



<https://doi.org/10.18778/1231-1952.30.2.04>

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ADDING VALUE BY NATIONAL REPORTING TO SUSTAINABILITY APPROACHES OF THE LOCAL-REGIONAL LEVEL: THE CASE OF GERMANY

Abstract. Global socio-environmental challenges and local impacts, global agendas, and local implementation: multi-level governance has never been more important – or more complex. To keep track of progress and the challenges in sustainable urban development, monitoring systems at all levels are at different stages of development and in need of harmonisation. In this context, national reporting can link the global level with the local one by identifying and reviewing framework conditions, and setting indicator and data standards for cities, counties, and municipalities. This raises questions about the awareness of different issues, resource imbalances and, not least, the effectiveness of standardised monitoring. This paper provides valuable insights into the lessons learned from the preparation of the first national progress report on the implementation of the New Urban Agenda. The reflections could support further governance and monitoring efforts not only at the national level but also across all levels.

Key words: urban studies, urban development, sustainable development, Sustainable Development Goals, New Urban Agenda, Germany.

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1. INTRODUCTION

Although sustainable development has a history dating back at least 300 years, during which the concept has been described, defined and enriched with diverse experiences in various phases (Shi *et al.*, 2019), the past decade has marked another transition phase from the development to the implementation phase. In less than two years, the global community under the umbrella of the United Nations has adopted important agreements that are shaping our lives today and will shape in the future. The 2030 Agenda for Sustainable Development, which includes the 17 Sustainable Development Goals (SDGs), the Paris Agreement on climate change, the Sendai Framework for Disaster Risk Reduction, the Addis Ababa Agreement on Financing for Development and the New Urban Agenda (NUA), have come into force to counterbalance the ‘Great Acceleration’¹ with unprecedented environmental change and social inequalities.

These agendas were negotiated at the global level and address primarily the signatory states, however, what is quite obvious for the New Urban Agenda is also true for the other agendas: regional and local governments play important roles or even determine whether the objectives of the agendas can be achieved at all (see, e.g., Rudd *et al.*, 2018; Simon *et al.*, 2018). For instance, in regards to the SDGs, it is estimated that at least 105 out of the 169 targets (65 percent) will not be reached without proper engagement of and coordination with regional and local governments (OECD, 2020). Other studies, such as the project SDG-Indicators for Municipalities from Germany, have come to similar conclusions: Jossin *et al.* (2020) have identified 74 percent or 163 out of 220 targets and ‘sub-targets’ – SDG targets with multiple statements that were divided into several single targets – that are of problem and task relevance for German municipalities.

This raises several questions on effective multi-level collaborative governance between national, regional and local government institutions, e.g., how we can overcome the widespread mismatch between statutory responsibilities on the one hand and powers, resources and capacity on the other (Perry *et al.*, 2021). Besides these vertical relationships, further questions appear when considering horizontal collaboration between entities at the same level, as well as collaboration among different types of actors such as the public and private sector, the civil society, and academia (Valencia *et al.*, 2019). The variety of perspectives and questions seems to overload the debate, however, sustainable development requires exactly these considerations, as one actor or process alone hardly generates any impact.

¹ The model known as the “Great Acceleration” by Steffen *et al.* (2015) identifies twelve socio-economic megatrends and twelve ecological (Earth system) megatrends that in many respects have shown a dramatic unprecedented increase in human activity since 1950. This highlights the impact of human activity on the life-giving ecosystems of our planet.

The same applies to measuring the impacts in terms of multi and cross-level monitoring of sustainable urban development. Irrespective of the level, the benefits of indicator-based governance have always been a core topic. Monitoring success and enabling local governments to steer the transition require data-based indicators of sustainable development. This paper will shed light on the opportunities and challenges of national reporting that add value to sustainability approaches of the local-regional level.

Integrated governance, documentation, and measurement of an effective sustainability policy that considers all jurisdictional levels and actors of a country and the various sustainability dimensions in their diverse interactions are, therefore, the actual political and administrative challenge. Federations are a specific type of states here, since the different layers of government have a special level of autonomy. However, it can also be observed for unitarian states that sustainability reports are often only available for specific levels or local authorities, e.g., for the national or regional level or individual municipalities. There are already existing reporting approaches that aim at comprehensive and comparative integration. For example, the OECD has developed a ‘Toolkit for a Territorial Approach to the SDGs’, which is designed as a user-friendly checklist to guide policy makers at all levels of government to implement a territorial approach to achieving the Sustainable Development Goals (SDGs)” (OECD, 2022). This form of ‘territorialisation’ of the 2030 Agenda and its SDGs, on the one hand, takes off on the special features of the individual state levels, but also wants to create a uniform standard for all sub-units. Finland also presented a Voluntary National Review Report in 2020, which relies on a ‘Whole of Government’ and ‘Society Approach’. In this context, reference is also made to the special importance of municipalities: “There is room for improvement in the coordination between the national level and the local level on the specific role of the municipalities in implementing the SDGs. For example, national indicators seldom serve the purposes of the monitoring of local sustainability work and there are locally developed indicators and monitoring systems. However, there are initiatives that create interactions between these governance levels. The Ministry of the Environment is running the Sustainable City Programme (2019–2023) that promotes the sustainable development of cities and municipalities through practical urban development and strategic management.” All of these examples – whether integrated voluntary or local review reports or cross-states comparative analyses of sustainability efforts – refer to challenges that shall be discussed in the following analysis. These include the globally binding and uniform definition of sustainability indicators including their data gathering methods, the territorial gradation of sustainability goals, an improvement in official data bases, as well as the determination and calculation of the sustainability contributions of the individual administrative state levels.

2. BACKGROUND AND METHODOLOGY

Like most of the above-mentioned international agendas, which are based on a voluntary commitment by the signatory states, the New Urban Agenda also relies on periodic and voluntary monitoring and benchmarking of the development progress. Sustainable urban development in signatory countries of the New Urban Agenda is to be reviewed every four years, according to a recommendation in paragraph 166. Against this background, the first German progress report on the New Urban Agenda at the national level was prepared in 2020 and 2021 (BBSR, 2021). The project was commissioned by the Federal Ministry of the Interior, for Home Affairs and Construction, which was responsible for the national and international urban development policy, and the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). Since the New Urban Agenda does not contain its own monitoring mechanism but does have diverse links to the Sustainable Development Goals (SDGs), SDG 11 (Sustainable Cities and Communities) in particular, an SDG monitoring method adapted to the requirements of the New Urban Agenda was applied and tested together with selected partner municipalities. The focus of the investigations was on climate protection and adaptation, as well as mobility in the urban-rural context, each supplemented by digitalisation approaches.

This article focuses on selected challenges that national reporting on sustainable urban development faces, especially in a federation like Germany. The real tension is between international requirements and the desire for comparability on the one hand, and the shared federal responsibilities and structural heterogeneity of the monitoring object – the municipalities – on the other.

3. VERTICAL INTEGRATION OF SUSTAINABLE URBAN DEVELOPMENT IN GERMANY

The implementation of urban sustainability agendas is influenced to a large extent by the framework conditions of the federal government. According to the German Basic Law (constitution), cities, counties (Landkreise) and municipalities are not an independent level of government, but an administrative division of the 16 federal states (*Länder*). Article 28 of the Basic Law states that German cities, counties and municipalities are based on the principle of local self-government and that municipalities must be guaranteed the right to regulate all local affairs within the limits set by the law. Due to Germany's federal structure, urban development policy affects the responsibilities of several jurisdictional levels. Relevant in this regard is, among other things, the Federal Building Code

(*BauGB*) – and Chapter 2 Special Urban Development Law in particular, which was last amended in 2017. The legislative competence for the Building Code is incumbent on the federal government pursuant to Article 74 (1) of the Basic Law. According to this, the federal government is responsible for “urban land use, land law (excluding the law on development contributions) and housing subsidy law, old debt assistance law, housing subsidy law, miners’ housing law and miners’ settlement law.” Other sources of law of relevance to urban development policy include the Regional Planning Act (*ROG*), which also falls within the scope of concurrent federal legislation, the Act on Protection against Harmful Effects on the Environment Caused by Air Pollution, Noise, Vibrations and Similar Processes (Federal Immission Control Act, or *BImSchG*) and the Ordinance on the Use of Land for Building Purposes (Federal Land Utilisation Ordinance, or *BauNVO*). At the level of the federal states, the 16 state planning laws, the state spatial planning and development programmes, and the building codes, which are based on the Model Building Code of the Working Group of the Building Ministries (*ARGEBAU*), are of particular relevance (BBR, 2000). The federal government supports urban development measures of the states and municipalities with various subsidy programmes. Relevant here is the Administrative Agreement on Urban Development Promotion (*Verwaltungsvereinbarung Städtebauförderung*) to be concluded annually between the federal government and the states.

Most of the federal states also already have adopted their own sustainability strategies with predominant reference to the SDGs and implemented a wide range of programmes and measures (see Federal Statistical Office of Germany, 2023). Some of them focus specifically on supporting their municipalities in developing and implementing their own sustainability strategies. However, sustainable development is also a voluntary task at this level, and the options available to German municipalities, (not only) in terms of budgetary and human resources, vary widely within and between the federal states. Similarly, the degree of localisation and implementation of the SDGs at the municipal level varies accordingly.

Given that sustainable development must be implemented at least in part at the local level, multi-level coordination and vertical integration of policies and activities at all levels and their coordination is an important and challenging task. The German Sustainable Development Strategy, which was last revised in 2021, understands policy for sustainable development as a cross-cutting task. It is the result of many political initiatives that converge in the State Secretaries’ Committee for Sustainable Development. Already with the first meeting in 2012 on the topic of Sustainable Policy for the City of the Future, the decision was taken in 2015 to establish an inter-ministerial working group on “Sustainable Urban Development from a National and International Perspective” and further joint decisions with the states and municipalities. There have been constant efforts to coordinate sustainable urban development across levels.

These partly autonomous, partly shared responsibilities of the individual federal levels, as well as the interdisciplinary topic combining urban and sustainability expertise increase the need for political and administrative coordination in a cross-sectional policy field that again has various intersections with other policy fields such as structural, environmental, construction, transport, and social and labour market policy. In addition, the structural conditions in the approximately 11,000 municipalities are very heterogeneous in terms of urban/land settlement structures, topography, and demographics, as well as in social, economic, and fiscal terms. In recent years, however, important steps have been taken in Germany to realign urban development policy – also in line with the New Urban Agenda – in the sense of transformative urban redevelopment. Thus, municipalities are increasingly obliged to conceptually embed their planned urban development measures in corresponding sustainability strategies and vice versa. Even if many municipalities still lack a dovetailing of the various sub-concepts (sustainability, climate, energy redevelopment concept, etc.), an important step was taken in 2020 with the realignment of institutional urban development funding by the federal and state governments to promote the development of such holistic sustainability approaches in the municipalities.

This brief overview of the approaches taken by the federal government, states, and municipalities shows that political and public awareness of sustainability issues in Germany has grown considerably in recent years and is now reflected in a variety of guiding principles and approaches that are being continuously developed. However, the federal organisation of competences means that individual jurisdictional levels act autonomously in this field. As a consequence of this structure, strategies and indicator systems develop from different reference systems, resulting in a variety of individual thematic emphases and focal points. Despite various coordination efforts, sustainability monitoring at the federal, state, and local levels is still in its infancy (see chapter 5).

4. IMPLEMENTATION ACTIVITIES AT THE LOCAL LEVEL

Numerous municipalities in Germany have been involved in sustainable urban development processes for some time now. One of the starting points for this development was the Local Agenda 21, which was adopted by the United Nations in 1992 and found its way into cities, counties, and municipalities with very individual contributions under the slogan “Think globally, act locally!”. Further milestones for a stronger involvement of German municipalities in sustainability management could have been the Aalborg Charter, the adoption of the UN Millennium Development Goals and the first German Sustainable Development Strategy in 2002. Also, many municipal sustainability processes in Germany originated

from the initiative of citizens and were mainly driven by their voluntary commitment. For some years now, more and more municipalities have been bringing together existing commitment in municipal sustainability strategies and concepts. However, the depth of development varies considerably: while some municipalities focus on exemplary sustainability measures, other also define comprehensive mission statements and goals, or goal systems, and regularly review the degree of goal achievement (Bertelsmann Stiftung, 2016).

One contribution to the harmonisation of the processes is made by the Club of 2030 Agenda Municipalities. This comprises cities, counties and municipalities that have signed the Specimen Resolution 2030 Agenda for Sustainable Development: Shaping Sustainability at the Municipal Level by the German Association of Cities and the Council of European Municipalities and Regions (CEMR). The resolution consists of a general part on the commitment to the SDGs and a modifiable part for individual specifications on which SDGs should be localised and in which way. It can be signed by cities, counties, and municipalities alike. By signing the resolution, municipalities become members of the 'Club of 2030 Agenda Municipalities', a network with multiple opportunities for online collaboration, annual networking meetings, and the provision and exchange of relevant information. The Club of 2030 Agenda Municipalities is growing steadily: more than 240 cities (as of December 2023) have thus committed to the implementation of the 2030 Agenda and the 17 global Sustainable Development Goals of the United Nations since 2015. Participating municipalities are also asked to take optional measures in three thematic focus areas: Information and Awareness Raising, Networking and Advocacy Measures, and Transferring the 2030 Agenda to the Municipal Level. At the annual networking meetings organised by the Service Agency Communities in One World (SKEW), municipal representatives learn about the status of implementation of the 2030 Agenda at the local level.

Overall, the momentum of these sustainability activities at the municipal level is steadily increasing. The voluntary self-commitment of the municipalities is continuously increasing and is thus countering the pressure of higher-level policies and citizens' initiatives. In relation to the more than 11,000 municipalities in Germany, however, their number is still very manageable and does not yet reach, for example, the more than 2,000 Local Agenda resolutions that could be counted in the early 2000s (BPB, 2002). However, there are municipalities that have been working with individual sustainability principles and target systems long before these initiatives were established and that have given preference to the continuity of their sustainability monitoring over adopting the new global frameworks, supra-regional visibility and networking, although their activities actually correspond more or less comprehensively to at least one sustainable (urban) agenda. However, measuring the impact of these input/output activities requires systematic and holistic monitoring, which is not yet sufficiently established everywhere, given the resources and methodology involved.

There is no doubt that awareness, knowledge, and political will to implement sustainable development are not evenly distributed in the municipalities, which means in many cities, counties and municipalities sustainable development processes are not (yet) a priority. In many municipalities, however, various sustainability measures are implemented or at least discussed without this consciously taking place under the umbrella of sustainability, e.g., in the sense of the 2030 Agenda or New Urban Agenda. The circumstance that sustainability is understood as a voluntary municipal task and that a common frame of reference is lacking will have their share in this. Therefore, sustainability management must be monitored and evaluated just as much as the achievement of the goals itself (see, e.g., Hák *et al.*, 2016). In particular, it is important to mention the degree of integrated approach of municipalities, where different departments of the municipality have to work in a highly interdependent and cooperative way to avoid conflicting goals and optimise goal congruence within different departments and fields of action (see, e.g., Giles-Corti, 2020; Valencia *et al.*, 2019).

In addition to this horizontal integration and overcoming of sectoral structures, vertical integration and support at all levels naturally also play an important role. Only with adequate funding, balancing regional economic disparities, and linking support programmes to sustainability agendas and strategies can the transformation succeed.

Lastly, sustainability monitoring and management aligned with agendas and strategies can only be as good as the agenda or strategy itself. While the 2030 Agenda and the New Urban Agenda may be the best compass currently available for sustainable (urban) development, they bring with them various thematic gaps, such as aspects of community resilience and social cohesion, culture and the arts, and digitalisation as a means of sustainable development, sustainable finance, and the belief in economic growth, which is hardly questioned here, versus the concepts of strong sustainability with sufficiency, de-globalisation, and decentralisation approaches. Accordingly, many approaches reproduce these limitations and thus possibly neglect important factors in the impact structure.

5. INTEGRATING LOCAL INDICATORS AND DATA IN THE GLOBAL DEBATE

The 2030 Agenda assigned a crucial role to municipalities (UN Habitat, 2016) and the New Urban Agenda (NUA) of 2016 linked sustainable development to urban development. However, as mentioned above, the 17 goals, 169 targets, and associated indicators to monitor the success of the global goals relate to the national level and have limited local applicability. Similarly, while directly addressing cities

and towns, the NUA does not include a review mechanism in its 175 paragraphs. Therefore, systematic processes for localising the SDGs and reviewing the NUA at the municipal level are needed (see, e.g., Hák *et al.*, 2016; Valencia *et al.*, 2019). Localisation of the SDGs, their targets, and indicators refers to local adaptations that include ‘translating’ the goals and targets to the municipal level, selecting and prioritising them locally, framing them contextually, and assigning locally applicable target values.

This translation also encounters a peculiarity within the SDGs with regards to multi-level governance and monitoring: there are 107 outcome targets that refer to desirable outputs, outcomes, or even impacts of actions that can be implemented for sustainable development. These targets are numbered decimally. In addition, however, the SDGs also include 62 Means of Implementation (MoI; numbered alphabetically from SDG 1 to SDG 16 whereas SDG 17 is entirely dedicated to the MoI), representing 37 percent of all goals. They were introduced because one of the major limitations of the MDGs was the inability to specify the resources needed to achieve the goals (Bhattacharya and Afshar Ali, 2014). MoIs refer to either financial or non-financial measures to achieve the goals, and they vary in terms of the level addressed, from global such as the United Nations to national or subnational policies. In addition, some of them are non-specific in terms of the level they address, and can, therefore, be applied at the regional or local levels, especially in terms of community development policy and international cooperation. Integrating local indicators and data in the global debate and vice versa is thus made even more difficult.

Besides the debate on implementation options, generally the local level has an increasing need for an impact-oriented approach, which is intended to show relevant actors the link between the definition of their strategies, its measures and the intended and possibly unintended changes (see, e.g., Koch *et al.*, 2019). Impact logic seeks to systematically identify the resources that go into an activity (input), the outputs that the activity produces (output), and the effect on the target group (outcome) and on the society as a whole (impact). Undeniably, most impacts do not follow an ideal-typical linear course. Temporal and spatial divergences in the impact logic rather lead to a complex impact structure, in which the connection between input and impact can take very different paths and cannot always be explained causally in a flawless way. In particular, the unknown time lag between the components makes accurate predictions nearly impossible. In the sustainable urban development context, for example, impact linkages are usually not limited to city boundaries or the urban-rural context. Pressing sustainability issues, such as climate change, biodiversity loss, and inequality are most often global challenges – and relevant to the Global South – and highlight the need for coordinated and integrative action (see Knipperts, 2020). Practitioners, however, are more likely to face the question of how to make the use of funds efficient and impact-oriented, and how to measure output, outcome, and particularly impact.

The SDG Indicators for Municipalities (Bertelsmann Stiftung *et al.*, 2022) are an attempt to meet this need of impact orientation. It is a comprehensive set of indicators for reviewing the impact of SDGs at the local level. They are developed continuously and participatory in a working group of the same name and accompanied by a wide range of support services such as an interactive data platform, the so-called SDG portal (www.sdg-portal.de). The identification of suitable indicators includes the collection, scientific evaluation, and selection of indicators for the targets and sub-targets that are fundamentally relevant at the local level in Germany. For the compilation of the indicator catalogue, suitable indicators are reviewed from the UN level to the European and national to the local level. The respective data is made available for cities, counties, and municipalities with more than 5,000 inhabitants in the SDG portal. This sustainability monitoring service makes it easier for municipalities to take stock of their sustainable development, report on it transparently, for instance with the help of a Voluntary Local Review (VLR), and get started with impact-oriented sustainability management.

Although the New Urban Agenda also contains a wide variety of goals, it does not have its own indicators that can be used for national monitoring and the international benchmarking that builds on it. To address this issue, the existing SDG Indicators for Municipalities were used (see BBSR, 2021).

6. DISCUSSION

The first national progress report on the New Urban Agenda has confirmed that a wide range of efforts are being made at all levels in Germany to strengthen the framework conditions for sustainability in cities and municipalities. The Inter-ministerial Working Group for Sustainable Urban Development, the sustainability strategies of the federal and state governments, and the corresponding initiatives at the municipal level, such as the specimen resolution on the 2030 Agenda, make the diverse activities in the field of sustainability visible. However, these efforts encounter different municipal structures and conditions, which are often sectoral and characterised by a lack of resources. The report has revealed that larger, growing municipalities are generally in a better position to establish local sustainability monitoring and management. Where there is strong political will, committed administrative staff and support for local initiatives to actively address the most pressing sustainability challenges, even smaller communities are appearing on the map.

Monitoring as a first step for this commitment shows a very different state of development – both with regards to the availability of valid indicators and the availability and quality of corresponding data. In terms of indicators, many fields

of action, such as the climate sector, rely on input indicators, which measure and document the use of resources, while for instance in the mobility sector it is easier to measure output and outcome. The reasons for this lie in the nature of the areas of analysis (e.g., global greenhouse effect vs. local traffic volumes/loads), the sustainability dimensions addressed (e.g., predominantly ecological vs. predominantly social), and the possible measurement methods. These factors are also, or perhaps precisely, reflected in the paragraphs of the New Urban Agenda, which provides a higher validity of the indicators. While mobility data is generally well available and shows the little progress that has been made, which is comparably weak at the federal level, climate assessments, statistical evaluations on renewable energies, and measure evaluations are (still) rather seldom conducted locally – and this despite the fact that available data and survey values indicate a very high level of activity – at least with regards to inputs such as the increasing preparation of climate protection concepts. Often, measures, especially in the field of climate adaptation, are implemented in different parts of the administration and are not subsumed under the umbrella of sustainable development. Existing climate and mobility data has high data quality due to standardised measurement methods (e.g., the German balancing system for municipal GHG emissions (BISKO, Hertle *et al.*, 2019) and the system of representative traffic surveys (SrV; Hubrich *et al.*, 2019)), official registrations and statistics (e.g., statistics of building completions, car registrations, and traffic accidents), as well as remote sensing (e.g., solar potential cadastre and traffic areas). Often, however, the data is not available centrally, but only in the individual municipalities, which makes inter-municipal analyses, which are sensitive anyway, even more difficult. Against the background of this problem, in some cases qualitative information was preferred to measurable data and to form indices by means of standardised questionnaires. In this way, it was possible to record the diverse measures of climate adaptation, urban-rural mobility, and the associated progress in digitisation. In both areas, the potential of digitisation has hardly been exploited to date and is often limited to information and citizen participation offerings.

In the course of the work and analyses within Germany on the first progress report on the New Urban Agenda, it became clear above all how diverse and varied the municipal sustainability activities of the counties, cities and municipalities in Germany were. This was based on the structural characteristics of the more than 11,000 municipalities in Germany, which in turn also influence the specific political and civil society prioritisation of sustainability activities in the sense of the Sustainable Development Goals (SDGs) and the New Urban Agenda. In addition, awareness of sustainability issues varies greatly between municipalities. In all of the cities and municipalities with which we were able to cooperate for the preparation of the progress report, the topic is organisationally located in very different administrations. This ranges from separate staff units to the departments for urban development and/or the environment to the departments for city marketing.

The sectoral structure of German local government often means that an interdisciplinary exchange on such cross-cutting issues is difficult to achieve or is still in its infancy in many municipalities. It is also not uncommon for large sections of urban society to lack the awareness of sustainability issues. In peripheral and sparsely populated areas, for example, sustainability is often equated with climate protection. Elsewhere, sustainability is discussed primarily from an economic perspective, focusing on the economic benefits for the region. In addition, many local authorities are already implementing or at least discussing various sustainability measures, without always consciously bringing them under the umbrella of sustainability in the sense of the New Urban Agenda and the 2030 Agenda. This is also due to a development that, in the course of the implementation of Local Agenda 21, on the one hand it saw sustainability as a voluntary task and, on the other hand, left the design of monitoring entirely to municipal self-determination without a common frame of reference for indicators.

Thus, the systems for monitoring the municipalities' own sustainability activities in Germany show a very different level of development. They range from comprehensive and indicator-based sustainability reports to initial qualitative stock-taking, which is used to first identify where there links in the municipalities' own work to the goals of the New Urban Agenda and the SDGs are. Considerable efforts are still required to establish a cross-level and standardised monitoring system in Germany. This applies even more as the indicator system used so far is based on different types of indicators. The main distinctions are the level of data collection and the availability of official data. However, the fundamental question of whether a comprehensively standardised sustainability monitoring system for municipalities would be desirable and effective on the one hand, and feasible on the other, remains open to political debate. The differences between the municipalities are considerable. Particularly in small municipalities it is apparent that a large number of the sustainability indicators are only suitable for their work to a limited extent. In the future, there will be a need for further scientific discussions on how this 'scale-blindness' of the indicators available today can be mitigated.

In order to intensify the progress in the implementation of the New Urban Agenda and the 2030 Agenda, it is, therefore, necessary to revise the level of the detail of existing municipal monitoring systems in the coming years. Only when a large number of municipalities systematically report on their own sustainability activities, it will be possible to assess the overall contribution of the municipal level to the achievement of the New Urban Agenda and the SDGs as a whole. However, it is important not to lose sight of the purpose of such monitoring. The systematic and indicator-based recording of municipal sustainability activities is an important contribution to raising political and social awareness. Ultimately, this is also the motivation for all the municipalities that have been involved in

in this report: raising the awareness of their own administration and civil society is of central importance – in the sense of a “global commitment to sustainable urban development as an essential step towards the realization of integrated and coordinated sustainable development at the global, regional, national, subnational and local levels with the participation of all relevant actors” (New Urban Agenda, paragraph 9).

With regards to the technical and practical challenges for municipalities in establishing sustainability monitoring, the cities, counties, and municipalities stated – as in many other areas – a lack of human resources as an obstacle to the accelerated expansion of their sustainability activities. Moreover, municipalities generally do not have their own statistics departments. In this case, networking and cooperation within and with the counties play an important role. However, the size of the city does not necessarily correlate with advanced sustainability management. Even smaller and medium-sized municipalities sometimes already proceed very systematically. In such cases, it is usually the direct effects of climate change and urbanisation, for example, that prove to be the drivers for active sustainability management – often in combination with local networks and an administrative leadership that has declared the topic a top priority. But even in these municipalities, the data issue remains the bottleneck. In Germany, current data from official statistics is only available for some of the sustainability indicators for all local authorities. Thus, the municipalities have to collect their own data for many indicators, which is again a question of resources.

7. CONCLUSION

The paper aimed to describe the state of an indicator-based multi-level governance for sustainable urban development in Germany, while identifying the opportunities and risks as lessons learned from the recent NUA national reporting. The discussion clearly shows that, on the one hand, there are mismatches in the architecture of sustainable urban governance. This is due to the interdisciplinary nature of the topic, which must unite the themes, actors and resources of urban and sustainable development – without a holistic orientation and implementation framework for the local level. On the other hand, conceptual questions, in particular regarding the monitoring of sustainable urban development, need to be answered. This ranges from the ‘scale-blindness’ of the indicators to data availability, and responsibilities. The dynamics with regards to sustainability efforts on the input side are currently relatively high. Without an integrated approach, constantly balancing the requirements of the different levels, frictional losses could counteract the progress in sustainable urban development.

Acknowledgements. The authors would like to thank the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) for the opportunity to reflect in this article on the project work for the National Progress Report on the Implementation of the New Urban Agenda.

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