Multi-Level Governance: Mainstreaming Climate Commitments. In Urban climate action: Policy brief series

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Abbreviations

CFF	Cities Finance Facility
COP	Conference of the Parties
CPI	Climate Policy Initiative
DRM	Disaster Risk Management
GERICS	Climate Service Center Germany
GGA	Global Goal on Adaptation
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas
GIDRM	Global Initiative on Disaster Risk Management
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GlaSS	Glasgow-Sharm-El-Sheikh Work Program
ICLEI	Local Governments for Sustainability
IFC	International Finance Corporation
IFRC	International Federation of Red Cross and Red Crescent Societies
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
L&D	Loss and Damage
LT-LEDS	Long-Term Low Emissions Development Strategies
NAPs	National Adaptation Plans
NBS	Nature-based Solutions
NDCs	Nationally Determined Contributions
NGOs	Non-Governmental Organizations
NUA	New Urban Agenda
OECD	Organisation for Economic Co-operation and Development
PA	Paris Agreement
RCPs	Representative Concentration Pathways
SD	Sustainable Development
SDGs	Sustainable Development Goals
SDSN	Sustainable Development Solutions Network
SDU	University of Southern Denmark
UAs	Urban Areas
UCLG	United Cities and Local Governments
UDC	Urban Determined Contributions
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UN-HABITAT	United Nations Human Settlements Programme
USD	United States Dollar
VLRs	Voluntary Local Reviews
VSRs	Voluntary Subnational Reviews

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Introduction to the Policy Briefs Series

The Urban climate action: Policies briefs series has been developed by the UNESCO Chair on Urban Resilience at the University of Southern Denmark (SDU.Resilience), in collaboration with authors from the Sant'Anna School of Advanced Studies; the Royal Holloway University of London; the Technical University of Turin; the Climate Policy Initiative (CPI); the German Development Cooperation (GIZ); the Climate Service Center Germany (GERICS); and the Global Green Growth Institute (GGGI).

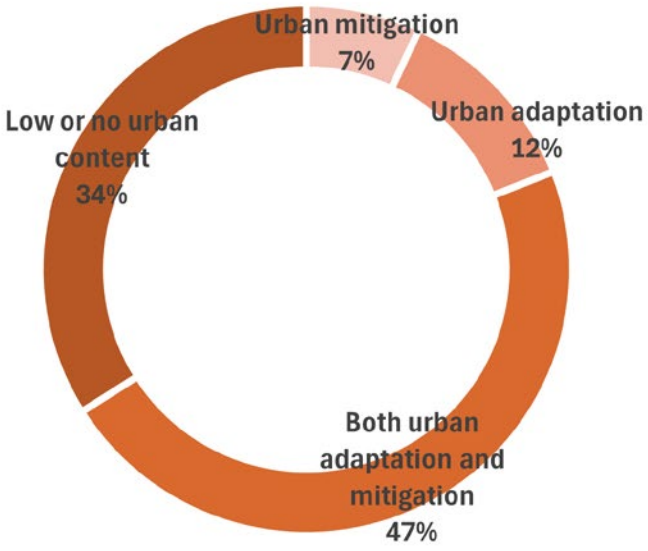

Figure 1: Level and type of urban content in the NDCs.

39% of the NDCs analyzed identified climate hazards that are currently affecting cities in their countries - or might affect them in the future. The climate hazards referred to in the NDCs include floods; droughts; sea level rises; storm events; temperature rises; heat and cold waves; land degradation; saltwater intrusion; water acidification; and wildfires.

The Urban climate action: Policies briefs series uses the analysis of the urban context of the NDCs to provide recommendations for policymakers. The recommendations are intended to encourage informed decision-making on specific urban climate-related issues.

Based on the analysis of urban-related content in the NDCs, seven thematic Policy Briefs have been produced on the following key topics:

- Multilevel Governance;
- Urban Climate Adaptation;
- Urban Climate Finance;
- Nature Based Solutions;
- Disaster Risk Reduction;
- Loss and Damage; and
- SDGs, New Urban Agenda, and Voluntary Local Reviews.

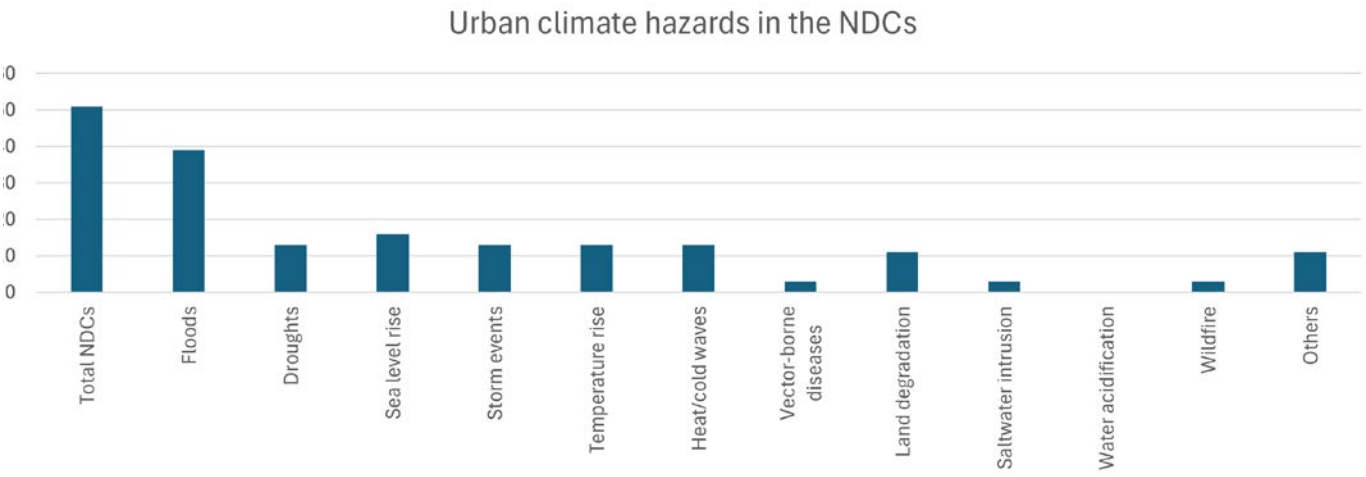

Figure 2: Urban-related climate hazards and the number of NDCs in which they are mentioned.

The key takeaways from the Urban climate action: Policies briefs series are as follows:

- Many national governments still do not include urban emissions reduction in their NDCs. Urging them to do so shall be an urgent priority for the UN.
- Multilevel climate governance needs to be strengthened and collaborative action with subnational governments is necessary to produce accurate NDCs.
- Urban climate hazards need to be identified, assessed and managed with adequate finance and stakeholder engagement.
- Cities need access to climate information and, specifically, downscaled climate data. This is particularly true if Nature-Based Solutions are to be effective and resilient to future climate scenarios.
- Loss and Damage at the urban level is severely under-represented in the NDCs.
- Article 6 of the Paris Agreement - if applicable to cities- might provide the required finance for urban climate action.
- Going forward it is advisable to support the integration of international and national targets into local development planning, implementation and reporting. Furthermore, these should inform local and regional adaptation plans. They should also be aligned with NDCs and National Adaptation Plans (NAP).

The following section of the document includes the thematic Policy Briefs.

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Multi-Level Governance: *Mainstreaming Climate Commitments*

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Abstract

Multi-level governance is a fundamental condition for enabling climate action at the local level. It requires vertical integration of national policies with local action - downscaling climate initiatives through intermediate levels of administration. It also requires horizontal integration - enhancing transboundary collaboration between neighboring local administrations, stakeholders and civil society. Multi-level governance is, therefore, a complex process aimed at integrating different climate change policies, actors and territorial levels - assuming a spatial dimension.

From a climate change perspective, both vertical and horizontal integration requires mainstreaming in order to support climate policy integration into related government policies. The first calls for climate change mainstreaming - which cover mitigation and adaptation - were voiced during the World Summit on Sustainable Development in Johannesburg in 2002. According to the Summit, mainstreaming refers to the integration of policies and actions (focused on mitigation and adaptation measures to climate change) into sectoral and planning tools in order to guarantee long-term sustainable solutions.

As evident from the review of NDCs conducted by UN-Habitat (UN Habitat, 2023), multi-level governance continues to present many gaps and challenges for governments in developing their adaptive capacity. Multi-level governance requires enhancing institutional and technical capacities at the local level as well as ensuring the availability and direct management of financial resources. This would involve varying levels of direct investment from local governments.

Additionally, multi-level governance should involve developing plans to implement mitigation and adaptation actions, the continuous modification of policies and practices, and exploitation of any opportunities that may arise.
Core international agreements - including the Paris Agreement, the Addis Ababa Action Plan, Agenda 2030 and the New Urban Agenda - acknowledge the importance of participation from all institutional levels in addressing climate change challenges. These institutions are either state or non-state actors. They include national, regional and local governments as well as civil society and the private sector. According to article 4.2 of the Paris Agreement, national governments are principally responsible for designing, submitting and implementing their NDCs. However, national governments are unable to carry out their identified climate actions without the collaboration and support of local authorities and actors. This is because each level of governmental has different capabilities and limitations (in terms of power and responsibilities) that vary significantly in different countries.

In conclusion, a country's national government offers suggestions for translating international climate change commitments into coherent national policies. Regional governments provide support and the information necessary (about geographic and socio-economic characteristics) to prepare climate strategies. Finally, local governments have the responsibility of providing relevant actions to scale up the mitigation and adaptation measures of communities. Local governments are also the most in touch with the citizens - providing a relevant understanding of the problems related to climate change and the local opportunities and capacities that are necessary to address its effects.

In addition to governmental actors, there are also non-state actors whose roles cannot be undermined. These actors fall into two main categories. The first category includes: civil society organizations (CSOs) – which includes community-based organizations; and non-governmental organizations (NGOs) - which principally contribute to amplifying the voice and vision of local communities. The second category is the private sector, which accounts for 75% of global climate financing flows and 85% of all global investments (UN Habitat, 2022). Therefore, when designing and implementing the NDCs, many institutional actors - such as private, public and social organizations operating at different political and territorial levels - are involved and affected. These actors might be independent from a political point of view, but are interconnected in terms of their contribution to NDCs. Varied interests and actions of these actors require "the arrangements for making binding decisions that engage this multiplicity", which is known as multi-level governance (Schmitter, 2004).

There are different reasons why multi-level governance and the cooperation of all governance levels are fundamental for achieving climate action goals. These are as follows:

1. Multi-level governance facilitates coordinated action - guaranteeing that climate action is taken, and will be implemented at, all policy levels. Coordinated action is necessary since climate-related challenges are interdependent. Therefore, relevant responses cannot be fragmented.
2. Multi-level governance improves accountability and transparency of decision-making processes. Climate actions may lack acceptance and support from society if decision-making processes are not open. From this perspective, public participation is a critical component of multi-level governance. Mitigation and adaptation policies can be socially accepted – and formulated quicker and easier - if they adopt equitable decision-making processes and take into consideration the genuine needs of the local community.
3. Multi-level governance can enhance the effectiveness and efficiency of coordinated climate

actions - leading to the improved implementation of policies and the saving of resources. Effectiveness is maximized when policies and actions are aligned at different levels - and efficiency is improved if activities are complementary. At the same time, all actors can share and benefit from the common resources provided through synergies.

4. Multi-level governance supports the promotion of equity within its bilateral dimensions (both procedural and distributive) because socially integrated actions ensure measures that meet the needs of different stakeholders are adopted – particularly for those that are most vulnerable to the effects of climate change. This outcome is in line with the "just transition" initiative advocated by the United Nations (UN) Secretary-General and the "Leave no one behind" (LNOB) promise of the 2030 Agenda (United Nations Sustainable Development Group, 2017) (United Nations Secretary-General, 2020)

According to this rationale, the Intergovernmental Panel on Climate Change (IPCC) strongly recommends mainstreaming multi-level governance and considers it to be a core enabling condition that is required to enhance the feasibility of mitigation and adaptation options (IPCC, 2022). According to (Klein, Schipper, & Dessai, 2005; IPCC, 2022), mainstreaming is defined as "the integration of policies and measures to address climate change into ongoing sectoral and development planning and decision-making." The value of mainstreaming is identified to be "to ensure the long-term sustainability of investments as well as to reduce the sensitivity of development activities to both today's and tomorrow's climate."

In terms of ensuring multi-level governance is applied, it is necessary to be mindful that complementary climate actions can occur across different levels - through the enhancement of both vertical and horizontal coordination. The links between upper and lower levels of government are referred to as the "vertical" dimension, while arrangements for cooperation between the regional level - or the local level - are referred to as the "horizontal" dimension. An example from the planning perspective is that national climate policies need to be vertically integrated into regional and local actions. This is to provide clear mandates, technical support and funding in order to bolster local capacity and enable private sector investment.

In order to facilitate the integration of both horizontal and vertical dimensions in designing NDCs, it is necessary to consider several matters. These include political will; legal frameworks that support efficiency and coherence; the transparency and inclusion of all actors; and building financial, technical and scientific capacity for all levels of governance to undertake the necessary climate actions.

Key messages

Multi-level governance enables coordinated local climate actions. This is necessary because climate-related challenges are interdependent and occur across different levels and administrative boundaries. Multi-level governance also facilitates holistic action that avoids fragmenting mitigation and adaptation responses. The integration of multi-level governance in climate actions brings about several advantages: facilitating coordinated action; supporting the accountability and transparency of the decision-making process; enhancing the effectiveness and efficiency of climate actions; and promoting procedural and distributive equity.

Recommendations to support multi-level governance

1. Overcome the lack of coordination between different levels of government;

2. Guarantee that national policies coordinate local climate actions while local governments assume the role of catalysts of social transformation;
3. Call for mainstreaming to integrate mitigation and adaptation policies into sectoral and planning tools;
4. Integrate green and just transition principles into climate adaptation;
5. Support training for local governments on capacity building to strengthen the legitimacy and credibility of their climate actions; and
6. Create dialogue among researchers (at the scientific level), policy-makers (at the normative level) and practitioners (at the operational level).

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Reviewer: David Simon (Royal Holloway, University of London)

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Urban Adaptation:
Improving multilevel governance to scale up local and regional climate change adaptation

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Abstract

Cities are particularly vulnerable to the impacts of climate change. 70% of urban areas are already affected by, or at risk of, the effects of climate change - such as ever-rising temperatures and varying rainfall patterns. By 2050, several billion urban dwellers will be affected. Typical urban features (such as a high population and building density, surface sealing, and a lack of green space) make cities vulnerable to external shocks (such as floods, landslides and disease outbreaks) as well as stresses (such as urban heat island effects and water shortages). It is thought that one-third of all major cities worldwide could exhaust their current water resources by 2050 (IPCC, 2022). Inhabitants of informal settlements are particularly vulnerable as they often live in hazard-prone areas - such as coastal and river floodplains or on steep slopes. At the same time, resilience efforts are often focused on metro cities, while small- and medium-sized cities receive less attention. While dealing with the environmental effects of climate change, cities are also heavily challenged by socio-economic and technical deficiencies. A lack of financial resources - as well as limited technical and institutional capacities to strengthen resilience and implement adaptation actions - hinder climate action. This is particularly the case in developing countries. Therefore, municipal governments need to take medium- and long-term action – including

investments – to build climate resilience and develop capacities to react to already existing (as well as unpredictable) climate events. To achieve this, most countries refer to human habitats and settlements - including urban areas - as priority areas in their NDCs. Despite the challenges, climate-sensitive urban development can present cities with enormous opportunities.

Climate change is a global crisis with severe local impacts.
Multilevel governance for adaptation means translating international or national targets into local solutions and reporting local results into national or international reporting to inform future policy making. The urban and climate change community, including national, regional, and local governments, UN agencies, city networks, research organizations and civil society should work together to accelerate progress in urban adaptation and make cities across the world more resilient. The longer adaptation measures are postponed the greater the risk for damage to urban residents, infrastructure, and economies. Today only 9 % (Cities Climate Finance Leadership Alliance, 2021) of global climate finance goes into adaptation. Urban and peri-urban adaptation action must scale significantly, especially in the most affected countries. To do so, systems of multilevel governance need to be improved. Multilevel governance for adaptation means translating national adaptation targets into local solutions and reporting local results into national and international reporting (to inform future policy making).

At the global level, the topic of adaptation has gained attention in the climate change policy arena. At COP21, the Parties to the Paris Agreement decided to formulate a Global Goal on Adaptation (GGA) as part of the agreement. It is the counterpart to mitigation mechanisms aimed at limiting global warming to a maximum of 1.5C°. However, unlike the temperature goal, the adaptation goal does not yet have a defined framework, methodology or indicators to measure progress. This is due to the difficulty of measuring success in adaptation - as adaptation refers to the prevention of possible damages. There is no universal indicator for adaptation because adaptation is highly context and sector specific – it is also locally interconnected. At COP26, the two-year Glasgow-Sharm-El-Sheikh Work Program (GlaSS) was launched with the aim of defining the GGA and to expand it by including sub-targets. COP27 led to the decision to “initiate the development of a framework” to be considered and adopted at COP28. This framework was supposed to “guide the achievement of the global goal on adaptation and the review of overall progress in achieving it” (UNFCCC, 2023).

Finally, at COP29 the final framework called UAE Framework for Global Climate Resilience, was adopted to strengthen adaptation action, though lacking some key components as it includes overarching, but not yet quantified, global targets for the development and implementation of adaptation plans. A two-year initiative, the UAE-Belém work programme, was launched to fill these gaps, and will conclude at COP30 in 2025. Moreover, during COP28 other initiatives relevant to cities were launched, such as the Coalition for High Ambition Multilevel Partnerships (CHAMPS) for Climate Action. The initiative, signed by 72 Parties, aims to enhance cooperation with subnational governments in planning, financing, implementing and monitoring climate strategies, such as the NDCs, NAPs, NBSAPs and LT-LEDS.
In the lead up to COP29 and beyond, it is important for the urban and climate change communities to ensure that local and regional governments are well represented in the process. Specific challenges and the needs of urban and peri-urban areas will need to be reflected in the planning, implementation, and reporting to the GGA.

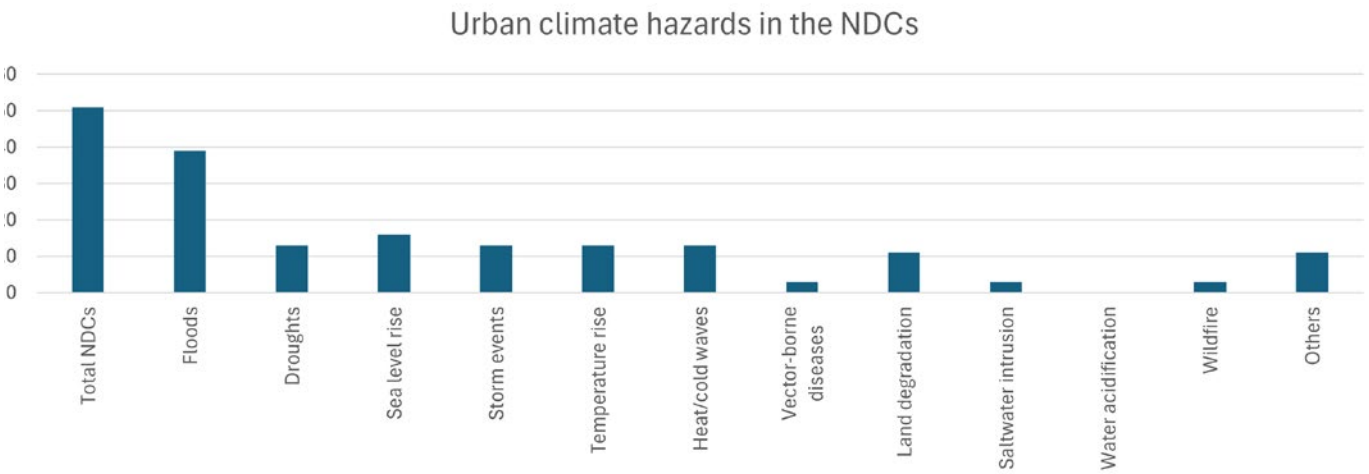

Figure 3: NDCs with urban adaptation and mitigation. Source: Urban Climate Action: the urban content in the NDCs. Global Review 2022.

At the national level, many countries have already referred to cities – as well as local and regional governments - as priority areas in their NDCs and several refer to adaptation.
The Urban Climate Action: The urban content of the NDCs: Global review 2022 (UN Habitat, 2023) analyzed 193 NDCs submitted to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) before June 19, 2022. The analysis illustrates that adaptation responses are more frequently stated at the national level despite the local nature of adaptation measures. Adaptation content in NDCs (including targets, challenges and responses) needs to be integrated into local development planning, implementation and reporting. This is necessary to increase the efficiency of adaptation measures; build an evidence base; unlock finance; and design solutions that work for local places and people. In many of its partner countries, the German Development Cooperation (GIZ) supports enabling conditions for multilevel governance in policy design; financial governance; dialogue; and capacity development.

The GIZ Urban-Act program, for example, supports a transformation towards low-carbon and resilient urban development in the Asia-Pacific region. The project addresses enabling conditions at the national level and strengthens the capacities of cities for mainstreaming climate change into urban development. The project also fosters intergovernmental and city-to-city dialogue at a regional scale.

At the local level, climate change causes diverse impacts.
The effects of climate change on urban areas vary according to numerous factors - such as the degree of warming; the local economy and population; environmental conditions; and the built environment. The Urban Climate Action: The urban content of the NDCs: Global review 2022 found that climate change hazards are more frequently mentioned at the national level than the urban level. The most prominent urban climate change hazard is flooding. Greater focus on urban climate hazard identification - in particular, through multi-risk perspectives – is necessary. Here, special attention must be paid to growing small and medium-sized cities where data availability is limited. The GIZ CitiesAdapt program is supporting secondary cities in Mexico and South Africa with climate-resilient urban planning and the implementation and scaling-up of concrete adaptation measures in selected disadvantaged neighborhoods.

Cities need to act fast.
Delaying adaptation measures increases the cost of future damages and losses. However, many local governments lack the capacity to prepare and finance complex adaptation measures. Project preparation facilities help cities turn adaptation ideas into bankable projects and to source much

needed financing. The C40 Cities Finance Facility (CFF) (C40 Cities Finance Facility, 2024), is a multi-donor initiative funded by Germany, the United Kingdom and France. It aims to strengthen cities' resilience to climate change by helping them to prepare and link their climate infrastructure projects to finance. In Durban, the CFF has supported the development of a city-wide business case for a Transformative River Management Program. It aims to adapt the city's 7,400 km of streams and rivers to the flooding, drought and higher temperatures that can be expected from climate change. Early access to project preparation by cities facilitates the bankability of adaptation projects and their implementation. This minimizes the costs and impacts of potential damages and losses due to climate change.

Key Messages

Urban and peri-urban adaptation action must scale significantly - especially in the most vulnerable countries. To do so, systems of multilevel governance between the global, national, regional and local level need to be improved through policy, financing and capacity building. Multilevel governance for adaptation means translating international or national targets into local solutions. It also involves reporting local results into national or international reporting - to inform future policy making. Urban and climate change communities (including national, regional and local governments), UN agencies, city networks, research organizations and civil society should work together to accelerate progress in urban adaptation - and make cities across the world more resilient.

Recommendations

1. Ensure that local governments are well represented in climate negotiations at the UNFCCC and that the needs of urban areas and local territories are reflected in the operationalization of the Global Goal on Adaptation;
2. Support the integration of international and national targets into local development planning, implementation and reporting. Feed local and regional adaptation plans back into Nationally Determined Contributions and National Adaptation Plans;
3. Improve the evidence base of what climate change will mean for a specific place and its people - with a view to addressing existing gaps and future needs; and
4. Support cities – as well as local and regional governments - in preparing adaptation projects and linking them to finance and capacity building through project preparation facilities.

Acknowledgments

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Urban Climate Finance:
From Global to Local Actions

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Abstract:

Urban Areas (UAs) are registering a rapidly increasing set of climate change related threats. These can be direct (e.g. floods, droughts and the frequency and intensity of extreme weather events) or indirect (e.g. economic and social stresses and health risks). While these climatic events now represent a significant threat for many UAs around the world, their impact in terms of greenhouse gas (GHG) emissions keeps on rising. Integrated mitigation and adaptation strategies appear to be the only reliable solution allowing UAs to curb the climate change challenge. UAs require effective tools to support these strategies and the corresponding actions. Nowadays, UAs enjoy relevance in the climate change debate - confirmed by its inclusion in relevant international agreements (e.g. Agenda 2030 and the Paris Agreement); the dedicated action by international agencies (such as UN-Habitat); and the presence of climate-related issues in an increasing number of national urban policies. However, this relevance often fails in effective financial support. Currently, financial support for UAs comes from multiple actors - including national governments; cities' own resources; international public funding; and private investors. UA's climate finance flows reached USD 384 billion annually on average between 2017-2018 (Cities Climate Finance Leadership Alliance, 2021). However, this is dwarfed by the estimated annual need of USD 5 trillion a year. This policy brief discusses the rationale and scope necessary for UAs to access adequate levels of finance for local climate actions. It also aims to present initial steps for implementing financing systems that support UAs climate strategies worldwide.

Urban areas must prioritize tackling climate change

With an estimated 4.4 billion aggregate inhabitants, more than 50% of the global population are found in Urban Areas (UAs). They are at the center stage of tackling climate change threats – through mitigation and adaptation strategies.

Many UAs are ready to act. To date, more than 13,000 cities across 144 countries have committed to the Global Covenant of Mayors and pledged to implement policies, undertake measures to reduce greenhouse gas (GHG) emissions, and prepare for climate impacts (Global Covenant of Mayors for Climate & Energy, 2022). Cities also represent a relevant investment opportunity as, according to the IFC, emerging market cities alone could generate more than USD 2.5 trillion in investment opportunities by 2030 (IFC, 2018).

While the issue registers increasing attention, there is an existing gap between the financial resources that are required and those that are provided. According to the Cities Climate Finance Leadership Alliance in 2021, financial resources that are provided are, on average, limited to roughly USD 384 billion annually (Cities Climate Finance Leadership Alliance, 2021). Therefore, it is imperative that new solutions and innovative approaches are found to address this problem without delay.

Financial flows and gaps

Urban policymakers are already enacting policies to build adaptation and resilience strategies against climate change, including flood mapping, crisis management, community engagement, tree planting, and long-term planning. Cities are increasing their efforts to address climate change. However, existing investment pathways are still inconsistent with the aims of mitigation, adaptation and resilience. Spending also remains far below what will be required.

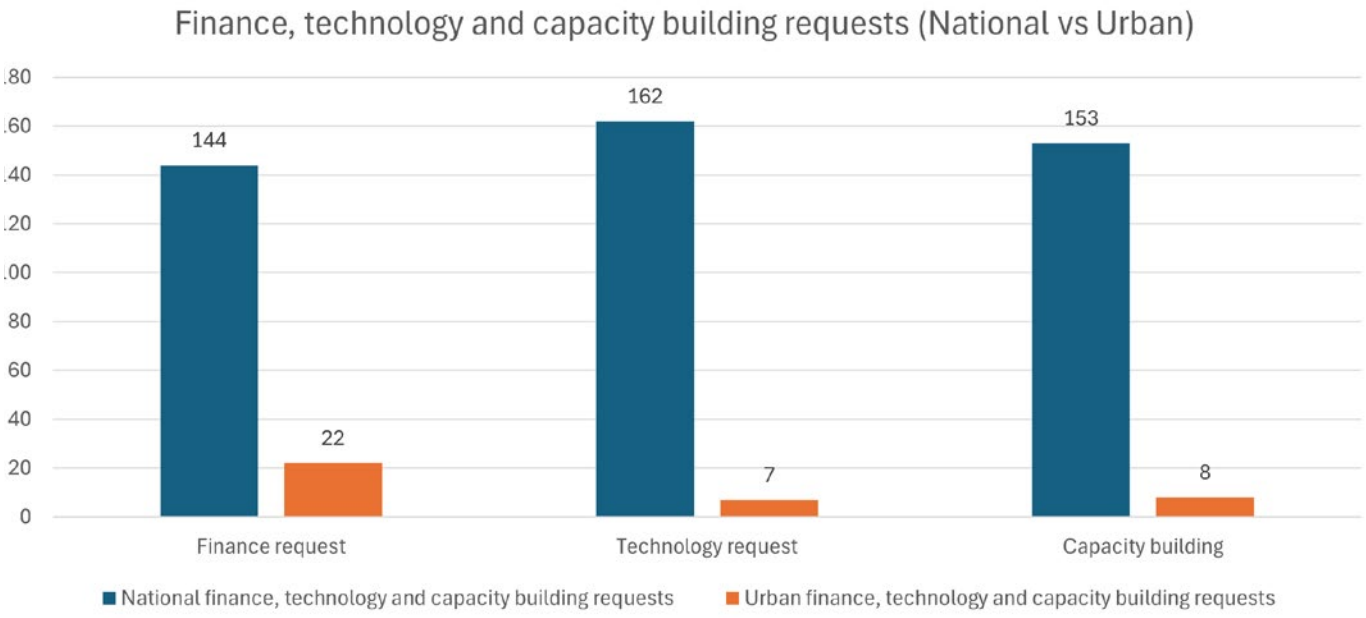

Figure 4: NDCs with request for means of implementation at the national and urban levels. Source: Urban Climate Action. The Urban Content in the NDCs: Global Review 2022.

Considering only public spending, subnational governments are currently the main providers of public investment in sectors that directly affect climate change and the environment. They total 64% of all public investment between 2000-2016. However, subnational climate-related

spending and investments represented only around 1.3% and 0.4% of GDP on average between 2000-2016. This indicates the necessity to scale up transition finance efforts (OECD, 2020).

While a significant increase in public and international funding for UAs is required, these funds will not be enough to close the urban investment gap. Scaled private investments are necessary for cities' efforts against climate change. Enabling the conditions needed to attract the appropriate private financial flows requires new approaches and innovative instruments, including a more active engagement with the private sector and the community.

Alternative solutions

A comprehensive approach is needed to accelerate and scale urban climate finance. It should encompass key elements that can drive positive change. The Paris Agreement (PA) represents an adequate framework to address such requirements. The PA structure represents a unique opportunity for UAs - with articles 4, 6 and 7 raising the greatest expectations.

Article 4 requires national authorities to define their short- and long-term climate targets and strategies. Nationally Determined Contributions (NDC) are defined as independent national efforts. These can be a lot more effective if collaborative discussions between central governments and their subnational entities are undertaken. By setting up 'Urban Determined Contributions' (UDC) that are aligned with a country's NDC, cities can support the national authorities to refine their NDC (UN Habitat, 2023). UDCs may significantly help UAs specify and detail their requirements for implementing substantial climate actions.

Article 6 may provide the opportunity for private investment if addressed to cities' needs and opportunities. While uncertainties remain in its general functioning, Article 6 has already raised interest among private investors worldwide. Current evolutions of Article 6 debate foresee its system soon overcoming any voluntary carbon market and becoming the global reference for private investments for mitigation. While not specifically addressing subnational entities, the debate on synergies between Article 6 and urban areas has become a constant in any international climate policy fora.

Finally, Article 7 of the PA highlights strategies to increase adaptation. It is crucial for cities to be a core focus in the climate change adaptation discussion and to be included in the Paris Agreement. This is because only a small percentage (9%) of urban climate investments are directed towards adaptation projects on a global scale (Cities Climate Finance Leadership Alliance, 2021).

Taking this into account, a national debate that prioritizes vertical integration is essential. It entails fostering collaboration and coordination between different levels of government to enable the streamlined flow of climate finance to cities. This helps standardize practices and procedures necessary to supplement sources of financing (UNDP, 2017).

Lastly, promoting more technical assistance to cities is vital in enabling them to access international funds and implement well-structured projects. By providing the necessary expertise and support, cities can navigate complex funding mechanisms, develop robust proposals, and maximize their potential to attract climate finance.

Together, these approaches can fuel the transformational change needed to advance urban climate finance and build more resilient and sustainable cities.

Recommendations

Given the considerations raised in this paper, it is possible to determine the main financial requirements that UAs need for their local climate actions.

- The existing gap between climate-related investments and effective provisions for UAs reflects the inadequate solutions available for funding and investing in urban climate-smart infrastructure. Public funds alone cannot fill this gap and the private sector needs to contribute significantly. In general, accelerating the current pace of mitigation and adaptation actions is a priority for cities. Therefore, it should also be a priority for all international communities.
- The international framework on climate change actions (represented by the Paris Agreement) has become the ideal reference point to address UAs' key requirements - particularly Articles 4, 6 and 7. Article 6 of the Paris Agreement - which explicitly aims at raising private investments and is still under discussion – should be recognized as an important potential strategy for city financing.
- National governments must act and promote a vertical integration that coordinates action at different levels of government – and efforts must happen at the international, national and local levels.
- Implementing city-level technical instruments and building capacity to enhance investments appears to be an undisputable priority. It is essential that such implementation begins immediately.
- Targeted stakeholder engagement with private sector and the local community might aid in attracting in private finance.

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Nature-Based Solutions in the urban context: *Co-benefits of Nature-Based Solutions to policy integration in relation to NDC*

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Abstract

An analysis from the "Nature-Based Solutions Initiative" shows that around 84% of the reported NDCs have already integrated Nature-Based Solutions (NBS) activities into their management plans for mitigation and adaptation (as of 22nd February 2022). In most cases, these activities were not explicitly described as NBS, however the concept is increasingly being raised. The signing of the Glasgow Climate Pact - which highlights NBS - may be a key reason for this visibility. It is stated that the Conference of the Parties recognize "the interlinked global crises of climate change and biodiversity loss, and the critical role of protecting, conserving and restoring nature and ecosystems in delivering benefits for climate adaptation and mitigation, while ensuring social and environmental safeguards." In many cases, parties to the Paris Agreement also included a measurable goal for the implementation of NBS. However, the majority of these focused on measuring GHG eq mitigation interventions. There is relatively little detail provided about the possible co-benefits and the potential challenges that NBS may entail. It has been largely taken for granted that NBS has a potential positive impact on the reduction of greenhouse gases. This policy brief highlights that NBS interventions must be considered in the context of the impacts of climate change. This is because implementation can turn into maladaptation (or even contribute to greenhouse gasses emission - as in the cases of drying moorland) if incorrectly

managed. In this policy brief, the potential co-benefits of NBS are presented. The necessity for policy integration and coherence to avoid disservices are also underlined.

Nature-Based Solutions have been calculated to be able to reduce CO2-Emissions by at least 10 gigatons by 2050. This has been estimated on a conservative basis (UNEP and IUCN, 2021) and has become a mainstay of mitigation practice. Most of the CO2-Emissions reduction that is related to NBS refers to an increase in forest cover. Regarding urban areas, NBS has an advantage as an adaptive and resilience building approach. It is typically characterized by parks, green spaces and water bodies. These interventions have been declared in most NDC reports submitted to UNFCCC. In 2022, the International Union for Conservation of Nature (IUCN) identified that around 84% of countries reported NBS implementation as mitigation measures. While further evaluation of the effectiveness of adaptation-led NBS should be undertaken, there is currently a significant groundswell of support for NBS in cities found in NDCs and National Adaptation Plans (in terms of increasing adaptive capacity). In regard to how countries report on mitigation efforts at the urban level, NBS implementation was largely adopted in analysis undertaken as part of this publication. This was specifically the case with interventions focused on increasing urban green spaces and green infrastructure.

The IUCN describes NBS as effective and adaptive actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges. They simultaneously provide human well-being and biodiversity benefits (Cohen-Shacham, Walters, Janzen, & Maginnis, 2016). UNEP gave further granularity to the definition in 2022 and described NBS as “actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits” (UNEP, 2022)
NBS has, in general, been declared as measures capable of producing services and goods that go beyond the reduction of greenhouse gasses (GHG). The co-benefits of NBS are popular as they can support adaptation processes to climate change in urban areas simultaneously - such as reducing heat island effect, supporting healthy environments or helping reduce the risk of disasters. Therefore, their adoption by various actors (including international, national and private sector actors) is widespread. It ranges from actions aimed at reducing GHG (by avoiding degradation or mismanagement of ecosystems) to creating new ones that might increase the sequestration of CO2 and enhance ecosystemic services to certain contexts - including cities.

Increased Funding for NBS as part of Mitigation and Adaptation Strategies highlights the Need for New Measures to Support Planning and Policy

The implementation of Nature-Based Solutions (NBS) and their integration into Nationally Determined Contributions (NDCs) presents numerous opportunities for acceleration. The popularity of NBS is evident through the existence of various donor schemes and regulations, with an estimated annual global investment of 154 billion USD (UNEP, 2022). The prevailing consensus among development and policy communities is that the popularity of NBS is well-deserved. This is because NBS offers compelling alternatives to costly engineered solutions. It can also effectively address climate adaptation, mitigation and biodiversity restoration. However, concerns arise when implementing NBS in urban areas. Prior to implementing interventions, NBS planning necessitates enhanced policy coherence and integration. This is crucial - not only due to the diverse co-benefits they can generate and their impacts across sectors and social groups - but also due to the potential drawbacks they may inadvertently cause.
Adapting the concept described by (Gómez Martín, Giordano, Pagano, van der Keur, & Costa,

2020), NBS policy integration and coherence exercises should evolve beyond the golden standard outlined by IUCN. It should incorporate the aims of NBS into all stages of policy-making at a city level – both non-environmental as well as environmental (IUCN, 2020). This should be complemented by an attempt to aggregate any expected disservices – including as part of an overall evaluation of policies. It should also involve a commitment to minimize contradictions between NBS policies and/or measures and other policies.

In 2021, the IUCN developed a comprehensive standard for the implementation of NBS. This standard aims to provide users with a strong framework that enables the design and verification of NBS capable of addressing one or multiple societal challenges. While this standard is not necessarily designed for urban areas, it underlines the need for enhanced ex-ante NBS policy integration and coherence - particularly in urban contexts and in developing nations. This is because a key prerequisite for the planning and implementation of NBS is to reconcile urban planning with other urban related sectors. As a matter of fact, NBS implementation cannot effectively happen if addressed with sectoral policies. This would limits NBS's positive impact on sectors other than the environment, such as public health, housing or land use planning. Case studies have shown that the implementation of NBS in the long term might produce disservices to other SDGs (Gómez Martín, Giordano, Pagano, van der Keur, & Costa, 2020; International Panel on Climate Change, 2022). This is because increasing green spaces may increase property values and disadvantage vulnerable populations. The creation of sustainable urban water drainage systems (SUDS) to mitigate urban flooding may also increase mosquitoes and vector-borne diseases.

According to the UN-Urban Agenda (United Nations General Assembly, 2017), the integration of different sectors is crucial for effecting change in urban planning. Building upon the framework proposed by (Gómez Martín, Giordano, Pagano, van der Keur, & Costa, 2020), it is recommended to enhance ex-ante policy coherence and integration in order to minimize potential drawbacks associated with Nature-Based Solutions (NBS) – particularly those primarily designed for mitigation or adaptation purposes. Our suggestion involves ensuring coherence among various policy sectors and aligning priorities and timelines when planning NBS for mitigation. This entails carefully mapping adaptation and mitigation considerations with social, physical, economic and spatial outcomes. For instance, there should be collaboration between relevant departments to determine the appropriate areas and timing for NBS implementation. Those departments should include those responsible for water management; nature conservation; landscape planning; informal settlements; health; and transportation. Collaboration should also focus simultaneously on reducing greenhouse gas emissions and mitigating additional risks.

To prevent potential maladaptation, it is essential to give careful thought to developing climate services alongside the implementation of Nature-Based Solutions (NBS). This ensures that NBS proposals (such as recommending wetlands for certain areas) do not become counterproductive in specific climate scenarios. For instance, if rainfall in a certain area is projected to significantly decrease under a given Representative Concentration Pathways (RCPs), suggesting a wetland in such an area would exacerbate the depletion of water resources.

Key messages

To support the implementation of NBS measures, this policy brief emphasizes that dedicated planning and management tools must be developed in, and for, urban contexts. Given the appetite for NBS projects that international donors and public authorities are currently demonstrating, there is a risk that investments can lead to disservices - particularly if they

do not accurately take into consideration the climate scenarios of specific localities. These disservices could lead to infrastructure that could become redundant. For example, if a wetland is extended and restored in a region and locality that is predicted to have strained water supply under near term RCP scenarios, actions to support the wetland could cause further strain on water resources in the region. In such a case, other scenarios should be considered. Cities and local authorities need greater support in terms of data management, monitoring and planning. This can enable them to make the right approaches to urban NBS – in regard to both climate adaptation and mitigation.

Recommendations

1. A "desiloed" and holistic adaptation management approach needs to be implemented by cities and local authorities before they engage in large scale implementation of NBS. This will enable cities to clearly map out impacts across various spatial, environmental and socio-economic considerations;
2. Cities need to have capacity-building support for the management of decision-making related to climate scenarios – so that NBS decisions avoid unintended consequences;
3. Cities and local authorities need support to manage information, analyze and evaluate the possible disservices of NBS - so that their day-to-day management and maintenance of NBS generates the right outcomes for local people (particularly in terms of ecosystem services and socio-economic outcomes); and
4. Cities need access to climate information (particularly downscaled climate data) so that NBS interventions do not fall victim to future climate challenges and disservices do not take place.

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Disaster Risk Reduction in Urban Contexts: *Entry points to reduce disaster and climate risks in cities and metropolitan regions and strengthen Nationally Determined Contributions*

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Abstract:

Cities are especially exposed and vulnerable to disaster risks - such as floods, heat waves or droughts - as they are home to 56% of today's worldwide population (World Bank, 2023). In addition, they are also at risk as they include critical supply lines, assets and infrastructures. These risks will further increase due to the negative impacts of climate change, increasing emissions and unplanned urbanization. Accelerated investment and targeted action in sustainable and resilient urban development is needed to protect lives and livelihoods; mitigate economic and environmental loss and damage; and secure development gains. This policy brief is intended to help decision-makers at the local and urban level identify their finance, capacity-building and technology needs in regard to disaster prevention. It encourages them to adopt a multi-risk perspective. Such a risk-informed development approach enhances decision-makers' ability to systematically report on climate hazards and concretize risk-reducing measures in NDCs - without being confined to a silo mentality.

As the report *Urban Climate Action - The urban content of the NDCs: Global review 2022* (hereafter referred to as the NDC report) shows, almost two out of three NDCs have an urban focus (UN-Habitat, 2023). Nevertheless, its analysis indicates that there is relatively vague reporting on climate hazards in urban contexts and appropriated responses. When NDCs address hazards and resulting risks on the urban level, they identify primarily hydrometeorological hazards - including flooding, droughts, sea level rises, and salt-water intrusion. Other hazards - such as temperature rises, storm events, land degradation, and landslides - are only rarely mentioned. In general, hazards and risks are often inadequately addressed and lack consideration of the systemic and interconnected nature of current and future risks.

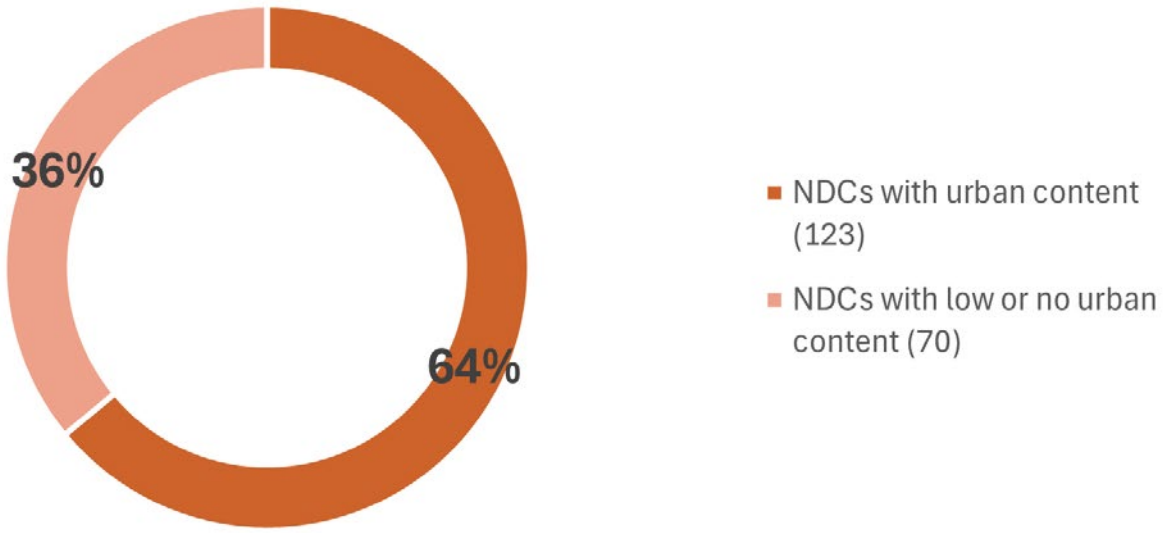

Figure 5: The majority of the NDCs (123 out of 193) have urban content, strong or moderate. (Source: UN Habitat, 2023, p.24)

Even though climate change is one of the most pressing topics of our time - and resulting hazards will become more frequent and more intense - we must not overlook other threats arising from geological, technological, biological and human-made hazards and their impact on urban contexts. For example, landslides - and subsequent building collapses - can not only be triggered by extreme climatic events such as heavy rains and storms. They can also be triggered by earthquakes or tampering with - or negligence of - critical infrastructure. Such events can cause great damage if no precautionary measures have been taken – particularly in densely populated areas. Residents of informal settlements are particularly exposed and vulnerable. In destroyed, derelict and inaccessible urban districts, basic services such as water and energy supplies are unreliable or inaccessible, medical care is impeded, and waste collection is not guaranteed. Emergency response is also limited and means that cascading effects occur - such as diseases spreading quickly.

While disasters cannot be averted entirely, their negative and cascading effects can be reduced. Often, disasters only occur because underlying risk drivers and ensuing risks have not been sufficiently considered in planning and decision-making processes. If neither the municipality nor the urban population have taken any preventive or preparedness measures, an extreme event can turn into a disaster.

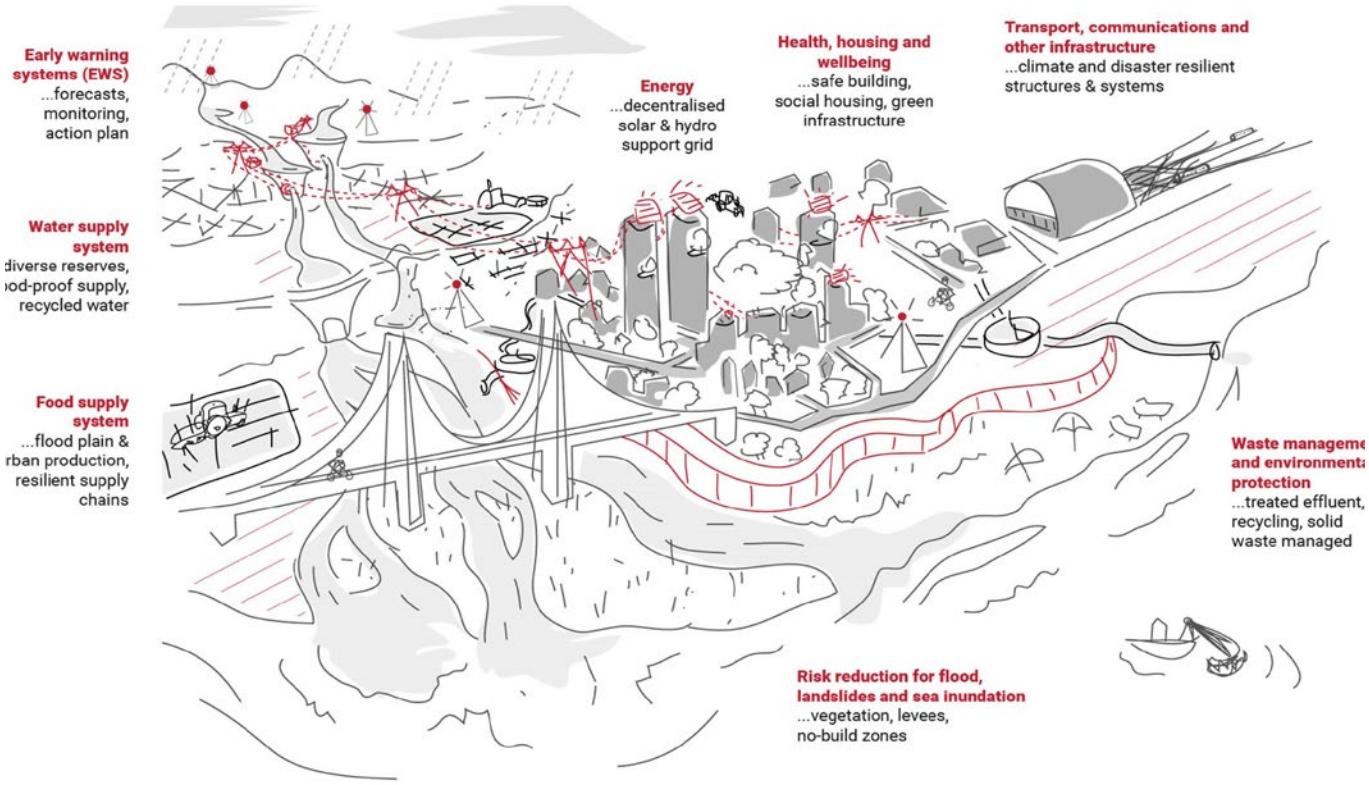

Figure 6: Critical infrastructure in urban settings (Source: United Nations Office for Disaster Risk Reduction, 2019, p. 426-427)

In a world of increasing interconnectivity – whether between sectors, countries or individuals – risks can no longer be managed in isolation. Instead, they must be treated as an inevitable component of complex and interconnected systems. Today's risks are increasingly systemic and cascading across social, economic and environmental systems. The COVID-19 pandemic exemplified how a single health hazard can turn into a crisis affecting various sectors and burdening entire societies worldwide. Therefore, we need to identify and implement integrated solutions that take a multi-risk perspective. It doing so, we must consider all hazards and understand their interlinkages and cascading effects - particularly at the urban level.

Risk-informed decision-making and Disaster Risk Management (DRM) can provide solutions to prevent, reduce and prepare for disaster risks as well as for responding once an extreme event or disaster occurs. It involves risk analyses, emergency planning, measures for disaster preparedness, risk transfer solutions, and resilient (re-)construction and recovery activities. By mitigating the vulnerability and exposure of people, assets and infrastructure - as well as strengthening coping and adaptive capacities of people, communities and administrative structures - resilient urban systems can be designed. To meet the specific urban needs required to prevent and mitigate disaster risks, the NDC report identifies that it is necessary to improve capacity-building, financial resources and technology know-how. As the identification of urban risks is complex and can be a resource-intensive undertaking, measures must be integrated and cross-sectoral in order to address systemic risks in the best possible way.

Strengthening and building capacity is relevant at the administrative and technical level and for civil society. Within local administrations - and for actors of multiple sectors - the understanding, implementation and evaluation of risk-informed policy planning is essential to making cities more resilient. Practical action includes creating and regularly updating risk mappings and strategies

(for example, heat action plans or flood risk maps to classify safe settlements and commercial areas), establishing preparedness plans and multi-hazard early warning systems that are routinely tested, raising risk awareness in the community, and integrating DRM measures into local plans for climate change adaptation and water management. It also involves the integration of DRM measures into local development strategies. To foster resilient urban investments, civil servants must be enabled to identify and address potential risks in the planning and evaluation of public investment projects. An understanding of systemic risks can contribute to an improvement in the conceptualization of building codes, green areas, power grids and dams. The data basis for such planning has been significantly improved in recent years – this is a result of remote sensing or the use of AI methods to identify natural hazards. Nevertheless, shortcomings regarding the availability of disaggregated socio-economic data continue to impede the identification of vulnerable population groups and their possible exposure. Civil servants need to base their decisions on combined analyses of both data types to enable more nuanced mappings of risk areas, spatial and land-use plans or early warning systems.

Moving from planning to implementation requires access to finance. If cities have financial mechanisms to deal with disasters, these are often emergency funds earmarked for response and recovery. To strengthen financial capacity for resilience, these funds should be redesigned to include preventive and ex-ante solutions. They should also be complemented in the long term by new individual funding geared towards risk assessment and prevention - allowing for activities that, for example, safeguard critical infrastructure. To improve leverage of existing **financial resources** and to tap into new funding to manage urban risks, cities can integrate risk aspects into existing investment strategies and sectoral budget lines – such as those focused on climate change adaptation and mitigation. Dedicated risk-informed public investment strategies and funding options should be based on their specific urban risk profile and possible economic disaster impacts.

Additionally, adequate **technological know-how** is needed. Risk-informed building codes and methods are required during construction as well as in the context of resilient rehabilitation of infrastructure. This includes using disaster-resilient materials to withstand extreme heat, storms, earthquakes and prolonged rain. This is particularly important as critical infrastructure must ensure the functioning of society in a crisis event. This includes infrastructure such as hospitals, power plants, transport systems and administrations. In addition, including Nature-Based Solutions - such as facade greening, reforestation of city parks, dune stabilization in coastal areas, and the creation of urban lakes and water systems as rainwater retention basins - reduces the risk of flooding or heat waves in cities. Both approaches contribute to climate adaptation, but they also contribute to emissions reduction and energy efficiency – such as when (re)construction uses recycled materials or cities create green spaces that capture CO_2.

Including civil society in all these processes is of utmost importance. It builds trust, ensures engagement, raises awareness and ensures that people are connected to service networks and early warning systems. Resilience for all of society relies on equal access to information, resources, participation and affordable, easy-to-implement solutions. Understanding the impact of norms, roles and socio-cultural and economic factors within a given culture or society (and their intersections) is critical to disaster risk reduction.

Risk reduction must also be substantially scaled up by private entities. This is because the private sector relies heavily on the functioning of urban systems and has a strong interest in protecting

assets and investments from losses - including from disasters. Therefore, increased public-private partnerships and economic development programs by local governments are necessary to create incentives for the private-sector to engage in resilience strengthening and affordable insurance solutions.

A number of initiatives provide examples of relevant tools and programs for financing resilient urban planning, developing technology know-how, and enhancing capacities. These include:

- Making Cities Resilient (MCR2030) *(United Nations Office for Disaster Risk Reduction, 2024)*
- C40 Cities and its Finance Facility *(C40 Cities Finance Facility, 2024)*
- UN HABITAT's City Resilience Action Planning Tool *(UN Habitat, 2020)*
- Connective Cities *(Connective Cities, 2024)*
- ICLEI and its programs on urban resilience and climate *(ICLEI - Local Governments for Sustainability, 2024)*
- Resilient Cities Network (R-Cities) *(Resilient Cities Network, 2024)*
- The Global Initiative on Disaster Risk Management (GIDRM) *(The Global Initiative on Disaster Risk Management, 2024)*
- The Resilience Initiative Africa (RIA) *(Deutsche Gesellschaft für Internationale Zusammenarbeit, 2023)*
- The World Council on City Data *(Data For Cities, 2024)*
- The International Federation of Red Cross and Red Crescent Societies' (IFRC) Urban Action Kit *(International Federation of Red Cross, 2021)*

Key messages:

- By 2050, more than two-thirds of the world's population will live in urban areas and large parts of these urban areas are yet to be built. Today's investments in urban infrastructure must therefore be designed following a risk-informed development approach. This will safeguard future urban populations, their assets and livelihoods. It will also make them resilient to extreme events.

- A common understanding of risks and their cascading effects needs to be coherent, cross-sectoral and embedded in urban strategies and financing plans.

- Early warning systems that can alert the population within 24 hours can reduce subsequent damage by 30 percent. Therefore, cities must move from reaction to prevention and increase investment in preparedness, risk reduction and resilience building.

Recommendations:

1. *Understand systemic risks*: Actors and stakeholders working on urban planning need to develop processes for multi-risk identification. There must be a systemic approach to understanding, addressing and communicating risks and their cascading effects – such as risk mapping, modeling economic loss and damage, and actionable messages describing how to safely prepare for, and respond to, local hazards.
2. *Ensure effective risk governance:* Cities need to have in place, and implement, strong evidence-based strategies and plans to address hazards and manage risks. These must follow a multi-risk approach. In addition, they need to invest in risk-informed decision-making processes that improve the coherent integration of risk management across sectors and levels. This must

apply to all key national and urban policies – including National Determined Contributions, National Adaptation Plans and Long-term Low Emissions Development Strategies. It should also apply to local strategies on economic development, climate change, waste management, infrastructure and financing.

3. *Finance preventive action:* Administrations need to establish dedicated financial resources focused on prevention. They must also invest in capacity-building measures to make the urban population more resilient.
4. *Bring relevant actors together:* Different relevant actors must be brought together and included in planning processes. This is because they each have different needs, vulnerabilities and expectations. They also have unique capacities and strengths. Resilience for all can only be achieved through a whole-of-society approach. Relevant actors that should be brought together include government officials, critical infrastructure operators, urban planners, business advocates, and civil society representatives – such as residents of informal settlements, women and youth groups (The German Federal Ministry for Economic Cooperation and Development, 2022),
5. *Use Nature-Based Solutions:* It is important to increase investment in - and development of - cross-cutting and risk-informed solutions related to Nature-Based Solutions and ecosystem services. These solutions should contribute both to climate change adaptation and response – such as reforestation of city parks, coastal stabilization, and rainwater retention basins.
6. *Think outside the box:* Consideration should be given to potential context-specific risk drivers (other than climate change) that might affect the risk profile of a city. This could include unplanned migration, conflict, epidemics or a lack of financial resources for social protection in certain areas.

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Beyond Mitigation and Adaptation: *Localizing Loss and Damage in the Urban Context*

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Abstract

The concept of loss and damage (L&D) has become an important focus area in international discussions and negotiations about climate change. This is as developing countries are increasingly facing the impacts of climate change and climate variability. More specifically, urban metropolitan areas and urban populations around the world are struggling with the effects of climate change and are experiencing local climate-induced losses and damages. However, a recent review by UN-Habitat of the urban content of the Nationally Determined Contributions (NDCs) revealed a significant gap between national and urban cross-cutting issues - such as loss and damage, participation, gender and multilevel governance.

Out of 100 NDCs that mentioned L&D at the national level, only four NDCs referred to L&D at the city level. This suggests it is important to improve the vertical integration of multi-level governance, strengthen national climate policy implementation, and promote local climate action - particularly with regard to climate adaptation and L&D. In addition, to address L&D in cities, urban planners and policymakers need to prioritize actions to reduce vulnerability to climate impacts. These actions include investing in climate-resilient green and hybrid infrastructure, increasing community participation, building capacity for disaster response, and developing early warning systems. Strengthening the legal and institutional framework is also important

to protect vulnerable communities and ecosystems. Improved access to finance is critical for implementing adaptation and resilience measures - especially for cities with limited financial resources. Reconstruction and recovery efforts must also consider the preservation of cultural heritage and address the displacement and migration associated with climate impacts. Regional and national collaboration is also important to promote best practices, technologies, and improve collaboration on climate finance and technology transfer.

The concept of loss and damage (L&D) has arisen as a crucial focus area within the international climate change dialogue. This is because it acknowledges the necessity of addressing the residual consequences of climate change that cannot be averted solely by mitigation and adaptation efforts. By integrating L&D within urban planning and policymaking, it is possible to establish resilience and curtail the impacts of climate-related perils. It also ensures the viability and livability of urban territories for subsequent generations. Following the review of selected countries' NDCs, this policy brief (1) articulates an overview of the L&D paradigm in urban settings; (2) highlights essential principles and good practices for incorporating L&D within urban planning; and (3) provides policy recommendations on how to address L&D in an urban setting.

A report that reviews urban content in NDCs was conducted by UN-Habitat in 2023. It identified a major gap between national and urban cross-cutting issues. L&D - as one of the cross-cutting issues - was only explicitly mentioned at the urban level by four NDCs (the Bahamas, Guinea Bissau, Myanmar and Syria). Comparatively, 100 NDCs mentioned L&D at the national level. This suggests it is necessary to enhance the vertical integration of multi-level governance, strengthen the implementation of climate policies, and empower local climate action - particularly regarding climate adaptation and L&D.

Box 1: Understanding loss and damage in the urban context
Loss and damage (L&D) in urban areas can take several forms - including physical damage to buildings and infrastructure due to extreme weather events (such as floods, hurricanes and heat waves). Economic losses to businesses and urban households are another type of L&D resulting from climate-related disruptions. These may include supply chain disruptions or increased insurance premiums. In addition, loss of life and injuries, social and cultural impacts, and environmental impacts (such as loss of biodiversity and ecosystem services) can also be considered a form of L&D. The causes of L&D in urban areas are multifaceted - with climate change and related extreme weather events being the factors that contribute the most. Unsustainable urban development practices (such as poor land use planning and inadequate infrastructure), socioeconomic factors (such as poverty and inequality), and climate policy failures (such as inadequate policies and a lack of financial support) can also make urban areas susceptible to L&D.

Although only four NDCs explicitly mentioned urban-related L&D, a number of other NDCs were reviewed for L&D content as part of this policy brief. The UN-Habitat report recognized that 47 NDCs had significant urban content and designated them as Cluster A. From this group, 32 NDCs were selected for in-depth review as part of this policy brief. To ensure that all types of L&D were covered - including those caused by slow-onset events or extreme weather events - we included a wide range of keywords in the review. These keywords included "loss," "damage," "climate change," "risk," "disaster," "emergency warning system," "climate resilience," "slow-onset events," and "extreme weather events." This was to ensure that NDCs with limited L&D content

were not overlooked. However, only NDCs in Cluster A were considered in the review because they were assumed to have a higher proportion of L&D content than NDCs in Clusters B and C. Nevertheless, it is plausible that NDCs in Clusters B and C also contain insightful L&D content. It is also important to note that the policy brief only examined the English versions of the NDCs in Cluster A.

In our analysis, we found that a portion of the NDCs prioritized L&D by explicitly including a separate section with measures to effectively address L&D. However, the majority of NDCs addressed L&D indirectly – with references to L&D found in various sections of the document and no distinct section to focus on the topic. When L&D was found to be addressed in a separate section, the NDCs provided - among other things - assessments of historical and forthcoming L&D events. They also proposed a structured institutional framework for the successful implementation of measures. For instance, the NDC of Vanuatu refers to L&D in a standalone section (as is the case for mitigation and adaptation). It also considers L&D to be a priority area - outlining 12 policy commitments. These are accompanied by a budget that estimates the financial resources required to fulfil the identified L&D commitments (Vanuatu, 2022). Although a number of NDCs merely touch upon the concept of L&D, they still detail the losses and damages sustained from climate change - especially due to extreme weather events. For instance, while the Ethiopian NDC does not delve into the detail of L&D found in Vanuatu's NDC, it still formulates policies using a vulnerability analysis of climate change impacts. This involves articulating vulnerability in different sectors - such as disaster risk reduction, urban settlements and transportation. It is important to note that 27 NDCs with content on L&D have designed policies using a vulnerability analysis (Federal Democratic Republic of Ethiopia, 2021).

To narrow the context in which L&D is discussed in NDCs, we identified when words related to L&D were frequently mentioned. This analysis can be found in Table 1. In addressing L&D, finance is often highlighted as a critical issue in the NDCs. This is because many policies to deal with L&D require financial support - particularly from international sources. For example, Vanuatu's NDC estimates that it needs around USD 180 million to fully implement its L&D policies. It also identifies that almost 90 % of the funding for L&D will be dependent on international support. Building resilience is another key focus of many NDCs when addressing L&D. Disaster management and risk reduction measures are often emphasized - particularly for vulnerable urban areas. Vietnam, for instance, has developed a climate change monitoring system; established an early warning system for natural disasters; implemented flood prevention planning; and protected flood drainage spaces in major river basins (Socialist Republic of Vietnam, 2022).

Decentralization is also seen as an important factor in addressing L&D - with many NDCs calling for climate-resilient local governance and localized management. For instance, Vanuatu's NDC highlights the need for an institutional structure to implement its enhanced NDC and achieve its L&D objectives. Housing and rapid urbanization are also identified as problems in the context of L&D. Nature-Based Solutions (NBS) are suggested as cost-effective and efficient means to address these issues. Some NDCs also recognize non-economic losses - including the negative impacts of climate change on health; the loss of land due to erosion; the loss of cultural heritage and local knowledge; and the loss of biodiversity and ecosystem services. Cross-cutting issues - such as gender, human rights and indigenous peoples' rights - are also often mentioned in conjunction with loss and damage.

Recommendations

There are potential challenges in addressing L&D in urban areas, such as the complexity of urban systems, the diversity of urban contexts and needs, and the uncertainty of the projected climate change impacts. Nevertheless, there are also opportunities for action and innovation, such as the use of technology and data analytics and the adoption of nature-based solutions. In summary, to address L&D in the urban context, the following recommendations are suggested:

1. *Mainstream climate change and incorporate a risk-based approach in urban planning*. This includes conducting comprehensive risk assessments to identify vulnerabilities and developing adaptation strategies tailored to the specific context of each urban area. By prioritizing climate resilience and incorporating risk-based approaches, urban planning can proactively address the challenges of climate change and create more sustainable and resilient cities for the future.
2. *Improve access to climate finance and provide financial mechanisms at the local level* by collaborating with development and financial institutions. Dedicated funds and mechanisms that prioritize climate-resilient infrastructure financing and promote innovative financial products (such as climate insurance and risk transfer programs) should be explored. An enabling environment should also be created to ensure their availability. In addition, policymakers should invest in capacity-building programs to help local officials access and effectively use climate finance. This will also ensure transparency and the efficient use of funds allocated for helping households and businesses cope with L&D.
3. *Strengthen legal and local institutional frameworks* to address potential challenges. Challenges may include fragmented governance and coordination as well as the uneven distribution of benefits and risks associated with resilience efforts. Urban policymakers should address challenges by enacting and enforcing laws that incorporate climate resilience into urban planning and development processes. Local governments should also be empowered to take proactive action. In addition, policymakers ought to promote stakeholder engagement and participation in decision-making processes. This should include supporting collaboration between government agencies, civil society organizations, and communities to jointly address loss and damage - and to strengthen resilience in urban areas.
4. *Support multilevel governance and strengthen coordination* among different levels of urban actors. This should be undertaken by establishing clear mandates and responsibilities for different levels of government; promoting collaborative platforms and networks that facilitate information sharing and joint decision making; and providing financial and technical support to strengthen the capacity of local governments. Policymakers should promote the vertical integration of climate policy and urban planning by aligning national strategies with local priorities. This can ensure effective communication and collaboration among different levels of urban stakeholders.
5. Adopt and prioritize Nature-Based Solutions in urban planning that are tailored to the specific needs and context of urban areas - such as green roofs or permeable pavements. This will increase resilience to climate-related risks. Measures should be implemented to protect and enhance natural ecosystems. These provide important services and functions - such as flood control; water purification; microclimate regulation; and heat island effect reduction.

Table 1

Financial needs	Finance
Identifying economic loss	
International support	
Rising cost of addressing loss and damage	
Substantial financing	
Disaster preparedness	Resilience
Disaster risk reduction	
Disaster risk reduction management	
Understanding disaster risk	
Better management	Governance
Climate-resilient local governance	
Strategic plan reform	
Housing	Urban
NBS in urban planning	
Urbanization	
Adaptation and loss & damage	L&D
Historical information on losses	
Loss and damage to human life	
Loss and damage to national economy	
Loss of biodiversity	

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Relating the urban content of NDCs to the Sustainable Development Goals, New Urban Agenda and Voluntary Local Reviews

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Abstract

The 17 Sustainable Development Goals (SDGs) form the monitoring and evaluation framework of the 2030 Agenda - which constitutes one of the components of the global sustainable development agenda adopted by UN member states in 2015-16. Along with the New Urban Agenda (NUA), SDG 11 and urban-related components of other SDGs provide a specifically urban dimension to the global agenda. Voluntary Local Reviews (VLRs) - followed recently by Voluntary Subnational Reviews (VSRs) – have been used to assess the progress of SDG implementation. Since 2018, they have been produced by a growing number of cities and regions worldwide. Together, they raise the profile of urban efforts to promote sustainable development and tackle climate change. To provide a more complete picture of progress, this policy brief combines evidence of the urban content in NDCs from the SDU Resilience and UN-Habitat study with evidence of SDG and NUA implementation. The evidence available of SDG and NUA implementation was obtained from VLRs; national reports to the UN High-Level Political Forum; reports by the UN Sustainable Development Solutions Network (SDSN); academic literature; and other relevant sources. Several caveats must be kept in mind - particularly that the evidence available remains very patchy and skewed towards official reports and individual case studies by academics and NGOs.

A key characteristic of the current global sustainable development (SD) agenda is that it rests on the principle of voluntarism, subject to international review but without any global compliance or enforcement mechanism. While designed to encourage UN member states (the Parties) to participate in a collaborative spirit, this provides no levers or penalties and makes tackling climate change and achieving sustainable development at all scales through concerted international action very challenging. Whatever the initial motives and intentions of governments, there are many possible reasons why subsequent commitments and then investments and actions to fulfil them may lag or not be forthcoming. This underlines the importance of the demonstration effect of positive examples, peer review, persuasion and perhaps informal pressure or incentives.
The global SD agenda comprises of five complementary components which were agreed and adopted in 2015-16. In chronological order these are: the Sendai Framework for Disaster Risk Reduction; the Addis Ababa Action Agenda on Financing for Development; the 2030 Agenda for Sustainable Development (which includes the SDGs); the Paris Agreement of the UN Framework Convention on Climate Change; and the New Urban Agenda. Nevertheless, they lack any direct intercalation or formal linkage mechanisms.

This combination of voluntarism and a lack of direct linkage creates a significant challenge to successfully meeting emissions reduction targets, reducing and anticipating disasters, and achieving sustainable development and resilience at all levels. Indeed, few countries have succeeded to date in integrating some, or all, of these commitments. Using the report on the urban content of NDCs (UN-Habitat, 2023) as a starting point, this policy brief highlights a lack of interconnection. It also articulates practical recommendations on how to combine various urban components of the SD agenda and make efforts to achieve urban sustainability more effective.

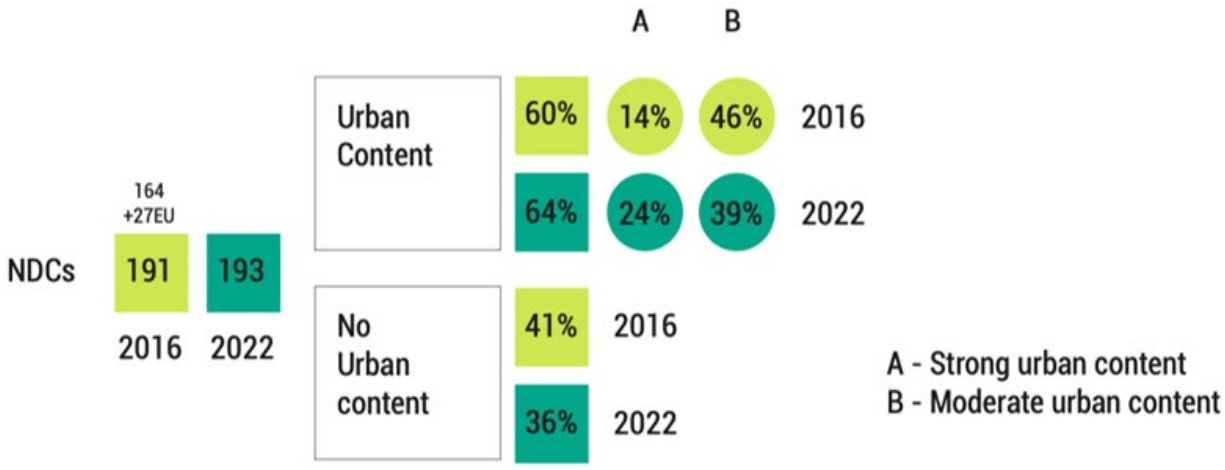

Figure 7: NDCs urban content analysis: comparing 2016 and 2022 results

The urban content of NDCs

One positive highlight from the analysis undertaken by UN-Habitat in 2023 is the modest increase in the total number of national NDCs with urban content compared to the 2016 analysis. In addition, there is a significant shift from moderate to strong urban content (Figure 7). In 2022, 47 countries had strong urban content and a further 76 had moderate urban content. Nevertheless, over a third (70) of the 193 reporting countries still lacked urban content in 2022. Identifying the reasons for this and urging those countries to include urban emissions reduction

within their next NDC are obvious priorities that need to be addressed.

Expanding the analysis of urban content found in NDCs to other key national urban policies - such as National Adaptation Plans (NAPs) and Long-Term Low Emissions Development Strategies (LT-LEDS) - is recommended in the report. This is because it emphasizes the value of identifying and integrating urban content across all relevant national policies. It is intended to strengthen the attention to – and level of ambition in – urban climate actions. Here, attention focuses on specific urban components within the SD agenda to suggest ways in which these could be integrated by local governments. In turn, this could result in more complete and accurate inputs to national policies and future NDCs.

Why is this important? Simply put, around 70% of global emissions originate in urban areas and this continues to increase. Urban areas are also where the majority of most countries' populations live and experience the impacts of climate change. Urban governments are, therefore, pivotal actors in implementing climate mitigation and adaptation actions aimed at promoting more sustainable and resilient development. The SD agenda addresses these challenges by highlighting the importance of collaborative efforts and multi-level governance. It recognizes that no one stakeholder can achieve this alone.

The essential differences in the profiles of so-called cross-cutting issues (i.e., the reported mitigation and/or adaptation efforts in the NDCs that have both national and urban components) are clearly evident. Two representative examples illustrate this well. Firstly, Figure 8 compares the number of NDCs that mention adaptation challenges and responses in respect to national and urban emissions. It is noteworthy that - in relation to urban areas - responses are more numerous than challenges across all categories. This implicitly suggests that urban areas are more proactive in making adaptation interventions than national governments – thereby reinforcing the point that including urban components in NDCs is essential.

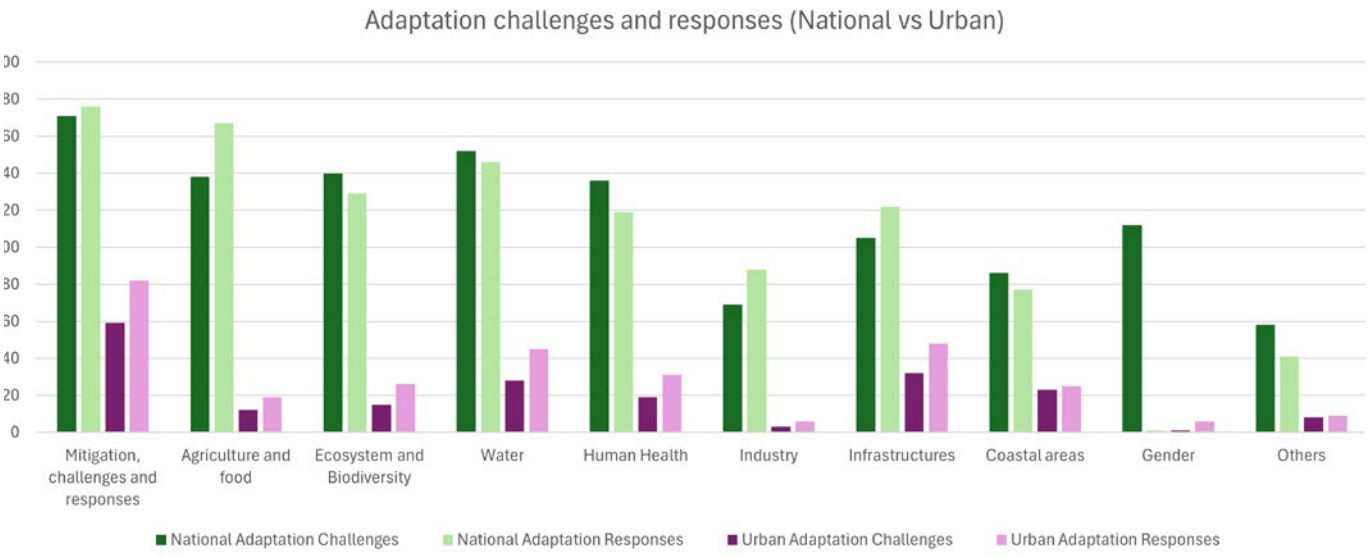

Figure 8: NDCs urban content: Adaptation challenges and responses (national vs urban). Source: Urban Climate Action - The Urban Content of the NDCs: Global Review 2022. UN-Habitat (2023)

The second illustrative example is the sharp disparities between the number of mentions of national and urban cross-cutting issues in the NDCs (Figure 9). This holds true across the entire

range of issues and is underlined by the most and least frequently mentioned issues at both levels. Participation, gender, loss and damage, and innovation appear most frequently at the national level - whereas informal settlements and public spaces appear least often. At the urban level, the most frequently mentioned cross-cutting issues are Nature-Based Solutions, ecosystem services, informal settlements, and youth. Data availability, multi-level governance, innovation, indigenous representation, social inclusion and the circular economy appear least often at the urban level.

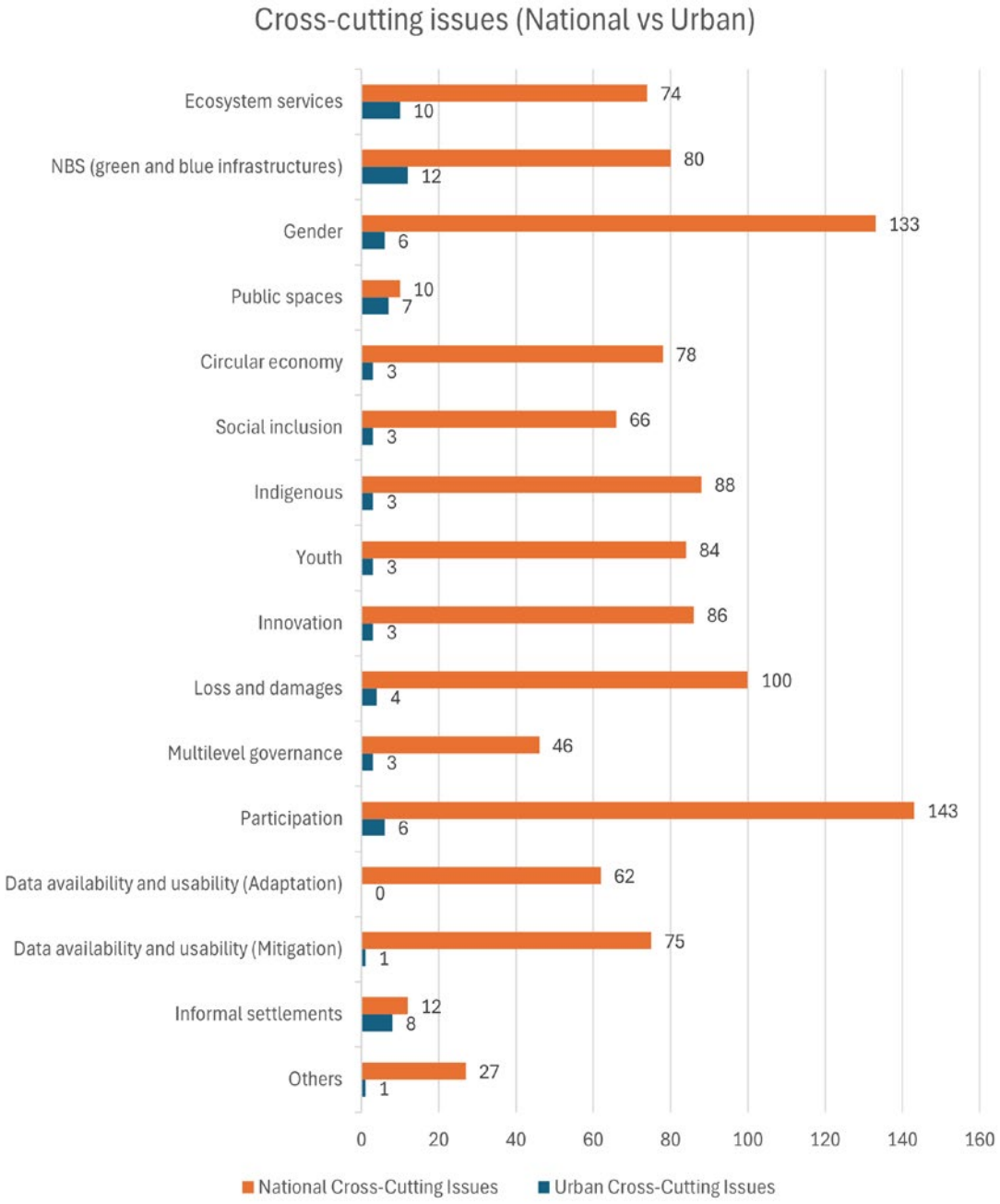

Figure 9: NDCs Urban Content: Cross-cutting indicators (national vs urban). Source: Urban Climate Action - The Urban Content of the NDCs: Global Review 2022. UN-Habitat (2023)

While further analysis of the reasons for these differences is required, this might reflect different priorities, levels of responsibility, and degrees of collaboration between national and urban governments in producing the NDCs. One potential explanation is that the issues mentioned frequently by national governments as being cross-cutting, are those where national governments recognize that they cannot implement them alone. Conversely, those mentioned most frequently by urban governments as being cross-cutting, might be where they lack full powers and/or adequate resources to tackle them alone.

Circumstantially, it appears that there is wide diversity in the degree of consultation across levels of government and, in some cases, the urban content may simply have been estimated by the national government. This reveals another key source of weakness and this is addressed in the recommendations section below.

Urban evidence to strengthen NDCs

The UN-Habitat (2023) report does not mention any urban evidence or include indicators from other elements of the global SD agenda. Adding such linkages could greatly strengthen the interconnectedness of strategy and policy responses. In many respects, this reflects the compartmentalization of each element of the SD agenda and unveils the way in which these are institutionalized and implemented. This is despite the fact that each Framework, Agenda or Agreement exhorts Parties and sub-national entities to work collaboratively across departments and governance levels.

According to a 2021 report by United Cities and Local Governments (UCLG), the proportion of UCLG members being consulted by their national governments over compilation of the VNRs on SDG implementation has actually declined. This is despite substantial efforts by local governments to increase their actions and reporting.

Accordingly, this final section of the Policy Brief suggests how urban content and the process of localizing Agenda 2030 (not least through VLRs now being produced by a rapidly growing number of cities) can systematically be fed into NDCs.

VLRs originated with New York City's decision to undertake a local equivalent of a VNR when former President Trump announced the USA's withdrawal from the Paris Agreement. There was no precedent and no formal mechanism or review process for VLRs. However, VLRs have now been established via submissions by cities to the UN Department of Economic and Social Affairs (UNDESA). How VLRs are actually produced varies substantially since there is still no template or standardized methodology. Roughly 40% of reporting cities consulted with their national governments but most did not. This means that the levels of critical self-assessment or public engagement undertaken - versus highly selective and descriptive self-promotion - also vary. Nevertheless, these represent fairly comprehensive and systematic assessments of local government progress in implementing the SDGs. The information from VLRs could also readily be fed upwards to national governments to enhance their VNRs.

Like Agenda 2030 and the SDGs, the very aspirational New Urban Agenda (NUA) advocates for integrated action on climate change, sustainability and resilience. This includes addressing mitigation and adaptation together when practicable. This is in order to maximize both resource efficiency and co-benefits. The NUA lacks a specific monitoring and evaluation framework, and the SDGs are increasingly playing this role through UN-Habitat's reporting dashboards and other mechanisms. At the urban level, SDG 13 (on climate action) collects data on mitigation,

adaptation and other measures that should feed directly into both VLRs and VNRs - as well as potentially into elements of NDCs.

These are merely examples of how better integration across components of the global SD agenda - and among levels of government - could greatly enhance progress towards achieving the respective goals. They also exemplify how the robustness of monitoring and reporting functions could be improved. The analysis above forms the basis of the following recommendations.

Recommendations:

1. Identifying the reasons why many national governments still do not include urban emissions reduction in their NDCs - and urging them to do so - is an urgent priority for the UNFCCC secretariat and UN-Habitat;
2. National governments should collaborate actively with sub-national governments – and particularly those in urban areas - to produce the most accurate NDCs possible;
3. VLRs represent fairly comprehensive and systematic assessments of local government progress in implementing the SDGs. Therefore, the information from VLRs could readily be fed up to national governments to enhance their VNRs - and potentially into elements of NDCs.
4. At the urban level, SDG 13 (on climate action) collects data on mitigation, adaptation and other measures that should feed directly into both VLRs and VNRs.

Acknowledgements:

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