revitalization program in the city of Makassar found that the community-based revitalization model focuses on active participation and active involvement of the community starting from the preparation of the Slum improvement action plan document to the process of maintaining and utilizing infrastructure and the environment managed directly by the community as the goal of the sustainability of the implementation of the slum revitalization program in the city of Makassar. Compared to previous research, it only explains the community's emphasis on the process of improving physical infrastructure.

3.1.4 Research implications for other fields

Research in the field of community-based slum revitalization can have significant implications in areas such as government policies that support revitalization efforts, public health and the environment that affect the sustainability of revitalization programs. Through a deep understanding of the implications of the research, all parties involved can work together to achieve the goal of sustainable revitalization that has a positive impact on the community and the environment.

3.1.5 Limitations and future research

The implementation of community-based slum revitalization programs, there are some limitations. Revitalization implemented in various countries varies greatly. Therefore, it needs to be studied more deeply in the context of the community. Community involvement plays a key role in the success of slum revitalization. This is because community involvement not only improves program implementation but also ensures that community needs and aspirations are effectively accommodated. While for future research that needs to be considered by future studies related to the impact of the long-term realization of programs that have been implemented by other countries, especially in developing countries. It is possible to have results that support the research findings as well as specifically can be studied by other fields of study.

4 Conclusions

This research reveals that community-based slum revitalisation strategies in Makassar City have a significant positive impact on improving the quality of life of residents and improving settlement infrastructure. Based on the data analysis and findings obtained, the following conclusions can be drawn:

First, the community-based slum revitalisation strategy in Makassar City located in Buloa and Tallo areas has been successful in improving residents' access to basic facilities such as clean water, sanitation, and road infrastructure. This helps to reduce social inequality and improve residents' quality of life. Community involvement in the decision-making process and implementation of revitalisation programmes is a key success factor. The process of coordination and collaboration between the local government, Community Empowerment Agencies, and other Stakeholders is a critical component in the implementation of this revitalisation strategy. The success of this programme does not only depend on one party, but also involves cooperation between various stakeholders. Financial limitations need to be a concern in continuing this revitalisation programme. Sufficient resources and supportive policies will help maintain the sustainability of the programme.

Secondly, continuous evaluation and monitoring of the progress of the revitalisation project is essential to ensure that the desired goals and outcomes are achieved. Through regular evaluation, improvements and adjustments can be made to increase the effectiveness of the revitalisation strategy. Efforts must continue in developing and implementing a community-focused strategy to revitalize slums in Makassar City for sustainable and inclusive urban development. The programme's success relies on maintaining a focus on community participation, stakeholder collaboration and effective monitoring, resulting in sustainable benefits for the city's residents and assisting in addressing the city's slum problem.

References

1. D. Harvey, "The right to the city," in *The city reader*, Routledge, 2015, pp. 314–322.
2. J. Browne *et al.*, "Enhancing health care equity with Indigenous populations: evidence-based strategies from an ethnographic study," *BMC Health Serv Res*, vol. 16, pp. 1–17, 2016.
3. L. Seeliger and I. Turok, "Averting a downward spiral: building resilience in informal urban settlements through adaptive governance," *Environ Urban*, vol. 26, no. 1, pp. 184–199, 2014.
4. E. Rustiadi, D. O. Pribadi, A. E. Pravitasari, G. S. Indraprahasta, and L. S. Iman, "Jabodetabek megacity: From city development toward urban complex management system," *Urban development challenges, risks and resilience in Asian mega cities*, pp. 421–445, 2015.
5. J. Minnery *et al.*, "Slum upgrading and urban governance: Case studies in three South East Asian cities," *Habitat Int*, vol. 39, pp. 162–169, 2013.
6. X. Q. Zhang, "The trends, promises and challenges of urbanisation in the world," *Habitat Int*, vol. 54, pp. 241–252, 2016.

7. M. Lehtonen, L. Sébastien, and T. Bauler, "The multiple roles of sustainability indicators in informational governance: between intended use and unanticipated influence," *Curr Opin Environ Sustain*, vol. 18, pp. 1–9, 2016, doi: <https://doi.org/10.1016/j.cosust.2015.05.009>.
8. X. Guan, H. Wei, S. Lu, Q. Dai, and H. Su, "Assessment on the urbanization strategy in China: Achievements, challenges and reflections," *Habitat Int*, vol. 71, pp. 97–109, 2018.
9. Y. Yang, S. T. Ng, F. J. Xu, and M. Skitmore, "Towards sustainable and resilient high density cities through better integration of infrastructure networks," *Sustain Cities Soc*, vol. 42, pp. 407–422, 2018, doi: <https://doi.org/10.1016/j.scs.2018.07.013>.
10. D. Roy, M. H. Lees, B. Palavalli, K. Pfeffer, and M. A. P. Slood, "The emergence of slums: A contemporary view on simulation models," *Environmental Modelling & Software*, vol. 59, pp. 76–90, 2014.
11. E. O. Ibem, "Accessibility of services and facilities for residents in public housing in urban areas of Ogun State, Nigeria," in *Urban Forum*, Springer, 2013, pp. 407–423.
12. B. Surya, "The processes analysis of urbanization, spatial articulation, social change and social capital difference in the dynamics of new town development in the fringe area of Makassar City (case study: In Metro Tanjung Bunga Area, Makassar City)," *Procedia-Social and Behavioral Sciences*, vol. 227, pp. 216–231, 2016.
13. T. Shibata, J. L. Wilson, L. M. Watson, I. V Nikitin, R. La Ane, and A. Maidin, "Life in a landfill slum, children's health, and the Millennium Development Goals," *Science of the Total Environment*, vol. 536, pp. 408–418, 2015.
14. J. D. Hawkins and J. G. Weis, "The social development model: An integrated approach to delinquency prevention," in *Developmental and life-course criminological theories*, Routledge, 2017, pp. 3–27.
15. J. Thorn, T. F. Thornton, and A. Helfgott, "Autonomous adaptation to global environmental change in peri-urban settlements: Evidence of a growing culture of innovation and revitalisation in Mathare Valley Slums, Nairobi," *Global Environmental Change*, vol. 31, pp. 121–131, 2015.
16. H. Nakamura, H. Umeki, and T. Kato, "Importance of communication and knowledge of disasters in community-based disaster-prevention meetings," *Saf Sci*, vol. 99, pp. 235–243, 2017.
17. M. Z. Gough and J. Accordino, "Public gardens as sustainable community development partners: Motivations, perceived benefits, and challenges," *Urban Affairs Review*, vol. 49, no. 6, pp. 851–887, 2013.
18. J. Gao and B. Wu, "Revitalizing traditional villages through rural tourism: A case study of Yuanjia Village, Shaanxi Province, China," *Tour Manag*, vol. 63, pp. 223–233, 2017.
19. D. E. Thomson and H. Etienne, "Fiscal crisis and community development: The great recession, support networks, and community development corporation capacity," *Hous Policy Debate*, vol. 27, no. 1, pp. 137–165, 2017.
20. Rodriguez, "Social innovation for neighbourhood revitalization: A case of empowered participation and integrative dynamics in Spain," in *Social innovation and territorial development*, Routledge, 2016, pp. 81–100.

21. Y. Li, H. Westlund, X. Zheng, and Y. Liu, "Bottom-up initiatives and revival in the face of rural decline: Case studies from China and Sweden," *J Rural Stud*, vol. 47, pp. 506–513, 2016.
22. C. Haynes and J. G. Nembhard, "Cooperative economics—A community revitalization strategy," in *Leading Issues in Black Political Economy*, Routledge, 2018, pp. 457–482.
23. C. Bianchi and S. Tomaselli, "A dynamic performance management approach to support local strategic planning," *International Review of Public Administration*, vol. 20, no. 4, pp. 370–385, 2015.
24. G. Villanueva, C. Gonzalez, M. Son, E. Moreno, W. Liu, and S. Ball-Rokeach, "Bringing local voices into community revitalization: Engaged communication research in urban planning," *Journal of Applied Communication Research*, vol. 45, no. 5, pp. 474–494, 2017.
25. B. Arimah, "Infrastructure as a Catalyst for the Prosperity of African Cities," *Procedia Eng*, vol. 198, pp. 245–266, 2017.
26. M. Auerbach, "Neighborhood associations and the urban poor: India's slum development committees," *World Dev*, vol. 96, pp. 119–135, 2017.
27. T. Esch *et al.*, "Breaking new ground in mapping human settlements from space—The Global Urban Footprint," *ISPRS Journal of Photogrammetry and Remote Sensing*, vol. 134, pp. 30–42, 2017.
28. Y. Liu, Y. Yang, Y. Li, and J. Li, "Conversion from rural settlements and arable land under rapid urbanization in Beijing during 1985–2010," *J Rural Stud*, vol. 51, pp. 141–150, 2017.
29. U. Giseke, "Understanding the Problems of Grand Casablanca," in *Urban Agriculture for Growing City Regions*, Routledge, 2015, pp. 88–220.
30. K. Schanes, K. Dobernic, and B. Gözet, "Food waste matters-A systematic review of household food waste practices and their policy implications," *J Clean Prod*, vol. 182, pp. 978–991, 2018.
31. B. M. Sharma *et al.*, "Health and ecological risk assessment of emerging contaminants (pharmaceuticals, personal care products, and artificial sweeteners) in surface and groundwater (drinking water) in the Ganges River Basin, India," *Science of the Total Environment*, vol. 646, pp. 1459–1467, 2019.
32. K. Daley, H. Castleden, R. Jamieson, C. Furgal, and L. Ell, "Water systems, sanitation, and public health risks in remote communities: Inuit resident perspectives from the Canadian Arctic," *Soc Sci Med*, vol. 135, pp. 124–132, 2015.
33. S. Dos Santos *et al.*, "Urban growth and water access in sub-Saharan Africa: Progress, challenges, and emerging research directions," *Science of the Total Environment*, vol. 607, pp. 497–508, 2017.
34. J. Bartram and S. Godfrey, "Drinking-water supply," in *Routledge handbook of water and health*, Routledge, 2015, pp. 191–202.
35. M. Rusca, A. S. Boakye-Ansah, A. Loftus, G. Ferrero, and P. van der Zaag, "An interdisciplinary political ecology of drinking water quality. Exploring socio-ecological inequalities in Lilongwe's water supply network," *Geoforum*, vol. 84, pp. 138–146, 2017.

36. Y. Kazerooni *et al.*, “Fires in refugee and displaced persons settlements: The current situation and opportunities to improve fire prevention and control,” *Burns*, vol. 42, no. 5, pp. 1036–1046, 2016.
37. C. Yuan, Y. He, Y. Feng, and P. Wang, “Fire hazards in heritage villages: A case study on Dangjia Village in China,” *International journal of disaster risk reduction*, vol. 28, pp. 748–757, 2018.
38. D. T. Do, Y. Cheng, A. Shojai, and Y. Chen, “Public park behaviour in Da Nang: An investigation into how open space is used,” *Frontiers of Architectural Research*, vol. 8, no. 4, pp. 454–470, 2019.
39. R. Galdini, “RETRACTED ARTICLE: Placemaking as an approach for innovative urban renewal practices: community gardens in Berlin.” Taylor & Francis, 2017.
40. S. S. Cilliers, S. J. Siebert, M. J. Du Toit, and E. Davoren, “MANAGING URBAN GREEN SPACES FOR BIODIVERSITY CONSERVATION”.
41. Ren, “Construction of life cycle evaluation model for urban innovative ecological system based on new-type urbanization,” *Open House International*, vol. 43, no. 1, pp. 36–40, 2018.
42. W. A. Kellogg and E. M. Matheny, “Sustainable Waterfront Development in the Great Lakes Basin,” in *Handbook of Globalization and the Environment*, Routledge, 2017, pp. 311–333.
43. J.-F. Harvey, P. Cohendet, L. Simon, and S. Borzillo, “Knowing communities in the front end of innovation,” *Research-Technology Management*, vol. 58, no. 1, pp. 46–54, 2015.
44. N. Bates *et al.*, “Electrical grid and supercomputing centers: An investigative analysis of emerging opportunities and challenges,” *Informatik-Spektrum*, vol. 38, pp. 111–127, 2015.
45. V. O. Owolana and C. A. Booth, “Stakeholder perceptions of the benefits and barriers of implementing environmental management systems in the Nigerian construction industry,” *Journal of Environmental Engineering and Landscape Management*, vol. 24, no. 2, pp. 79–89, 2016.
46. D. M. Nassar and H. G. Elsayed, “From informal settlements to sustainable communities,” *Alexandria engineering journal*, vol. 57, no. 4, pp. 2367–2376, 2018.

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