SLOCAT Inputs for Global Dialogues 2024 on "Cities: buildings and urban systems"

Sharm el-Sheikh Mitigation Ambition and Implementation Work Programme - March 2024

SLOCAT's engagement in the Working Group in 2023

October 2023: Participation of Secretary General, Maruxa Cardama, invited as resource person, **in the Second Global Dialogue** of the Work Programme, focused on accelerating the just energy transitions, including in transport systems. In our experience, the global dialogues present a critical opportunity to shed light on and catalyse effective solutions for reducing emissions with a nexus approach, share lessons and challenges learned from implementation at the national and sub-national levels and build bridges between UNFCCC parties and non-party stakeholders.

SLOCAT submissions of inputs: May 2023 | September 2023.

Key facts on urban transport access, emissions and energy demand

- The transport sector accounted for 20.7% of global fossil fuel CO_2 emissions in 2022. Road transport (passenger and freight) contributed 77% of global transport CO_2 emissions in 2019.
- Urban transport accounted for 8% of global CO_2 emissions and around 40% of global transport emissions in 2020.
- The share of renewable energy is only 4.1% of the total final energy demand in transport.
- Using public transport and active mobility instead of driving is one of the most effective actions people can take to help combat the climate crisis. Yet, only 32% of the urban population in Africa and 38% in Asia has convenient access to public transport.[1]
- The demand for urban transport of people and goods is projected to increase substantially. Urban passenger transport demand is projected to almost double by 2050 and, in the absence of interventions, motorised mobility in cities could surge 94% between 2015 and 2050. This means that emissions, air pollution and energy demand from the land transport sector will continue rising.
- Under current policies, urban transport emissions would decrease slightly, by 5% until 2050. Ambitious actions on urban passenger transport across the *Avoid-Shift-Improve* framework can reduce emissions more than 80% below 2019 levels by 2050 (see *Table 1*).[2]

Acting on the transport - buildings - urban systems interface will deliver on the COP28 Decision on the First Global Stocktake

While the buildings sector accounts for over one third of global energy consumption and emissions, the energy used travelling to / from different buildings (home, office, school, etc.) can be greater than the energy used to run the buildings.

[1] SLOCAT (2022), "Transport and Voluntary National Reviews 2022", www.slocat.net/vnr
[2] SLOCAT (2023), SLOCAT Transport, Climate and Sustainability Global Status Report – 3rd Edition, https://tcc-gsr.com/

- The impact of the transport - buildings interface on emissions is largely determined by the form of a city, where buildings are located, and how easily we can access sustainable transport options to travel between different buildings.
- Urban sprawl increases the distance between homes, businesses, services and jobs, raising the cost of infrastructure and public services.
- The projected increase in the demand for urban transport of people and goods means increased emissions, air pollution and energy demand from the land transport sector.

Transport and urban systems planning need to embrace less energy-demanding urban transport systems, less car-centric models for passenger transport and less road-centric models for freight transport, coupled with a just transition to phase-out fossil fuels in land transport. This will bring enormous opportunities for more inclusive, prosperous, healthy, sustainable and resilient urban communities.

- At COP28, the **Decision on the First Global Stocktake** on the Implementation of the Paris Agreement called on countries to:
  - *"28. (a) Tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030."*
  - *"28. (d) Transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science."*
  - *"28. (g) Accelerating the reduction of emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero- and low-emission vehicles."*
  - *"28. (e) Accelerating zero- and low-emission technologies, including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production."*
  - *"28. (f) Accelerating and substantially reducing non-carbon-dioxide emissions globally, including in particular methane emissions by 2030."*
  - *"28. (h) Phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible."*
- **The call to double the share of energy-efficient and fossil-free forms of land transport by 2030[3] is aligned with the COP28 Decision on the First Global Stocktake.** While each country will adopt a nationally determined approach, there are a series of universal enablers to meet this target. **Governments, climate, development and private funders, philanthropies, businesses, academia and civil society have the opportunity to deliver on both the mandates of the COP28 Decision and the pledges on global renewables and energy efficiency targets through bold and urgent action in the action areas indicated below.** According to the IEA Net Zero Scenario[4] transport represents about a quarter of all gains needed to double the rate of energy efficiency, with the shift to sustainable transport modes playing a central role.

[3] The Call to Action was initiated by SLOCAT and REN21 jointly with IDDRI, ITDP, UIC, UITP and WRI in the run up to COP28 and so far has gathered 60+ signatories, including Chile and Colombia.
[4] Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach: https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach

Key approaches are being increasingly recognised and used to optimise the mitigation potential of the transport - buildings - urban systems interface

Integrated approaches to land-use and transport planning[5] can help reach the goal of compact, connected and coordinated cities which makes them low-carbon, sustainable, healthy and inclusive. It ensures that cities have well-defined boundaries, compact urban form, a mix of residential and commercial buildings, and accessible pathways, bike lanes and access to public transport. By reducing per capita land consumption, infrastructure and transport costs, integrated transport and land use policies can deliver significant economic, social, and environmental benefits. The **Sixth Assessment Report of the Intergovernmental Panel on Climate Change** highlighted the potential of public transport focused development and mixed land use to reduce greenhouse gas emissions by 23-26% by 2050.

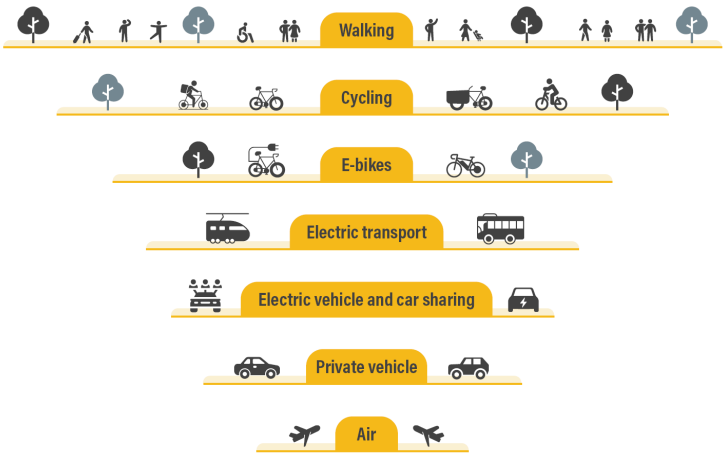
Applying **land-value capture (LVC) around transport facilities**, can help to generate much needed finance for multi-modal sustainable transport systems in close proximity to buildings, thereby increasing the efficiency of urban systems. LVC is more than just a funding method; it is about creating a governance framework that integrates transport and land use, so that developments can be undertaken jointly for an optimised urban environment. To implement LVC, there is a need to rethink how we plan and deliver transport infrastructure and services in relation to the city. This includes reconsidering the way we value the benefits of public transport and active mobility, at both the institutional and societal levels, and how we communicate these benefits to make LVC acceptable to the widest range of stakeholders, land users in particular[6].

Stronger institutions and governance for effective implementation are required. **Integrated authorities for urban land use and transport planning** play a critical role in making this happen but they often have limited resources and capacity or other economic instruments, such as LVC capacity.

[5] Module 3 "Integrated Transport Planning" of SLOCAT (2023), SLOCAT Transport, Climate and Sustainability Global Status Report – 3rd Edition https://tcc-gsr.com/module-3/integrated-transport-planning/
[6] https://cms.uitp.org/wp/wp-content/uploads/2020/06/LVC-final-version_ok.pdf

The **integration of sustainable transport in green building standards** also plays a crucial role in promoting the use of sustainable transport options. International green building standards (e.g. LEED in the United States and BREEAM in the United Kingdom), include a transport/location evaluation criteria, which aims to encourage building projects to be integrated into various sustainable transport modes to achieve the goal of reducing emissions and promoting public health. To help reduce commuter-related transport emissions, strategies can include limits on available parking, designated preferred parking spaces for shared mobility providers, and electric vehicles or alternative fueling stations installed on site, as well as ensuring convenient access to public transport. For example, England became the first country in the world to require new buildings to include electric vehicle charging points in 2021. **By promoting the use of sustainable transport options, green building design contributes to the overall goal of achieving a more sustainable and resilient built urban environment.**

Figure 1: Sustainable transport hierarchy

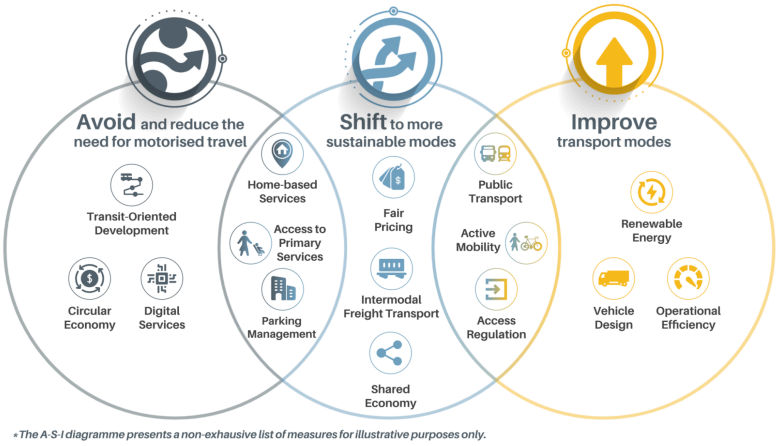


Sustainable urban mobility plans (SUMPs) are used in a growing number of cities to promote sustainable modes of transport and reduce the negative impacts of urban mobility. Doubling **public transport** usage in cities alone will cut urban transport emissions by around half [7]. **Walking and cycling** are the most sustainable forms of personal transport. Enabling more people to walk and cycle safely can play a significant role in achieving climate goals and is a quick, affordable and reliable way to lower transport emissions while improving public health, strengthening the economy and supporting a fairer, more equitable society. More national governments, as well as regional and city institutions, are preparing walking policies, although only 42% of countries had a national walking policy as of 2022; up to 10% more countries had sub-national policies in place. **Proximity planning** – such as the "15-minute city" in Paris, the "super blocks" in Barcelona and the "low traffic neighbourhoods" in London – is experiencing re-invigorated momentum.

Supporting the objectives of SUMPs, **transit-oriented development approaches** influence the location of developments and new buildings where there already exist or could exist good connections by public transport and active travel.

[7] https://thefutureispublictransport.org/

Figure 2: Avoid-Shift-Improve framework



Applying the ***Avoid-Shift-Improve*** **framework through integrated, inter-modal and balanced approaches** is critical to unleashing the full benefits of sustainable, low-carbon transport.[8] In addition to the transition of technologies ("Improve" measures), behavioural changes ("Avoid" and "Shift" measures) are needed to support transport decarbonisation, as emission reductions will not be achieved without critical shifts in transport modes. In urban areas, a shift of 20-50% of all car trips to public transport, ridesharing, walking and cycling is required to support transport decarbonisation by 2050. Car ownership can be reduced 35% by providing adequate public transport services and ridesharing schemes.[9] Higher parking prices in cities have shown to induce a greater use of public transport and active modes.

Table 1: Examples of ambitious urban transport actions

ASI framework	Urban passenger transport measures to be taken by 2050 to reduce emissions more than 80% below 2020 levels
Avoid	Economic instruments ○ Pricing mechanism, such as 40% increase of parking prices ○ Carbon pricing of USD 65-200 per tonne CO_2 Land-use policies and transit-oriented development ○ Over 13% increase of average population density ○ 3.3% increase in land-use mix Teleworking ○ Up to 13% of population working from home
Shift	Enhancement of cycling and walking infrastructure ○ Infrastructure growth by up to 200% Public transport expansion and service improvements ○ Public transport systems growth by 67% ○ 27% of bus network feature priority lanes ○ Service levels increase by up to 20%
Improve	Speed limits ○ Urban speeds decrease by up to 20% Vehicle restriction schemes ○ Parking spaces reduced by 25% and car ownership decreases by up to 8%
Source: International Transport Forum (2023), ITF Transport Outlook 2023, https://www.itf-oecd.org/itf-transport-outlook-2023	

To reduce emissions and pollution and to improve air quality, several cities and countries around the world have deployed **low-emission zones, ultra-low-emission zones and zero-emission zones** in recent years. In some cases, these zones apply specifically to freight vehicles. Although the primary aim often is to mitigate congestion and poor air quality, the zones also can lead to reduced CO_2 emissions and improved health and social equity.

[8] SLOCAT (2022), Avoid-Shift-Improve Refocusing, https://slocat.net/asi/
[9] SLOCAT (2023), SLOCAT Transport, Climate and Sustainability Global Status Report – 3rd Edition, https://tcc-gsr.com/

SLOCAT is the international, multi-stakeholder partnership powering systemic transformations and a just transition towards equitable, healthy, green and resilient transport and mobility systems for the people and the planet. We deliver on our mission through co-creation, co-leadership and co-delivery across knowledge, advocacy and dialogue activities in the intersection between transport, climate change and sustainability. Our multi-sectoral Partnership engages a vibrant and inclusive ecosystem across transport associations, NGOs, academia, governments, multilateral organisations, philanthropy and business; and a large community of world-class experts and change-makers. Going where others do not or cannot go individually, our Partnership is leveraged to set ambitious global agendas and catalyse progressive thinking and solutions for the urgent transformation of transport and mobility systems worldwide. Since 2016, SLOCAT has been the official Focal Point for the transport sector in the Marrakech Partnership for Global Climate Action and in that role facilitates the engagement of transport stakeholders.

For further information

Main knowledge base

SLOCAT (2023), SLOCAT Transport, Climate and Sustainability Global Status Report – 3rd Edition
https://tcc-gsr.com/

Philip Turner, Director for Global Advocacy philip.turner@slocatpartnership.org

www.slocat.net @slocatofficial