

Transport-related inequalities in the sustainable transition debate

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My argument (in a nutshell)

- there are **multiple inequalities** related to transport
- in a car-dependent society, **most of them have to do with the car** in one way or another
- the impact of sustainable transport policies on these inequalities are multifaceted and contradictory...
- ...but in the public & political debate, **some of these inequalities are emphasised, while others are overlooked...**
- ...often by actors who are interested in preserving the (car-dependent) status quo
- this tends to **result in unfair outcomes**

4 dimensions of transport-related inequality

4 sub-dimensions of transport poverty... (Lucas et al., 2016)

...and their relationship with car dependence (Mattioli, 2021)

1. **Mobility poverty:** lack of transport resources



“Car dependence is defined by the reduced availability and viability of modes other than the car. In car-dependent contexts, lack of access to a car typically results in sub-par levels of accessibility”

2. **Transport affordability:** inability to meet the cost of transport



“In car-dependent contexts, low-income households are under pressure to own and use cars, despite the substantial economic investment that these require”

3. **Accessibility poverty:** difficulties in reaching key activities



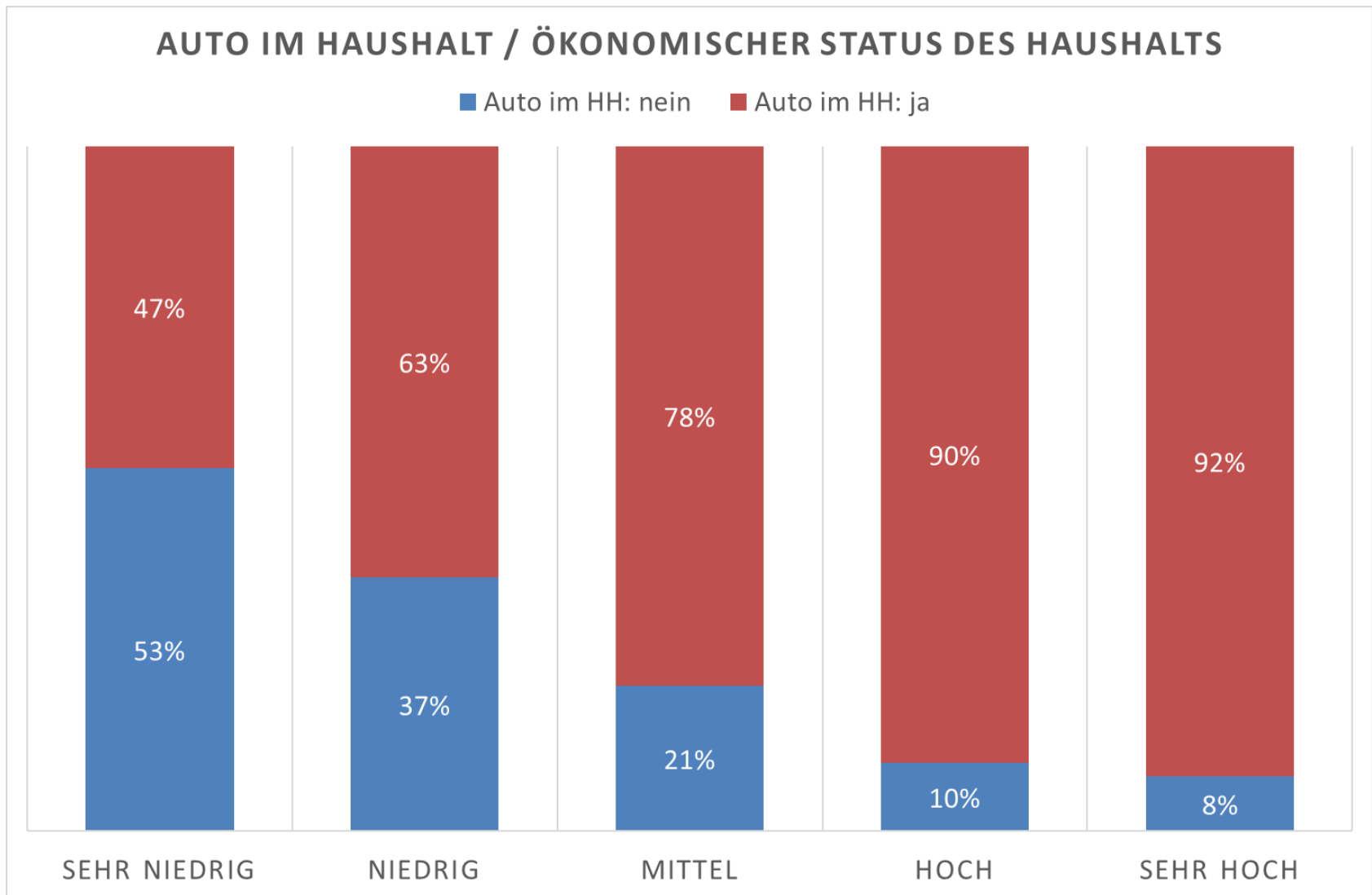
“The expansion of activity spaces associated with car dependence can make it difficult to reach essential activities within reasonable time and cost, both for people with and without access to cars”

4. **Exposure to transport externalities:** disproportionate exposure to the negative effects of the transport system



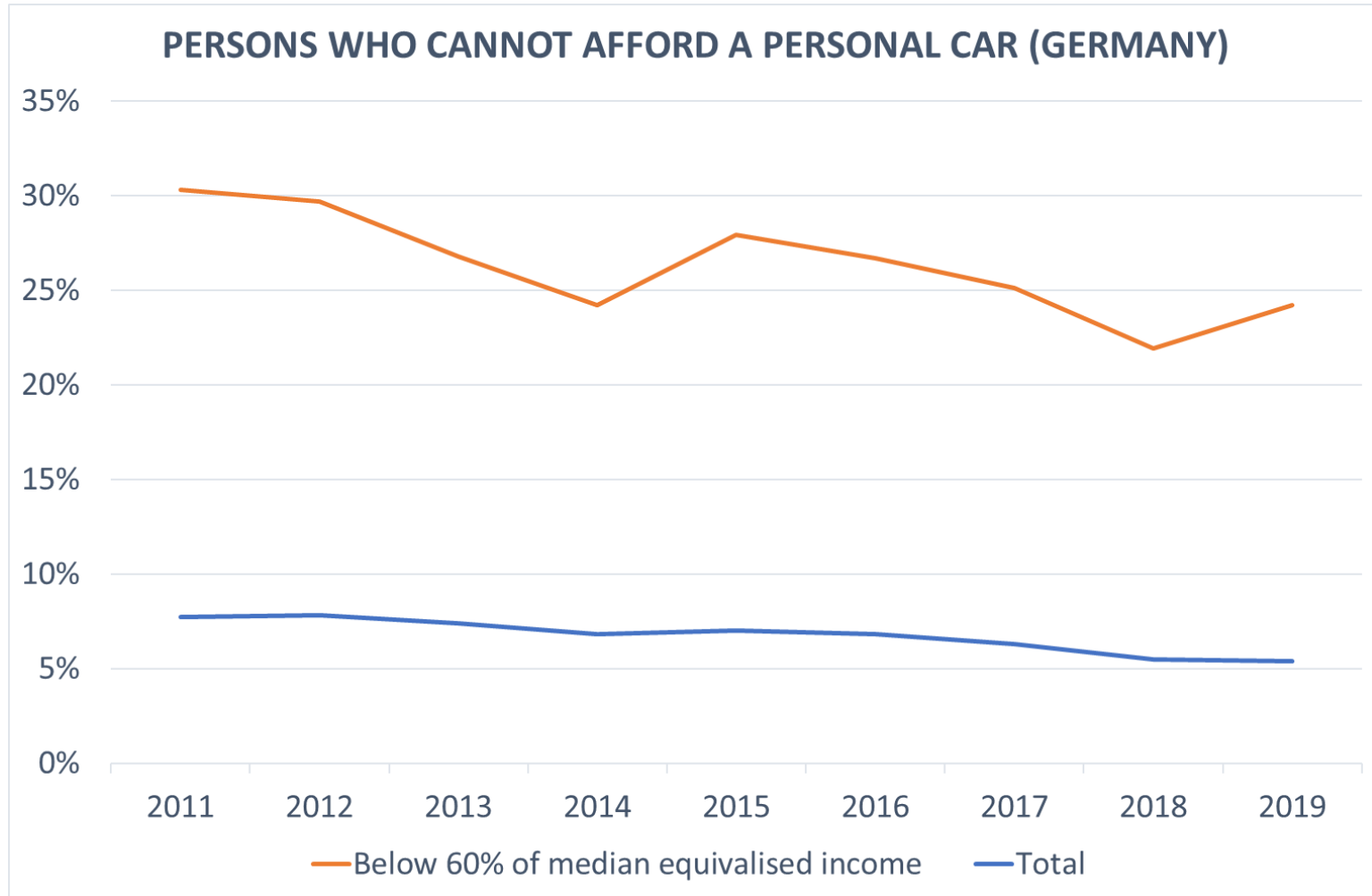
“In car-dependent societies, most negative effects in terms of, e.g., road safety, noise and air pollution are related to cars and their dominance over transport systems”

1. Mobility poverty – lack of transport resources



(Based on MiD 2017 data)

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(Based on EU-SILC data

https://ec.europa.eu/eurostat/databrowser/view/ILC_MDDU05_custom_1365725/)

1. Mobility poverty – lack of transport resources

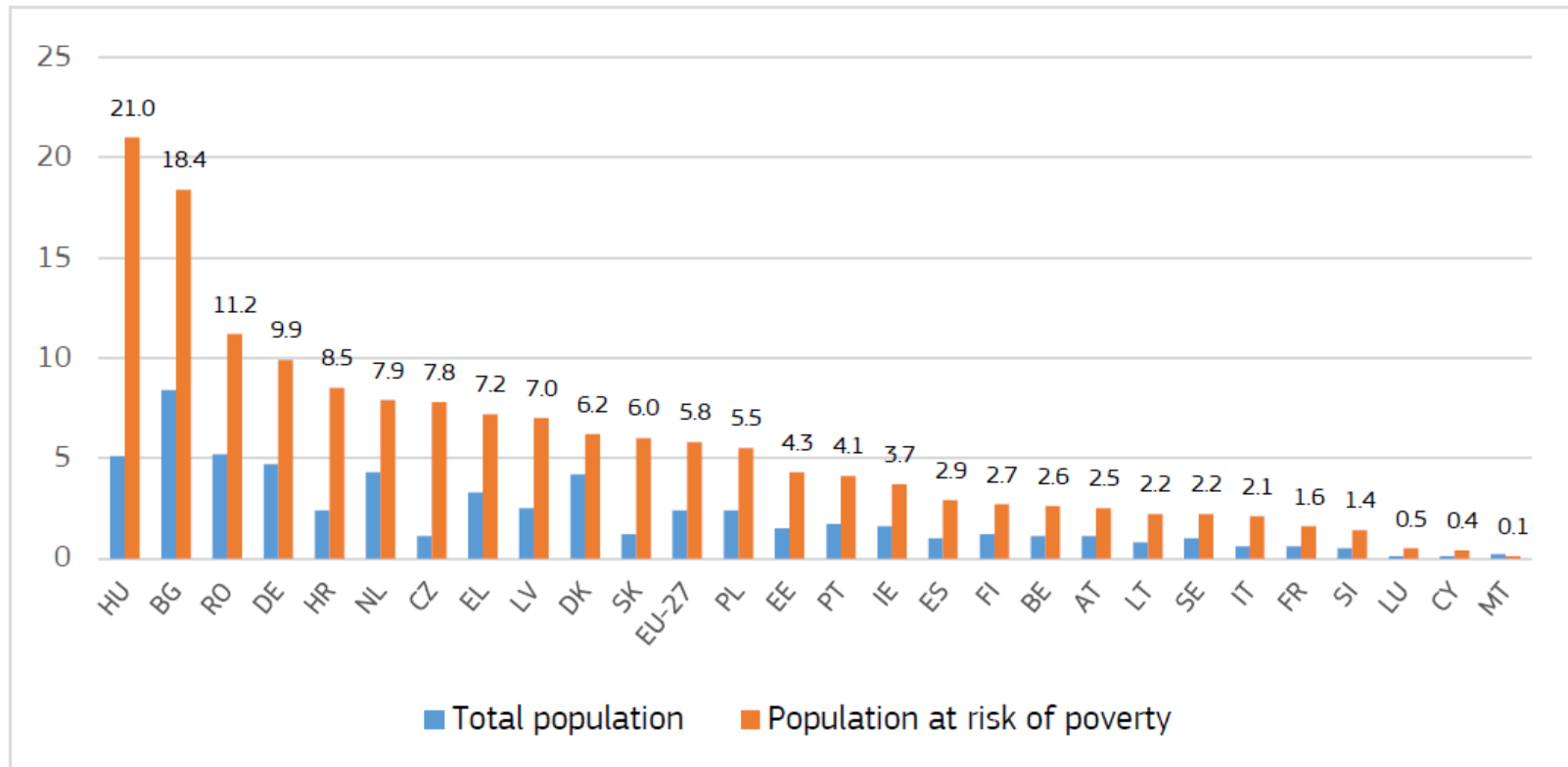
- The **car outperforms other modes in terms of access to employment** opportunities, with negative effects on the employment chances of those without cars (Bastiaanssen et al., 2020)
- **Lack of access to cars constrains participation** in social activities and contact with relatives (Morris et al., 2020; Rubin & Bertolini, 2016)
- But this is **highly variable across space** – as you move from dense cities to sparsely populated areas (Mattioli, 2013):
 1. share of households without cars decreases
 2. the carless are more concentrated among older people, singles & unemployed
 3. wider gap between households with / without cars in terms of travel activity
 4. wider gap between households with / without cars in terms of accessibility

2. Transport affordability – cars

- In car-dependent contexts, **low income households are under pressure to own & use cars, despite the substantial economic investment** they require.
- They face a **trade-off between curtailing travel and cutting expenditure** in other areas
- **“Forced car ownership”** in Germany (Mattioli, 2017):
 - 5% of German households (10% in the lowest income quintile)
 - 7% in rural areas vs. just 3% in urban areas
 - have high levels of social exclusion, material deprivation, economic strain, indebtedness and domestic energy poverty
 - living on the ‘edges of social inclusion’ (e.g., working poor)
- Other research suggests that they **struggle to cope when fuel prices increase**, and that this can impact on their well-being (Mattioli et al., 2018)

2. Transport affordability – public transport

Figure 12a: Persons who cannot afford regular use of public transport, by income group, EU countries, 2014 (%)



Source: Eurostat, own elaboration based on Eurostat, Table, ilc_mdes13a, February 2020.

(Baptista & Marlier, 2020)

2. Transport affordability – public transport

- **Reasons for public transport affordability issues among low-income people in Germany:**
 - PT fares have increased more rapidly than other goods since the 1990s (Frey et al., 2020)
 - the rise of the *Verkehrsverbünde* has driven up fares (1990-2015): +15% in Hamburg, +46% in München, +33% in Rhein-Ruhr (inflation-adjusted) (Buehler et al., 2019)
 - issues with *Sozialticket* schemes (Daubitz, 2014; 2017):
 - often more expensive than flat-rate for transport included in *Hartz-IV*
 - “working poor” are not eligible
 - some low-income people forego the *Sozialticket*, using more expensive single tickets, walking & cycling, foregoing trips entirely, or cutting on other necessities (Daubitz, 2014; 2017)

3. Travel-related time poverty

- When individuals **spend such a long time traveling that it leads them to miss out** on other important activities
- Often related to **(long) commutes with motorised modes**
- Associated with **multiple adverse effects**: less time on valuable activities, less social support, higher separation rates, lower fertility, negative health outcomes
- Affects **groups that are not typically ‘socially excluded’**: men, full-time employed, singles / without children, with higher income and education levels (“**work rich but time poor**”)
- Can be an issue for carless public transport commuters in large metropolitan areas as well (Mattioli, 2014)

3. Travel-related time poverty

- **Trends in commuting time** in Germany 1991-2016 (Rüger et al., 2018; BiB, 2018):
 - **26.8% of workers had a one-way commute longer than 30 minutes** in 2016, up from 20.4% in 1991
 - this share is higher among men (29.6%) than women (23.7%)
 - 4.8% had a one-way commute longer than 60 minutes in 2016

4. Exposure to traffic-related air pollution

- there are inequalities not just in the distribution of benefits, but also in the **distribution of the negative impacts of transport**
- **not just public health / environmental, but also social inequality problems** (although typically not seen as such)
- UBA review: **low-income individuals tend to be more exposed** to air pollution in Germany (Frey et al., 2020)
- **Often the most exposed are carless, low-income, urban households** who:
 - live in proximity to heavily trafficked roads (because of housing affordability)
 - contribute the least to the problem
 - are disadvantaged on other dimensions of transport-related inequalities as well

4. Exposure to traffic-related air pollution

- Socio-economic disadvantage and exposure to PM10 in Dortmund (Flacke et al., 2016)

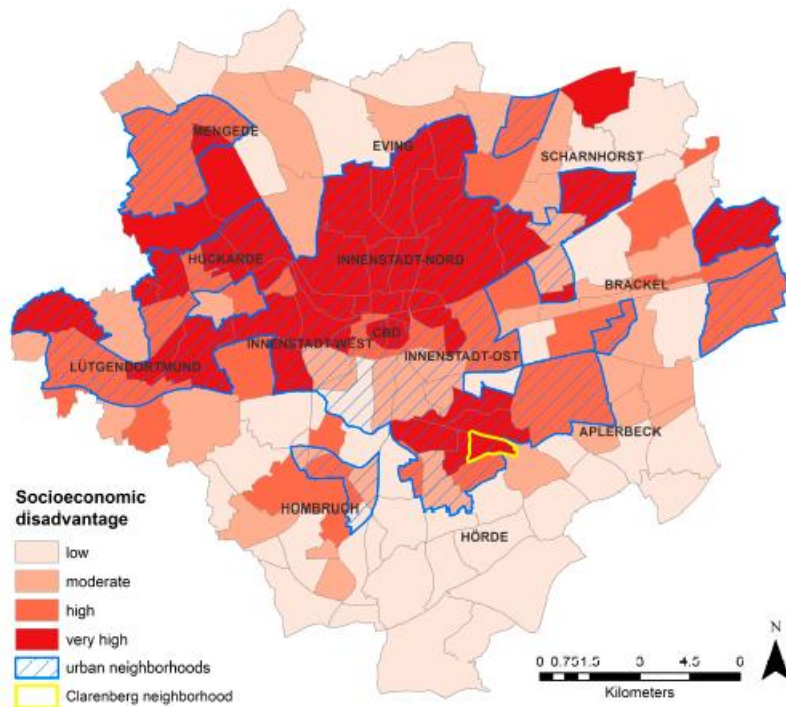
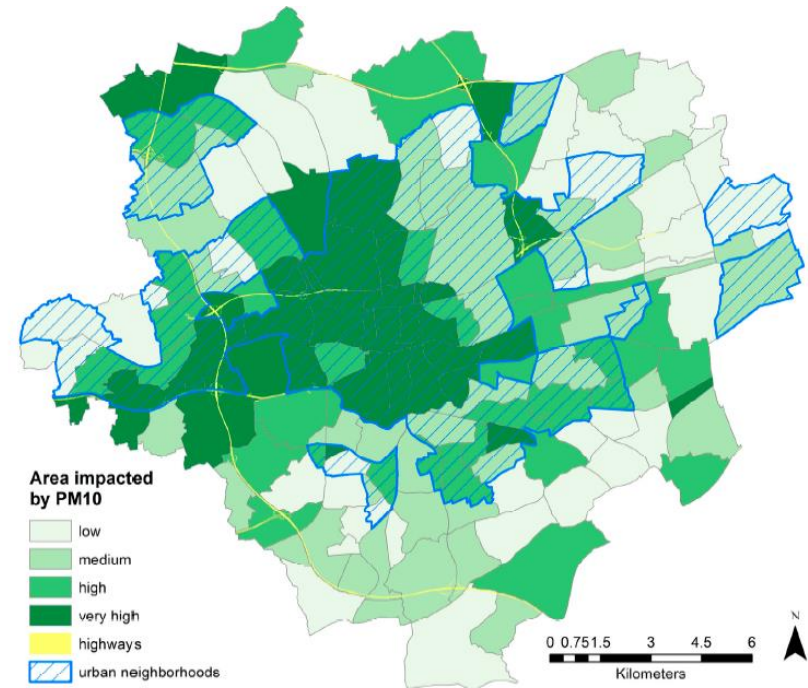


Figure 2. Proportion of socioeconomically-disadvantaged residents per neighborhood.



(c) PM10

The inequality impact of transport policy measures: a mental experiment

- What would be the **impacts on low-income households of introducing a CO2 tax** to reduce transport emissions?
 1. some low-income people rely on cars to get to work, and spend a disproportionate amounts on motoring already, will need to spend even more (**transport affordability**)
 2. ...at the same time, many low-income people have no car at all, so they are not affected – and might even benefit from revenue redistribution (**mobility poverty**)
 3. ...hopefully some will shift from car to public transport, but that may increase the duration of of their commute, making them time poor (**time poverty**)
 4. low-income groups are the most exposed to air pollution, would benefit the most from air quality improvements from reduced traffic (**exposure to externalities**)

Conclusion: towards a better debate?

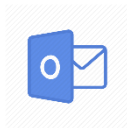
CURRENT FRAMING

- *Selective*: prioritises some dimensions of inequality
- “environmental” vs. “social” issues
- Who are the “winners & losers” of this policy measure?

BETTER FRAMING

- *Holistic*: consider all the multiple dimensions of inequality
- Acknowledge important social equity dimension to “environmental” issues
- Avoid assuming that status quo is fair (some of us are losing out already)

Thank you for your attention!



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