Interreg Baltic Sea Region

Co-funded by the European Union

ENERGY TRANSITION
Climate-4-CAST

Member of EnTRA-platform
Energy Transition in BSR

Interreg Baltic Sea Region

Co-funded by the European Union

PROJECT PLATFORMS
EnTRA

Urban Climate Governance

Framework for Climate Budgeting

UBC-Talks about Climate Budget | Webinar | 02.12.2025

Jörg Knieling

HafenCity University Hamburg
Institute of Urban Planning and Regional Development

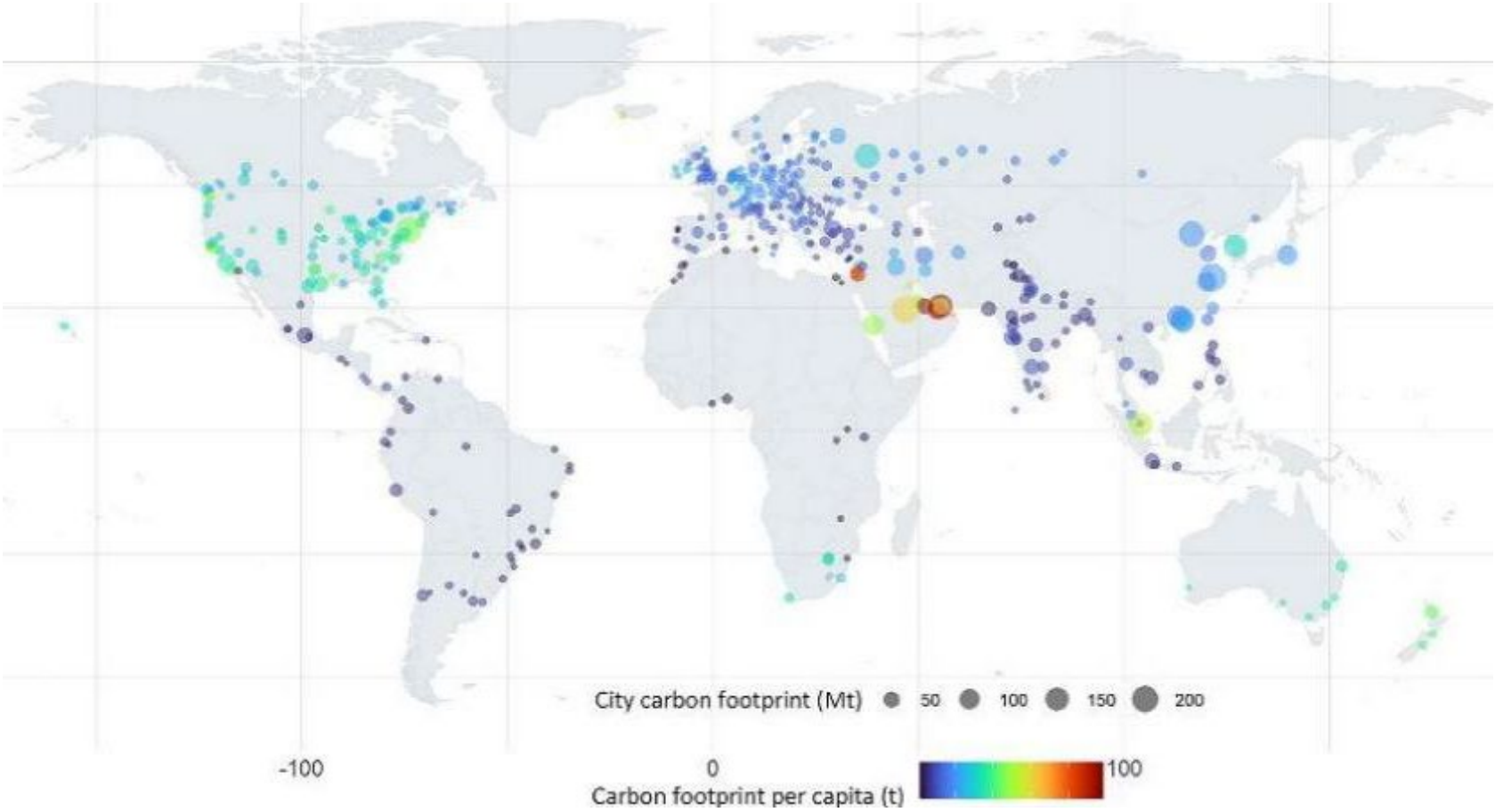
Climate-4-CAST is co-funded by the Interreg Baltic Sea Region Programme 2021-2027

Agenda

1. Climate Change:
   A Global and Local Challenge
2. Urban Climate Governance
3. Tools & Approaches in Urban Climate Governance
4. Climate Budgeting as a Governance Innovation
5. Wrap-up & Reflection

Source: https://www.tampere.fi/en/

1. Climate Change: A Global & Local Challenge



Total carbon footprint and per capita footprint of global cities, 2020
Source: Sun et al. 2022, Using crowdsourced data to estimate the carbon footprints of global cities

Why Cities Matter?

Emission hotspots

Climate frontline

The Need for Action!

Lead the way

Protect the communities

How?

Urban Climate Governance

2. Urban Climate Governance

"Urban climate governance refers to the ways in which public, private, and civil society actors and institutions articulate climate goals, exercise influence and authority, and manage urban climate planning and implementation processes."
(Anguelovski & Carmin, 2011)

Why Urban Climate Governance Matters?

- Multi-actor: government + stakeholders (private, civil society)
- Multi-instrumental: formal, informal, economic + organizational instruments
- Multi-level: local / regional ⟷ national

Governance framework:

- An "ideal" setting that provides long-term orientation and overarching umbrella for future development of the cities

Fig.: Good Governance Practice

Source: Own Illustration based on C40 Cities, 2021

Interreg Baltic Sea Region
Co-funded by the European Union
ENERGY TRANSITION Climate-4-CAST

Urban Climate Governance

Multi-level and multi-actor Governance

- Network of relationships between governmental levels, non-state actors, and organizations in climate action.
- Key idea: Climate change requires collective decision-making and shared competencies across levels.
  - ❑ **National level**: sets regulations, provides funding, supports cities
  - ❑ **Local/regional level**: implements policies, manages local adaptation & mitigation
  - ❑ **Transnational level**: city networks (C40, ICLEI, UBC) enable knowledge-sharing and joint initiatives

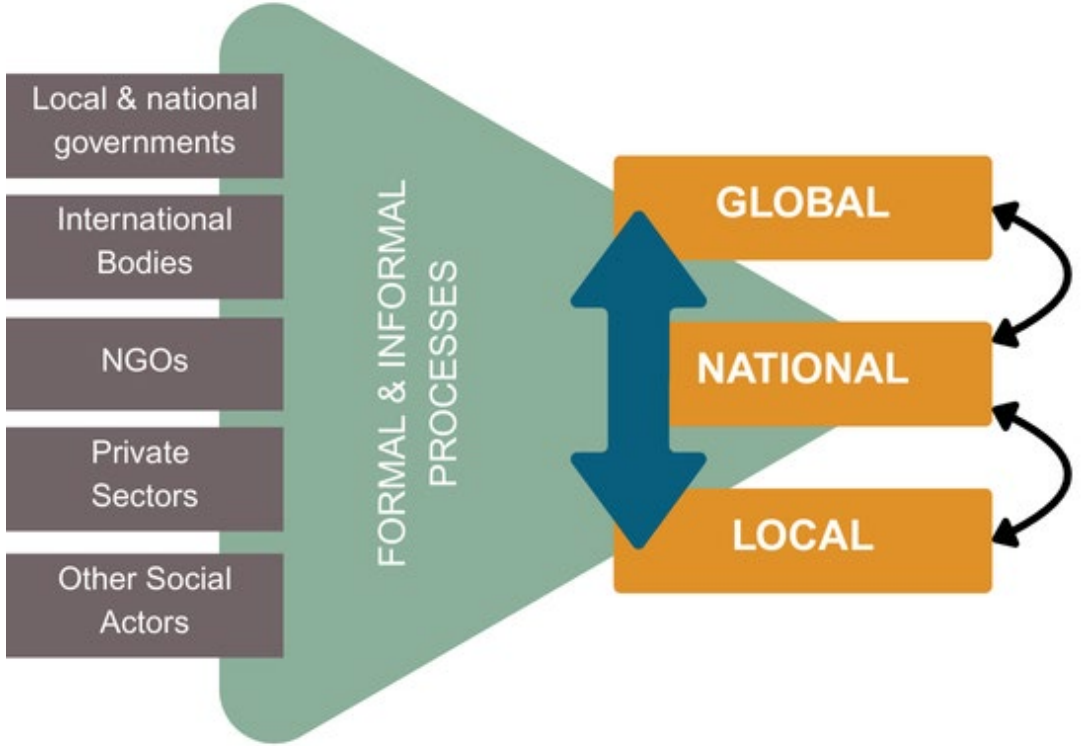


Fig.: Multilevel Governance

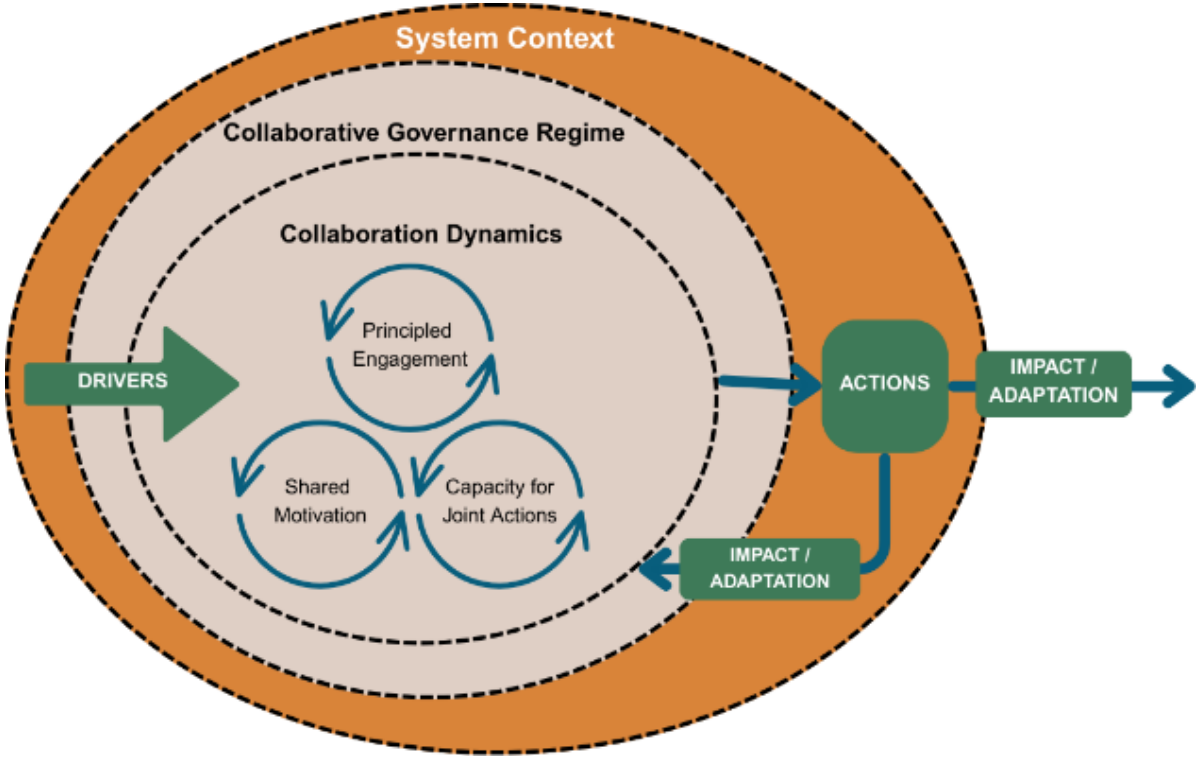
Source: Own Illustration based on Bulkeley et al. 2003

Interreg Baltic Sea Region
Co-funded by the European Union
ENERGY TRANSITION Climate-4-CAST

Urban Climate Governance

Collaborative Governance

- Public agencies engage non-state stakeholders in formal, consensus-oriented, deliberative decision-making.
- Key element
  - ❑ **Starting conditions**: consider power imbalances, incentives, and past cooperation/conflicts.
  - ❑ **Design & leadership**: clearly define roles, encourage interdependence, and build networks.
  - ❑ **Collaboration process**: foster dialogue, trust, "small wins," and commitment to shared goals.
  - ❑ **Outcomes**: achieve joint action, iterative learning, and tangible policy impact.
- **Governance as dynamic and cyclical, not linear.**



The Integrative Framework for Collaborative Governance

Source: Own Illustration based on Emerson et al. 2012

Interreg Baltic Sea Region
Co-funded by the European Union
ENERGY TRANSITION
Climate-4-CAST

3. Tools & Approaches in Urban Climate Governance

Climate Change Mitigation in Cities: Voluntary vs Regulatory

- Voluntary commitments
- Regulatory Tools
- Collaborative governance
- Infrastructure investment
- Innovative tools
- Transnational networking

Voluntary / Soft Tools	Regulatory / Hard Tools
Emissions goals & pledges (e.g., net-zero by 2030/2040)	Laws & regulations (building codes, emission standards)
Climate Action Plans (CAPs), often non-binding	Mandatory reporting (GHG inventories)
Partnerships & networks (C40, ICLEI, Covenant of Mayors)	Zoning & land-use planning
Participatory Budgeting, Citizen participation, stakeholder dialogues	Financial instruments: carbon pricing, green bonds, subsidies, PPPs
Knowledge-sharing & experimentation (Living Labs, pilot projects)	Integration of targets into legal / financial frameworks
Sources: van der Heijden 2019; Haarstad et al. 2024; Shtjefni et al. 2024; Barrett et al. 2024.	

Key Challenges Cities Face

Implementation Gaps:

- Cities announce ambitious goals, but actions lag due to weak budgets, limited technical capacity, and siloed department structure
- Frontrunner paradox: a few innovative cities skew perception of broader capacity
- CAPs often focus on planning rather than measurable interventions

Capacity and Resources:

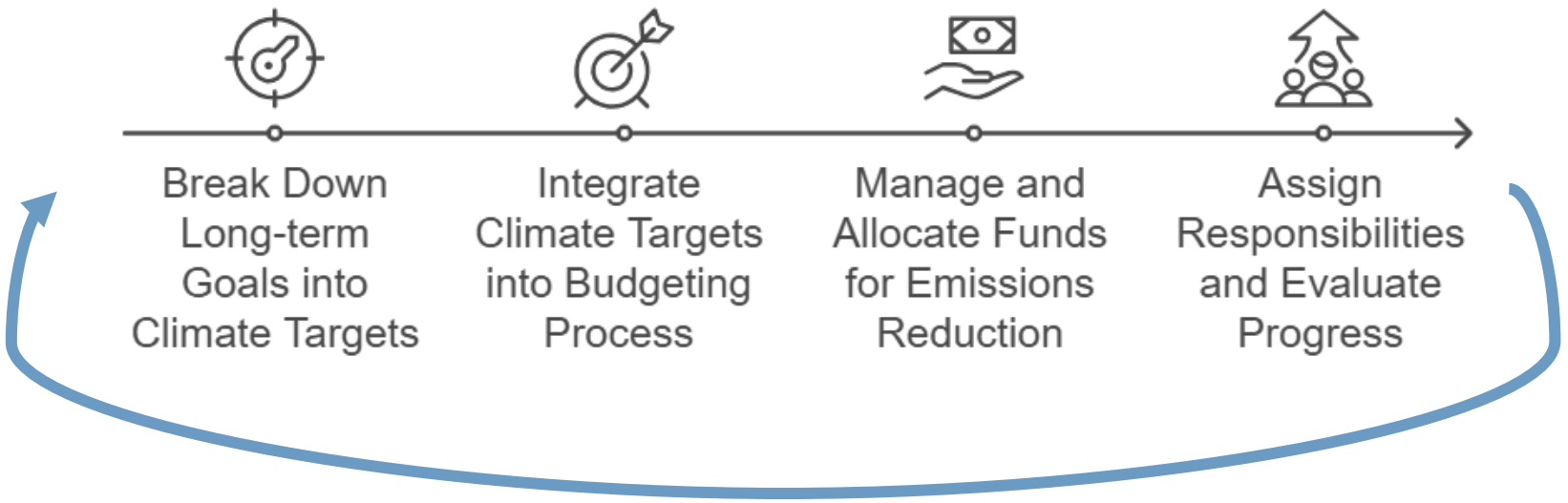
- Smaller cities: lack skills, staff, and financial capacity
- Larger cities: complex stakeholder networks and institutional barriers
- Capacity-building is a critical need

Data and Transparency:

- Limited harmonized GHG inventories and reporting; weak monitoring of climate outcomes
- Reduces accountability and evidence-based decision-making

4. Climate Budgeting: A Governance Innovation

Climate Budget: What?



Source: Illustrated by the author from C40 Cities (2024): Climate budgeting – Transforming governance to mainstream climate action

Climate Budget: Why?

- Effective climate action
- Enhanced accountability
- Facilitated collaboration
- Link financial budget to climate target

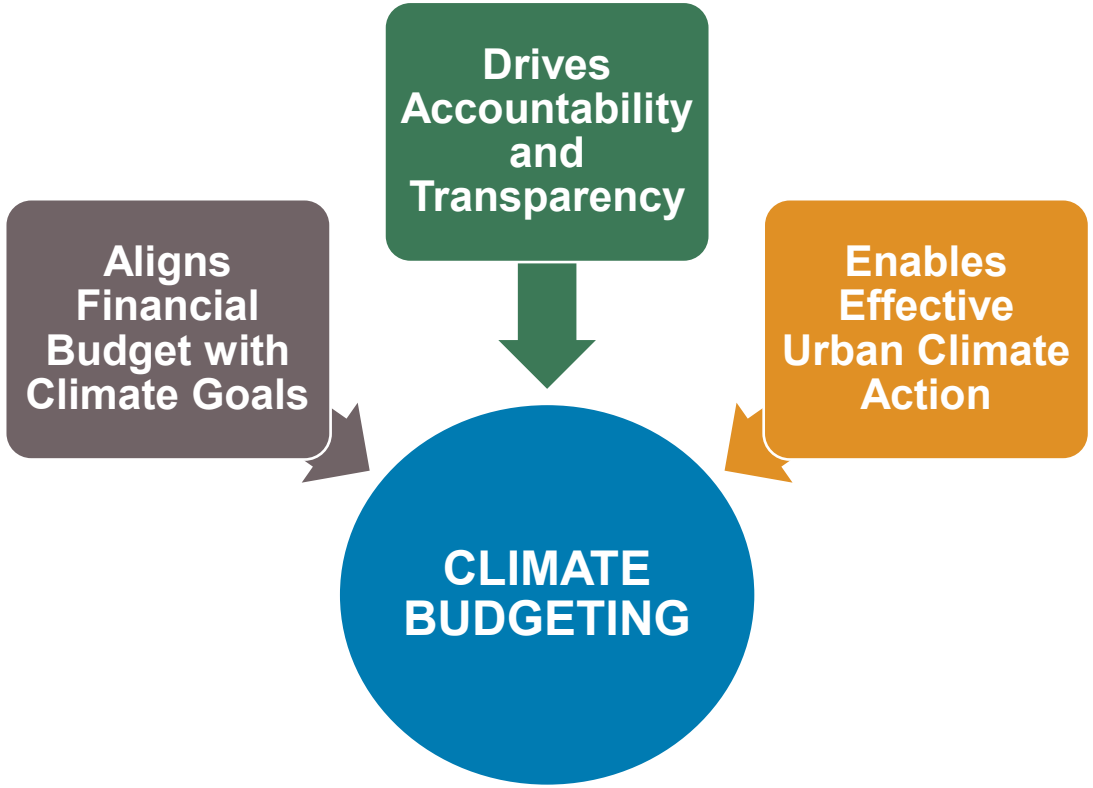
Source: Illustrated by the author from Robertsen, C. (2023): Climate budgeting at local level. Directorate-General for Economic and Financial Affairs.

Interreg Baltic Sea Region
Co-funded by the European Union
ENERGY TRANSITION Climate-4-CAST

Climate Budgeting: A Governance Innovation

Linking Challenges to Needs

- **Implementation Gap** → operationalize climate actions by identifying and closing delivery gaps
- **Budget Misalignment** → systematically align climate targets with financial planning and resource allocation
- **Silos in Governance** → integrated, cross-departmental collaboration to accelerate action
- **Transparency Deficit** → robust monitoring and reporting to show the real impact of policies
- **Capacity Shortfalls** → strengthen municipal expertise, data access, and decision-support tools



5. Wrap-up & Reflection

Urban Climate Governance

- Multi-Actor
- Multi-level
- Dynamic and Evolving

Climate Budgeting as a Governance Tool

- Addresses uncertainties in emissions impacts, costs, and timing
- Strengthens municipal capacity to take bold, data-driven decisions for climate action
- Provides a scalable framework that other cities can adopt for climate neutrality

Interreg Baltic Sea Region
Co-funded by the European Union
ENERGY TRANSITION
Climate-4-CAST

Interreg Baltic Sea Region

Co-funded by the European Union

ENERGY TRANSITION
Climate-4-CAST

Member of EnTRA-platform
Energy Transition in BSR

Interreg Baltic Sea Region

Co-funded by the European Union

PROJECT PLATFORMS
EnTRA

Thank you for your attention!

UBC-Talks about Climate Budget | Webinar | 02.12.2025

Jörg Knieling / Donald Alimi / Kimberly Tatum

HafenCity University Hamburg
Institute of Urban Planning and Regional Development

Climate-4-CAST is co-funded by the Interreg Baltic Sea Region Programme 2021-2027

References

Anguelovski, I., & Carmin, J. (2011). Something borrowed, everything new: Innovation and institutionalization in urban climate governance. *Current Opinion in Environmental Sustainability, 3*(3), 169–175. https://doi.org/10.1016/j.cosust.2010.12.017

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory, 18*(4), 543–571. https://doi.org/10.1093/jopart/mum032

Barrett, B. F. D., Trencher, G. P., Truong, N., & Ohta, H. (2024). How can cities achieve accelerated systemic decarbonization? Analysis of six frontrunner cities. *Environmental Science & Policy, 148*, 107–123.

Burley Farr, K., Song, K., Yeo, Z. Y., Johnson, E., & Hsu, A. (2023). Cities and regions tackle climate change mitigation but often focus on less effective solutions. *Global Environmental Change, 80*, 102–136.

Council on Foreign Relations. (2025). History of climate action timeline. *World101*. Retrieved from https://education.cfr.org/learn/timeline/history-climate-action

C40 Cities. (2021, May). Good climate governance in practice: Case studies from leading cities. *C40 Knowledge Hub*. Retrieved from https://www.c40knowledgehub.org/s/article/Good-Climate-Governance-in-Practice?language=en_US

Emerson, K., Nabatchi, T., & Balogh, S. (2012). *Collaborative governance regimes*. Washington, DC: Georgetown University Press.

FEU-US. (2025). Timeline of climate action. *The Truth About Climate Change*. Retrieved from https://feu-us.org/our-work/truth_cc/timeline/

Haarstad, H., Grandin, J., & Solberg, R. R. (2024). Do cities have tools to meet their climate targets? The limits of soft governance in climate action plans. *Urban Climate, 48*, 101–123.

Hofstad, H., Millstein, M., Tønnesen, A., Vedeld, T., & Hansen, K. B. (2021). The role of goal-setting in urban climate governance. *Environmental Policy and Governance, 31*(6), 414–430.

NetZero Events. (2025). Carbon neutrality by 2050: What are the EU targets? *NetZero Events*. Retrieved from https://netzero-events.com/carbon-neutrality-by-2050-what-are-the-eu-targets/

Shtjefni, D., Ulpiani, G., Vetters, N., Koukoufikis, G., & Bertoldi, P. (2024). Governing climate neutrality transitions at the urban level: A European perspective. *Journal of Cleaner Production, 435*, 140–155.

Sun, X., Mi, Z., Sudmant, A., Coffman, D'M., Yang, P., & Wood, R. (2022). Using crowdsourced data to estimate the carbon footprints of global cities. Advances in Applied Energy, 8, Article 100111. https://doi.org/10.1016/j.adapen.2022.100111

Ulpiani, G., & Vetters, N. (2023). On the risks associated with transitioning to climate neutrality in Europe: A city perspective. *Sustainability, 15*(9), 6421.

van der Heijden, J. (2019). Studying urban climate governance: Where to begin, what to look for, and how to make a meaningful contribution to scholarship and practice. *Environmental Policy and Governance, 29*(4), 257–271.