

Green growth or Greenwash? On the tensions between development, distribution and climate justice in the transport sector

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This seminar

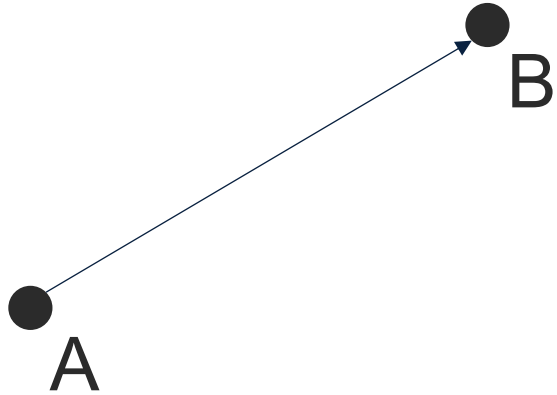
- A live “think piece”
- A collation of some interesting research and bits (some of it mine, most of it others’, all the latter credited)
- Hopefully, an interesting chat with some fellow sustainability enthusiasts (and a free lunch?)
coffee



Introduction/ primer



Getting from A to B



- Transport is the *spatial linking of derived demand* resulting from a value of a person or thing being at another place (B) relative to where they are (A)
- The ***transport system*** refers to the **nodes, modes, flows and networks** that facilitate this

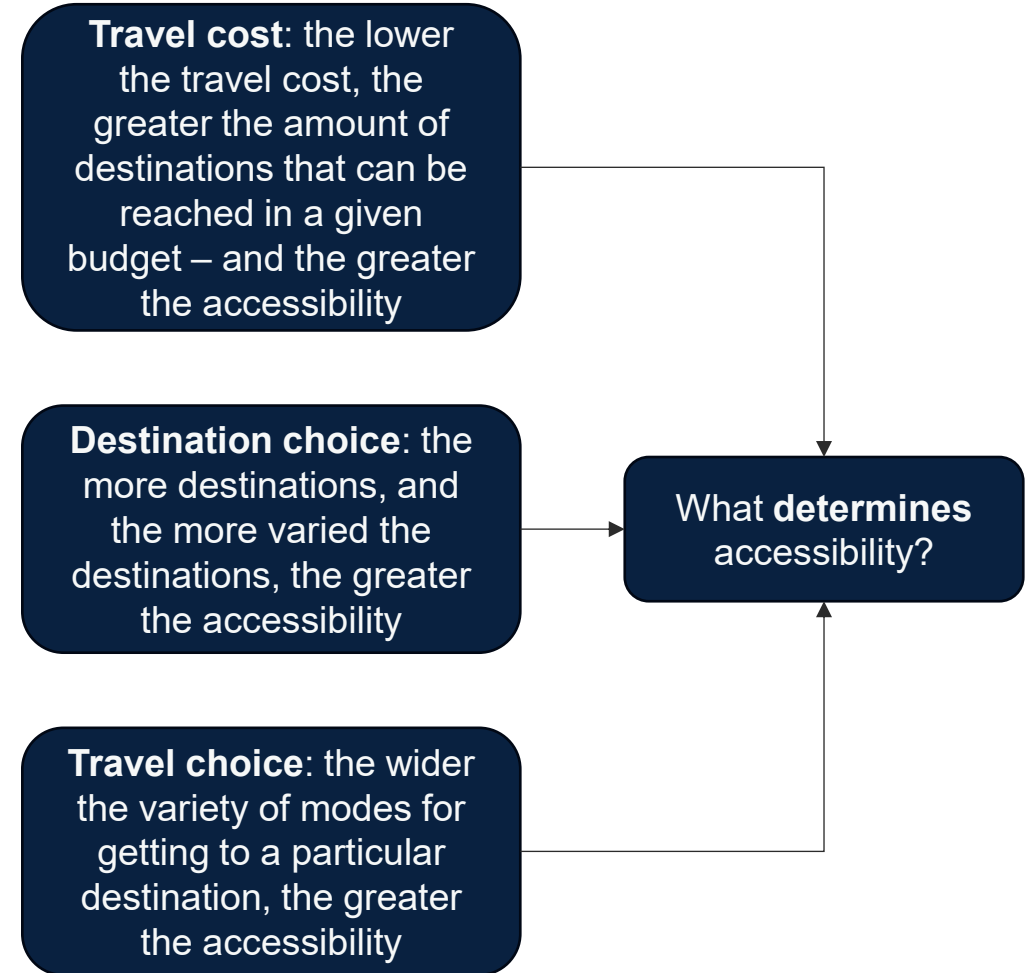
Mobility

- Mobility = the *ease of movement* of a passenger or unit of freight
- When mobility is **high**, *activities are less constrained by distance*



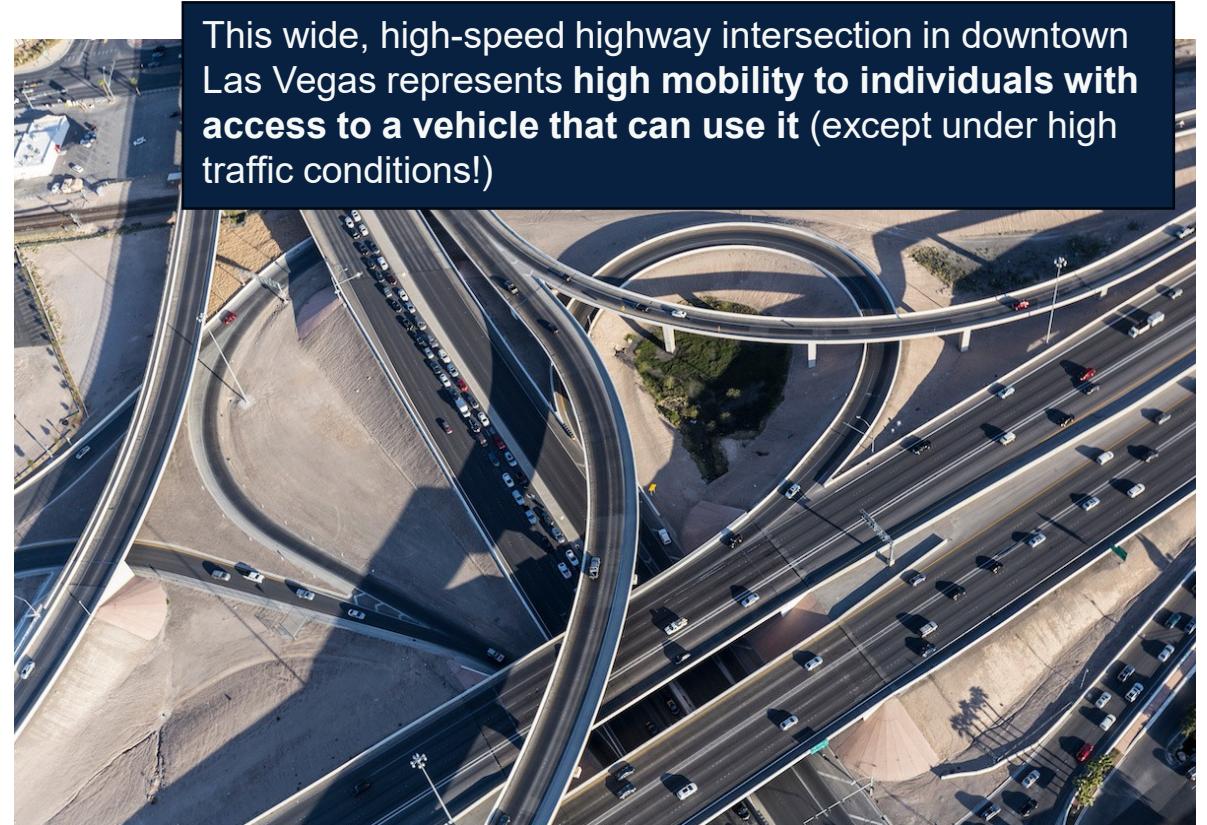
Accessibility

- Accessibility is the **potential for interaction**, both **social** and **economic**. (Handy, 1994)
- A **basic dimension of city performance** (Lynch, 1984)
- When accessibility is high, transport system users have ***greater opportunities to participate in value-returning activities***



Does good mobility mean good accessibility?

- Mobility is determined by **road capacity, design speed**, and (in the case of automobile mobility) **how many other people are using the road**
- Mobility is also driven by **travel costs** and their relation to individuals' **budgets**



This wide, high-speed highway intersection in downtown Las Vegas represents **high mobility to individuals with access to a vehicle that can use it** (except under high traffic conditions!)

US-95 and I-15 interchange in downtown Las Vegas, Nevada. | trekandphoto / Adobe Stock

That **mobility** will **help individuals overcome distance** and thus reach more destinations (increasing accessibility).

But *where* are the destinations?

Good mobility vs. good accessibility

- Good mobility usually contributes to good accessibility because it means **easier travel between two points**
- But poor mobility doesn't necessarily mean poor accessibility if **goods, services and activities can be accessed without vehicular travel**

- High **diversity** in land use means more destinations (commercial, employment, social) are nearby to where people live
- High **density** means travel distances shorter (and therefore required speed is lower for a given level of accessibility)



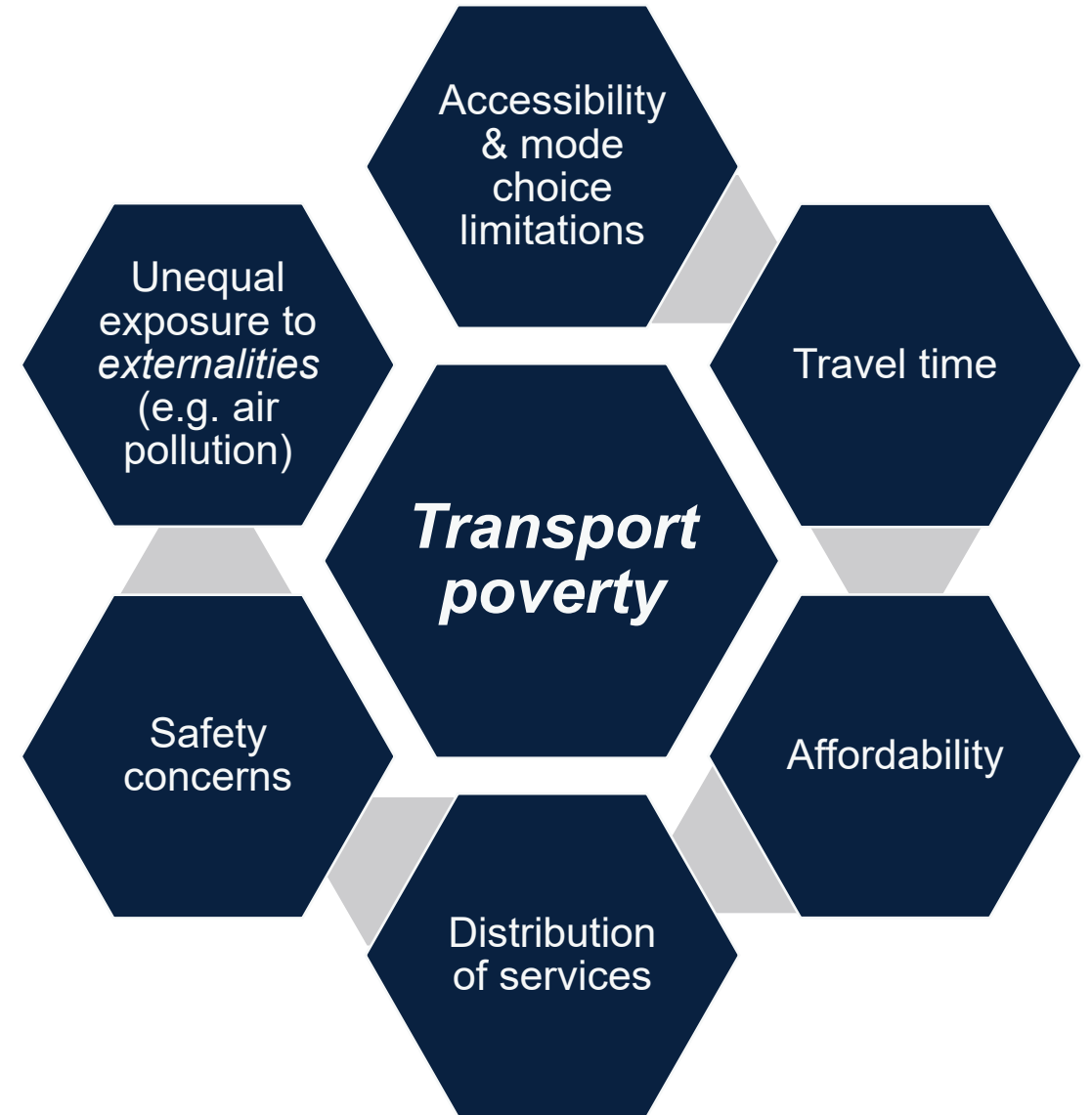
Shibuya, downtown Tokyo | Google Maps

Challenges & contradictions



Transport poverty

- Transport is a key contributor to economic, environmental and social wellbeing
- Many low-income and other marginalised populations experience **transport poverty** → **they are excluded** from key life-supporting activities such as education, work, healthcare, and social support



Transport poverty as a broad set of intersectional issues

1. There is no **transport option available** that is suited to the individual's physical condition and capabilities
2. The existing transport options **do not reach destinations** where the individual can fulfil their **daily activity needs** in order to maintain a reasonable quality of life
3. The necessary **weekly amount spent on transport** leaves the household with a residual income **below the poverty line**
4. The individual needs to spend an **excessive amount of time travelling**, leading to social isolation
5. The prevailing travel conditions are **unsafe or unhealthy for the individual**
6. **Inability to participate** in transport decision-making/ **lack of recourse to legal justice**

(Urban) travel behaviour and gender

“Women have been found to make **fewer journeys to work by car** and **more journeys for maintenance activities such as shopping and childcare** (Best and Lanzendorf, 2005; Boarnet and Sarmiento, 1998).

Women on average also **travel less often and for shorter distances** than men (Moriarty and Honnery, 2005) and are **more willing to reduce vehicle use** than men (Polk, 2003; 2004).

The differences in travel behaviour by gender are mostly due to the **complexity of activities more often experienced by women than men**. Due to the gendered **division of work in households, women often have multiple tasks and activities, such as employment, household and caregiving responsibilities.**”



Understanding Urban Travel Behaviour by Gender for Efficient and Equitable Transport Policies

Discussion Paper No. 2018-01

Wei-Shiuen Ng and Ashley Acker
International Transport Forum, Paris, France

February 2018

Ng, W. and Acker, A. (2018). Understanding urban travel behaviour by gender for efficient and equitable transport policies. ITF Discussion Paper.

Why does it matter?

- Traditional transport project appraisal goes for the **highest benefit-cost ratio**, which will often skew towards worker/commuting activities – this will therefore benefit:
 - Men more so than women
 - Adults more so than children
 - Working-age more so than the elderly
 - Able-bodied people more so than disabled people

The Value of Time (VoT) varies across travel **modes** and **purposes**. In the UK, for example:

- A working rail passenger's time is worth £24.52/hour
- A non-commuting non-working trip is worth £3.82/hour

Table A 1.3.1: Values of Working (Employers' Business) Time by Mode (£ per hour, 2010 prices, 2010 values)			
Mode	Factor Cost	Perceived Cost	Market Price
Car driver	14.86	14.86	17.69
Car passenger	14.86	14.86	17.69
LGV (driver or passenger)	10.24	10.24	12.18
OGV (driver or passenger)	12.06	12.06	14.35
PSV driver	12.32	12.32	14.66
PSV passenger	8.42	8.42	10.02
Taxi driver	10.89	10.89	12.96
Taxi / Minicab passenger	14.86	14.86	17.69
Rail passenger	24.52	24.52	29.18
Underground passenger	8.42	8.42	10.02
Walker	8.42	8.42	10.02
Cyclist	8.42	8.42	10.02
Motorcyclist	14.86	14.86	17.69
Average of all working persons	16.19	16.19	19.27
Values of Non-Working Time by Trip Purpose (£ per hour, 2010 prices, 2010 values)			
Trip Purpose	Factor Cost	Perceived Cost	Market Price
Commuting	8.36	9.95	9.95
Other	3.82	4.54	4.54

Mobilities of care

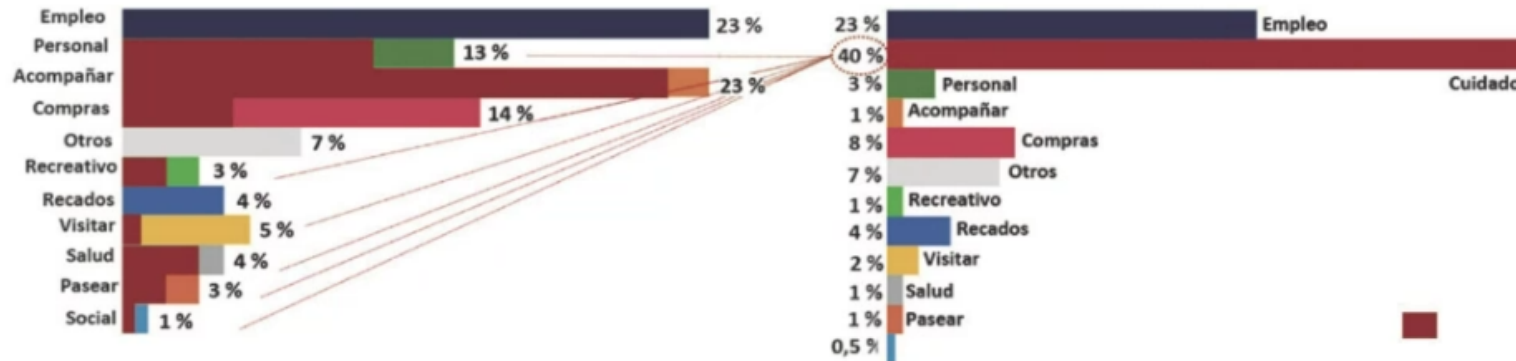


FIG. 3/ Viajes mujeres según propósito, población 30-45 años, Madrid 2014. Categorías tradicionales y categoría paraguas de movilidad del cuidado.

Fuente: Elaboración propia, Madrid 2014.

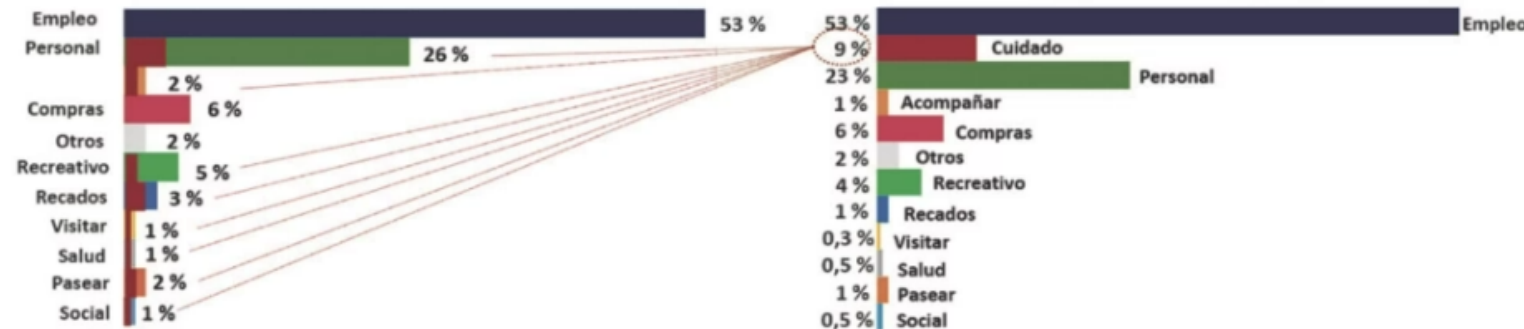


FIG. 4/ Viajes de hombres por propósito, población de 30-45 años, Madrid 2014. Categorías tradicionales y categoría paraguas de movilidad del cuidado.

Fuente: Elaboración propia, Madrid 2014.

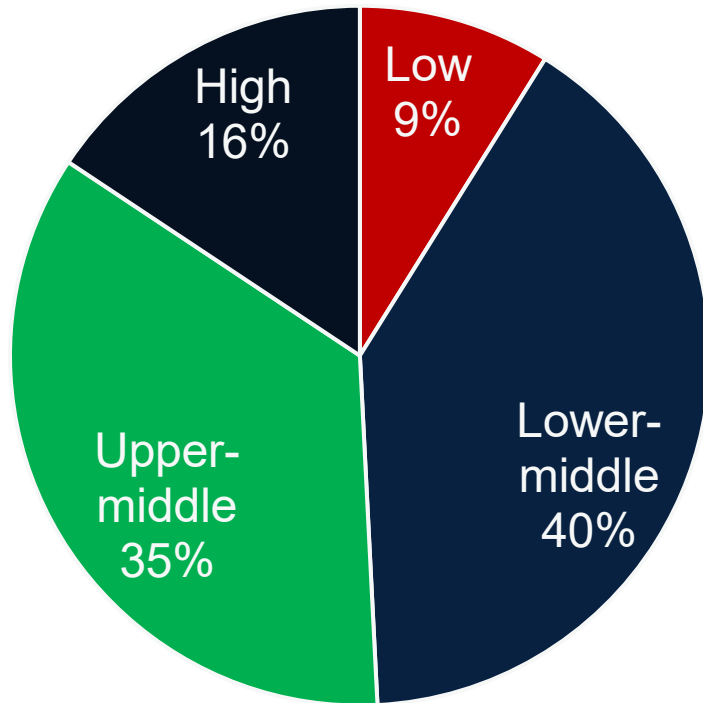
- Mobilities of care are fulfilling **social responsibilities**, such as childcare, eldercare, errands, and other activities related to maintaining households and social networks.

- Designing transport networks for commuters at peak times disadvantages women (who are more likely to participate in **mobilities of care**)

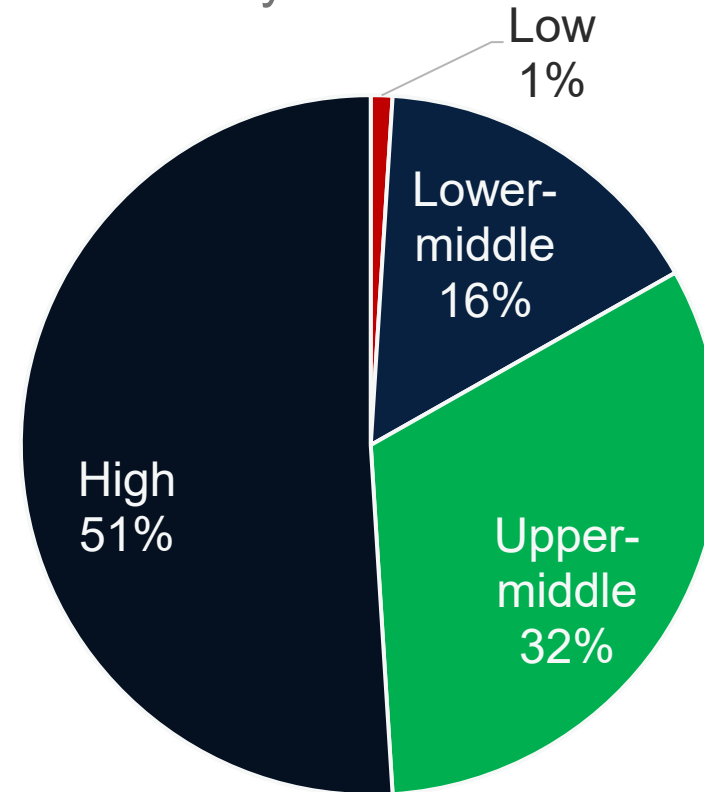
[Sanchez & Zucchini \(2021\)](#)

Climate (in)justice in transport

Population share by country income status



Transport sector emissions by country income status

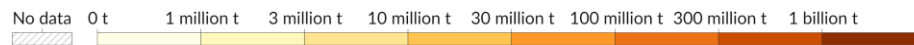
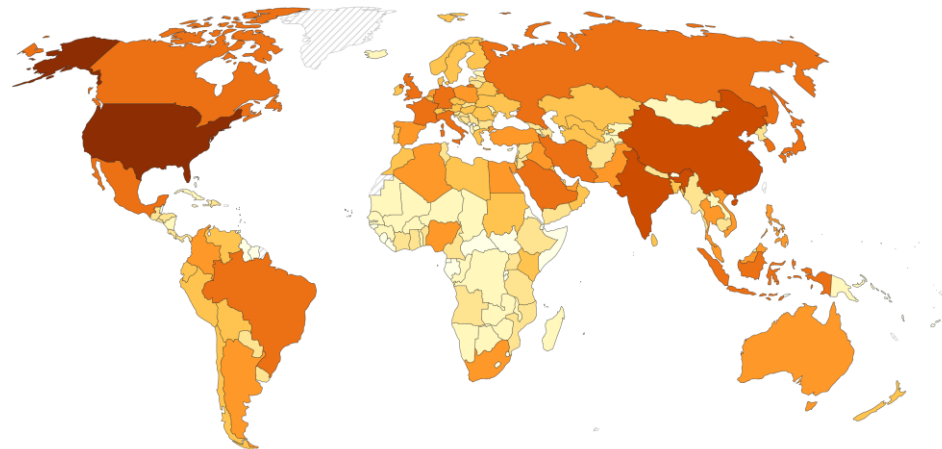


Countries who emit more are less likely to be impacted

CO₂ emissions from transport, 2019

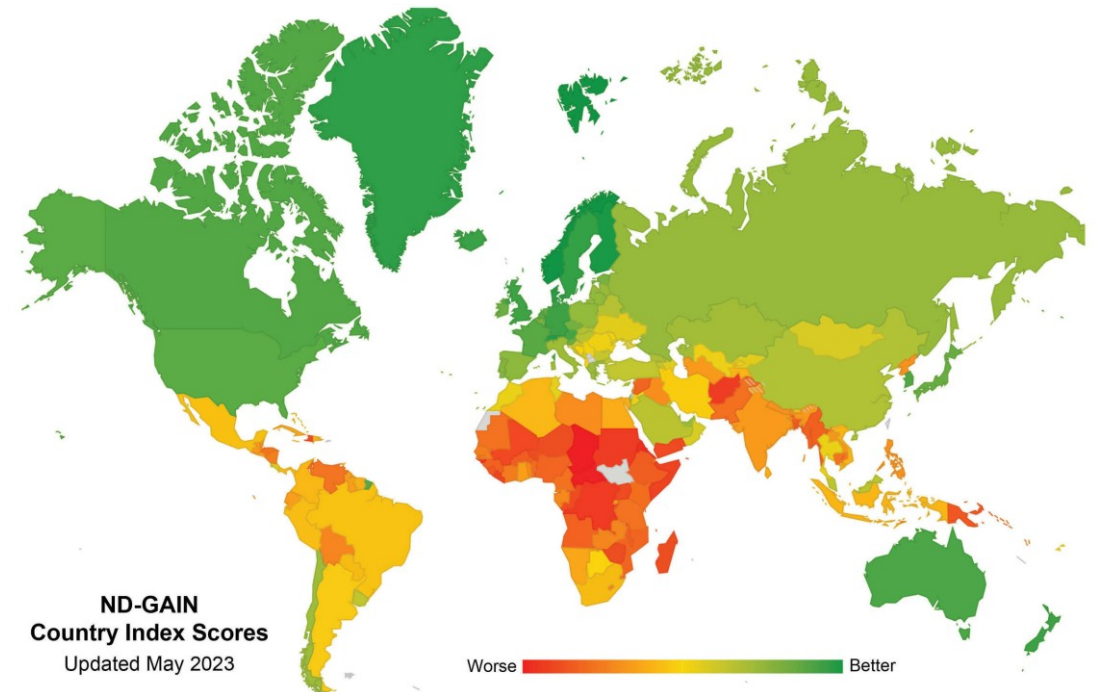
Emissions are measured in tonnes. Domestic aviation and shipping emissions are included at the national level. International aviation and shipping emissions are included only at the global level.

Our World
in Data



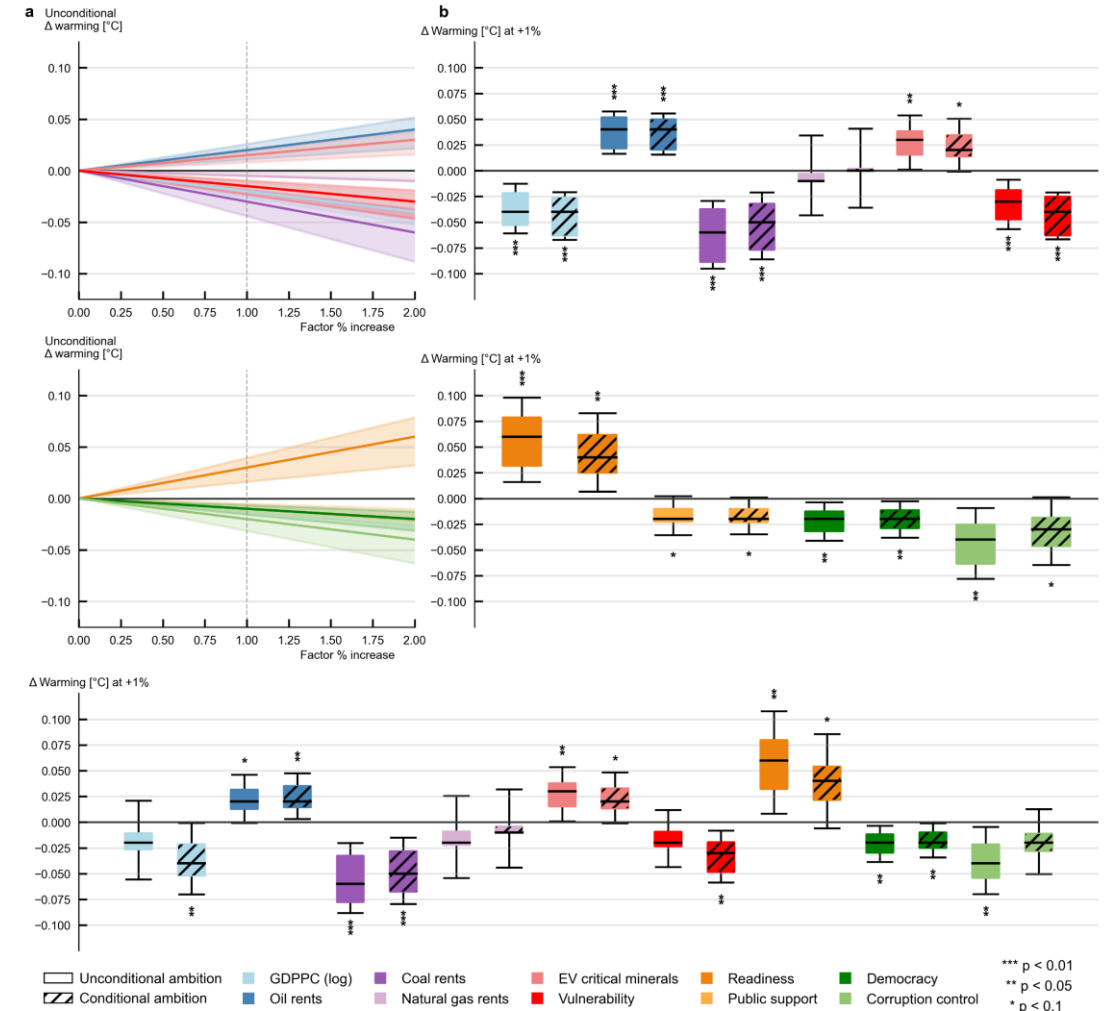
Data source: Climate Watch (2023)

OurWorldInData.org/transport | CC BY



Transport climate ambition is driven by resources, governance and power

- Countries with higher oil rents are **less likely** to be ambitious in their transport climate mitigation targets
- Stronger democracies are **more likely** to be ambitious in their transport climate mitigation targets
- Climate change vulnerable countries are more likely to be ambitious, but only if they can **access finance**



David Sturges, University of Strathclyde

What do communities need from transport?



UN Sustainable Development Goals (SDGs)



- Transport is mentioned in **one** SDG target:
- SDG 11.2:** “*Ensure access to safe, affordable, and sustainable **transport** systems for all*”

Access to transport?



Access to goods, services and activities



Transport in SDGs

Transport has a **direct** influence on...



SDG Target 3.6 | Road traffic injuries: By 2030, halve the number of global **deaths and injuries from road traffic accidents**



SDG Target 7.3 | By 2030, double the global rate of improvement in **energy efficiency**



SDG Target 9.1 | Develop **quality, reliable, sustainable and resilient infrastructure**, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.



SDG Target 11.2 | By 2030, provide **access to safe, affordable, accessible and sustainable transport systems** for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons



SDG Target 12.c | Rationalize inefficient **fossil fuel subsidies** that encourage wasteful consumption by removing market distortions, in accordance with national circumstances.

Transport in SDGs

Transport has an **indirect** influence on...



SDG Target 2.3 | By 2030, double the productivity and incomes of small-Scale food producers



SDG Target 3.9 | By 2030, significantly reduce the number of deaths and illnesses from **hazardous chemicals** and air, water and soil pollution



SDG Target 6.1 | By 2030, achieve universal and **equitable access** to safe and affordable drinking water for all



SDG Target 11.6 | By 2030, reduce the adverse per capita **environmental impacts** of cities, including by paying special attention to air quality and municipal and other waste management



SDG Target 12.3 | By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses



SDG Target 13.1 | Strengthen **resilience and adaptive capacity** to climate-related hazards and natural disasters in all countries



SDG Target 13.2 | **Integrate climate change measures** into national policies, strategies and planning

What do communities need from transport?



Safety



Accessibility



Reliability



Affordability

But:

- For/to whom? (Equitability)
- Under what conditions? (Resilience)
- For how long? (Sustainability)

Solutions/ contestations

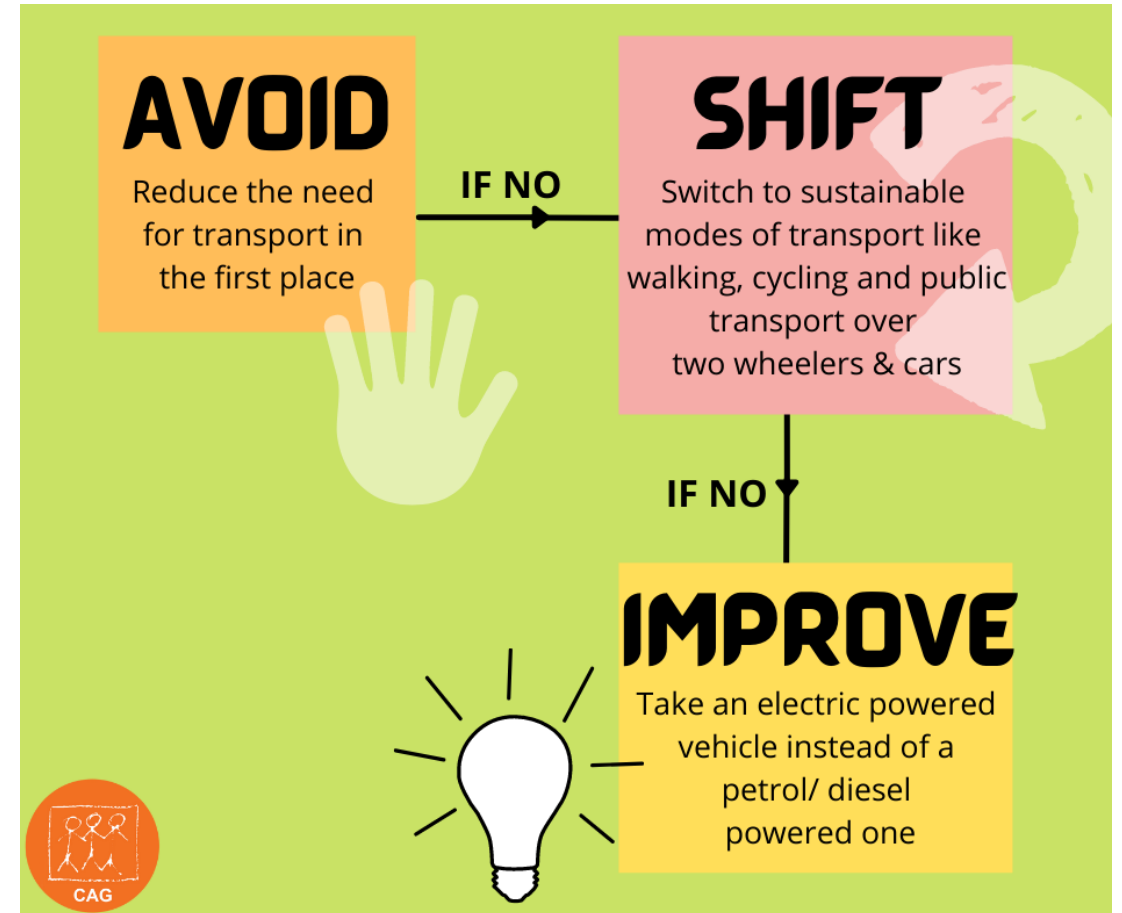


Redistributing access



Presenter's own photo – Birmingham City Centre, summer 2025

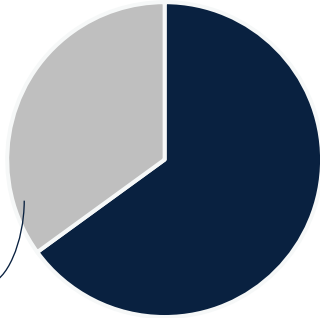
- Who has access (and to what)?
- Who needs access?
- How does access intersect with capability?



<https://www.cag.org.in/database/sustainable-transport-avoid-shift-improve>

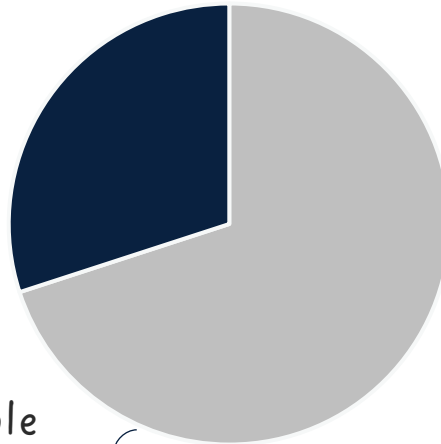
Confronting mobesity

~10 million electric car sales (global, 2022)



35% were electric SUVs

~17 million electric car sales (global, 2022)



70% of models available were SUVs or pick-ups (segments E-F)

World View | Published: 24 June 2024

Confronting mobesity is vital for the global electrification of transport

[Christian Brand](#)

[Nature Energy](#) 9, 909 (2024) | [Cite this article](#)

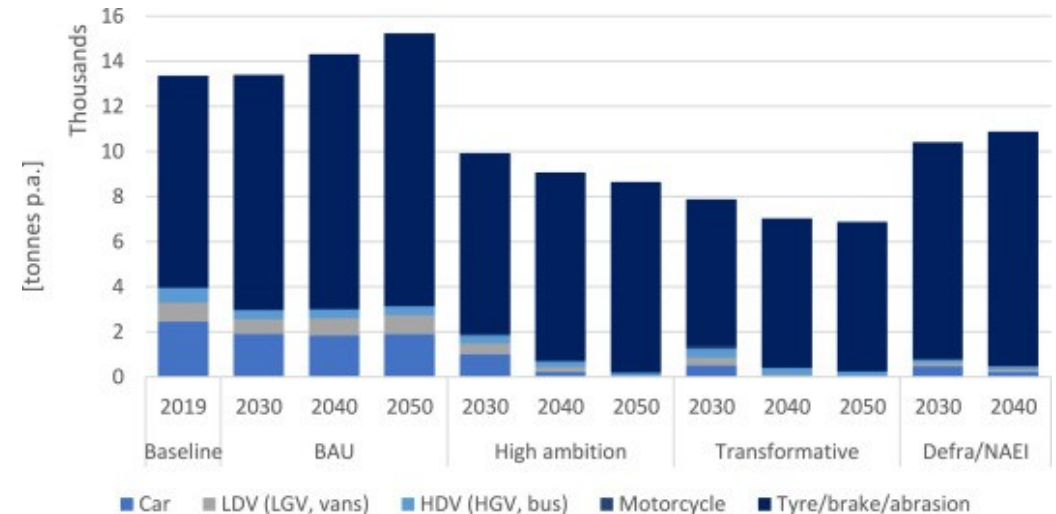
1903 Accesses | 2 Citations | 118 Altmetric | [Metrics](#)



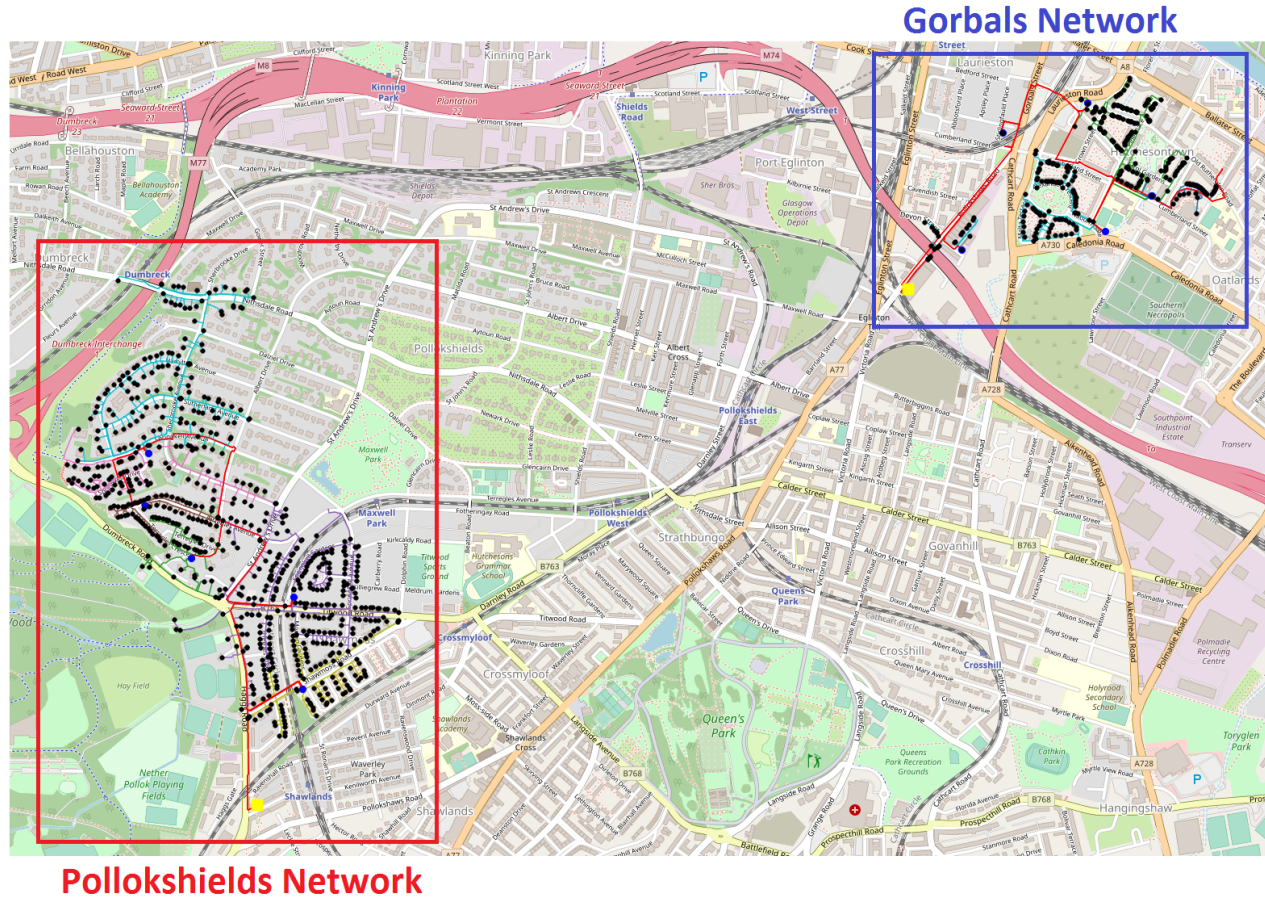
Mercedes e-SUV sporting green number plate

Large cars undermine sustainability

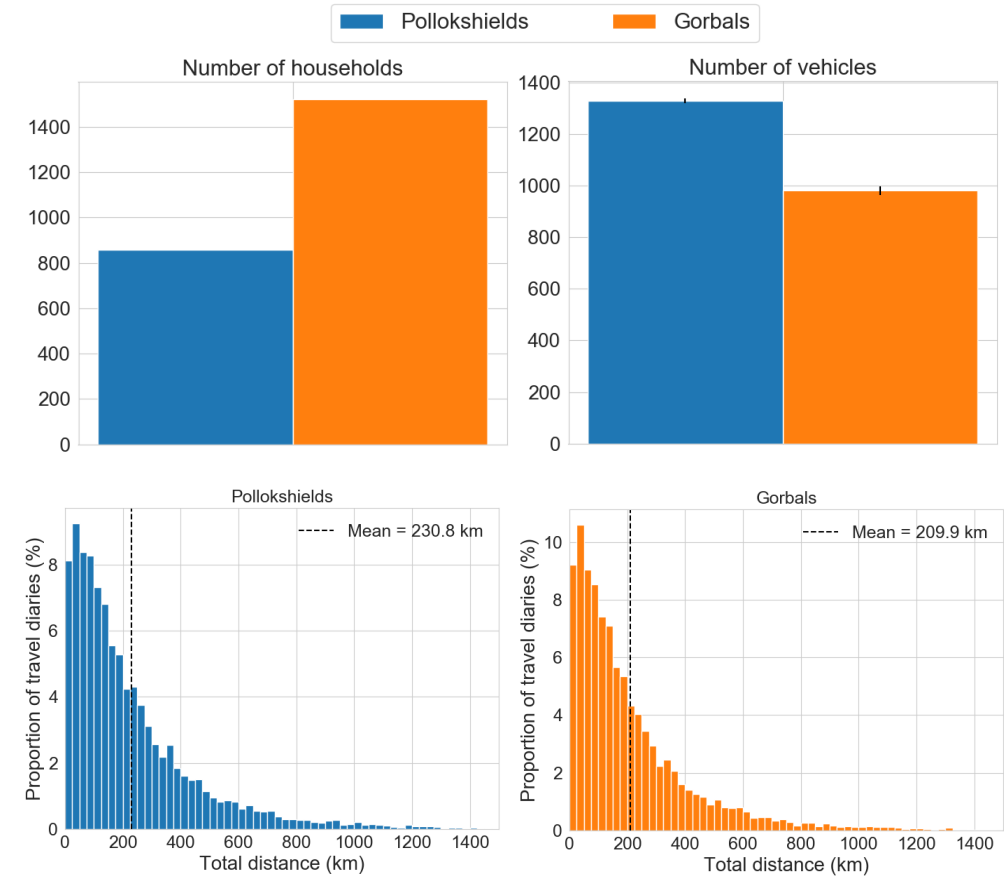
- Larger, heavier vehicles drive demand for critical minerals
- 30% of cobalt mining in DRC is artisanal (unregulated “illegal” mining)
- Heavier vehicles produce more air pollutants (brake dust, road and tyre abrasion) – majority of PM2.5s are still there after 100% electrification (below)



A tale of two distribution networks

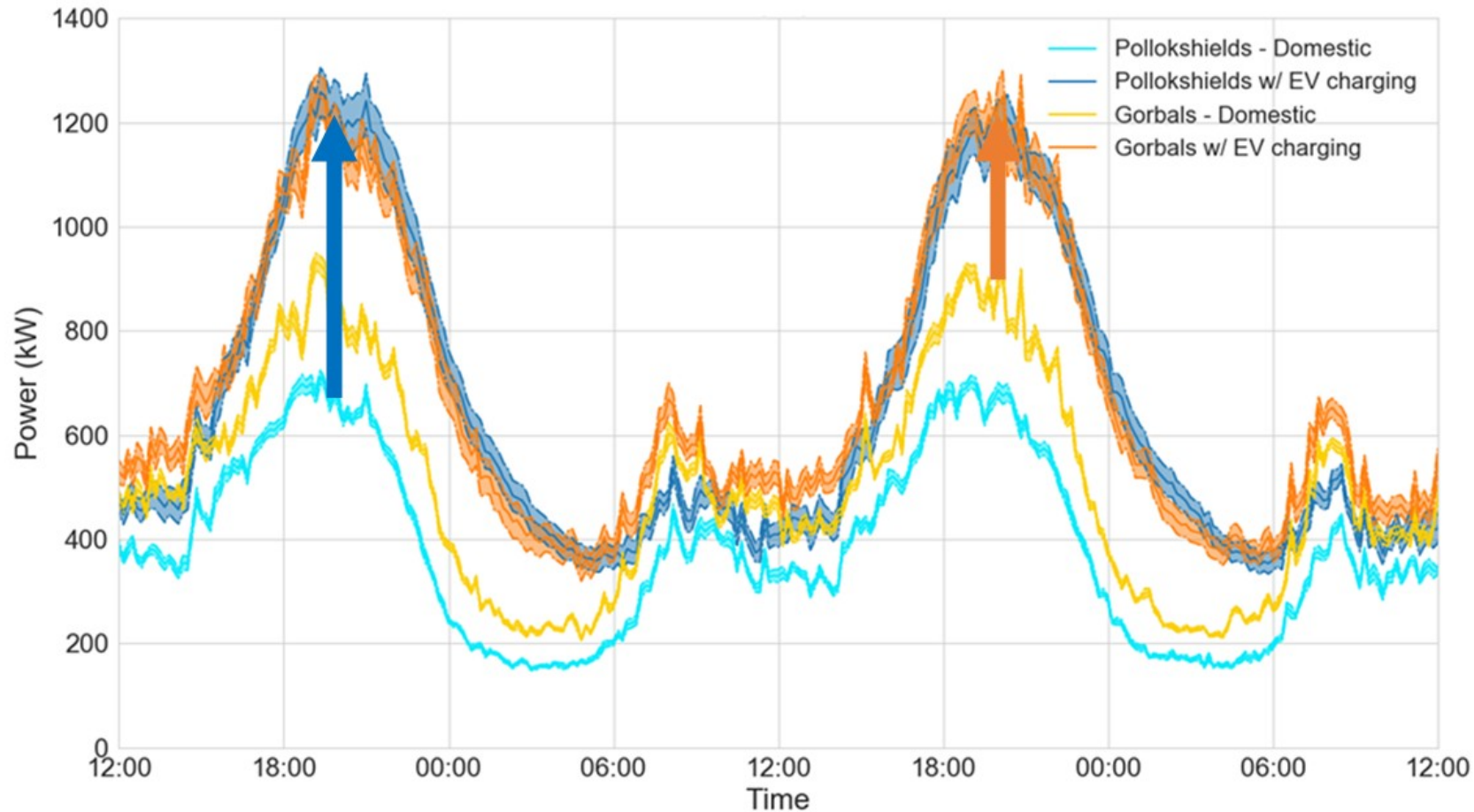


P'shields has ~2 cars per household; Gorbals has ~0.7



P'shields residents are likely to drive further

Network upgrades

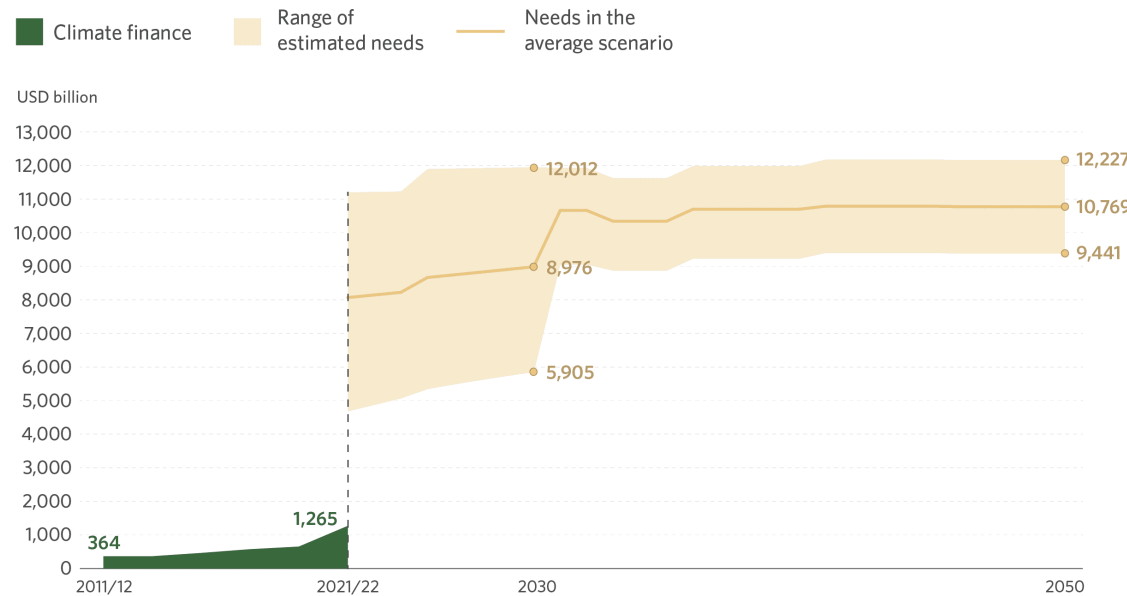


- Increased peak from electric car charging in P'shields ~2x that of Gorbals
- These costs will be **socialised** across electricity bills over the entire network (Southern Scotland)
- ***Who benefits?***

Transport development and investment

Climate finance

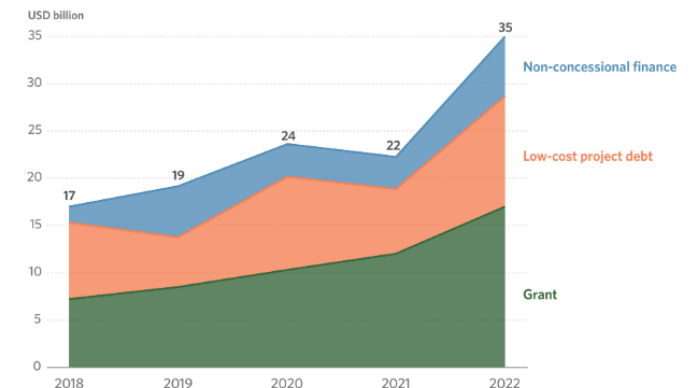
Figure ES3: Global tracked climate finance and average estimated annual needs through 2050



Source: Climate Policy Initiative



Total international public finance to LDCs

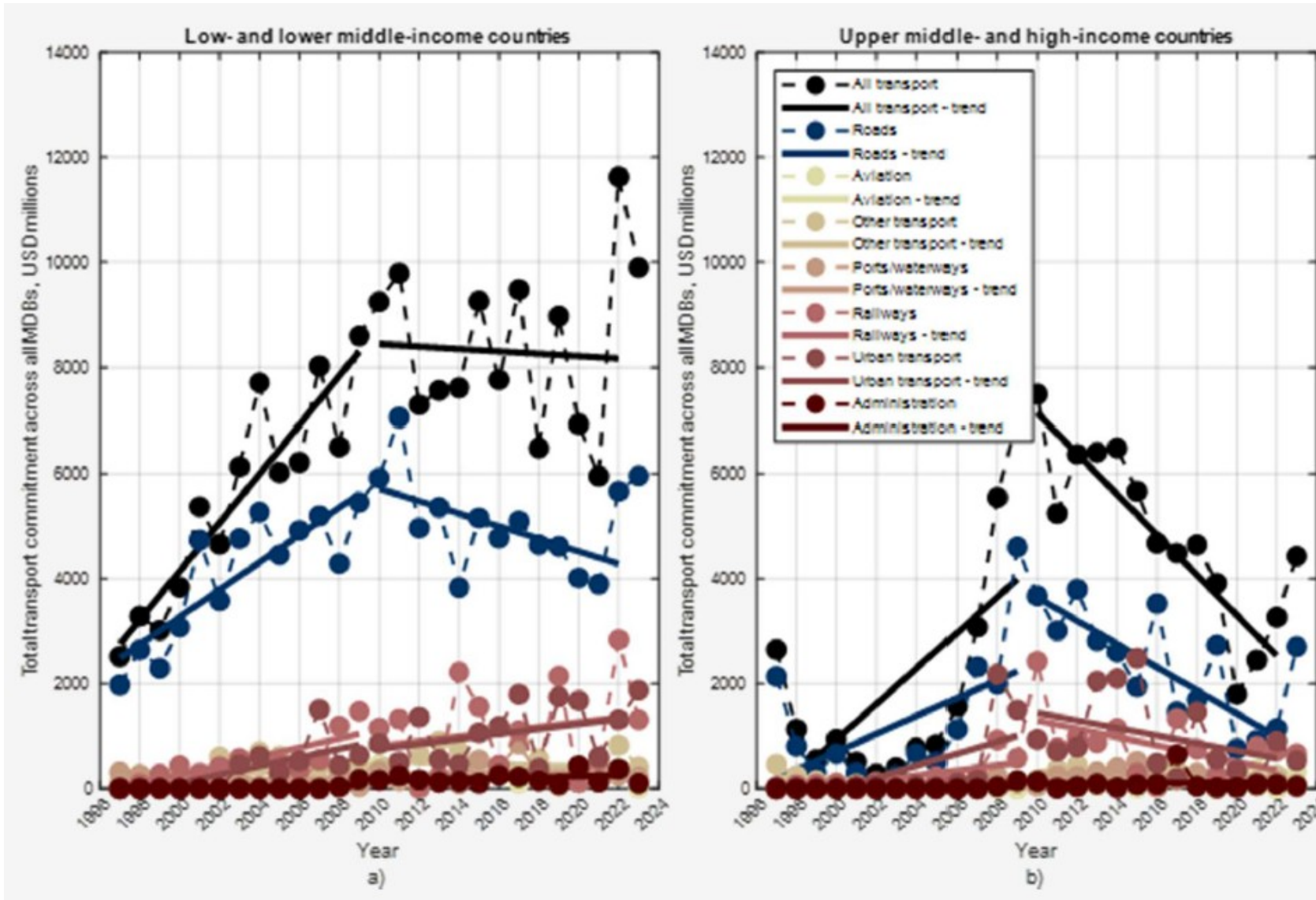


Multilateral development banks (MDBs)



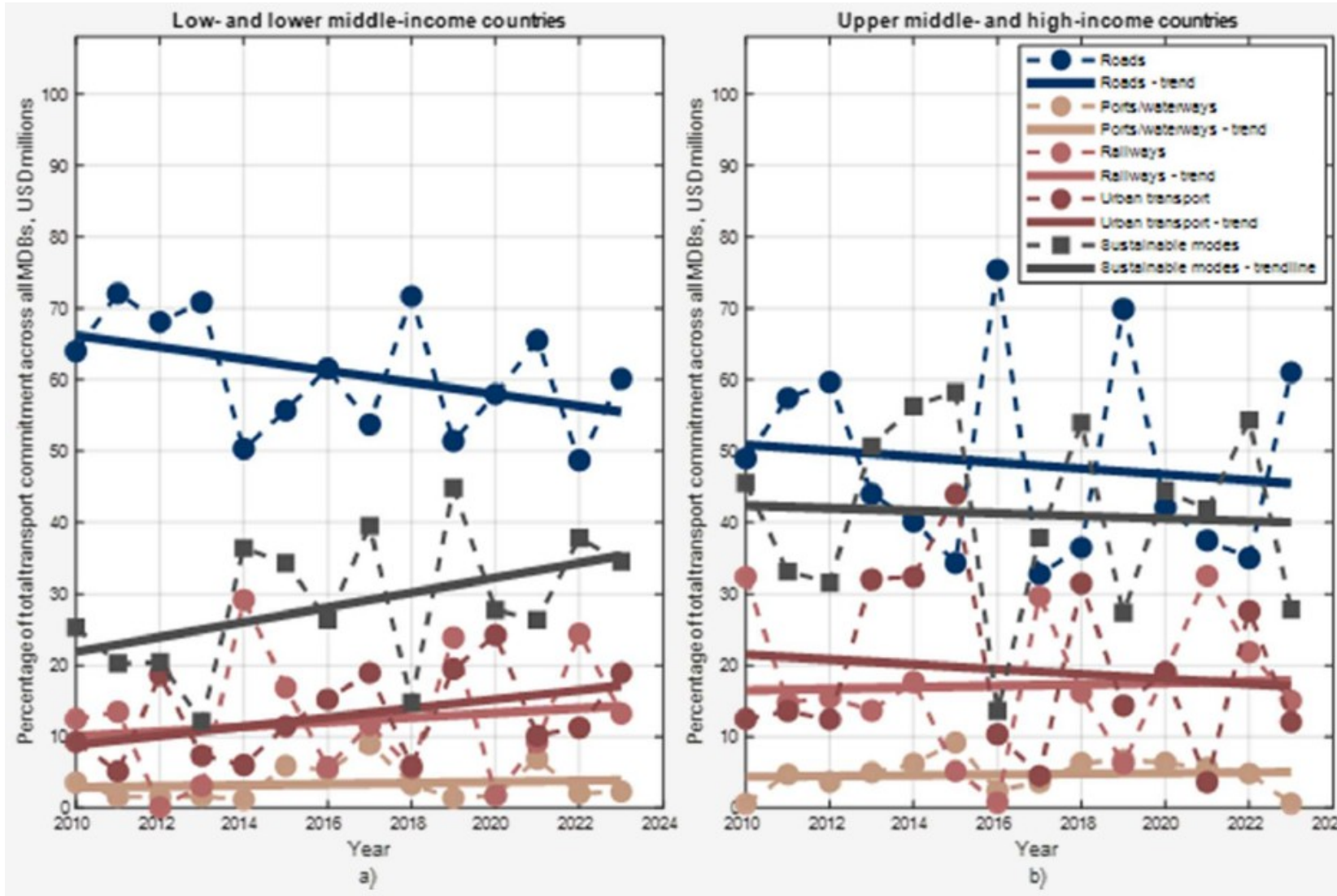
International investment (especially China)

Where does MDB transport spending go?



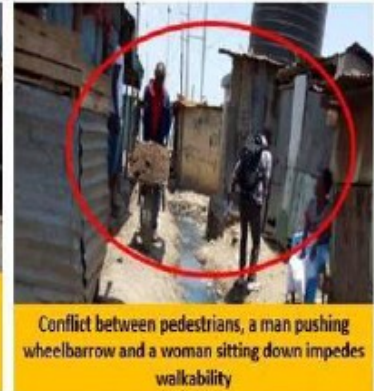
- Total commitment has increased in LICs/LMICs until 2010 and remained steady; has reduced in UMICs/HICs since 2010
- Roads are **by far** the largest projects, particularly in LICs and LMICs

Where does MDB transport spending go?



- Road project spending as a proportion of total commitment **is in decline** in LICs & LMICs
- Sharpest increase in LICs & LMICs is from “**sustainable modes**”
- **Sustainable modes** and **roads** jostle for highest share year-to-year in UMICs & HICs

Mukuru Kwa Njenga, Nairobi (2019)



Out with the old, in with the new (2024)



Mukuru resident statements

“They came with that perception of saying they wanted to construct that major road – Catherine the River Rd.”

*“The landowner came and obtained a court order to **demolish the whole community** and that’s how those structures were brought down. It happened around 2021, **just before we went to the election in 2022.**”*

*“The landowner was intending to regularise the settlement by selling the parcels that had subdivided the land to the structure owners who had settled on that land, so his plan is just to **resettle them**, regularise them, give them ownership documents.”*

*“As you saw, it’s now a clear place, though **people are still agitating and not agreeing to leave the place.**”*

*“Not only did the housing go, but lots of businesses as well, right alongside that road. **Everything that was there, if any investment, school, all the businesses, supermarkets were all brought down.**”*

*“Those people that they **houses were cleared, some relocated to other places** or other settlements in Nairobi, like to the informal settlement of Mathare, Kibera, also along Mombasa Road there is Mulongo.”*

Threats and steps

Threats to the sustainable transport agenda

- Business as usual for infrastructure spending and promotion of **large projects**
- Transport planning and investments are based on **elite visions of “idealised” urban transport**
- **Informal settlements are not included** in urban spatial planning
- **Informal transport** is generally excluded from visions of the future
- Lack of integration between housing development and **basic service provision**
- **Low investment and policy attention for walking** (and cycling) infrastructures outside city centres

Achieving socially sustainable transport systems in Global South cities

- Develop new **decolonised visions to deliver transport and mobilities plans in Global South cities**
- Analyse current systems to identify **socio-spatial inequalities**
- Design **integrated transport and land use projects** to meet people’s basic activity needs and capacities
- Establish **minimum system performance standards** and outcome targets to purposefully reduce inequalities
- Use **indicators of social progress to evaluate** whole system performance

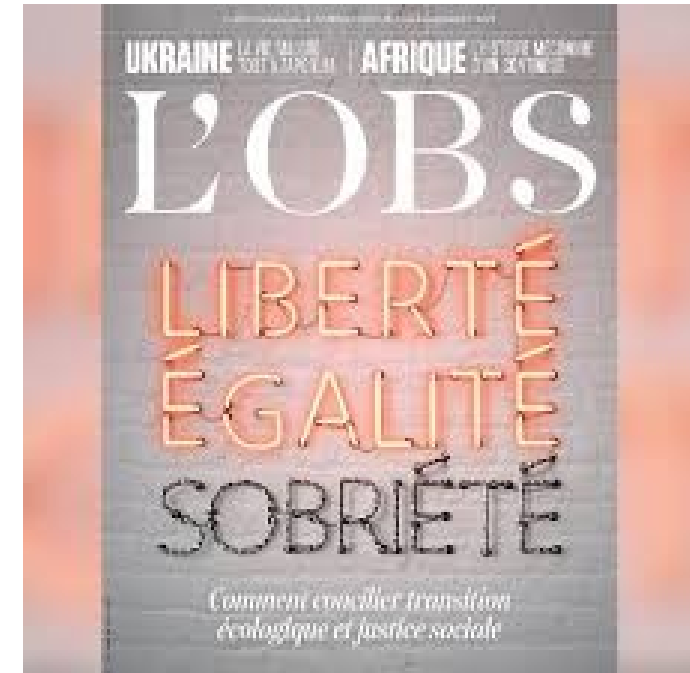
Conclusions/ discussion framing/ open chat



Green growth and greenwash (and growth agnosticism)



Efficiency and sufficiency



Sustainable communities



Open floor/forum

