

Garden and kitchen biowaste management in households

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POWER4BIO project



Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice



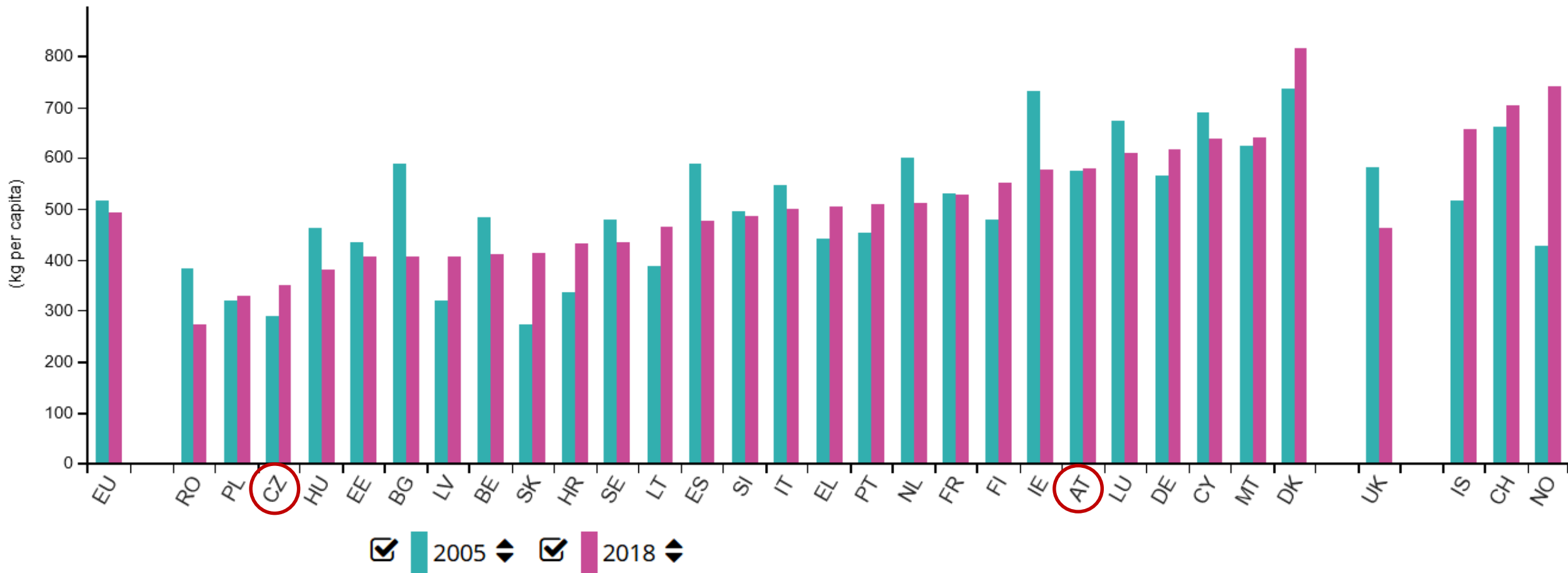
Topics of the presentation

- Household management of biowaste in gardens
- Household management of biowaste from kitchens
 - Czech and Austrian case studies
 - Focus on urban-rural differences



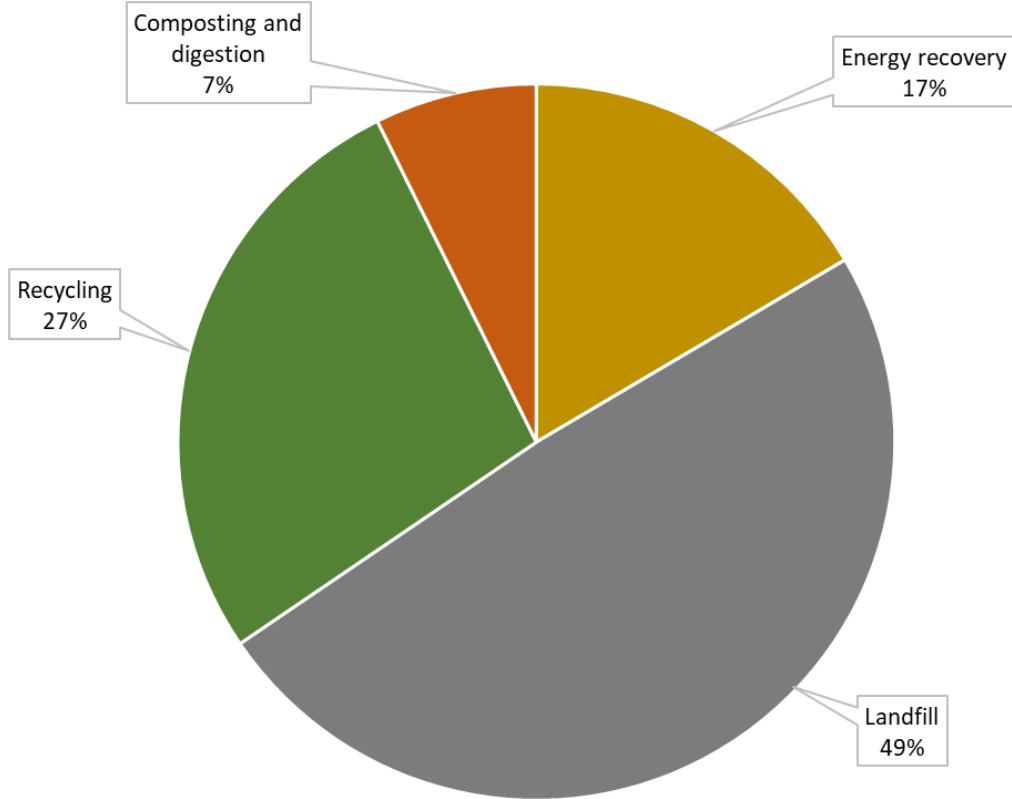
Waste production

Municipal waste generated, 2005 and 2018

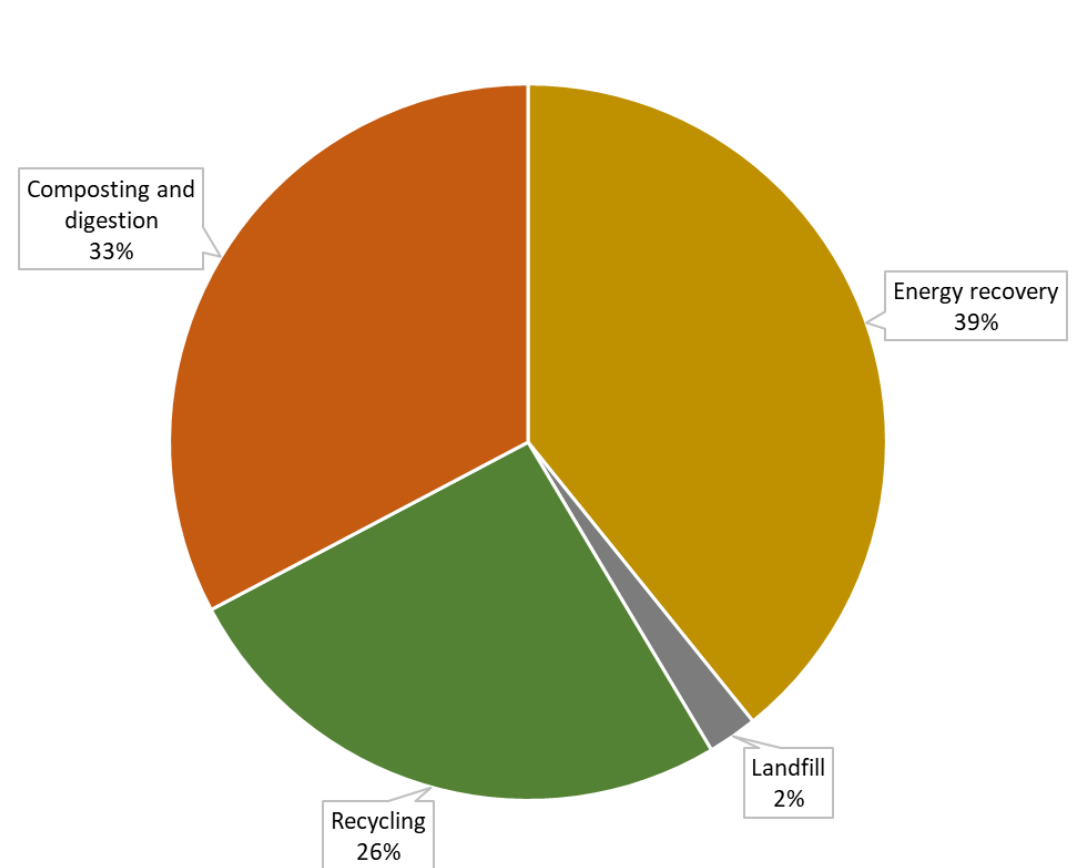


Waste treatment

Municipal waste treatment (Czechia)



Municipal waste treatment (Austria)



Case studies

- Czech representative population (N = 1047)
- Czech gardeners (N = 1037)
- Austrian gardeners (N = 821)

- All data – spring 2020
 - Questionnaire survey (self-reported behaviour)
 - Combination of face-to-face and online questionnaires

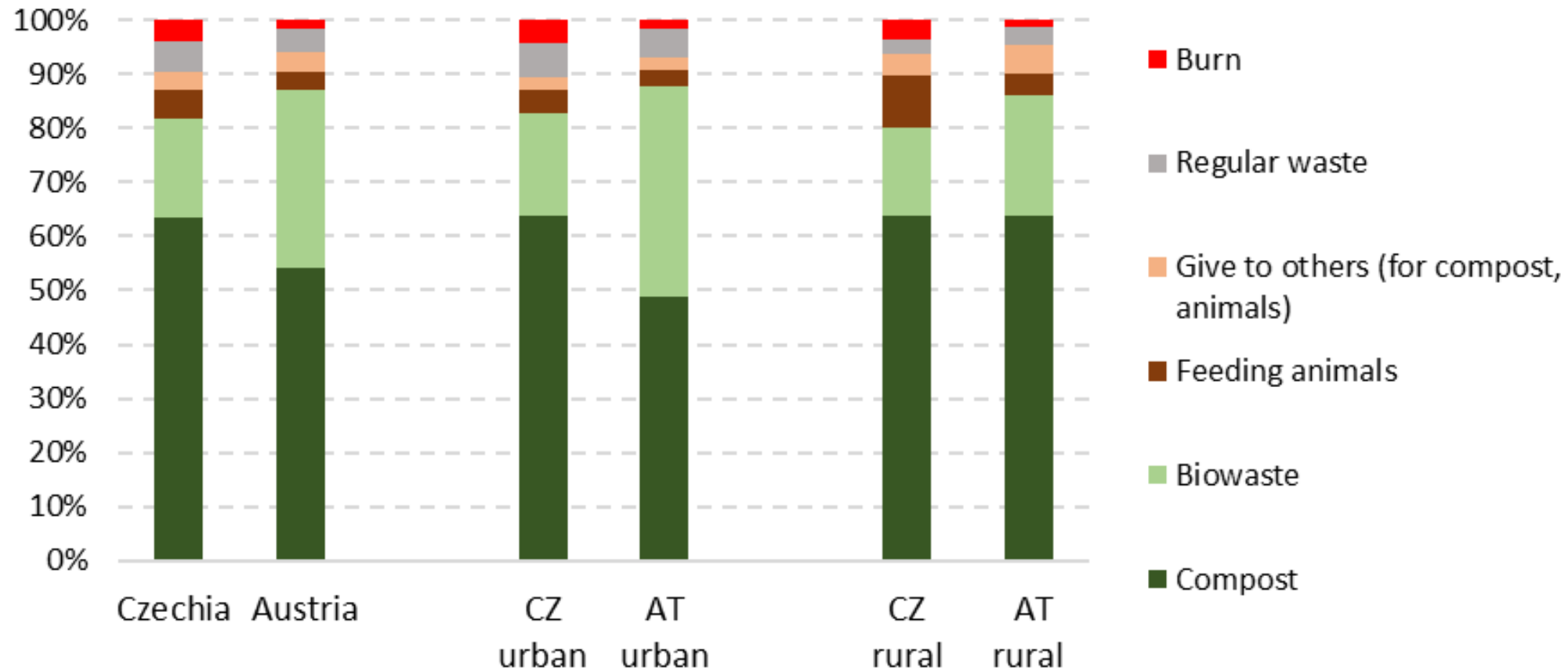
- Data collected in Spaces of Quiet Sustainability project (Czech Science Foundation No. 19 10694S)

Food production in gardens

- Gardening, food self-provisioning, subsistence agriculture
 - Widespread activity with potential benefits (45 % of population in Czechia)
 - Shortest food supply chain
 - Greenhouse gas mitigation – low carbon footprint of food
 - Cca 40-90 kg CO₂/year/person saved among Czech gardeners (Vávra et al. 2018)
 - Circular economy and use of materials – e.g. composting
 - important element for carbon sequestration and water absorption (organic matter important for soil)
 - CO₂ cut: 1. Efficient biogas station; 2. Composting; 3. Landfill (Cleveland et al. 2017)
 - Urban greenery – adaptation to climate change, ecosystem services
 - Social & economic benefits – health & leisure, cultural significance, networks, resilience, financial savings

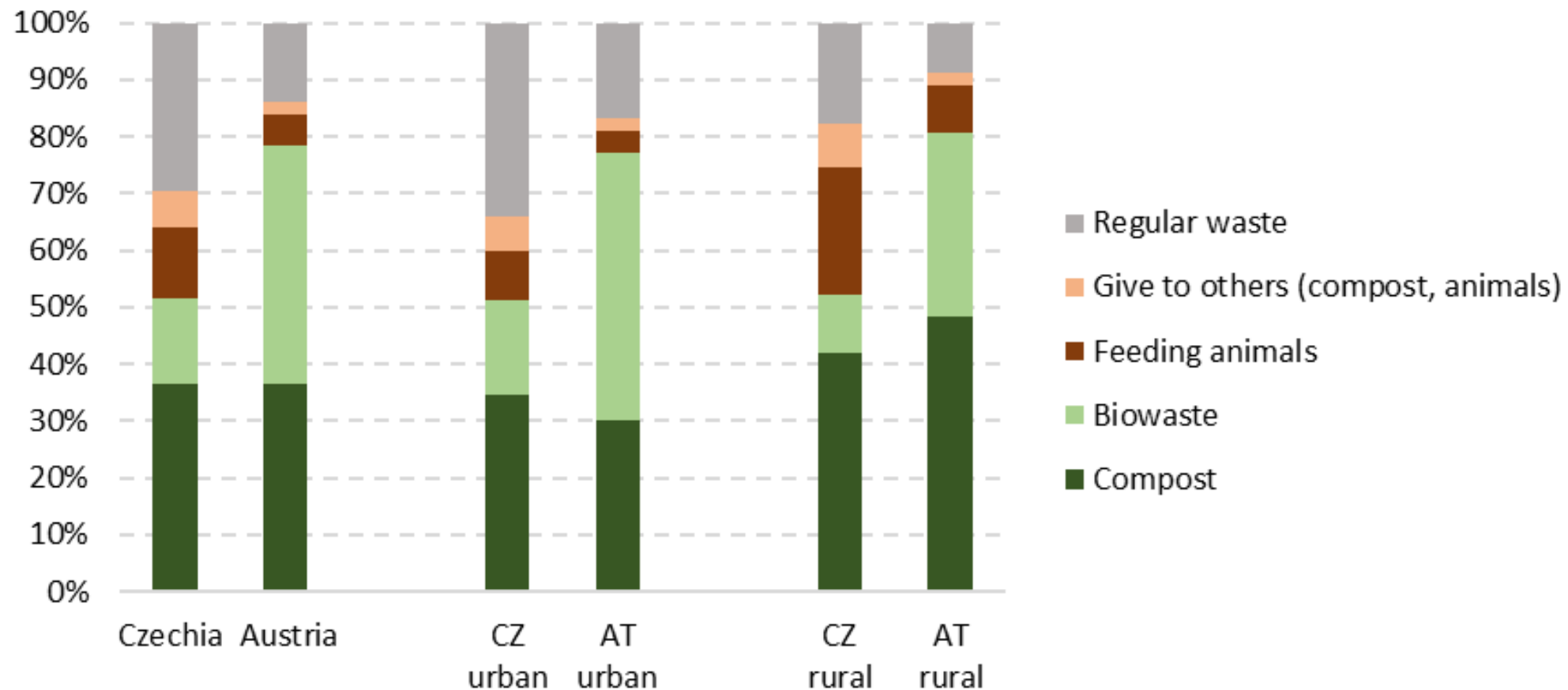
Gardening households – garden biowaste

Management of garden waste in gardening households
(share of waste)



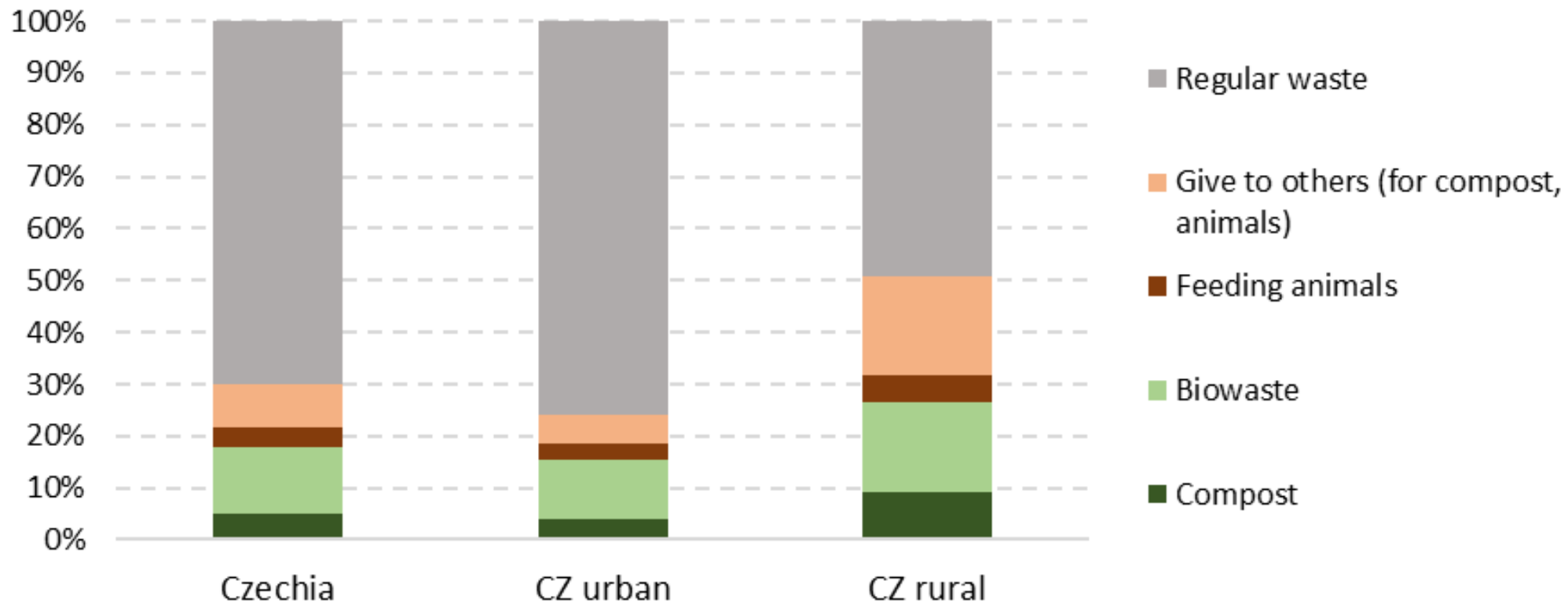
Gardening households – kitchen biowaste

Management of kitchen waste in gardening households
(share of waste)



Non-gardening households – kitchen biowaste

Management of kitchen waste in Czech non-gardening households (share of waste)



Key findings

- Gardeners
 - Garden waste
 - Urban areas – Czechia more composting, Austria more biowaste; no differences in rural areas
 - Czech gardeners – more animal feeding
 - Overall sustainable waste management (local cycle)
 - Kitchen waste
 - Big CZ-AT differences in biowaste (especially in urban areas, AT > CZ)
 - Czechia – more animal feeding
- Non-gardeners
 - Mostly regular (mixed) waste
 - Waste sharing in rural areas
- Potential of biowaste use in Czechia – improve management especially in case of non-gardening households (55 % of population)

Further information

- Spaces of Quiet Sustainability project website
 - <https://tichaudrzitelnost.geogr.muni.cz/en/>
- Series of three webinars on informal food production (starting 2 December 2020)
 - <https://tichaudrzitelnost.geogr.muni.cz/en/informal-food-production-and-sharing-webinars/>
- Special issue 'A Systemic Perspective on Urban Food Supply: Assessing Different Types of Urban Agriculture' of Sustainability (co-edited by Jan Vávra)
 - https://www.mdpi.com/journal/sustainability/special_issues/Urban_Food_Urban_Agriculture
- Special issue 'The Invisible Sustainability of Otherness: Rethinking Food Systems from the Margins' of Sustainability (co-edited by Petr Jehlička)
 - https://www.mdpi.com/journal/sustainability/special_issues/rethinking_food_systems_from_the_margins

Thank you for your attention

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🌐 <http://www.ef.jcu.cz/about-faculty/departments/department-of-regional-management/osoba/24446>

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🌐 <https://tichaudrizitelnost.geogr.muni.cz/en/>

🐦 [@QuietSust](https://twitter.com/QuietSust)

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SQS

Spaces of Quiet
Sustainability



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REGIONS FOR
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