FOCAL-points

Household greenhouse gas footprints and Austrian climate policy: identifying leverage points for demand-side mitigation

Simone Gingrich[1], Alina Brad[2], Willi Haas[1], Carolin Hirt[2], Etienne Schneider[2], Dave Abson[3], Dominik Wiedenhofer[1], Christian Dorninger[1]

1 BOKU University, Austria, Institute of Social Ecology

2 University of Vienna, Austria, Institute of Political Science

3 Leuphana University Lüneburg, Germany, Social-Ecological Systems Institute

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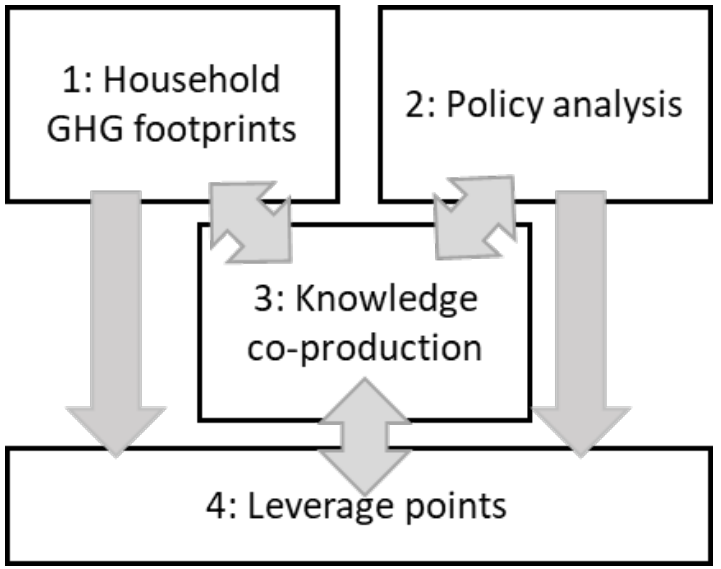
Project aims

Demand-side solutions are pivotal for climate-change mitigation, but how policies shape household emissions remains under-studied.

1. Establish a comprehensive and detailed database of Austrian household greenhouse has (GHG) footprints since 1995.
2. Conduct a multi-level policy analysis of demand-side climate policies for transport and housing.
3. Co-create knowledge on feasible options with stakeholders involved in and affected by demand-side climate policies.
4. Identify leverage points for effective demand-side climate-change mitigation policies in Austria.



Building on APCC Special Report “Strukturen für ein klimafreundliches Leben”

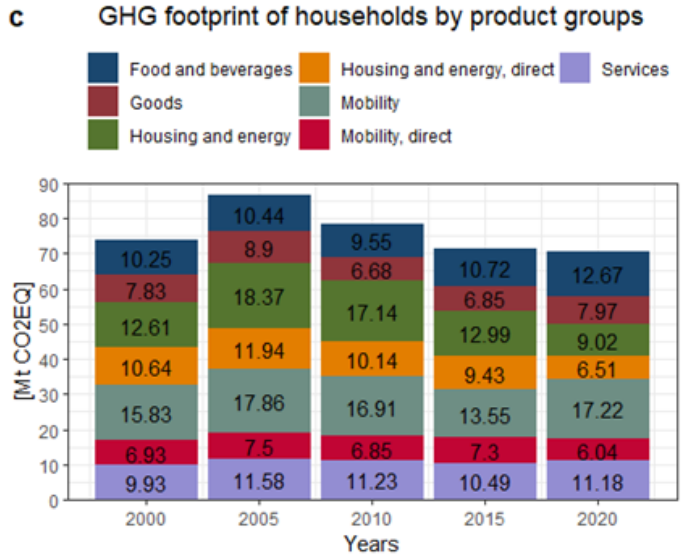
1. A high-resolution database of Austrian household GHG footprints 1995-2020

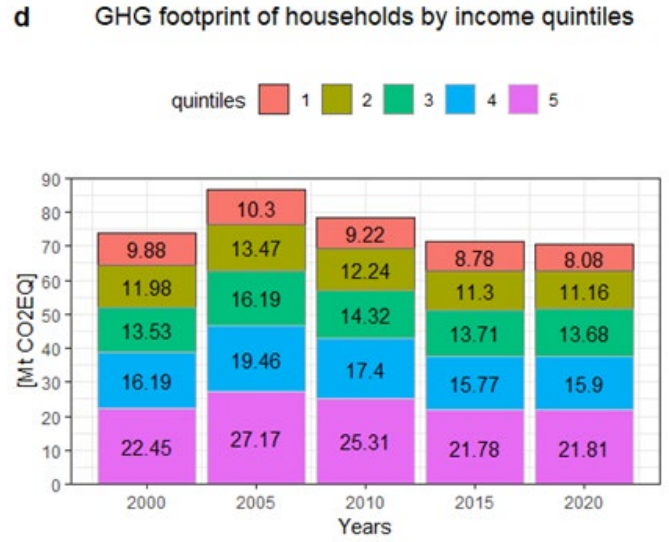
Integration of Multi-Regional Input-Output tables (EXIOBASE), Austrian national GHG inventory report, and consumer expenditure surveys for 1995 (2000)-2020:

- GHG footprints of households decreased by only 7% since 1995.
- Housing emissions decreased by c. 1/3 since 2000, mobility emissions remained constant.
- Lowest income quintile caused less than half the emissions of highest quintile.
- Emissions inequality declined slightly since 2000, because of strong housing emissions reduction in highest quintile – despite constantly high mobility emissions.

→ Manuscript in preparation: Christian Dorninger, Simone Gingrich, Dominik Wiedenhofer: Slow and unequal reduction in Austrian household GHG footprints 2000-2020, planned submission in Journal of Cleaner Production

Synergy: RegIOLab ACRP 15th Call



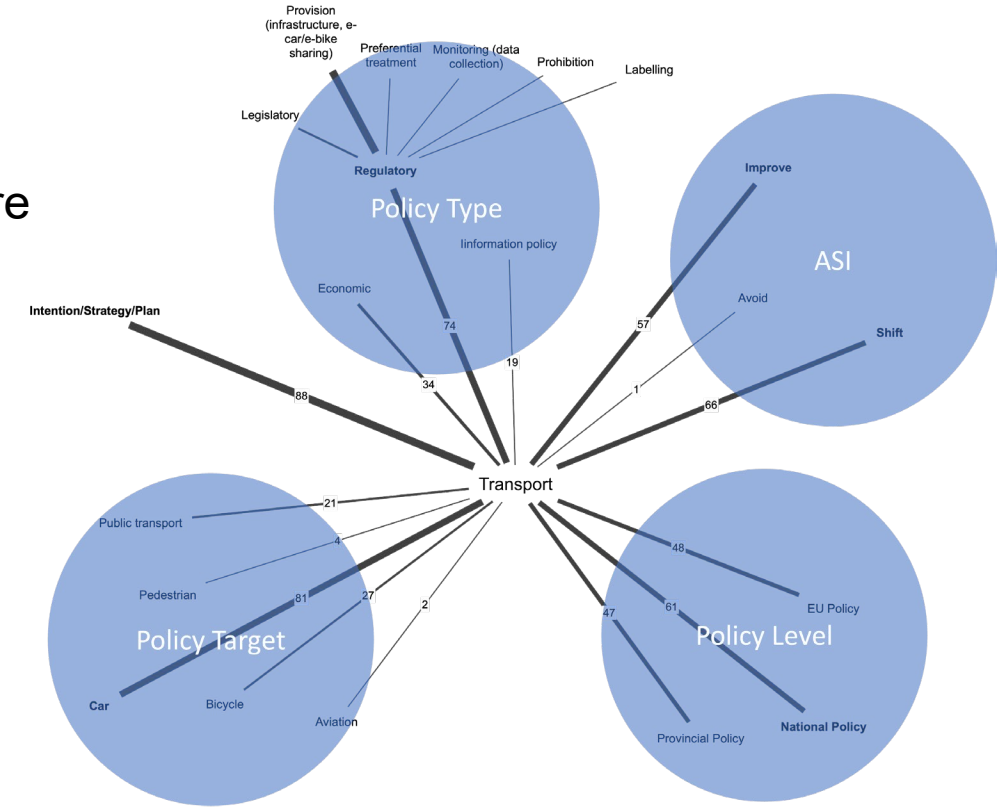


2. Multi-level analysis of demand-side climate policies for transport and housing

Identification and systematic coding of 339 relevant policies and public investment programs in transport and housing (1995-2020), expert interviews.

- Many policies fall in the category “intentions/strategy/plan”, i.e. are not necessarily binding.
- Focus of transport policies: regulatory interventions, e-mobility (cars, “shift”).
- Focus of housing policies: economic interventions, shift to renewables, homeowners (rather than tenants).

→ Manuscript in preparation: Alina Brad, Simone Gingrich, Carolin Hirt, Dominik Wiedenhofer, Christian Dorninger, Willi Haas, Dave Abson, Etienne Schneider: Demand side policies exist but remain ineffective

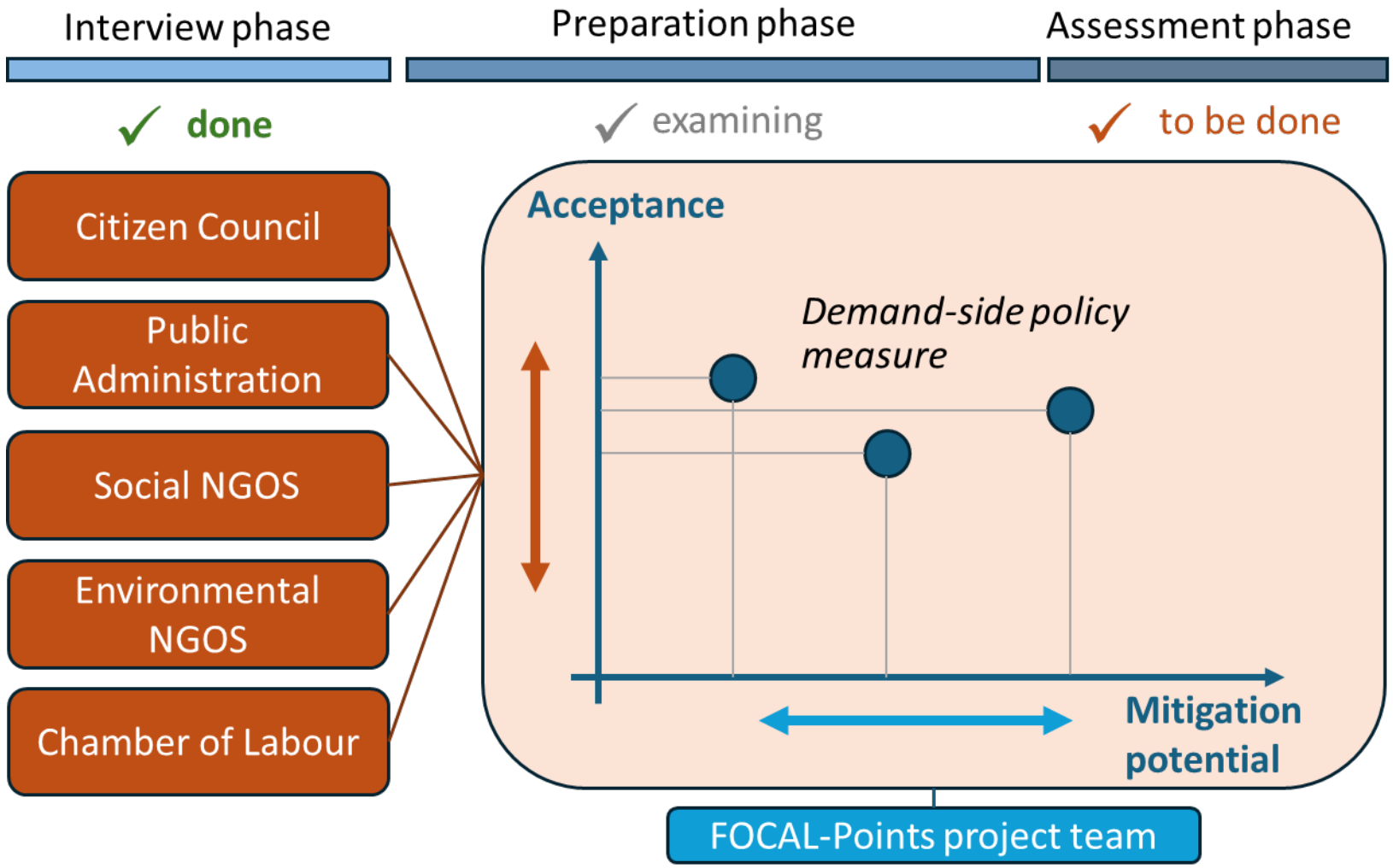


3. Knowledge co-creation

Identification and first interactions with stakeholders.

Workshop staging a citizen council on sufficiency: BOKU Nachhaltigkeitstag 2023.

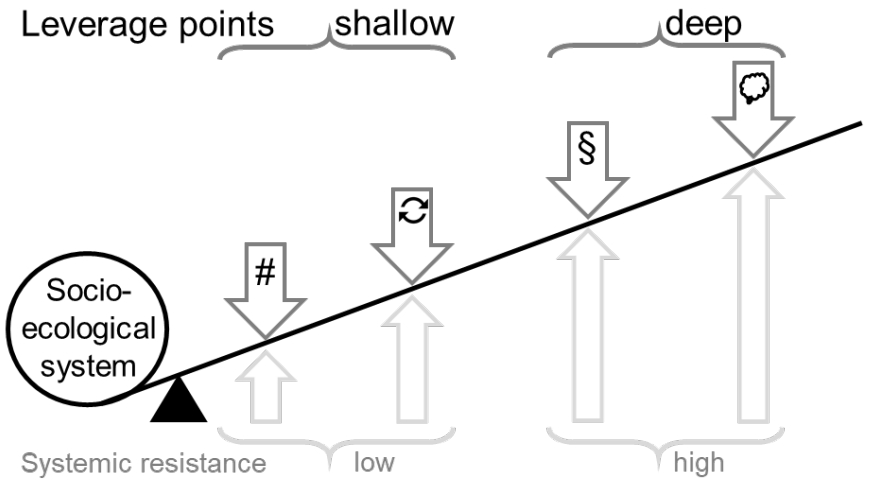
Assessment phase planned in fall 2024 to explore acceptance of different demand-side mitigation options.

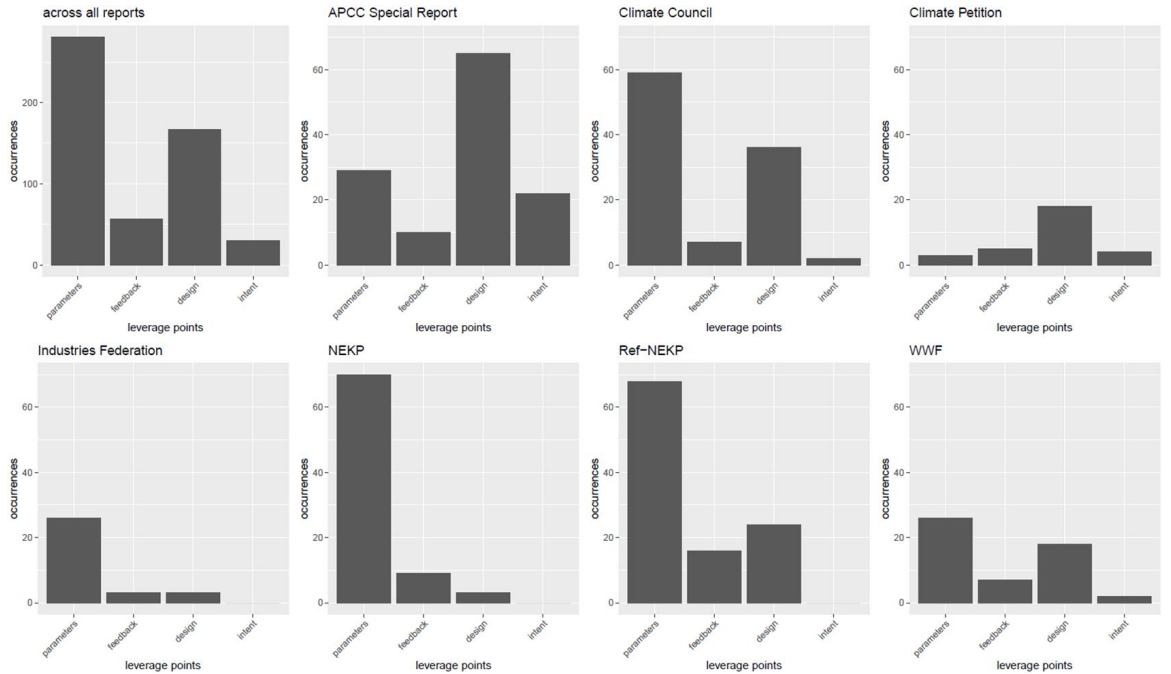


4. Leverage-points integration

Hypothesis: Current policy strategies fall short in achieving mitigation targets because they neglect deeper leverage points.

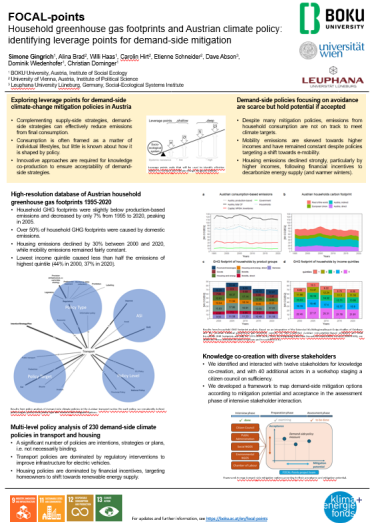
- The leverage points scale was used to map mitigation proposals by different actors.
- A similar approach will be used to integrate findings from 1-3.
- We will identify intervention points for future demand-side climate-change mitigation policies that are effective, fair, and acceptable.





Preliminary conclusions

- Despite many mitigation policies, emissions from household consumption are not on track to meet climate targets.
- Mobility emissions are skewed towards higher incomes and have remained constant despite policies targeting a shift towards e-mobility.
- Housing emissions declined strongly, particularly in higher income groups, following financial incentives to decarbonize energy supply (and warmer winters).
- Demand-side policies focusing on avoidance are scarce but hold potential if accepted.



Thank you for your attention!

https://boku.ac.at/focal-points/

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