

Committee: World Health Organization (WHO)

Topic: Tackling sanitation challenges in informal settlements in Latin America

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Topic Introduction

Informal settlements have gradually become commonplace in Latin America, and the public health issues, especially pertaining to the spread of infectious diseases, having grown substantially over the last 20 years, due to a significant influx of rural migration into urban areas^{1,2}, it has become an issue in urgent need of attention by the international community.

With deficient local funding, sanitation challenges, most prominently a reduced supply of drinking water and limited sewage processing, have grown in significance. Sanitation facilities in informal settlements, despite various improvements, such as investments in public works, provided for by infrastructure development programs, have not been effective in relation to ease of use by civilians^{3,4}.

The issue is compounded further by a lack of healthcare resources in many informal settlements⁵, and reduced financial resources of residents that form a significant barrier to access to healthcare services⁶. As such, it should be noted that the issue of sanitation challenges in informal settlements be approached in multiple dimensions, offering effective solutions that can garner multilateral support, to provide the Latin American population in informal settlements with equal opportunity for sanitation.

¹ "SDG Indicators." United Nations, unstats.un.org/sdgs/report/2019/goal-11/. Accessed 28 June 2024.

² Reckford, Jonathan T.M., and Yvonne Aki-Sawyer. "Informal Settlements Are Growing Everywhere - Here's What We Do." World Economic Forum, 22 Aug. 2023,

³ Dickson-Gomez, Julia et al. "Water, Sanitation, and Hygiene Challenges in Informal Settlements in Kampala, Uganda: A Qualitative Study." *International journal of environmental research and public health* vol. 20,12 6181. 19 Jun. 2023, doi:10.3390/ijerph20126181

⁴ Muanda, Christophe, et al. "Factors and impacts of informal settlements residents' sanitation practices on access and sustainability of sanitation services in the policy context of free basic sanitation." *Journal of Water, Sanitation and Hygiene for Development*, vol. 10, no. 2, 29 Apr. 2020, pp. 238–248, <https://doi.org/10.2166/washdev.2020.123>.

⁵ Bakhtiar Piroozi, et al. "Socioeconomic Inequality in Unmet Outpatient Healthcare Needs among People Living in Urban Informal Settlements in Sanandaj City, Iran., 11 Dec. 2023

⁶ Poortaheri, Naeimeh et al. "Health needs assessment of the residents of the informal settlements in South-Eastern Iran: A case study of Bam city.", 30 Jun. 2021



Definition of key concepts

Sanitation

“The process of keeping places free from dirt, infection, disease, etc., by removing waste, trash and garbage, by cleaning streets, and other actions.”⁷

Urbanization

“The process by which large numbers of people become permanently concentrated in relatively small areas, forming cities.”⁸

Latin America

According to Britannica, Latin America “is generally understood to consist of the entire continent of South America in addition to Mexico, Central America, and the islands of the Caribbean whose inhabitants speak a romance language.”⁹

Informal settlements

The Community of Latin American and Caribbean States (CELAC) Urban and Cities Platform defines informal settlements as “residential areas where the inhabitants do not have security of tenure regarding the land or housing they inhabit, ranging from illegal occupation to informal rental housing.”¹⁰

Land tenure

The United Nations Food and Agriculture Organization defines land tenure as “the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land”¹¹.

⁷ Encyclopædia Britannica. “Sanitation Definition & Meaning.” *The Britannica Dictionary*, Encyclopædia Britannica, inc., www.britannica.com/dictionary/sanitation. Accessed 17 July 2024.

⁸ Britannica, The Editors of Encyclopaedia. “urbanization”. *Encyclopedia Britannica*, 21 Jun. 2024, <https://www.britannica.com/topic/urbanization>. Accessed 17 July 2024.

⁹ Bushnell, David, Lockhart, James and Kittleson, Roger A.. “history of Latin America”. *Encyclopedia Britannica*, 7 Jul. 2024, <https://www.britannica.com/place/Latin-America>. Accessed 10 July 2024.

¹⁰ Urban and Cities Platform. “22. Informal Settlements.” *22. Informal Settlements | Urban and Cities Platform*, Community of Latin American and Caribbean States, 6 Sept. 2023, plataformaurbana.cepal.org/en/urban-themes/22-informal-settlements.

¹¹ The Food and Agriculture Organization of the United Nations. “3. WHAT IS LAND TENURE.”, *Land Tenure and Rural Development*, Rome, 2002.



Background Information

The Sustainable Development Goals (SDGs) Goal 11 calls to “make cities and human settlements inclusive, safe, resilient, and sustainable”.¹² Currently, progress on this Goal is regressing due to rapid uncontrolled urbanization, pandemics, and climate change. Creating sustainable solutions to the issue of sanitation in such settlements is crucial in attaining SDG Goal 11, and successfully implementing policies in the Latin American area regarding sanitation can prove to be a template for sustainable development, accelerating progress over the SDGs overall.

Causes

Overcrowding and rapid urbanization

“Progress on Household Drinking Water, Sanitation and Hygiene 2000-2020 Five Years into the SDGs”, a document produced by the World Health Organization¹³ in 2021, has shown that the population in developing countries that are living in informal settlements have increased substantially over the past years. Rapid urbanization in some developing countries in Latin America has led to difficulty in adequately addressing housing and sanitation infrastructure, since local healthcare agencies find difficulty in keeping up with new urban development.

Insufficient financial capacity

Availability of financial resources could also be considered a barrier for informal settlements in LEDCs, especially those in Latin America. Local municipalities mostly funded re-urbanization efforts in informal settlements independently with low levels of international assistance, which is troublesome for settlements where funding is severely restricted. Despite having taken notice of the issue of informality, Argentina’s socio-urban integration programme (PISU) is shown to be a 15-to-20-year effort, that may still need more than public funding to fully realize¹⁴.

¹² “Cities - United Nations Sustainable Development Action 2015.” United Nations, United Nations, www.un.org/sustainabledevelopment/cities/. Accessed 17 July 2024.

¹³ World Health Organization, 2021

¹⁴ Welisiejko, Sebastián, and Belén Cáceres. *Informal Settlements: No Longer Invisible*, GSG, May 2022, www.gsgimpact.org/media/ojbfa45n/informal-settlements-report-aug-2022.pdf.



Lack of water and sanitation resources

Despite going through renovations and improvement efforts by local municipal governments, in a significant portion of informal settlements, the existing sanitation and sewage treatment solutions are still not deemed satisfactory¹⁵. Most informal settlements also experience significant shortage of clean drinking water, a necessity for human survival¹⁶. A report by the Economic Commission for Latin America and the Caribbean (CEPAL) showed that 2.5 out of 10 people do not have adequate access to safe drinking water (2017), and a sum of 12.97 million people in Colombia and Bolivia are without access to handwashing facilities (2018)¹⁷. In addition to resources in relation to sanitation capacity, such as sewage treatment and handwashing facilities, reliable and safe access to drinking water, proclaimed as a human right by the UN General Assembly, is also a key factor in increasing sanitation and life expectancy in Latin American informal settlements.

Impact

Unsatisfactory sanitation has been noted as a factor in the spread of infectious diseases, such as tuberculosis or malaria¹⁸. The SARS-CoV-2 virus, responsible for the outbreak of the COVID-19 pandemic, spreading in the form of aerosols, droplets, as well as through fecal matter, has its effects exacerbated by insufficient healthcare and sanitation capacity. This has led to a significant number of deaths related to the viral infection, caused by a lack of human waste disposal solutions and overcrowding in rapidly urbanizing settlements. In urban areas, the health of residents in poorer parts of the city are affected disproportionately. According to a Reuters report, COVID-19 infection rates are “nearly 30% higher” in Buenos Aires’ poor neighborhoods, compared to wealthier regions.¹⁹

<u>December 17, 2015</u>	UN General Assembly adopted resolution A/RES/70/169, affirming the human rights
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¹⁵ Augsburg, Britta, et al. “When nature calls back: Sustaining behavioral change in rural Pakistan.” *Journal of Development Economics*, vol. 158, Sept. 2022, p. 102933, <https://doi.org/10.1016/j.jdevco.2022.102933>.
¹⁶ Gojobe, Kamila. “Dry Times in the Slums: The Struggle for Water in Informal Settlements.” *Arise*, 22 June 2023, www.ariseconsortium.org/dry-times-in-the-slums-the-struggle-for-water-in-informal-settlements/.
¹⁷ “Basic Water and Electricity Services as Key Sectors for Transformative Recovery in Latin America and the Caribbean.” *CEPAL*, Economic Commission for Latin America and the Caribbean, 7 Sept. 2022, www.cepal.org/en/insights/basic-water-and-electricity-services-key-sectors-transformative-recovery-latin-america-and.
¹⁸ Von Seidlein, Lorenz, et al. “Crowding has consequences: Prevention and management of covid-19 in informal urban settlements.” *Building and Environment*, vol. 188, Jan. 2021, p. 107472, <https://doi.org/10.1016/j.buildenv.2020.107472>.
¹⁹ Teixeira, Fabio, et al. “‘No Time’: Latin America’s Slum Dwellers Lead Coronavirus Battle.” *Reuters*, 25 May 2020, www.reuters.com/article/idUSKBN2311GQ



	to drinking water and sanitation as essential human rights. ²⁰
<u>July 05, 2018</u>	World Bank provided USD 70 million loan to Peru for “A modernization of water supply and sanitation services project” ²¹
<u>September 25, 2018</u>	The World Health Organization published “Guidelines on Sanitation and Health” ²² , in which several methodologies to sanitation are mentioned, including Community-Led Total Sanitation (CLTS). ²³
<u>June 5-9, 2023</u>	UN-HABITAT (United Nations Human Settlements Programme) passed resolution HSP/HA.2/L.5 on “accelerating the transformation of informal settlements and slums by 2030”

Major countries/ organizations and alliances

Bolivia

Bolivia is a predominantly urban country. Urban areas, such as the Agglomeration of La Paz where prominence of informal settlements is high, have seen use of urban big data tools to optimize solid waste collection and management²⁴, which encourages an evidence-based design that increases the efficiency of local sanitation components.

²⁰ United Nations General Assembly. 70/169. *The human rights to safe drinking water and sanitation*. Resolution no. A/RES/70/169, UN, 2016

²¹ World Bank Group. “Development Projects : Modernization of Water Supply and Sanitation Services - P157043.” *World Bank*, projects.worldbank.org/en/projects-operations/project-detail/P157043. Accessed 10 July 2024.

²² World Health Organization, *Guidelines on Sanitation and Health*, 2018.

²³ Venkataramanan, Vidya et al. “Community-Led Total Sanitation: A Mixed-Methods Systematic Review of Evidence and Its Quality.” *Environmental health perspectives* vol. 126,2 026001. 2 Feb. 2018, doi:10.1289/EHP1965

²⁴ Copa, Eva, et al. “La Paz and El Alto on Their Way to Integrated Urban Development.” *United Nations Development Programme*, 18 Oct. 2021, www.undp.org/blog/la-paz-and-el-alto-their-way-integrated-urban-development.



China

Currently, China has ongoing programmes such as the “Rural Toilet Revolution”²⁵ that aims to increase levels of sanitation in rural China in a resource-oriented approach. Depending on regional objectives and relevant interests, it is likely that China may be more open to contribution of funds or sanitation infrastructure construction assistance for Latin American countries.

Peru

As one of the Latin American nations where informal settlements are most prevalent, Peru has already made efforts to reduce poverty and increase sanitation in its informal settlements. A study done by the Overseas Development Institute highlighted Peru’s efforts that have increased provisioning of safe drinking water in informal settlements²⁶, showing also continued growth of Peruvian cities through informal settlements constructed in high-risk areas²⁷.

United States

The U.S. Agency for International Development (USAID) already provides substantial financial and humanitarian assistance, involving sanitation support, to countries in the Caribbean region, including El Salvador, Guatemala, and Honduras²⁸. Having a regional interest in the area, as well as being a global leader in technological development, the United States may be more incentivized to seek collaboration and technology sharing for sanitation infrastructure.

Inter-American Development Bank (IDB)

The IDB is a financial organization that aims to provide financial and technical assistance to Latin American nations, with urban development and housing being one of their focus topics. They have provided funds in the form of loans and created initiatives to increase living standards in Latin American informal settlements, showing an interest in sustainable development aid in the area.²⁹

²⁵Hua, Wenyan, et al. “Sustaining resource-oriented sanitation behaviors through informal institutions: Evidence from China.”, Nov. 2023

²⁶ Cockburn, Julio Calderón, et al. *ON THE PATH TO PROGRESS: Improving Living Conditions in Peru’s Slum Settlements*, Overseas Development Institute, June 2015, media.odi.org/documents/10030.pdf.

²⁷ *ibid.*

²⁸ “Generating Hope: USAID in El Salvador, Guatemala, and Honduras: Latin America and the Caribbean.” *U.S. Agency for International Development*, 27 Feb. 2023,

www.usaid.gov/where-we-work/latin-america-and-the-caribbean/generating-hope-usaid-el-salvador-guatemala-and-honduras.

²⁹ Salgado Derqui, Javier Jose, and Goulart Janaina Borges De Padua. “Brazil to Improve Access to Housing for Vulnerable People in the State of Paraná.” *Inter-American Development Bank*, 10 Apr. 2024, www.iadb.org/en/news/brazil-improve-access-housing-vulnerable-people-state-parana.



Previous attempts to solve the issue

Citywide Inclusive Sanitation Initiative (CWIS)

An initiative started by the World Bank to improve sanitation conditions worldwide by “considering the full sanitation service chain”³⁰, involving procedures depicted in the following:

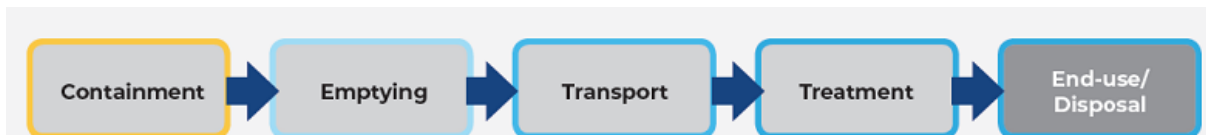


Image 1: Procedures involved in the full sanitation service chain³¹

The CWIS has seen successful implementations in parts of developing countries. A report done by the Global Water and Sanitation Center cites “Empowerment and Transformation” as the main achievements of the CWIS implementation in Odisha, India³².

UN-HABITAT Global Action Plan

The Global Action Plan developed by UN-HABITAT is a document outlining measures to transform informal settlements to relieve poverty and increase sanitation standards³³. Serving as a technical framework to transforming informal settlements by 2030, it emphasizes a set of objectives for the international community to transform informal settlements by 2030, addressing also the issue of sanitation challenges faced in informal settlements.

Participatory Slum Upgrading Programme (PSUP)

The PSUP is a collaborative effort also led by UN-HABITAT, consisting of 51 participating countries that are committed to participatory slum upgrading³⁴, taking action to provide safe and affordable

³⁰ World Bank Group, “Citywide Inclusive Sanitation (CWIS) initiative.”, 2021

³¹ *ibid.*

³² Basyal, Isha. “Citywide Inclusive Sanitation in Odisha: A Journey of Empowerment and Transformation.” *Global Water & Sanitation Center*, 26 Jan. 2024, www.gwsc.ait.ac.th/citywide-inclusive-sanitation-in-odisha-a-journey-of-empowerment-and-transformation/.

³³ United Nations Human Settlements Programme (UN-Habitat), *GLOBAL ACTION PLAN: Accelerating for Transforming Informal Settlements and Slums by 2030*, Nairobi, Kenya, 2022.

³⁴ United Nations, “The Participatory Slum Upgrading Programme”, n.d.

drinking water and adequate sanitation³⁵. Focusing on community empowerment, integrated development and advocating policy, it takes action to support vulnerable informal communities through providing adequate water supply and building sanitation capabilities. Proposed in 2018, the PSUP has seen successes of its initiatives in Ghana³⁶, where the program is most widely reported of.

Possible solutions

Sanitation infrastructure development aid for LEDCs in Latin America

Providing financial aid to countries where informal settlements can be most prevalent can be very useful, as it eases the burden on local municipalities and increases number of resources available to local healthcare agencies. Member States will need to consider the non-zero risk of misutilization by local governments when discussing potential aid packages, as well as their implementation details. States should also consider how well this action aligns with the WHO's objectives, and its effectiveness, while considering implementation of various minutiae and mechanisms to ensure correct appropriation of resources devoted by the WHO.

Expanding campaigns in local municipalities

Information campaigns and surveys carried out in informal settlements are likely to resolve the issue of insufficient consideration of local needs. Information collection and data analysis can help to highlight "hotspots" where clean water and sewage processing infrastructure are shown to be deficient, and it is likely to receive multilateral support from Member States. However, information collection may prove to be a significant strain on resources available to local municipalities without appropriate supporting mechanisms from the international community.

Encouraging innovation in sanitation technologies

Improvement of sanitation infrastructure could also consider how technological efforts can help make existing infrastructure more effective. MEDCs are more likely to support such initiatives, as it aligns with their policy to encourage innovation in healthcare and sanitation technology. LEDCs, especially those that are affected in Latin America, are likely to have a more positive reception to

³⁵ *ibid.*

³⁶ Getachew, Daniel. "UN Deputy Secretary-General Sees Impact of UN-Habitat's Participatory Slum Upgrading Programme in Ghana:" *UN-Habitat*, United Nations, 16 Nov. 2020, unhabitat.org/news/24-nov-2020/un-deputy-secretary-general-sees-impact-of-un-habitats-participatory-slum.



technological innovation initiatives, as they have a direct benefit in such efforts. Solutions should be considered that align with the WHO's objectives as a global organization, while considering how well LEDCs incorporate new sanitation technologies. Technological improvements in sanitation may however take a slower effect as national scientific research takes time to develop and evaluate experimental sanitation deployments.

Formalization of informal settlements

The rapid uncontrolled growth of urbanization in informal settlements could be regulated on a national level for Latin American countries facing the problem. This can be done by expanding municipal capabilities to control the spread of urban sprawl by stemming growth of new informalities and encouraging more central urban planning. However, imposing building and sanitation guidelines on informal residences may prove to be ineffective if other sources of the issue are not addressed, and creating specialized policies are likely to require dedication in national governments in Latin America.

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