3 Global Norms, African Contexts: A Framework for Localizing SDGs in Cities

Kareem Buyana, J. Jacqueline A. Walubwa, Paul Mukwaya, Hakim Sseviiri, Disan Byarugaba, and Gloria Nsangi Nakyagaba

Abstract

The Sustainable Development Goals (SDGs) set out a normative agenda that offers opportunity for cities to steer profound change globally. But if cities are to play an effective role in localizing the 2030 Agenda, there is a need for systematic engagement with the conundrums presented by the normative dimensions of the SDGs. We argue that African cities offer unique contextual insights into the linkages and overlaps among SDG norms, due to their immensely diverse nature and historically distinct drivers of urbanization. Set against African urban realities, the chapter presents an analytical framework that construes the linkages between global normative statements and local SDG meanings as mainstream and counter-mainstream interpretations. The framework was built by exploring alternative ways of localizing SDGs, through a transdisciplinary waste-to-energy research project in Kampala, Uganda. Based on the locally experienced tensions within the SDGs, we argue for a flexible approach to localization.

Keywords

Sustainable Development Goals (SDGs) · Cities · Localization · Africa · Kampala · Energy

3.1 Introduction

As sustainability became recognized as the global challenge of our time, the United Nations adopted 17 Sustainable Development Goals (SDGs) as an international framework for moving toward more equitable, peaceful, resilient, and prosperous societies and specifically within the limits of what nature can offer (UN 2015). Since the functions of cities intersect with most of the normative dimensions of SDGs, an integrated approach to urbanization is articulated under SDG 11, which stipulates objec-

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K. Buyana (✉) · P. Mukwaya · H. Sseviiri
D. Byarugaba
Department of Geography, Geo-informatics and Climatic Sciences, Makerere University, Kampala, Uganda
e-mail: kbuyana@gmail.com; pmukwaya@gmail.com; hsseviiri@gmail.com; disanbyarugaba@gmail.com

J. J. A. Walubwa
Department of Geography, Kisii University, Kisii, Kenya
e-mail: walubwajacque@gmail.com

G. N. Nakyagaba
Department of Geography and Environmental Sustainability, University of Oklahoma, Norman, OK, USA
e-mail: gloria.n.nakyagaba-1@ou.edu

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tives, numerical targets, and indicators that couple the global imperative of sustainability to safety, inclusiveness, and resilience in cities. However, taken as a whole, the SDG norms preclude agreement on a precise meaning at whatever scale and are therefore open to not only different but also fluid interpretations across places and societies.

Whereas globally it is estimated that 23% of the SDG indicators have an urban component and can be measured using statistical evidence from municipalities (UN-Habitat 2018), the attainment of SDGs in cities differs among regions—Europe, the Americas, Africa, Antarctica, and Asia. This is partly why so many scholars and practitioners have called for tenable and flexibly deployable approaches to localization, if progress toward the SDGs is to be visible by 2030 (Parnell 2016; Patel et al. 2017; Arfvidsson et al. 2017; Davidson et al. 2019; Croese et al. 2020; Malonza and Ortega 2020).

Set against the vast diversity of the African urban context, this chapter presents an analytical framework that construes the linkages between global normative statements and local SDG meanings as mainstream and counter-mainstream interpretations. The mainstream interpretations allow discernible connections to be made between local SDG meanings and the universal tenets for SDG implementation—the "5 Ps": people, planet, prosperity, peace, and partnerships. Counter-mainstream interpretations represent double-bind relationships between local SDG meanings and global normative statements. Although not all interactions among SDG norms can fall neatly into mainstream or counter-mainstream interpretations, the framework organizes empirical evidence from a transdisciplinary research project on SDG implementation at local scale in the city of Kampala, Uganda, into a coherent whole. The project involved the scaling up of the adoption of energy briquettes as alternative cooking fuel for low-income households and, at the same time, addressing the health and environmental consequences of indiscriminate waste dumping. Building on this work, the framework shows how diverse social constructs can be translated into normative codes, thus making it possible to discern the (dis)connections between local and global measurements of sustainable cities.

3.2 The Peculiar Nature of African Cities in the Context of SDGs

Urban societies in Africa are enormously varied with regard to history, demographic transitions, cultures, and governance arrangements. The informality of settlements, multiplicity of ecologies, and intersecting inequalities add to the complex realities in which the SDGs must be grounded. The pursuit of policy coherence, as a universal standard for implementing SDGs in an integrated manner (Tosun and Leininger 2017), is not only subject to divergent interpretations, but the goals may also remain largely abstract due to stark urban differentiations across Africa. The range and scale of different urban realities mean that internationally and nationally defined SDG priority targets may not necessarily reflect differences in urban realities across municipalities in a typical African city.

More than most global regions, African cities are heterogeneous. The continent is not only large and hugely physically varied; it also has highly ethnically diverse populations. Kampala, Addis Ababa, Mombasa, Johannesburg, and Lagos are very cosmopolitan, while other African cities are quite low in ethnic diversity, like Maseru, Bujumbura, Banjul, Tunis, Cairo, and Algiers (UNDESA 2014). How African cities are physically structured and administratively configured varies too. The history of urbanization in Africa is traceable to differing colonial footprints of administration, as opposed to industrial and technological drivers in most parts of Europe, North America, and developed Asia. For instance, British colonial officials chose to possess land for town planning from ethnic groups, such as the Igbo in Nigeria and the Baganda in Uganda, who have a history of cultural institutions that hinge on effective approaches to indirect rule (Anderson and Rathbone 2000; Boone 2007; Sikor and Lund 2009). Studies have revealed that there is a tight relationship between contemporary urban governance strategies in South African cities and the apartheid practices by which

urban privilege was enforced by the British (Miraftab 2012). The planning ideals that informed the construction of railways, housing estates, seaports, and industrial towns during the post-World War II colonial era still illustrate the rationality of invoking a generic urban form that prioritizes western architecture while obscuring Africa's traditional influences on socio-spatial ordering of cities (Byerley 2013; Martin and Bezemer 2020). Cities like Luxor in Egypt are characterized by historical archaeological sites that have for long influenced their physical expansion and natural growth (Mahmoud et al. 2019). Similarly, the tribal communities of Bakgatla-ba-Kgafela in Mochudi, Botswana, and Moruleng, South Africa, have conveyed the significance of conserving architectural heritage in the use of urban spaces (Mwale and Lintonbon 2020).

Notwithstanding important variation, Africa is seen as a critical focus of SDG implementation. How Africa is targeted for SDG implementation has to take account of the diversity of its urban conditions. Although Africa has the fastest urbanization rates in the world, it has not yet reached the level of 50% urbanization (Parnell and Pieterse 2014). But in the next 30 years, urban dwellers will outweigh rural residents for the first time on the continent. This is because seven out of the ten new megacities anticipated by 2030 across the globe will be in Africa. These include Cairo (Egypt), Accra (Ghana), Johannesburg (South Africa), Khartoum (Sudan), Kinshasa (Democratic Republic of the Congo), Lagos (Nigeria), and Nairobi (Kenya) (UN-Habitat 2016).

However, despite their growth, urbanization processes in Africa remain differentiated across regions. Whereas Northern Africa is highly urbanized, with most of its cities unevenly spread along its Mediterranean coastline and the Nile Valley and Delta, West African cities have a long history of cross-border mobility linked to factors such as long-distance trade (UN-Habitat 2016). In East Africa, rural-urban migration is a salient component of rural households' strategies for income diversification, coupled to flows of refugees and internally displaced persons that create multi-national borders and in-land city neighborhoods (Büscher 2018). The mining economy and racial segregation that shapes the sub-regional character of South African cities cannot be underestimated, coupled with geographical variations in natural resource endowments across urban areas in neighboring regions such as Gaza and Cabo Delgado in Mozambique (Collier 2017). The urbanization patterns of cities like Bujumbura, Mogadishu, Kinshasa, Khartoum, Juba, Monrovia, and Freetown have been partly shaped by the dynamics of prolonged civil strife and drastic political transitions (Bakonyi et al. 2019). This implies that attempts around the development of SDG localization mechanisms need to be explicitly cognizant of the nuances in the scale and speed of urbanization across the continent.

African cities are enormously varied in their population structure. This raises the question as to how SDG 10, which aims to reduce inequalities and support the universal SDG principle of "leaving no one behind," can match the interests of multiple vulnerable urban sub-populations, whose needs differ across cities. The proportion of cross-border communities, people with disabilities, those living with HIV/AIDS, refugees, street families, out-of-school adolescents, out-of-work adults, elderly citizens, ethnic minorities, and educated and non-educated slum entrepreneurs, is increasingly visible in African urban populations (Gibbs et al. 2020; Yeboah 2020). Meanwhile, there is little scientific knowledge of which urban sub-populations have been left behind, which remain furthest behind, the reasons as to why they have been left behind, and what kind of urban policies and sector-specific programs can potentially reach those left behind (Kabeer 2016; Cetrulo et al. 2020). The urban youth bulge, which coincides with intersections of economic deprivation and spatial disadvantage (Urdal and Hoelscher 2009; Ulbrich et al. 2019), pertains to the capacity of SDGs to promote inclusive urban development. The emergence of COVID-19 as a global public health and economic crisis has added new layers of intersecting inequalities. Informal settlements can only continue to practice prudence around social distancing, if urban services are channeled to them either free of charge

or at a much-reduced cost (Corburn et al. 2020). The closure of schools has challenged low-income families that have no history of home-schooling or virtual education, leading to social fatigue over containment strategies (Armitage and Nellums 2020). Refugees and undocumented workers, who fear deportation and retaliation by employers, have little incentive to embrace testing at designated health units (Mukumbang et al. 2020). While the New Urban Agenda (UN 2016) commits to the provision of inclusive and safe streets that are free from crime and violence, violence against women has been accentuated by confined living conditions in both low- and high-income families (Maclin et al. 2020; Wright and Skubak Tillyer 2020). Therefore, if the principle of "leaving no one behind" is to be operational in African cities, there are different levels of demographic specificities required in the analysis and in assessing the various SDG implementation mechanisms. To capture the overall progress on implementing the SDGs across each goal, for different places and for multiple constituencies, it is ideal to have sectoral and socially interoperable and, ideally, spatialized data.

As shown in Table 3.1, urban differentiations in Africa include demographic and other parameters that are critical for context-sensitive mapping of the SDGs and their linkages in urban contexts. For instance, within the framework of reporting progress through the Voluntary National Reviews by member states at the United Nations (Persson et al. 2016; Sebestyén et al. 2020), it is possible to have an open data initiative on land ownership by type of tenure system, which would avail data on the injustices harbored by the proliferation of informal land markets (Porsani et al. 2017; Steel et al. 2020) as per SDG 16 on peace and human rights. It could also use such data to measure the prospects of property tax, as a source of domestic financing for SDG implementation (Gambetta et al. 2019; Goodfellow and Owen 2020). Africa also holds enormous potential for using spatial media technologies, for example, to digitally map and visualize risk-prone livelihoods and infrastructure, as one of the approaches to picturing the status and trends in SDG indicators (Luque-Ayala and Neves Maia 2018; Kovacic et al. 2019; Zhilin et al. 2020).

But data openness between governments and citizens is often restricted to particular datasets, as an opportunity for advancing a political discourse around service provision to serve specific stakeholder interests (Cinnamon 2020). Insufficient civic engagement and disaggregation of data is also attributable to models which originate from the Global North and are uncritically replicated in Africa. For example, climate models, such as the Global Protocol for Community-Scale Greenhouse Gas Emissions, can be faulted on account of the difficulties to represent such emissions in Africa, where aggregates as pertinent as the number of vehicles registered and imported fossil fuels can be inadequate (UNECA 2017). Project-based statistical endeavors are also common in Africa, when donors prioritize SDG indicators for national statistical offices, but with conditions and limited follow-up or effort to build on previous investments and pilot projects (Weber et al. 2018). Resolving these challenges across the data space in Africa is critical for ensuring not only equity and accountability but also brevity in SDG monitoring.

Although Table 3.1 is not a comprehensive mapping of all possibilities of data and SDG linkages, it does highlight the wealth of analytical opportunity. However, for Africans, there are some clear omissions in the data that distort the priorities afforded to SDG implementation activities. For example, evidence shows that pro-private sector discourses within approaches to SDG financing are yet to include possible strategies for leveraging the ingenuity of informal economic clusters, which form around peri-urban spaces, transport corridors, mining, and border cities (Barua 2020). According to the UN Global Compact, more than 80% of its 9500 corporate members have committed to advancing one or more of the SDGs (Carby-Hall 2020; Martínez-Ferrero et al. 2020). However, it remains largely unclear how SDG 8 on decent work and economic growth, SDG 9 on innovation, SDG 12 on sustainable production and consumption, and SDG 15 on life on land can be aligned to business operations that are spatially uneven with alterna-

Table 3.1 Summary of linkages between SDG norms and the contextual features of African cities (Authors' aggregation of cited literature)

SDG norms	Linkages with the contextual features of African cities (positive, negative, or ambivalent)
Policy coherence and integration	**Negative linkage**: Policy coherence and integration cannot be easily pursued and may remain largely elusive. This is because African cities are enormously varied in terms of historical and current drivers of the scale and speed of urbanization, at city, country, and regional level (West; East; South; Central; and Northern Africa). Series of country-specific, inter- and intra-city consensus-building meetings with different stakeholders would have to be done, if nationally defined SDG priority targets are to guide the actualization of policy coherence and reflect differences in urban realities across city regions and municipalities in a given country
Leaving no one behind	**Ambivalent linkage:** SDG 10 on reduced inequalities and the universal SDG principle of "leaving no one behind" may match the interests of some but not all types of urban sub-populations in African cities. There is possible exclusion of urban sub-populations that include cross-border communities, people with disabilities, those living with HIV/AIDS, refugees, street families, out-of-school adolescents, out-of-work adults, elderly citizens, ethnic minorities, disadvantaged women, and educated and non-educated slum entrepreneurs. African cities have also been confronted by intra-urban inequalities that stem from intersections of structural, social, economic, and spatial disadvantage
Pro-private sector engagement and innovative financing strategies to mobilize domestic resources	**Ambivalent linkage:** The private sector in Africa cities comprises both large formal corporations and unincorporated small and medium informal enterprises. The customer base and supply chain linkages of both categories are dominated by entrepreneurs and employees in business dealings that are shrouded in accepted informalities. The ambivalence is such that actors in Africa's urban informal economy, and their contacts and informal trust networks in municipal authorities and national business associations, can conditionally support the role of large foreign formal corporations in implementing SDGs, or simply embrace what are presented as practices of corporate philanthropy, or even favor anti-private sector discourses
National commitment to follow-up and review systems	**Ambivalent linkage:** It is possible to report progress on SDG implementation in African cities through the Voluntary National Reviews by member states at the United Nations and visualize the trends in informal settlements using spatial media technologies and open data initiatives. But data openness between governments and citizens is restricted to particular datasets, which obscures the unique and complex realities in Africa. Insufficient disaggregation of data is also attributable to models which originate from the Global North and are uncritically replicated in Africa, as well as donor-driven prioritization of SDG indicators in collaborations with national statistical offices
Global solidarity and inclusive partnerships	**Ambivalent linkage**: The landscape of actors in formal and informal sectors of African cities, and the parallel nature of their operations beyond the purview of state authority, can bring about interdependencies but also unrealized synergies, thus falling short on the universal standard on inclusive partnerships during SDG implementation at global, regional, national, and local levels
Placing people, prosperity, and the planet at the center of SDG implementation	**Ambivalent linkage:** In African cities, there are various trade-offs among SDGs that particularly require the protection of nature while calling for inclusive economic growth and sustainable livelihood improvement. For example, urban informal settlements with low-quality housing situated in floodplains and wetland areas often adopt green roofing and water harvesting technologies that offer opportunities for improved storm-water management, better regulation of building temperatures, and reduced urban heat-island effects. This pulls in the question of what people and what parts of the planet ought to be prioritized, if SDG 1 (no poverty), SDG 14 (life under water), SDG 15 (life on land), and SDG 11 (sustainable cities) are to be addressed in an integrated manner

Key:
Positive linkage: the SDG norm is explicitly linked to the contextual features of African cities
Negative linkage: the SDG norm is explicitly delinked from the contextual features of African cities
Ambivalent linkage: the SDG norm is intricately linked to the contextual features of African cities

tive interpretations of what is formal or informal employment.

Meanwhile, in a further illustration of the unintended outcomes of evidence-led SDG implementation, the description of urban Africa as under-serviced may have nudged urban managers into large-scale infrastructure for industrial development and information technologies,

assuming this will interlink SDG 11 with SDG 8 and 9 (Pieterse et al. 2018; Matamanda and Nel 2020). But pursuing global norms of consolidating safe and decent working conditions though formalization can bring about cognitively dissonant messaging in African urban communities, where everyday business dealings are shrouded in uncertainty and accepted informalities (Hummel 2017; Thieme 2018; Grossman 2020). Indeed, in African cities, it is not always clear what the best pathways are toward decent work. In African cities where natural resources exist in abundance, the desire to create employment in the face of disappointing government policies often leads people to mine illegally on dump sites left behind by formal mining operations (Hoffman 2007; Mususa 2012; Stewart et al. 2020; Antwi-Boateng and Akudugu 2020; Makhetha and Maliehe 2020). In other cities, employment in the informal transport sector, locally known as boda-bodas and tuk-tuk rides and other unincorporated businesses, has an influence on collaborations between municipal actors and informal trust networks within national business associations (Goodfellow 2017; Ezeibe et al. 2017; Mohan and Tan-Mullins 2019).

Urban Africa is a combination of coastal, inland, highland, and arid cities, which means that pathways to urban resilience not only differ on account of multiple ecologies but also illustrate the trade-offs among SDGs that require the protection of nature while calling for inclusive economic growth. An estimated 54 million Africans live in vulnerable Low-Elevation Coast Zones (LECZ)—defined as areas that are 10 m or less above sea level—and this figure is projected to rise to over 100 million by 2030 (Becker et al. 2019). This raises double-bind or contradictory relationships between SDG 11 indicators, such as ratio of land consumption rate to population growth rate, and SDG 8 indicators, such as annual growth rate of real GDP per capita. Cities with greater exposure to excessive heat are located in Western and Central Africa, although East African cities indicate an increase of more than 2000 times the current level by 2090 (Rohat et al. 2019). Although this may align to SDG 13 indicators, such as number of countries with national and local disaster risk reduction strategies, urban ecologies in Africa harbor resilience pathways that raise the question of what people and what parts of the planet ought to be prioritized, if SDG 1 (no poverty), SDG 14 (life under water), SDG 7 (sustainable energy), and SDG 11 are to be addressed in an integrated manner. For example, urban informal settlements with low-quality housing situated in floodplains often adopt green roofing and water harvesting technologies that offer opportunities for improved storm-water management, better regulation of building temperatures, and reduced urban heat-island effects (Buyana et al. 2020). Although policymakers have linked the collective ingenuities of informal urban dwellers to illegality in slum upgrading projects, local community networks in unplanned settlements have set in motion urban resilience pathways, such as the uptake of solar electrification for water disinfection, through slum-dweller associations and social enterprises (Thorn et al. 2015). This means that effective implementation of SDGs in African cities will not be simple. To be effective in the complexity of the African city, SDG implementation calls for alternative approaches that are grounded in in-depth knowledge that sensitively reflects the different challenges and solutions deployed across varied populations, ecologies, and human settlement forms.

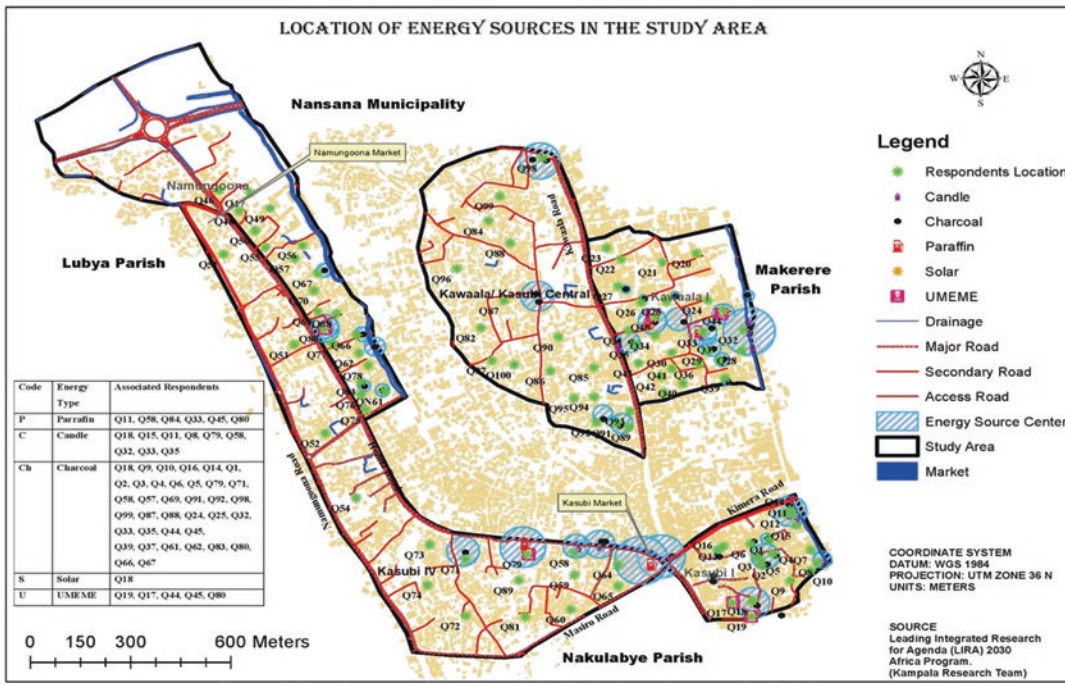
3.3 The Approach to Localizing SDGs in Kampala City, Uganda

While actors from civil society, academia, government, and the private sector are indispensable players in defining target areas for implementing SDGs at city level, the research project in Kampala, called Localized Norms for Sustainable Energy in Kampala (LONSEK), followed the premise that localization needs to consider initiatives outside hierarchical and highly formalized contexts, other than international and inter-municipal coalitions like the Compact of Mayors, the Cities Climate Leadership Group (C40), and the United Cities and Local Governments net-

work (UCLG) (Stafford-Smith et al. 2017; Bowen et al. 2017). On the other hand, if locally grounded meanings of SDG norms are to be obtained, there is a need for transdisciplinary research approaches that bolster deliberative learning processes with societal actors that are immersed in a specific situation, to not only shape the identification of problems and scalable local solutions but also permit broader joint reflections on alternative urban development visions (Schneider et al. 2019; Buyana 2020).

The LONSEK project explored opportunities in the informal urban waste sector, particularly the instances through which individual households and community ingenuities relate with transitions to affordable and clean energy that supports the most vulnerable groups (SDG 7), while leapfrogging the interdependent outcomes of healthy and sanitized urban environments (SDG 11 and 3), together with ending poverty and reducing inequalities (SDG 1 and 10). The project was undertaken in Kasubi-Kawaala Parish, which borders Kampala Central Division in the western part of the city (Fig. 3.1). Although drainage and road conditions have improved, most households in Kasubi-Kawaala rely on charcoal as a source of cooking energy and can barely afford formal waste collection services. Households therefore resort to illegal waste dumping that brings about environmental health burdens, including contamination of air and water sources. Lighting is from energy-saving bulbs and candles, coupled to adjustments in energy-use practices, for example, abandoning boiling of water and foregoing hot water baths and forsaking foods that require long hours of preparation, alongside illegal tapping of electricity from Umeme, the dominant hydro-power distribution company in the country.

The household health and energy coping mechanisms in Kasubi-Kawaala have emerged from the waste-to-energy sector. In order to investigate the nature of locally available technologies and capabilities among local actors in the waste sector, the LONSEK team from Makerere University worked with Kasubi Local Community Development Association (KALOCODE) and undertook key informant



Code	Energy Type	Associated Respondents
P	Parrafin	Q11, Q58, Q84, Q33, Q45, Q80
C	Candle	Q18, Q15, Q11, Q8, Q79, Q58, Q32, Q33, Q35
Ch	Charcoal	Q18, Q9, Q10, Q16, Q14, Q1, Q2, Q3, Q4, Q6, Q5, Q79, Q71, Q58, Q57, Q69, Q91, Q92, Q98, Q99, Q87, Q88, Q24, Q25, Q32, Q33, Q35, Q44, Q45, Q39, Q37, Q61, Q62, Q83, Q80, Q66, Q67
S	Solar	Q18
U	UMEME	Q19, Q17, Q44, Q45, Q80

Fig. 3.1 Map of project area and location of energy sources. (Source: authors)

interviews among purposively selected respondents from 100 households. The representatives from KALOCODE coordinated the process of establishing contacts with individual households and community groups of energy-briquette producers. The research team then followed up the contacts for interviews, using questions pertaining to practice-based challenges for transformation of waste management in the neighborhood. The questions were centered on how to enable transition of the current micro-scale interventions of energy briquettes to meso- and macro-scale, within the context of localizing SDGs in Kampala. This question became the boundary subject for social engagement and learning with the individual household respondents and community groups of energy-briquette producers. Interview data from households and energy-briquette producers was collected using the biographical method that took the form of a life narrative (Zinn 2005). Hence, the research project assumed that it is possible to reconstruct the individual self and identity by putting respondents in the context of their life course, as the act of telling a story that is linked to the main question. Through respondents' narratives, it was possible to recreate the actions taken toward the adoption of energy briquettes as alternative cooking fuel for low-income households, to address energy, poverty, health, and environmental consequences of indiscriminate waste dumping.

The energy briquettes are created when banana peelings and other dried organic material are put into a large bin and then burned at high heat and low oxygen, which creates a kind of charcoal material that is made out of garbage instead of trees. This is then crushed and mixed with clay and cassava flour, as a glue, and rolled into balls to create briquettes that can be used instead of charcoal. Other activities involve recovering reusable and recyclable items from the waste stream. These include polythene bags for growing mushrooms; banana, cassava, and sweet potato peelings and cow dung for compost; plastic bottles for packing juice and drinking water; newspapers for making tray eggs; tins and mineral water bottles for making shoe soles; bottle straws for knitting baskets; charcoal and saw dust for reducing odor from latrines; oily milk packages used as fuel for cooking; and discarded cardboard serving as walls and roofs of houses for a cool indoor climate.

These life-course actions of energy-briquette producers as well as users at household level were transcribed and reconstructed as storylines and visuals of lived experiences for an engaged, contextually rich, and nuanced interpretation of linkages between the emerging waste sector and SDGs. The LONSEK project organized SDG studios as seminar workshops for researchers, policy officials from Kampala Capital City Authority (KCCA), and local community actors from KALOCODE, to mediate discussions on how to depict the local context in relation to the SDGs through visuals and storylines. The SDG studios were premised on the principles of visual ethnography, which entails a situational combination of field techniques for exploring how we understand and learn about social phenomenon, using note taking, audio-visual recording, interviews, examination of local relative to policy and academic knowledge, and observation that is rooted in the ideal of participant observation to live, to some extent, as the briquette-energy producers do (Falzon 2016).

In addition, interviews with respondents from research, policy, and local community groups were conducted in order to gather their individual views, alongside the collective discussions held in the SDG studios. Thirty (30) respondents were interviewed in total, 12 from local community groups, 8 researchers, and 10 policy actors. Analysis of interview data was conducted as conversations were being carried out. This allowed for the immediate grouping of responses and their triangulation with the data obtained from the group-based interactions in SDG studios. The interviews were key for understanding how each actor in the research process perceived sustainability challenges at a local scale in relation to the global normative statements on SDGs.

The discussions in the SDG studios initially focused on all the 17 SDGs that were presented by the researchers, basing on the value statements framework of the United Nations Department for Economic and Social Affairs (UNDESA 2014).

But, in an example of how to localize the emphasis and nature of SDG interactions, those preferred for further discussion by local community actors and policy officials included SDG 11 (cities), SDG 7 (clean and affordable energy), SDG 1 (no poverty), SDG 2 (zero hunger), SDG 6 (clean water and sanitation), SDG 8 (decent work and economic growth), SDG 9 (innovation), SDG 10 (reduced inequalities), SDG 12 (responsible consumption and production), and SDG 13 (climate action).

The researchers developed a five-step process for deriving the local applications of SDGs, as shown in Table 3.2.

This five-step process of collective debate was key to mediating learning on the local appropriateness of SDG norms. It also nurtured a participatory process for identifying linkages and overlaps across different SDGs and how these are compatible or incompatible with the lived urban realities, exhibited in the form of visuals and storylines from energy-briquette producers. The challenge, though, was that it was a recursive process. Policy officials and local community actors had not widely engaged with the value statements of SDGs, even though there is a national SDG prioritization framework for Uganda, a national SDG Roadmap and Coordination Framework, as presented in the country's second Voluntary National Review on the implementation of Agenda 2030 (Republic of Uganda 2020). This prioritization framework was developed by the National Planning Authority with support from the United Nations Development Programme (UNDP), but local actors were not included. Similarly, there was lack of research on Agenda 2030 at a municipal level in Kampala, making it hard to identify barriers to municipalities localizing the nationally defined priority SDG targets.

Table 3.2 The five steps for relating the SDGs to local contexts

1. Categorize or group applicable and inapplicable SDG norms
2. Assess revisions required, based on the original intent of the SDG norm
3. Revise, replace, or alter the norm language as locally appropriate
4. Develop new norms to align with local context
5. Validate proposed norms to existing local and scalable solutions in the community

These limitations gave birth to the idea of designing Local Agenda 2030, as a visual aggregation of local versus global SDG meanings, in the form of a chart. The policy officials involved in the SDG studios argued that SDGs required a cross-sectional way of working within urban residents through collaborations with private and public stakeholders, but also research institutions for data and public education activities. Besides, municipal authorities like KCCA are still organized by sector, and such an organizational structure poses challenges to collaborative mechanisms for localizing SDGs (Caprotti et al. 2017; Valencia et al. 2019). The research team was able to ensure that local community actors are actively engaged in appropriating local meanings to the SDGs, in line with the visuals and storylines about the emerging waste sector, resulting in the launch of Local Agenda 2030-Kampala City (Fig. 3.2).

The analytical framework (Fig. 3.3) is a conceptually dynamic diagram that construes the linkages between global normative statements and local meanings of SDGs as mainstream and counter-mainstream interpretations, based on the findings and learnings from Kampala. The mainstream interpretations link local SDG meanings with the "5 Ps," people, planet, prosperity, peace, and partnerships, which are universally central to SDG implementation. Counter-mainstream interpretations represent double-bind relationships between local SDG meanings and global normative statements. Although the framework was developed based on SDG localization efforts in Kampala, the iterative methods used for its formulation (SDG studios, individual interviews across different actors, and selection of mainstream and counter-mainstream interpretations) can facilitate application in other city contexts. Beyond the methods and tools used for the participatory formulation of the framework, the process was a combination of representation, deliberation on alternative urban sustainability visions and balancing acts between individual and collective views. Those most affected by

Fig. 3.2 Launch of Local Agenda 2030-Kampala City. (Source: authors)

local sustainability challenges were represented by local community groups and were also given a chance to speak out so that their real-world challenges and perspectives on potential solutions could influence the design of the framework. This did not only enhance bottom-up participation in shaping the design and content of the framework but also required balancing acts by the researchers. The researchers who moderated the discussions frequently recognized that individual participants could shift between representative roles, at one moment seeming to speak for larger groups they represent and at other times expressing more personal or individual views. These dynamics of stakeholder inclusion made the framework a combination of pragmatic actions at the local level on the one hand and normative ambitions pertaining to translating the SDGs into local meanings on the other.

The local SDG meanings presented in the analytical framework indicate that turning global normative statements into socially relevant constructs of sustainability is largely dependent on the strategy chosen for interpretative analysis and the situation in which implementation can occur on the ground. For example, SDG 9 on inclusive and sustainable industrialization and innovation is locally appropriated to what actors in the informal urban waste sector are immersed into, thus the local meaning of "recycle old materials." Similarly, SDG 2 on food security and improved nutrition was translated as "avoiding food wastage" during the processes of harvesting, transportation, sale, preparation, and consumption of food. This local narrative is quite delinked from global statistics and policy responses, indicating that food insecurity is not just a product of a lack of food but is associated with rising urbanization, decreasing arable land, and weather extremes due to climate change (Battersby 2017; Barthel et al. 2019; Brunori et al. 2020). There is a contradiction here: whereas global normative statements on SDG 2 emerge from vulnerability assessment exercises of global food systems, the local interpretation is skewed toward eliminating wastage in local food value chain activities.

Mainstream interpretations

SDGs	SDG 6	SDG 7	SDG 11	SDG 13
Global normative statements	Ensure availability and sustainable management of water and sanitation for all	Ensure affordable, reliable, sustainable and modern energy for all	Make cities and human settlements inclusive, safe, resilient and sustainable	Take urgent action to combat climate change and its impacts
Local SDG meanings	Ensure protection of water sources and safe reuse of water	Always save energy	Keep cities clean and pollution free	Educate people on climate change

Counter-mainstream interpretations

SDGs	SDG 1	SDG 2	SDG 9	SDG 10	SDG 12
Global normative statements	End poverty in all its forms everywhere	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Reduce inequality within and among countries	Ensure sustainable consumption and production patterns
Local SDG meanings	Donate what you don't use	Avoid throwing away food	Recycle old materials	Don't discriminate	Use only what you need

Fig. 3.3 Analytical framework for localizing SDGs in cities

The other notable double-bind relationship is between the local meanings of SDG 11 and the images presented by local community actors. Whereas SDG 11 global normative statements look to a reduction in the proportion of urban population living in slums and informal settlements, the images taken reflected a mix of semi-permanent and permanent roof, wall, and floor materials, with local actors arguing that the measure for decent housing should focus on the number of iron sheets needed, affordability of materials required, public service delivery points (water, health, and electricity in the neighborhood), and tenure status. Therefore, mainstream and counter-mainstream interpretations demonstrate how the framework in Fig. 3.3 can be used to mediate discourses on the integrated nature of SDGs while discerning mechanisms for engaging citizens on the (dis)connections between locally embedded visions and global measurements of sustainable, inclusive, safe, and resilient cities.

3.4 Limitations of the Analytical Framework

The analytical framework adopted in Kampala utilizes a critical-interpretive approach to explore and engage with the local meanings of SDGs (Glaser and Strauss 1967). However, there are limitations associated with a critical interpretive synthesis of global normative statements versus local SDG meanings. This approach can interfere with synergies among local, national, and global measurements of sustainability. The normative dimensions of SDGs, and their linkages with

local contexts, need to demonstrate that it is possible to have both universal and geographic targeting, as well as a more nuanced view of the interlinkages, so that interpretations can move beyond simplistic notions of trade-offs and synergies (ISC 2017; Schmieg et al. 2018).

As an example, women in Kasubi-Kawaala Parish have primary responsibility for domestic tasks, such as the preparation of meals and boiling water. These tasks require the transportation and use of charcoal and are therefore energy and transport intensive. Though growth in ownership of personal motorized transport among women can symbolize improved standard of living at a local level, it can conflict with global efforts around the reduction of greenhouse gas emissions and the contamination of air and water sources. In the future, however, the transition toward zero-emission cars fueled by renewable electricity may remove this trade-off. Similarly, establishing a local seed fund for the provision of clean cooking stoves to women may serve to reinforce the disproportionate burden they bear of unpaid care work in the household, including child and elder care, and provisioning of food, fuel, and water (Abdelnour et al. 2020).

Hence, not all interactions between SDGs and the contextual features of cities fall neatly into the mainstream or counter-mainstream side of the analytical framework. However, if deployed, the framework can allow for broad multi-disciplinary and multi-sectoral conversations, translate diverse social constructs into normative codes, and organize empirical evidence on SDG implementation at local scale into a coherent whole. This makes it possible to synthesize knowledge and provide concrete clusters of normative statements about synergies and trade-offs, endorsed and debated by stakeholders from science, policy, and local communities.

3.5 Conclusion

Although the SDGs have demonstrated the potential to contribute to the transition toward more sustainable, inclusive, and resilient cities, many of the localization efforts are upstream in nature, with city-level aggregates that stem from a selected set of indicators, which construe the city as a measurable entity of data streams, thus obscuring vast urban differentiations on the ground. This is why there is a need for systematic and context-sensitive engagement with the normative dimensions and indicator targets of SDGs, if cities are to take on an effective role in global efforts around localization. We conclude by re-echoing our argument that African cities offer unique and comprehensive contextual accounts of the linkages and overlaps among SDG norms, due to the immensely diverse nature of their settlement patterns, population structure, ecologies, cultures, and the historically distinct drivers of urbanization across the continent.

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