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ARTICLE



Adapting the Sustainable Development Goals and the New Urban Agenda to the city level: Initial reflections from a comparative research project

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ABSTRACT

The Sustainable Development Goals and the New Urban Agenda recognise the role of cities in achieving sustainable development. However, these agendas were agreed and signed by national governments and thus implementing them at the local level requires a process of adaptation or localisation. In this paper, we analyse five aspects that practitioners and researchers need to consider when localising them: (1) delimitation of the urban boundary; (2) integrated governance; (3) actors; (4) synergies and trade-offs and (5) indicators. These considerations are interrelated, and while not exhaustive, provide an important initial step for reflection on the challenges and opportunities of working with these global agendas at the local level. The paper draws on the inception phase of an international comparative transdisciplinary research project in seven cities on four continents: Buenos Aires (Argentina), Cape Town (South Africa), Gothenburg (Sweden), Kisumu (Kenya), Malmö (Sweden), Sheffield (UK) and Shimla (India).

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Introduction

Various globally agreed agendas have attempted to address social, economic and environmental issues relating to development (e.g. the Millennium Development Goals (MDGs) and Local Agenda 21) with varying degrees of transformational impact, particularly at the local level. For example, the adoption of the MDGs by the UN General Assembly as part of the Millennium Declaration in 2000 signalled a global commitment to tackling poverty and promoting development in low- and middle-income countries. As an enabling mechanism, countries within the Organisation for Economic Co-operation and Development (OECD) provided development funds and debt forgiveness against adoption by recipient countries

of developmental policies deemed appropriate by the donors, in addition to meeting specific targets. The MDGs have been subjected to extensive and often critical analysis, focusing not least on the way they were formulated and implemented as a predominantly top-down exercise and how they sometimes skewed national policies towards the availability of funding or debt relief (e.g. Easterly 2009; Meth 2013; Browne and Weiss 2014; Satterthwaite 2016a; Klopp and Petretta 2017).

In an effort to avoid repeating such errors, the Sustainable Development Goals (SDGs) were formulated through an exhaustive and often highly participatory process by diverse stakeholder groups worldwide, including organised civil society, private sector and

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local bodies (Klopp and Petretta 2017). The SDGs form part of the UN's Agenda 2030 and cover the period 2016–2030. Unlike the MDGs, the SDGs apply to all countries. This marks an important symbolic difference by recognising that all countries, rich as well as poor, have work to do to achieve the SDGs. The logic of the SDGs is that the 17 individual goals represent the diverse elements of sustainability and that, as a set, they provide a holistic representation of the complexity and interdependencies of sustainable development. Each goal has a number of associated targets and indicators. As a globally agreed agenda, the SDGs comprise an unprecedentedly ambitious and complex set of goals, targets that comprise a monitoring framework through annual reporting to the UN.

Inevitably, therefore, there are multiple and complex interactions within and between SDGs in the form of both synergies and trade-offs, so that measures for achieving some of the different goals and targets may be complementary, whereas others may potentially compete or conflict with one another. As noted by Machingura and Lally (2017), the three dimensions of sustainability within Agenda 2030 as a whole are arguably well balanced, but the same is not the case within each of the SDGs, which were designed independently to address particular issues. For instance, SDG 2 focuses on ending hunger and all forms of malnutrition, while SDGs 14 and 15 are concerned with protecting and restoring aquatic and terrestrial ecosystems, respectively. Depending on the approaches taken in particular contexts to reduce hunger and malnutrition, these goals may compete against one another. For example, increasing fishing and deforestation for the expansion of agricultural production could tackle hunger in the short term while damaging ecosystems in the medium to long term. Additional examples of potential interactions between SDGs will be given in the Considerations section below (Consideration no. 4—Trade-offs and synergies).

A closely related global agenda is the New Urban Agenda (NUA), which was adopted by heads of government at the Habitat III summit in Quito in October 2016 after long negotiations, and constitutes a landmark commitment to the promotion of urban sustainability. Efforts to establish the SDGs as the monitoring and evaluation framework for the NUA were rejected during the negotiation process, so the NUA currently lacks a formal implementation framework (McPhearson et al. 2016; Satterthwaite 2016b; Schindler 2017). Subsequent

initiatives, however, including the project described in this article, explore the extent to which an informal connection between the SDGs and the NUA is both desirable and achievable.

Urban issues did not receive explicit attention in the MDGs, but the inclusion of a standalone urban goal (SDG 11) as part of Agenda 2030, in combination with the establishment of the NUA, points to the success of lobbying for increased policy attention and funding to urban areas, in recognition of the role cities play in enabling sustainable development (Simon et al. 2016; Watson 2016; Klopp and Petretta 2017). In that sense, seen together, Agenda 2030 and the NUA represent a historical precedent, marking the first time that the United Nations, as a membership organisation comprising national governments, has explicitly recognised the essential role of subnational entities (i.e. regional and local government institutions) in achieving sustainable development (Parnell 2016; Watson 2016). The explicit recognition of subnational entities by national governments, which are the signatories of these agendas, highlights the need for collaborative integrated multi-level governance (Leck and Simon 2013, 2018; see Considerations no. 2 below)

Both these agendas are ambitious, comprehensive and, arguably, socially progressive (Watson 2016; Zinkernagel et al. 2018). While achieving them universally may not be feasible within the agreed timeframe, if taken seriously, they can provide an opportunity for rethinking urban planning and development in all countries with all three dimensions of sustainability (social, environmental and economic) in mind. They can also serve as an opportunity to reassess governance systems and bring sustainability—including justice and equity—to the fore of urban planning and development agendas (Sietchiping et al. 2016). However, as shown below, the fact that the SDGs and the NUA were developed by national governments, despite consultations including city representatives and other relevant stakeholders, means that their interpretation and implementation at the city level is not straightforward. Two key challenges in this respect are: (a) current urban development trajectories are characterised by inertia in planning systems and vested interests, and (b) current global economic systems often conflict with the achievement of high sustainability standards (Watson 2016). Inter alia, these challenges may make it

unfeasible to implement the SDGs/NUA by 2030 as stipulated.

Central to potential success in meeting these challenges, therefore, is the urgency of understanding how and to what extent diverse local authorities around the world have begun to comprehend, engage with and seek to implement these agendas. Accordingly, this article outlines the preliminary findings of a strategic comparative research project seeking to examine these issues across an international network of cities. It outlines considerations that are intended to contribute evidence-based reflection on aspects that should be taken into account for a more transparent and comprehensive process in the design and implementation of these global agendas at the local level. Further outputs will report in due course on subsequent phases of the project's progress and findings. This intervention is designed to ensure rapid dissemination to facilitate engagement with the SDGs/NUA by other urban local authorities that could benefit from the diverse experiences reported here.

Context to the research project

The Mistra Urban Futures international research centre on urban sustainability is undertaking a comparative project to monitor and analyse the implementation of the Sustainable Development Goals with a focus on the urban goal (SDG 11) and relevant targets and indicators of other SDGs, alongside the NUA. The project involves seven cities on four continents: Buenos Aires (Argentina), Cape Town (South Africa), Gothenburg (Sweden), Kisumu (Kenya), Malmö (Sweden), Sheffield (UK) and Shimla (India), ranging from large metropolitan areas to intermediate- and small-sized cities across the Global North and South. The selection of cities enables the project to embrace at least one urban area in each major continent except North America and Oceania and provides considerable diversity of context and relevance to today's predominantly urban world (UN-HABITAT 2015) (Table 1). The project started in mid-2017 and will run at least until the end of 2019. It has two components, (1) in-depth research and analysis in each selected city and (2) a comparative dimension to enable sharing of knowledge and lessons. The aim of the project is to work actively with the municipalities to support their understanding and implementation of the SDGs and the NUA, and to facilitate cross-city learning, comparison and interaction among the seven participating cities as well as with other cities beyond the

Table 1. Case study cities and their populations.

City ¹	Population
Buenos Aires, Argentina	Registered (2010): 2,890,151 Estimate (2016): 3,059,122
Cape Town, South Africa	Estimate (2017): 4,014,765
Gothenburg, Sweden	Estimate (2016): 556,640
Kisumu, Kenya	Census (2009): 404,160
Malmö, Sweden	Estimate (2017): 334,000
Sheffield, United Kingdom	Estimate (mid-2016): 575,400
Shimla, India	Census (2011): 169,578

project. The findings, conclusions and results will also provide feedback to ongoing UN revisions of targets and indicators.

The project follows Mistra Urban Futures' approach of transdisciplinary co-production of knowledge with different stakeholders (Palmer and Walasek 2016; Simon et al. 2018). Thus far, the project has focused on co-producing knowledge through partnerships between academics and municipal officials. We have one researcher or team of researchers in each city working with municipal officials, although the exact working arrangements vary. The project was originally designed at the Centre's headquarters, and for reasons of comparability, a general methodology, including main objectives, structure of progress reports and deliverables, was developed. This general methodology is being applied and adapted locally based on the interests of the respective local authority through discussions between the researchers and the municipal officials. In that respect, the researchers and municipal officials agree on a working agenda following the general methodology and deliverables. The aspects we are following and analysing in each city include the level of awareness and engagement of the City² with both global agendas (i.e. the SDGs and the NUA); guidance and interactions between the national, regional and local levels on implementing the agendas; the governance mechanisms and strategies developed to work with the agendas; and the relevance and availability of data to monitor progress following the SDGs indicators as well as the national and city-level adaptations of the SDG indicators, with a focus on SDG 11. An important initial step, which has been taken by most cities, is to map the relevance of the SDGs/NUA onto each municipality's current procedures, practices and priorities. This includes evaluating the relevance, appropriateness and availability of data to monitor and report on the SDG indicators, particularly for SDG 11.

In Cape Town, for example, the researcher has been embedded into the City of Cape Town's

Organisational Policy and Planning Department (OPP), which means that she spends a percentage of her time at the City offices working with the OPP team on how the City can localise the SDGs and the NUA. Part of that work has included jointly arranging workshops with staff from different City departments to assess their awareness and interest in working with the SDGs. Similarly, in Malmö the researcher has a part-time position within the City's Environment Department, complementing his academic position. In Buenos Aires, the research team holds monthly meetings with the General Directorate of Strategic Planning of Buenos Aires City Government, which is the office in charge of implementing the SDGs; while in Kisumu, the researcher has set up a working group to meet monthly with officials from Kisumu City and Kisumu County as well as three times a year with national representatives from the Ministry of Devolution and Planning and the Kenya National Bureau of Statistics.

This project is a follow-up to a comparative pilot study conducted by Mistra Urban Futures in the first half of 2015 (Simon et al. 2016; Arfvidsson et al. 2017; Patel et al. 2017), which tested the potential targets and indicators for the urban SDG (SDG 11) in five cities: Cape Town, Gothenburg, Kisumu, Greater Manchester and Bangalore. This forerunner study contributed to the 'Campaign for an Urban SDG'³ (SDSN 2013; Simon et al. 2016) and tested the data availability, relevance and appropriateness of the draft targets and indicators for SDG 11. A key conclusion of the pilot study was that if SDG 11 is to be a useful tool to encourage local, regional and national authorities to make positive investments in the various components of urban sustainability transitions, it is essential that the indicators should prove widely relevant, acceptable and practicable.

In this diverse set of cities, the pilot study found that not one draft indicator was regarded as both important/relevant and easy to report on in terms of data availability in all the cities; and no city found the entire set of draft indicators under SDG 11 straightforward and important or appropriate (Simon et al. 2016; Arfvidsson et al. 2017; Patel et al. 2017). The investigated indicators remained mostly unchanged when Agenda 2030 was adopted. Draft indicator 11.1.1 originally referred solely to the population living in slums and informal areas, which the pilot study deemed of limited relevance for cities in countries such as Sweden. Addressing this shortcoming, the adopted 11.1.1

indicator includes also population living in inadequate housing.⁴ Further, some indicators were removed such as 11.2.2: 'km of high capacity (BRT, light rail, metro) public transport per person for cities with more than 500,000 inhabitants'.

Considerations for research and practice

Based on the first year of implementation of our ongoing comparative project, this article articulates some considerations that city actors and researchers should address when starting to adapt and implement the SDGs and NUA at the city level. We present five considerations: (1) delimiting the urban boundary; (2) integrated governance; (3) actors; (4) trade-offs and synergies and (5) indicators. Together they provide a picture of the challenges and opportunities facing the seven cities during the initial stages of localising the SDGs and the NUA. The considerations are meant to be applicable for both research and practice. In our project, the co-production of knowledge approach intrinsically links research and practice.

1) Delimiting the urban boundary

One of the first steps in the project has been to do an assessment of which SDG targets are relevant for each city. This assessment requires a precursory step of delimiting the urban boundary to be used for our analyses. For this purpose, we have resolved to use the administrative boundary of the participating municipality, in order to facilitate comparability and feasibility. At the same time, we are interested in exploring the appropriateness of this boundary vis-à-vis the SDGs and the NUA, as well as in the benefits and trade-offs that our boundary selection implies.

The definition of a boundary is necessary not only in the context of a research project where determining a standard boundary facilitates analysis of comparable data. It is equally important in enabling practitioners to identify the area of jurisdiction where specific urban laws, codes or regulations are applicable for implementing and monitoring programmes and projects.

Definitions of what is denominated as a 'city' or 'urban area' vary significantly from country to country. In India, for example, urban areas are defined either as all places with a municipal corporation, cantonment board or

notified town area committee, or places which fulfil the following criteria: (a) minimum population of 5,000; (b) at least 75% of the male working population engaged in non-agricultural pursuits and (c) a density of population of at least 400 persons per km² (Census of India 2011). In Kenya, in contrast, an area is classified as a 'city' if it has a minimum population of 250,000 (Parliament of Kenya 2017).

The variety of definitions of what constitutes an 'urban area' or 'city' poses a big challenge for international statistical comparisons; in the case of the SDGs and the NUA, this challenge is of particular concern for UN agencies that want to monitor and compare progress towards achieving these agendas across the world. UN-Habitat, for instance, has been analysing with other partners how to define a city for monitoring progress with SDG 11 and the NUA. To address this challenge, UN-Habitat has proposed adopting 'urban extent' as a statistical concept for the delimitation and measurement of cities and urban agglomerations. The 'urban extent' is based on the morphology of the city and the enumeration areas fixed by each National Statistical Office. This definition was used by UN-Habitat, New York University and Lincoln Institute of Land Policy to create a Global Sample of 200 cities and estimate their qualitative and quantitative growth from 1990 to 2015 (Moreno López 2017). UN-Habitat argues that the main strength of using urban extent to define urban areas is that it can help cities and countries to use easy to process and openly available data resources to understand the actual urban expanse, which often surpasses administrative boundaries (UN-HABITAT 2017). On the other hand, this often requires aggregation of data from multiple local authorities of varying size, institutional capacity and potentially political control, which can thus represent a considerable challenge. In addition, UN-Habitat is working together with several countries to pilot a methodology to identify a national sample of cities, where each country, in co-ordination with UN-Habitat and other stakeholders, would choose a number of cities of different population sizes, functions, geographic locations and economic and political importance following the 'urban extent' definition. The selected sample is expected to be used by countries to report on SDG indicators for urban agglomerations (particularly on SDG 11) (UN-HABITAT 2017).

'Cities seeking to remake themselves in truly sustainable ways need to care, at the outset, about boundaries and definitions' (Seltzer et al. 2010, p. 20). For planning and practice, administrative

boundaries define the geographical extents of the mandate of public officials. However, it might be more conducive to consider functional areas that better take into account the actual territorial extent within which different processes take place. For example, the location of housing, employment and commuting patterns are factors that contribute to determining functional areas for mobility strategies, often crossing multiple municipal boundaries. Some functionalities, however, such as citizen interactions and place-making, might instead best be captured at the sub-municipal or neighbourhood level. While stressing that neighbourhoods must not be seen as a substitute for other boundary options, Seltzer et al. (2010) argue that neighbourhoods still offer 'the most likely and effective scale' (p. 7) at which to address urban sustainability. Acknowledging such perspectives, it is of interest to this study to also note and consider sub-municipal initiatives; for example, the Agenda 2030-based declaration of intent for local sustainability efforts in the neighbourhood of Sofielund, which was signed in Malmö in 2017 (Bosund 2017; Larsson 2017).

When it comes to local implementation of the SDGs and the NUA, the way in which the urban boundary is delimited has significant implications for identifying relevant SDG targets, particularly given that in many places globally, government entities with varied levels of mandate and capacity operate within city boundaries. Institutional mandate is highly connected to the discussion on boundaries. Municipal governments worldwide have different mandates over issues that take place within their municipal boundaries. This also relates to the issue of integrated governance, which will be discussed further in the next section. Thus, planning and implementation processes of the SDGs, as well as comparison among cities, become complicated, calling for unique approaches at local levels to address the local sustainability challenges adequately and monitor the net effects of the different interventions within city boundaries accurately. From a research perspective, limiting the boundary of analysis to the municipal level and partnering to co-produce the research with the government entity that most aligns with that boundary (in the case of this project, the municipality, municipal corporation or equivalent), also delimits the areas over which the government entity has a direct mandate.

For example, in Sweden, municipalities have a mandate over physical planning and education at the elementary and secondary school level, while post-secondary education is the responsibility of the national government. Health care and public transport are issues decided on by regional governments. In Shimla in India, the state-level Town and Country Planning Department and not the Municipal Corporation of Shimla is in charge of developing land use plans as well as the municipality's development plan. In most Indian urban local bodies, urban planning, master planning and regulation of land use fall under the jurisdiction of parastatal agencies such as Town and Country Planning Organisation, Development Authorities or Urban Improvement Trusts. Similarly, various aspects of housing and transport provision are not the mandate of the local body. In Cape Town, the City also has no or only limited mandate to address issues around social development, education and health, as well as safety and security. All of these sectors fall under national and provincial government mandates but represent some of the major challenges faced by the city. In Kisumu, government institutions at different levels have unsynchronised overlapping roles and functions. National government ministries with both devolved and non-devolved functions operate within the city, alongside the county government on the basis of the County Integrated Development Plan. The national Constituency Development Fund managed by the members of Parliament and the Ward Development Fund managed by the members of the County Assembly are also used for the city's development. The previous examples demonstrate that municipal governments have a limited ability (based on their institutional mandate) to address all issues that take place within their administrative boundaries, thereby limiting their ability to address all SDGs. Furthermore, urban local authorities vary greatly in their institutional and financial capacities to fulfil their diverse mandates, including those that relate to implementation of the SDGs. These limitations highlight the need for integrated governance, which will be further addressed in the following section.

The delimitation of the urban boundary can also have implications for social and environmental justice, that is, how societal and environmental 'goods' and 'bads' are distributed in the city and its surrounding

region (Schlosberg 2007). Research in Buenos Aires, but also in other rapidly growing cities in the Global South (e.g. Seto et al. 2010; Allen et al. 2015; Valencia 2016), shows that urbanisation is taking place beyond the administrative boundaries of individual municipalities. This takes place often through rural-urban, urban-urban and regional migration (i.e. from one country to its neighbours) where migrants settle in the peripheral areas of metropolitan regions or conurbations (Tacoli 1998; Tacoli et al. 2015). These neighbouring municipalities often have limited institutional and financial capacities and face significant challenges to provide adequate social services and physical amenities, such as housing and schools.

In Buenos Aires, for example, poverty rates and housing indicators would give a very different picture if the municipal boundary is considered vis-à-vis the entire metropolitan area since the Buenos Aires Autonomous City (CABA) contains only 20% of the population of Greater Buenos Aires (which is formed by CABA and 24 surrounding municipalities) (INDEC 2010). In Kenya, attention also needs to be given to the municipal boundary that cuts across different administrative areas, referred to as sub-counties, which include a large portion of peri-urban and rural areas, which can provide misleading or inaccurate statistics at the city scale, for example on population density. While most relevant data are available from various sources (such as the Kenya Integrated Household Budget Survey 2015/16, Kisumu County Statistics Abstract 2015, Kenya Demographic and Health Survey 2014), addressing SDG11 targets and indicators requires consolidation and further analysis at the city scale. In addition, as in the case of Kisumu city, areas with primarily rural characteristics exist within defined administrative city boundaries, yet the social, economic and environmental challenges and opportunities of the densely populated areas differ significantly from those of the rural areas, each needing attention to particular issues and different planning approaches (see Figure 1).

Thus, one important lesson from this project to date is that delimiting the urban boundary in research and practice raises the question of who is included and whose needs are being ignored or excluded, as well as what urban processes and characteristics are missed when defining a particular boundary. These questions need to be kept in mind as local and regional governments adopt and implement the SDGs and the NUA.

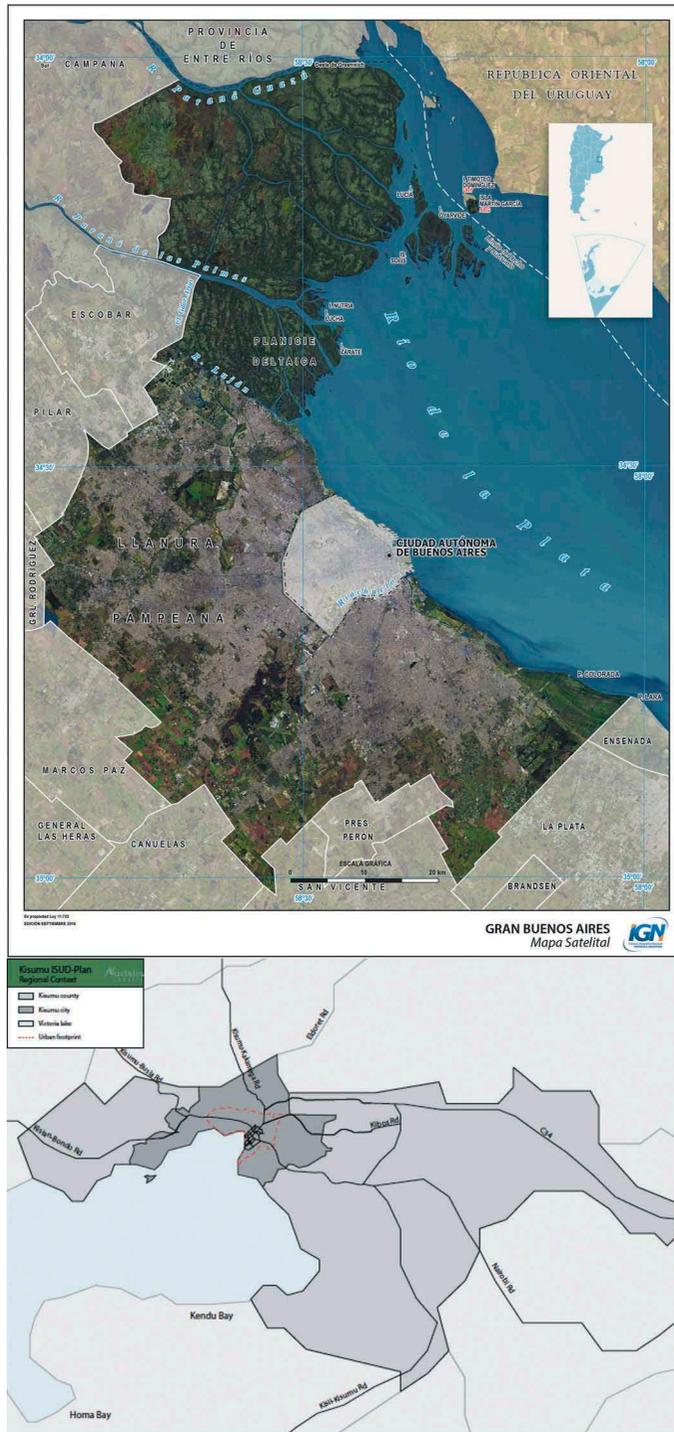


Figure 1. City boundary illustrations. Top: Buenos Aires city vs. Metropolitan Buenos Aires. Bottom: urban footprint, Kisumu city and Kisumu County. Sources: Instituto Geográfico Nacional de la República Argentina, 2016 and Directorate of Kisumu City Planning Office, 2013. Kisumu ISUD Plan, p. 22.

2) *Integrated governance*

A key aspect of Agenda 2030, and one which provides the foundation for the SDGs, is the integrated nature of sustainability, i.e. the importance of jointly addressing the social, environmental and economic dimensions of sustainability. This requires multi-level collaboration and governance. In both the declaration of Agenda 2030 (UN 2015) and the NUA (United Nations General Assembly 2016), the need for integrated governance is highlighted. This includes but is not limited to SDG 17, which explicitly focuses on fostering partnerships among actors and across different levels or tiers of government institutions.

Integrated governance includes horizontal collaboration (between entities and actors at the same level), vertical collaboration (among actors in different levels, e.g. national, regional and local) as well as collaboration among different types of actors (public sector staff and politicians, private sector, civil society and academia) (Leck and Simon 2013, 2018; Pieterse et al. 2017). Given the complexity of sustainability issues, it is widely recognised that no single actor or level of governance can fully address sustainability without forming partnerships and cooperating with different types and levels of actors (Leck and Simon 2013).

Within each City administration, integrated governance implies working across sectors and departments. However, most City operations are structured in topic or theme-based sectors, leading to institutional silos and barriers to cross-sectoral work. In the case of Gothenburg, for example, City staff are encouraged to collaborate with other departments, but political committees are still structured thematically. It may therefore be hard to find the necessary and most appropriate political anchoring for approval of integrated and cross-sectoral programmes, particularly those that aim to address both environmental and social issues.

While Agenda 2030 highlights the indivisibility of its goals, in practice, actors in different parts of an organisation tend to focus on the goals and targets that are directly relevant to their respective areas of work. Part of the issue with working in such silos is that actors have different visions and interests, meaning that the exact sustainability dimensions to be prioritised can become points of contestation (Parnell 2016). To address this issue, in 2017 the City of Malmö formed a sustainability unit within the City Office. One of its functions is to support the organisation's ambition to

use the SDGs as a framework to guide planning and implementation of all municipal initiatives and programmes. The unit reports to the specifically designated 'Preparatory Committee for Finance and Sustainability' which is chaired by the mayor and is a political body directly under the Executive Board. A key focus for initial efforts by both of these new institutions is the inclusion of 'sustainability' and 'Agenda 2030' as cornerstone concepts within an ongoing move to amend and improve by 2020 the City's overarching budget processes (Englund 2018; Herkel 2018; Malmö stad 2018a, 2018b).

Research on the 'food–energy–water (FEW) nexus' has provided concrete examples of effective, integrated governance of FEW resources, which can be helpful for countries and cities as they engage with Agenda 2030 and NUA. Though much of the nexus literature has focused on physical or technical inter-linkages of the resources, the need for integration at the policy and governance level has been imperative for sustainability of these resources. The nexus governance approach also acknowledges the problem of 'sectoral fragmentation' and hence the lack of integration as a dominant issue in both Global South and Global North countries. One framework of nexus governance suggests the 'scope of action' in the form of institutional change through integration of policy, and thereby integrated governance, at both horizontal and vertical levels to ensure the sustainability of FEW resources (Märker et al. 2018).

Agenda 2030 stresses the importance of harmonising the different global agendas, including the Paris Accord on Climate Change, the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Addis Ababa Action Agenda on Financing for Development, among others (UN 2015). Integrated governance is also about creating coherence among global and regional agendas at the local level. For instance, the African Union has adopted its own vision of development as part of Agenda 2063 (African Union 2015). These global and regional agendas have been agreed by national governments but their relevance to cities is undeniable and thus they need to be adapted to the local level (or localised) (Dellas et al. 2018). The localisation of one global agenda creates the opportunity to align the work with other agendas currently being implemented at the city level. This alignment should include not only new agendas such as the ones mentioned above but also the work done in the context of previous agendas such as Local Agenda 21

and the MDGs as well as other international agendas in which the City may be involved. Aligning global agendas at the local level also implies looking into potential conflicts and trade-offs between these agendas.

The City of Cape Town, for example, is a member of the Rockefeller Foundation's 100 Resilient Cities initiative, through which the city developed a Preliminary Resilience Assessment as a basis for its first resilience strategy. Rather than taking the localisation of Agenda 2030 as a separate process, the City of Cape Town is looking into aligning and framing this with its resilience work and other existing development agendas. Buenos Aires is also participating in the Resilient Cities initiative and the City launched its Resilience Strategy in October 2018 (Gobierno de la Ciudad de Buenos Aires 2018). However, localisation experiences and efforts to integrate different agendas vary from city to city. Malmö is attempting to establish Agenda 2030 as a principal pillar to which all other agendas, including current ones (e.g. that of the global Covenant of Mayors), should eventually become aligned, presumably through effects of trickle-down localisation processes. Similarly in Shimla, the Smart City proposal, which is the blueprint for implementing various programmes and projects under the Government of India's Smart City Mission, has 'convergence of agendas' as one of the critical components. As part of the Smart City agenda, participating Indian Cities have formulated their smart city strategies by identifying any convergences with existing schemes/programmes of the Indian government in terms of human or financial resources, similar project activities and intended outcomes.

As suggested by Fourie (2018), effective SDG implementation requires effective SDG co-ordination mechanisms. While his focus is at the national level, he suggests six features that could contribute to effective co-ordination at the local level and co-ordination between the national and local levels:

- (1) Political buy-in and advocacy from high-level politicians, which can contribute to facilitating collaboration across government departments.
- (2) Mandate to promote policy coherence, which refers to the importance of aligning the SDGs to the national and local development priorities by using a country's or city's priorities as

the point of reference as well as promoting horizontal and vertical policy coherence, aligning the policies of line departments in the former, and aligning the national with the sub-regional and local in the latter.

- (3) Inclusivity, in the sense of creating inclusive coordination mechanisms that include a wide variety of actors, including different levels of government (national, regional, local) as well as civil society, private sector and academia.
- (4) Capacity for effective communication, which includes creating regular and transparent information flows as well as awareness raising to government and non-government actors.
- (5) Accountability towards stakeholders, which includes establishing reporting mechanisms that consider both quantitative and qualitative assessments of progress.
- (6) An adequate budget that includes funding to address the previous five features adequately.

An additional element of what can constitute integrated governance and that could complement Fourie's (2018) co-ordination mechanism features (particularly feature 3) is the need for concrete and prompt national guidance or support. While implementation at the city level needs to be adapted to the local context and needs, clear guidance from the national level is useful, particularly for smaller municipalities, especially in countries of the Global South, which may have limited capacity in terms of human, financial or technological resources.

In general, representatives from our case study cities, regardless of city size and institutional capacity, express an interest in guidance and support from the national level—particularly when it comes to reporting mechanisms. In several of our case study countries, national governments have started to prepare guidance on the SDGs, often with UN support, that is coherent with the annual reviews that are to be presented on a voluntary basis during the annual UN High Level Political Fora in New York. Consequently, associated monitoring and evaluation have also been guided by national governments, mostly aimed at national level agencies. National and/or provincial guidance specific to local-level implementation of these agendas has been generally lacking. Such guidance can be helpful in ensuring timely outcomes. National level guidance and support can be given to local governments in various

aspects including but not limited to: (1) Identification of technical and financial resources needed to meet the goals. In selected cases, the government can also provide gap-funding for efforts where local governments do not have adequate funding; (2) Facilitate horizontal learning between regions and cities; (3) Given the diversity of local governments in countries, unified national guidance can also ensure consistency in efforts, processes and outcomes, particularly related to reporting mechanisms such that they are consistent over subsequent time periods as well as comparable regionally, nationally as well as internationally; (4) National governments can also guide and lead the creation of institutional mechanisms to enable SDGs monitoring, for example, by creating a steering or working group for specific SDGs and indicating which departments or ministries will be part of those groups; (5) On indicators to monitor progress at the local level and methodologies to collect the data (see section 5, below, on indicators), this could include capacity building training for data collection and analysis.

Where concrete national initiatives have been slow to emerge, some cities are hesitant to implement major initiatives independently, in case they have to backtrack or redesign their strategies to follow national level instructions. Others, as in the case of Malmö, however, focus more on the importance of local rallying efforts and proactiveness, thus expressing urgency and local ambitions to higher levels through their initiatives.

In June 2018, the Swedish government launched an action plan for the implementation of Agenda 2030 (Regeringskansliet 2018a), which highlights the crucial role of regional and local governments in achieving the SDGs. The action plan also tasks RKA (the Council for Promotion of Municipal Analyses) to work with SCB (Statistics Sweden) and other actors, including selected municipalities, to come up with a proposal of a set of local level indicators that municipalities can use on a voluntary basis to report progress on the SDGs. Results from this task are due by March 2019 (RKA 2018; Regeringskansliet 2018b). Meanwhile, SKL (the Swedish Association of Local Authorities and Regions) and UNA Sweden (the United Nations Association of Sweden) have jointly initiated a pilot project (2018–2020), initially comprising seven local and regional authorities, in order to provide national-level guidance on Agenda 2030, based on local- and

regional-level experiences with localisation efforts (UNA Sweden 2018).

The national government of India has provided the primary guidance towards achieving SDGs in the country. The National Institution for Transforming India (NITI Aayog), which is a policy think tank of the Government of India, along with the Ministry of Statistics and Program Implementation (MoSPI), are key agencies currently involved in monitoring the implementation of the SDGs in India. NITI Aayog has conducted regional consultations on the SDGs. MoSPI is involved in providing technical support to NITI Aayog in developing a national indicator framework aligning SDG indicators and existing data and reporting systems used in the country. These agencies have also mapped how current programmes of national and state governments relate to the SDGs. The SDGs are providing a standard to be achieved by the government's programmes and policies within its existing monitoring frameworks at the national and state levels.

In 2017 the UK Government published 'Agenda 2030: The UK Government's approach to delivering the Global Goals for Sustainable Development—at home and around the world' (UK's Department for International Development 2017). This report was intended to provide a clear demonstration of the UK Government's commitment to the SDG agenda. However, despite the repeated calls for central co-ordination and strategy and appointment of top level ministers to take responsibility for the SDGs, the report confirmed that they would be delivered by embedding them within Single Departmental Plans (SDPs). In this way, each government department will be responsible for reporting on its own progress towards the Goals through its Annual Reports and Accounts. The Cabinet Office will have a role in co-ordinating domestic delivery of the Goals, but only through the SDP process. Overall, the report outlined very little in the way of an overarching implementation strategy.

Guidance is also coming from levels beyond the national, as in the case of Buenos Aires. In 2017, ECLAC (the UN Economic Commission for Latin America and the Caribbean) published an action plan for the implementation of the NUA in Latin America and the Caribbean (ECLAC 2017). The regional action plan proposes interventions and actions, as well as relevant and priority policies, for the countries of the region to achieve sustainable

development in their cities and human settlements by 2036 and for cities to be 'engines' of the process.

In summary, the cities studied in our project are starting to engage at different paces with these global agendas, especially with the SDGs, as mediated through their respective national governments. So far, however, they have not adjusted their existing monitoring mechanisms or started to collect additional data following the UN-recommended SDG indicators. Clear guidance from national governments is also lacking in most cases, both concerning the extent to which city level reporting will be required, and on how to adapt the agendas and indicators to the city level. Prompt national guidance is anticipated by local governments. Smaller cities and cities which are further from political centres may have an additional challenge of distance from the source of guidance as well as capacity to implement such guidance. However, incremental progress towards achieving SDGs targets can lead to better outcomes over time. Performance measurement of key aspects relevant to local contexts through an SDGs framework can lead to a 'virtuous cycle' of better performance (Sanger 2013). In other words, given the cross-cutting nature of the SDGs, better performance on these goals can enable better performance as well as monitoring across various sectors.

3) Actors

Both the SDGs and the NUA call for inclusive and participatory implementation. Both agendas were developed envisaging an active role for government/public sector, business and civil society actors.

In participatory processes, groups supposedly representing major constituents are often invited, but these agendas should serve to make a renewed conscious analysis of who is representing major groups (such as civil society), who is included in these processes, and by default, who is excluded from them (Parnell 2016, p. 538).

Several questions related to actors need to be considered when localising the SDGs and the NUA. For example, what roles will civil society and private sector actors play in the implementation, monitoring and review of the SDGs and the NUA? Will their strategies be separate or co-ordinated and agreed on with those of the public sector? How are conflicts,

vested interests and discerning views going to be addressed?

An aspect often missing from discussions of global urban agendas is the role of citizens (Caprotti et al. 2017; Kaika 2017). Analyses from the implementation of the MDGs have shown that urban poor groups have usually not been involved in the design of interventions meant to assist them, with national or regional consultations involving some civil society groups representing a weak kind of 'participation' (Hasan et al. 2005, p. 6). While consultations around the SDGs were designed to be more inclusive, the lessons of the MDGs, such as the need to strengthen and support low-income groups and their organisations, and the capacity of local organisations to work with them and be accountable to them, are also relevant for meeting the SDGs (Hasan et al. 2005; Liverman 2018).

As mentioned above, who represents and speaks on behalf of different groups can prove challenging for transparent implementation of the SDGs and the NUA. The vested interests of different actors also play a role in this matter, as well as varying visions of what a sustainable and inclusive city means and how to achieve it. Different actor groups may interpret and use these agendas for different purposes: in Buenos Aires, for instance, labour unions are trying to use the SDGs to claim visibility and scrutinise the government's work.

Given the medium- and long-term perspectives on which both agendas are based, another crucial element is that their implementation must overcome the short-term planning that is often attached to political cycles. As stated by Finnveden and Gunnarsson-Östling (2017), clear sustainability goals are often lacking from planning processes, and thus there is a need to develop clear goals that are relevant for different economic and political cycles. There is a need to anchor the implementation of these agendas politically, as described in the case of Malmö above, to give them the necessary impetus and an institutional mandate. The opposite was initially seen in Sheffield, where austerity policies have severely constrained the work of City officials and their ability to engage with new agendas outside of the delivery of core services (Sheffield City Partnership Board 2018, p. 7). However, as of early 2018, interest in the SDGs is increasing, particularly spearheaded by the head of the sustainability office in the City (Pers. Comm.).

The SDGs envisaged multi-stakeholder partnerships, where multiple actors, including transnational actors, were seen as a key tool for achieving the SDGs. SDG Goal 17 is dedicated towards strengthening 'global partnerships to support and achieve the ambitious targets of the 2030 Agenda, bringing together national governments, the international community, civil society, the private sector and other actors' (UN 2015).

Institutionalised interactions between global and local actors, which aim to achieve common goods such as SDGs, are still considered unusual (Kalfagianni and Pattberg 2011; Beisheim et al. 2018). Hence in the given context, an added element to the discourse on integrated governance in the previous section also merits integration at a global scale. Such a form of global governance is witnessing enhanced participation of global and local actors, including range of private and non-governmental actors. New organisational paradigms such as public-private and private-private partnerships are complementing the conventional paradigms defined by the rule of law of the nation states. However, various perceptions are held regarding the 'legitimacy, effectiveness and overall desirability' of such partnerships. Research indicates that transnational multi-stakeholder partnerships yield better results if they leverage local ownership and the institutional and policy environment is favourable to them (Beisheim et al. 2018).

The ongoing processes in our case study cities also reaffirm the importance of local champions (Leck and Roberts 2015) that see the potential, or at least are curious about the potential, of these global agendas and thus provide the initial drive for the localisation process to start. Many of our city partners are the local municipal bodies of the respective cities. By becoming part of the project through often tedious administrative processes, they also acknowledge the significant role that they have in implementing such agendas. They see the value of such agendas in contributing to their monitoring capacity as well, especially of issues for which they are responsible, such as SDG 11.

Our project is thus integrating two important actors at both ends of this global governance paradigm towards achieving SDGs. Our research at global level is informing implementation processes at the local level. At the same time, for these processes to survive over time and become ingrained into the City's planning processes there is a need to create

awareness and build partnerships across municipal departments.

As mentioned before, the role of private sector actors, especially the business sector, was brought to the forefront while developing the SDGs, with the expectation that the private sector has the capabilities such as innovation, efficiency, responsiveness and relevant skills that are needed for achieving the goals (Scheyvens et al. 2016). For the transformation potential of these agendas to be realised, public sector involvement is insufficient and different societal sectors and actor groups working at different levels, from the neighbourhood (as in the case of Sofielund in Malmö mentioned in the previous section) to regional and national levels, need to be actively engaged. For various reasons, their engagement thus far has been limited. Reasons such as lack of finances, sole interest in a business case, short term planning versus long term sustainable development have acted as a barrier for businesses to engage as credible actors towards achieving SDGs. Hence, in order to enhance the role of non-governmental actors in the SDG process, such barriers need to be identified and addressed. In respect of businesses, this may mean moving beyond the (social) responsibility to (social obligation). However appropriate rules, legislation and guidelines will need to be framed to create a favourable institutional and policy regime that can enable these actors to contribute towards the SDGs (Scheyvens et al. 2016).

4) Trade-offs and synergies

Potential trade-offs and synergies among efforts to reach different goals relate in part to the boundary discussion above. Such interconnections need to be taken into account by all who strive to implement the SDGs and NUA (Caprotti et al. 2017; Machingura and Lally 2017; Nilsson et al. 2017). Systematically assessing the interactions among different SDG targets can serve to highlight potential conflicts, trade-offs and synergies among local programmes and policies, as well as among different interest groups at the local, but also international, levels.

In a systematic study of synergies and trade-offs, Pradhan et al. (2017) identify SDG 1 (on poverty) as the goal with the most synergetic relationship (representing a positive correlation between pair of SDG indicators), while SDG 12 (on consumption and production) as the goal most associated with

trade-offs (negative correlation between pair of SDG indicators). Many of the trade-offs linked to SDG 12 can be explained by the current unsustainable growth paradigm which gives priority to economic growth as a way to generate human welfare but at the expense of the environment. This relation can be seen in many Global North countries where high levels of GDP have on average contributed to positive developments in health and education, but also to high levels of greenhouse gas emissions and material consumption and waste (Pradhan et al. 2017). Reducing the consumption and waste of materials can lead to a reduction in energy demand, which in turn is key to reducing greenhouse gas emissions (von Stechow et al. 2016).

At the local level, efforts to achieve one SDG target can also lead to trade-offs in achieving other targets. For example, actions to meet a need for increased housing can lead to conversion of farmland and peri-urban green areas into built environments, affecting the livelihoods of farmers at the urban-rural interface, disturbing ecosystem services through conversions of local ecosystems, and pushing food production further away from consumers (Aguilar 2008; Lee et al. 2015; Valencia 2016). Conversely, if a municipality instead promotes urban densification, detrimental consequences for urban green areas, air quality and health might occur, unless such effects are successfully foreseen and mitigated. In its second report on SDG indicators, Statistics Sweden (SCB 2017, p. 64) raised the complex connections among land use, transport systems, public health, safety and security, all of which are key themes for SDG 11.

A critical step in localising these agendas is the assessment of these kinds of potential conflicts. Analysing possible synergies is equally important and not only between SDG goals but also with other agendas and actors. This is exemplified by the case of Cape Town, where, as previously mentioned, alignments are being sought between the SDGs work and the elaboration of a resilience strategy.

Weitz et al. (2018) propose a systematic approach to assess the interactions of SDG targets by considering how progress in one target influences progress on another. They follow Nilsson et al.'s (2017) framework consisting of a seven-point typology which indicates the nature of the interaction of one target with others and whether the relationship is positive or negative. The typology ranges from 'indivisible'

(where one objective is inextricably linked to the achievement of another goal) to 'reinforcing', 'enabling', 'consistent' (where there is no significant positive or negative interactions), 'constraining', 'counteracting' and finally 'cancelling' (where progress in one goal makes it impossible to reach another goal) (Nilsson et al. 2016, 2017). While other analyses of trade-offs and synergies have been undertaken between particular SDGs, most analyses of interactions are limited to particular areas and nexus (e.g. food-energy-water nexus) or limit the analysis to identifying whether the interaction is in the form of a synergy or a trade-off (e.g. von Stechow et al. 2016; Bowen et al. 2017; Pradhan et al. 2017; Fuso Nerini et al. 2018). We find the framework proposed by Weitz et al. (2018), particularly the seven-point typology, to have the potential to be a useful and robust tool for researchers and practitioners to assess the interactions of SDG targets systematically as it allows for analyses of how targets interact with multiple targets with the seven-point scale that provides a nuanced understanding of the interactions beyond the 'trade-off' and 'synergy' simplification.

In sum, such systematic assessments can contribute to a better understanding of the intended and unintended consequences of initiatives aiming to achieve the SDGs and the NUA, shedding light on complexities in interactions between agendas and stakes. They can also facilitate priority-setting in efforts to implement the SDGs and the NUA. Systematic assessments require a broad range of actors that have the expertise to identify the key aspects connected to particular areas (or targets) and the potential interactions with other. At the same time, suitable decision spaces that are inclusive and transparent are required to bring together multiple actors to discuss and negotiate how to address the points of conflict, which may be contentious (Bowen et al. 2017). Effectively leveraging synergies and negotiating and reducing trade-offs and conflicts will greatly increase the possibility to achieve Agenda 2030 and the NUA (Pradhan et al. 2017).

5) Indicators

An important aspect of the SDGs and the NUA is the ability of countries to monitor and report on their progress towards achieving the goals. In the case of the NUA, no concrete monitoring mechanism has yet

been put in place, beyond the requirement of four-yearly progress reviews by the UN contained in the NUA itself. Efforts to formulate the SDGs as a formal monitoring and evaluation framework for the NUA were rejected during the negotiations ahead of Habitat III in Quito. Nevertheless, the SDGs are seen as complementary and may have considerable potential in that regard (McPhearson et al. 2016; Satterthwaite 2016c); indeed the extent to which SDG 11 and urban-related elements of other SDGs can be used to assess progress on the NUA will be assessed by this project.

The MDGs, effectively predecessors to the SDGs, comprised eight goals and a total of 21 targets and 60 indicators.⁵ These had been designed to measure progress over their lifespan (2000–2015) through a system of annual reports by member states to the UN. The SDGs, however, have been designed to monitor no less than 169 targets, and encompass a total of 244 indicators (or 232 if the nine indicators that repeat under two or three different targets are taken into account).⁶

For municipalities, as well as for other urban stakeholders, indicators can play a number of roles. They can contribute to increasing the understanding of the challenges in cities by assessing and monitoring conditions over time, informing decisions and playing a role in generating political and citizen support for particular policies and programmes (Holden 2013; Simon et al. 2016; Klopp and Petretta 2017). However; what, how and where to measure is a process not devoid of politics, and thus indicators need to be seen as supporting tools, which can be used (and misused) as political instruments, rather than as straightforward metrics of complex urban sustainability issues (Simon et al. 2016; Caprotti et al. 2017; Bell and Morse 2018; Smith and Gladstein 2018). By introducing a typology of 'indicator uses', Hezri (2004, p. 366) contributes an analytical tool applicable to this context comprising five separate usage types characterised by (1) different degrees of rationality and (2) variations in response from decision-makers. Although the boundaries between the types—instrumental use, conceptual use, tactical use, symbolic use and political use—are inherently blurred (Bell and Morse 2018, p. 8), the typology underscores the need for sensitivity regarding the application of indicators. For what ends do they actually become used, and is there a risk that they become goals in and of themselves?

Learning from the MDG process, it has been noted that data were selected to show better outcomes than what can actually be claimed as being direct results of the MDG process as such. Klopp and Petretta (2017) argue that data sources during the MDG period were poor, only limited disaggregation to the city level was undertaken and problematic assumptions were often made. The second of these issues is hardly surprising since all the goals, targets and indicators of the MDG framework were formulated at the national level and indicator data were collected and evaluated nationally. In addition, in cities with high levels of informality and poverty, data collection often only covers formal practices, and thus indicators can significantly and systematically underestimate the scale of poverty and inequality (Arfvidsson et al. 2017; Klopp and Petretta 2017). In Cape Town and Kisumu, for example, rough estimates suggest that about 10% and 64% of the population, respectively, live in informal settlements (Arfvidsson et al. 2017, p. 105).

Monitoring and reporting on the SDGs runs a similar risk. The SDGs were designed to be reported at the national level and thus most indicators are based on national statistics. Even the urban SDG includes indicators which are aggregates of cities, such as indicator 11.3.2 ('proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically') (IAEG-SDGs 2018). As indicated above, however, the relevance of the SDGs for cities is not limited to SDG 11. Thus municipalities working with Agenda 2030 and the NUA will probably benefit from adapting to the local level the UN-recommended SDG indicators of SDG 11 and other relevant SDG targets, as well as from complementing their monitoring with alternative metrics that they find appropriate. At the same time, the uneven availability of urban data across the globe will limit the collection of data, with a bias towards members of the OECD and better-resourced middle-income countries, while analyses at the global scale may be biased on generalised measures that have little sensitivity to regional variation and local realities, including intra-city differences (Simon et al. 2016; Watson 2016; Robin and Acuto 2018).

The challenge of monitoring the SDGs starts at the target level. Target vagueness and lack of clarity, and hence measurability, have been highlighted as an issue by officials in the different municipalities in

our project. One example is target 6.6 on restoring water-related ecosystems ('6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes') and its indicator ('6.6.1 Change in the extent of water-related ecosystems over time') (IAEG-SDGs 2018). The target could be quite relevant to many cities and for issues ranging from water quality to climate resilience. However, the vagueness of the target does not provide guidance on how to set the baseline or a concrete target point to reach. This leaves room for interpretation, which can be positive for cities when adapting these global agendas to local needs. However, local interpretations can also hamper national and international comparability, as well as universal implementation and evaluation, and lead to business-as-usual approaches where the SDGs and the NUA are used as branding, rather than tools for transformation towards sustainability.

Other targets and indicators requiring investigation and critique regarding their usability include the SDG 11 targets relating to disaster risk management. For example, target 11.5 ('By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations') (IAEG-SDGs 2018). The focus on disasters may divert attention from smaller, more frequent impacts of hydrological and geophysical hazards that, cumulatively over time, may result in large social and economic damage (see, for example, Marulanda et al. 2010). Similarly target 11.b ('By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels') (IAEG-SDGs 2018). This target and its indicators do not address the quality of those policies and plans nor the quality and effectiveness of their implementation.

Another aspect related to the localisation of indicators which requires consideration is that there is no one-to-one relation between most targets and indicators. Many targets cover simultaneous and complex issues, and therefore they cannot be reflected entirely by individual indicators, or even by

composite indices. Examples of such complexity are target 5.a ('Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws') and target 9.1 ('Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all') (IAEG-SDGs 2018).

The SDG targets not only cut across simultaneous complex issues but also across jurisdictions within a city in terms of agencies responsible for various aspects related to the target. For example, SDG 6 deals with availability and management of water and sanitation. However, in most Indian cities, there are multiple agencies that are responsible for these functions. Within water supply, there can be different agencies responsible for storage of water, supplying it and operations and maintenance of the water supply network. Similarly, the agency responsible for constructing the sewer network can be different than the one maintaining it. The agencies responsible for collection and transport of solid waste can also be different from the agency responsible for its treatment (SDG target 11.6).

Given the above issues as well as the already large number of indicators to report on, the politics behind agreeing on the final indicators, and the time and economic pressure that data collection puts on national and local governments, it follows that the proposed UN indicators, in and of themselves, do not provide a comprehensive set of metrics to monitor the SDGs. Local governments, then, need to find complementary metrics that can help to plan and better monitor their SDG and NUA work. The challenge for local governments lies in finding a balance between a comprehensive set of new indicators (which can include the locally adapted SDG indicators) and using their existing city monitoring frameworks if they exist. The latter provide the advantage, in theory at least, of a historical record. The former may encompass indicators that cannot be tracked historically, with ensuing risks for underestimates of trends and previous work; nevertheless, it may be better suited for measuring progress towards an integrated sustainability agenda. As Klopp and Petretta (2017) suggest, the SDGs and new indicators should not overtake existing local monitoring

mechanisms but complement and strengthen them. The challenge of ownership as well as accountability in reporting on many such existing city monitoring frameworks might still exist as some of them are provided by regional or national governments and the Cities themselves may not have their own monitoring tools, which is the case in Kisumu, for example.

Even though the NUA does not propose or link to an indicator framework, it acknowledges the need to 'strengthen data and statistical capacities at national, sub-national and local levels' (United Nations General Assembly 2016). It suggests that the data collection procedures for reviewing progress on the NUA may be based on official national, subnational and local data sources while maintaining standards of transparency and privacy rights among others. It also talks about strengthening the capacities of respective institutions in the realms of planning, management, institutional coordination so as to better manage their resources towards 'results-based approaches' and building 'administrative and technical capacity'. As the UN's lead agency for implementation of the NUA and Goal 11, UN-Habitat is coordinating efforts to move forwards pragmatically, so that relevant targets and indicators from Goal 11 and relevant elements of the other Goals become the de facto monitoring and evaluation toolkit.

When it comes to indicators, arguably, the most important issue is to avoid measuring simply for the purpose of measuring or being seen to be measuring —also known as performativity (Satterthwaite 1997; Caprotti et al. 2017; Patel et al. 2017). The purpose of this project is not to promote a managerial target-setting approach that focuses on performance over comprehensive and locally sensitive analyses of the causes behind complex issues such as urban poverty and inequality (Meth 2013). Instead, we argue that thoroughly thought-through indicators can be useful both for local and global discussions, and for planning and monitoring purposes; however, their limitations need to be expressly acknowledged and addressed. Each urban local authority, ideally in consultation with its respective regional and national departments and ministries, and national associations of local authorities, should decide on an appropriate indicator set that is both realistic and feasible on the one hand and challenging and helpful in promoting its urban sustainability transition or more substantive transformation, on the other.

Conclusions

The SDGs and the NUA are ambitious, comprehensive and, arguably, socially progressive agendas. They have the potential to contribute to the transition towards more sustainable, inclusive and resilient cities by serving as tools that question the *status quo* and mobilise actors and resources. The more substantive transformative potential of these agendas is dependent on the quality of the implementation process.

The considerations outlined in this paper, while not exhaustive, contribute evidence-based reflections on aspects that should be taken into account for a more transparent and comprehensive process in the design and implementation of these global agendas at the local level. We have argued the need to start with a clear delimitation and definition of the local boundary that reflects the realities of the local context. This boundary delimitation requires an analysis of what processes and actors are being inevitably included and excluded with such a delimitation (consideration no. 1 above). That said, the complexity and comprehensiveness of these agendas as well as their inclusive and participatory aims call for an integrated governance approach that facilitates the creation of partnerships and dialogues between different levels of government (both horizontally among adjacent local authorities within a single urban agglomeration, and vertically), across sectors and with different societal groups. In order to succeed in achieving the goals of these agendas, innovation and cross-sectoral cooperation are required.

There is a clear risk that sectoral interests will be prioritised over the longer-term goals of the agendas. Most local authorities are still organised sectorally and such an organisational structure poses challenges to the integrated, transversal and collaborative work required to implement agendas such as the SDGs and the NUA (considerations 2 and 3 above). These previous three considerations will facilitate a thorough analysis of the potential conflicts, synergies and trade-offs between the interventions aimed to achieve the SDGs and the NUA (consideration no. 4). This should include a reflection on the 'blind spots' of these agendas, those issues that they do not cover or that lack sufficient attention. Human rights, for example, have been argued to have poor explicit weight in the SDGs (Ramcharan 2015). Achieving the transformative potential of these agendas at the local level will also be influenced in part by the ability to monitor and evaluate progress and to adjust

the course of action when necessary. This necessitates pertinent and reliable data management. The UN-recommended SDG indicators may prove challenging and ill-adapted for the local level in various contexts. However, municipalities can take advantage of their existing monitoring mechanisms, when available, and complement them with relevant and locally adapted SDG indicators and even with other sustainability indicator frameworks (consideration no. 5) (see, for instance, Zinkernagel et al. 2018).

Political will, coherent governance, and strong formal partnerships between public sector, private sector and civil society actors are key ingredients in achieving goals such as the SDGs. In many local authorities, there is no shortage of ambitions in sustainability work. The challenge is to put together the different parts of sustainability work into a coherent whole to enable an integrated approach. Such work can be facilitated by the establishment of a high-level strategic co-ordination/integration unit or committee with a specific cross-sectoral mandate and sufficient powers to drive this agenda. Where this comprises departmental or sectoral 'champions' for such an agenda to be able to work effectively with elected representatives, prospects for progress will be greatly enhanced.

Notes

1. City, in this context, refers to the city municipal boundary as defined in each country. In Cape Town this translates to the metropolitan municipality which governs the city of Cape Town and all of its suburbs. Sources: Buenos Aires (Registered): Instituto Nacional de Estadísticas y Censos INDEC (2010); (Estimated): Dirección General de Estadísticas y Censos (DGEyC), Ciudad de Buenos Aires, 2016; Cape Town: Cape Town Organisational Policy and Planning Department, 2017, *City basics*; Gothenburg: SCB (2017), *Kommuner i siffror*; Kisumu: KNBS, 2009, *Kenya National Census Data*; Malmö: SCB (2017), *Kommuner i siffror*; Sheffield: Sheffield City Council (<https://www.sheffield.gov.uk/content/sheffield/home/your-city-council/population-in-sheffield.html>); Shimla: India, 2011, *Census*.
2. In this article, we use 'City' (with upper-case 'C') to denote the municipal organisation as such, whereas 'city' (with lower-case 'c') denotes the physical urban settlement area plus its inhabitants and other constituent stakeholders (including the City).
3. <http://urbansdg.org>.
4. 11.1.1 indicator (adopted formulation): Proportion of urban population living in slums, informal settlements or inadequate housing.
5. Official UN MDG Indicators website <http://mdgs.un.org/unsd/mdg/default.aspx>.

6. Global indicator framework for the SDGs developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs): <https://unstats.un.org/sdgs/indicators/indicators-list/>.

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