

Environmental Management Group
Discussion Paper
Urbanization and the Environment: Towards a Possible Issue Management Group

Introduction

Subsequent to the 30th Senior Officials Meeting (SOM) of the Environment Management Group (EMG), in which the Executive Director of UN-Habitat proposed a new Issue Management Group (IMG) on urbanization and the environment to the EMG Chair, this discussion paper is presented to members of the EMG for a consultation to be held 17 July.

Cities are engines of economic growth. Although they are not always stewards of the natural environment, their role as drivers of land use change, behavioural patterns, and material throughput gives them tremendous leverage to mitigate the human relationship with the environment. This includes approaches that are more efficient and less risky than the prevailing developmental paradigm, whether because of avoided loss of biodiversity, mitigated per-capita greenhouse gas emissions, increased adaptation to the effects of climate change, or decreased pollution. When they are well-planned and managed, cities can facilitate the optimization of growth, sustainability, and wellbeing.

Similar in scope to the UN Common Approach to Biodiversity and UN Common Approach to Pollution, the System-Wide Strategy on Sustainable Urban Development was adopted by the Chief Executive Board in 2019. It cites cities, land use, resource scarcity, and decarbonization as major frontier issues to be addressed in an interagency manner. However, it remains a framework lacking in an interagency mechanism for coordinated implementation. An IMG on urbanization and the environment could help fill that gap.

Furthermore, as a legacy of UN-Habitat's upgrade from a centre to a fully-fledged programme, the mandate and terms of reference of the EMG still include the topic of human settlements. As noted at the Stockholm+50 conference the built and natural environment agendas are increasingly being pursued in isolation, despite evidence that a coordinated approach to the two would deepen global impact in both.

This discussion paper aims to focus initial discussions on a possible IMG and prepare the groundwork for eventual workstreams that would constitute it. In that light, it proposes four possible workstreams with high-impact potential for reversing the triple planetary crisis:

- Land use change and urban expansion: a macro, peri-urban scale focused predominantly on biodiversity
- Housing and neighbourhood configuration: a meso, neighborhood scale focused predominantly on climate change mitigation
- Informal settlement transformation: a meso, neighbourhood scale focused predominantly on climate change adaptation
- Construction and material flows: a micro, building scale focused predominantly on pollution

1. Land Use Change and Urban Expansion

SCALE: Near

SITE: Periurban edge

CRISIS: Biodiversity loss (primarily)



Land use change is the most significant driver of biodiversity loss. Conversion for urban use has the most profound impact as it is often prohibitively difficult and expensive to retrofit. By some measures urban uses are even outpacing agricultural ones as drivers of land use change. The degradation of natural landscapes often results in the loss of biodiversity, especially at the edges of cities. From 2000 to 2020 urban population densities decreased by 2.5 per cent, increasing urban sprawl and species at risk of extinction. However, proactive attention to protecting at-risk peri-urban habitat can ensure refuges for native flora and fauna as well as corridors for wildlife movement. Mainstreaming ecosystem services into urban planning and management can also help the UN system address the territorial dimensions of key issues such as water scarcity.

Land sparing intentionally preserves natural habitats (often large green patches) while consolidating other land uses in other already-converted areas (e.g. increasingly densifying urban cores). Intensifying human activities (such as agriculture and urban development) in certain areas can maximize efficiency while leaving other areas largely untouched to maintain ecological connectivity and provide essential ecosystem services. Minimizing landscape fragmentation and edge effects also sustains specialist species, which are often more vulnerable to disturbance. Concentrating conservation efforts in specific areas makes it easier to implement and monitor conservation strategies, enforce regulations, and control threats such as poaching or invasive species.

However, the denser a built landscape, the higher the pressure on remnant green space. Its disappearance is detrimental to humans (who need fresh air, climate buffering, and recreation) and non-humans (who need steppingstones between larger green patches). This requires the complementary approach of land sharing. It constitutes integrating human activities with biodiversity conservation across a shared landscape mosaic. Across a metropolitan area this could constitute community gardens, green roofs, urban forests, and wildlife corridors, interspersed with residential and commercial developments. The goal is increased access to green space (and its benefits) where natural biodiversity has already been degraded or lost.

Indicative Examples, Measures, and Initiatives

[New Urban Agenda](#) ¶137, 51-4, 69, 88, 97-9, 100, 109, 113-5, 117, 137, 152

[AFINUA](#) 1.2, 2.1, 2.2, 2.3, 2.6, 3.2, 3.3, 3.5, 3.8, 5.1, 5.2, 5.3

[Cities with Nature](#)

[Hotspot Stoplight](#)

Guiding Questions

1. Is this workstream relevant for collective unpacking?
2. Which related challenges should the EMG explore and how would a dedicated IMG help?
3. How could the UN System accelerate impact? (See also the [UN System-Wide Strategy on Sustainable Urban Development](#), which outlines technical support, subnational engagement, urban data, interagency platforms, and local financing.)

2. Housing and Neighbourhood Configuration

SCALE: Local

SITE: Neighbourhood

CRISIS: Climate change mitigation (primarily)



Housing can provide adequate shelter, space, water and sanitation, and secure tenure, but without a consideration of its context (i.e. where it is located in relation to everything else, most importantly employment and services) it can still be unsustainable socially, economically, and environmentally. Of the seven dimensions that constitute adequate housing, at least three (accessibility, location, and cultural adequacy) are at issue while a fourth (affordability) is implicated indirectly. Homes located far from jobs and essential facilities face long and expensive commutes, which figure overwhelmingly negatively in global surveys on quality of life. Unless there is adequate public transit, long distances also force travel by private car whose elevated per capita emissions of greenhouse gases are, in aggregate, a major contributor to global warming. This severely complicates efforts at mitigating climate change.

Whether a cause or consequence of dispersed housing, the socioeconomic segregation usually correlated with it jeopardizes initiatives towards integration and inclusion. The provision of services is expensive to impossible in poorly planned settlements of suboptimal density (whether too little or too much). Isolation also has increasingly detrimental effects on human health from non-communicable diseases to loneliness to susceptibility to mis- and dis-information. To counter this, land must be valued socially and ecologically as a public good. Proximity to and socioeconomic accessibility of public facilities and basic services must be provided via networks of green, accessible, and safe public spaces (including mobility systems).

Sounds urban planning and management can ensure adequate densities, green space retention and expansion, and the factoring of nature-based solutions into the bottom line. The well-located, well-connected, mixed-use, socially-mixed neighbourhoods that result can indeed foster equitable access to services and opportunities for all. Even where there is no or limited access to public transportation, configuration determines whether a neighbourhood is walkable. And its design details—inter alia, the provision of nonmotorized transit networks (e.g. footpaths/sidewalks), street trees, and key facilities—determine in large part whether it is safely and comfortably walkable, with further knock-on effects for climate change mitigation and adaptation.

Indicative Examples, Measures, and Initiatives

[New Urban Agenda](#) ¶32, 63, 67, 71-2, 80, 95, 104-7, 111-2, 119, 123-4

[AFINUA](#) 1.1, 1.5, 2.4, 2.5, 2.7, 3.1, 3.4, 3.6, 3.7, 4.6

[My Neighbourhood](#)

[Integrated Guidelines for Sustainable Neighbourhood Design](#)

[Spatial Development Framework](#)

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3. Informal Settlement Transformation

SCALE: Local

SITE: Neighbourhood

CRISIS: Climate change adaptation (primarily)



The recent public health and financial crises have caused the worst housing affordability crisis in more than a decade. Nowhere has affordability deteriorated more than in less developed regulatory and financial frameworks and markets. This phenomenon increases inequality in many societies with 1.1 billion people now living in informal settlements and slums and more than 300 million people experiencing homelessness. The land on which informal settlements are located is usually close to jobs, hidden from view, and otherwise unoccupied. This often translates to steep slopes, riverine valleys, and floodplains. Whereas the per capita environmental footprint of such communities is usually very low because they occupy a relatively small land area and their inhabitants consume relatively little, the environmental risk faced by these already vulnerable inhabitants is very high.

Cities already bear the brunt of climate exposure as they house more than 90 per cent of people settled in low-elevation coastal zones. People living in informal settlements experience the direst impacts—and usually have the least capacity to recover from—the adverse effects of climate change and other natural and human-induced hazards, such as sea level rise, vector-borne diseases, drought, and earthquakes. Flooding, landslides, and heatwaves also threaten them disproportionately. Lacking sanitation infrastructure as they often do, such settlements often have little choice but to release liquid and solid waste into nearby waterbodies, creating concentrated, localized, and unhealthy conditions of pollution.

Of the seven dimensions of adequate housing four (tenure security, basic services, affordability, and habitability) are of particular relevance to this workstream. Implementing the right to adequate housing in local, national and global frameworks is key to ensuring dignity and empowerment for all and as a pillar of social protection. It can also strengthen resilience to climate-related and other hazards through risk-sensitive urban and land-use planning, building codes applied to housing, and resilient infrastructure for those in vulnerable situations.

Indicative Examples, Measures & Initiatives

[New Urban Agenda](#) ¶155, 58, 86, 90-1, 96, 132-3, 135, 138-9, 151-2, 159

[AFINUA](#) 1.3, 1.4, 1.6, 2.8, 2.9, 4.1, 4.2, 4.3, 4.4, 4.5, 5.4, 5.6

[Participatory Slum Upgrading Programme](#)

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4. Construction and Material Flows

Scale: Local to Far

Site: Building and infrastructural networks

Crisis: Pollution (primarily)



The construction industry is a major greenhouse gas emitter and along with its resulting buildings operating over their full life cycle, responsible for some 40% of carbon emissions globally. Increasingly recognized is the other material and energy throughputs that cities and their infrastructure conduct, resulting in the generation of more than two billion tons of waste annually. This includes the sand (now globally in deficit) required from one place for the steel in tall buildings in another place, other downsides (e.g. PM2.5 from coal, dangerous nuclear waste, etc) of the energy required to heat and cool buildings (especially poorly insulated), and the unrecycled waste buildings produce that is often disposed of elsewhere, whether downstream with sewage or deliberately off-site with solid waste. Furthermore, 99 per cent of the world's urban population lives in areas that do not meet the new World Health Organization guidelines on air quality.

A shift towards a circular model in the building and construction sector and the use of sustainable building materials is urgently needed in order to reduce the carbon imprint of construction. Energy-saving infrastructure and effective waste management are critical for both climate change mitigation and sound economic development. Sustainable construction practices including, inter alia, the use of low-carbon, recycled building materials and prefabricated construction techniques can significantly minimize waste and reduce the carbon footprint of buildings and infrastructure. This workstream could focus on the ways in which specific, technical methodologies and material choices impact wider flows and environmental degradation in far-away places.

Circular economy principles advocate for minimal waste generation, the recycling of waste where reduction is impossible, and reuse of old materials in new construction, and modular construction techniques. The Amsterdam Circular Construction Program in the Netherlands highlights how circular economy principles can reduce construction waste and pollution while promoting sustainable urban development. Furthermore, adopting real-time pollution monitoring systems and using low-emission construction technologies can reduce air and noise pollution. Reducing the environmental impact of buildings and construction can also include technological advances in energy efficiency, renewable energy integration, and sustainable materials.

Indicative Examples, Measures and Initiatives

[New Urban Agenda](#) ¶70-1, 75-6, 101, 111, 121, 124

[AFINUA 2.7, 3.5, 3.6, 4.4, 5.1, 5.2](#)

[Global Alliance for Buildings and Construction](#)

[Waste Wise Cities](#)

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