

M U N I
E C O N

Improving biowaste management practices using municipal and citizen perspectives

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Introduction

- Biowaste generally represents a substantial part of municipal waste, Czechia included
- Collection of green (garden) waste became mandatory in Czechia since 2015
 - For some municipalities a new practice, for many an activity that has been conducted for decades, especially in more rural and more agricultural regions – thus perception and compliance vary
- Main question – what is the progress so far?

Motivation

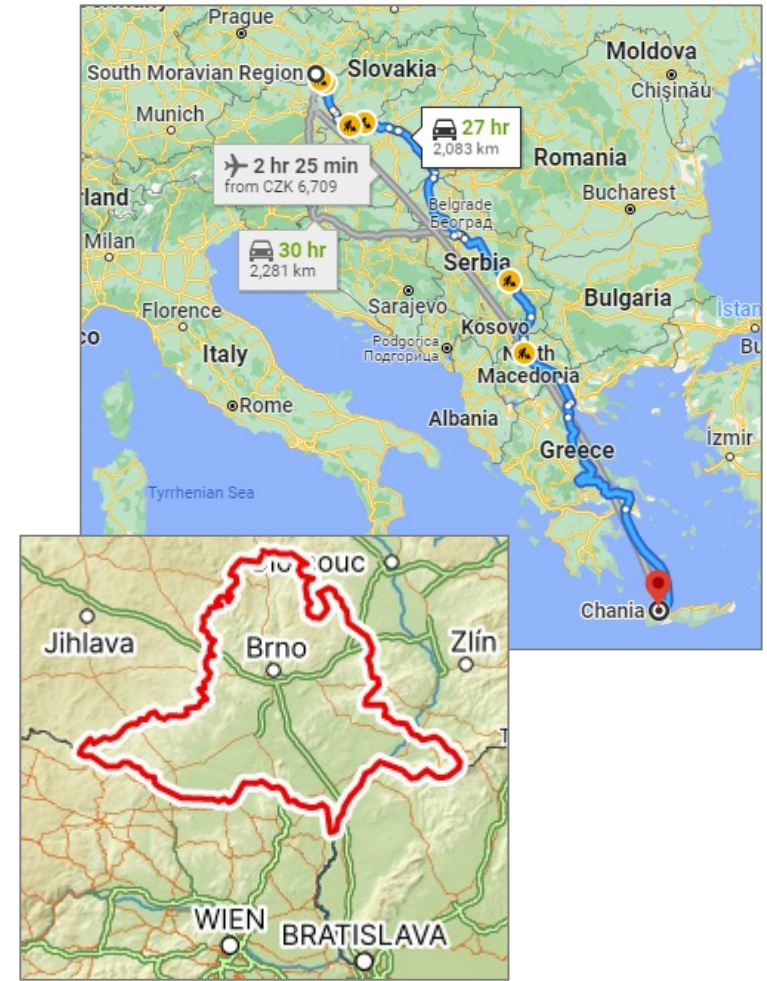
- Biowaste collection mandatory for some time,
- But perceived lack of evaluation studies
 - Some evidence on good practices, but often one-side perspective
- A general need for a more comprehensive feedback on how current system works and how are people and municipalities satisfied with it
 - And what specifically to improve/focus on further

Goal of the study

- Evaluate how municipal representatives perceive current state
- Evaluate how citizens perceive current state
- What are their suggestion on improvement?
- How this can be put together to improve overall state of biowaste collection?
 - Satisfaction of the people vs economic aspect for the municipalities

South Moravian Region, Czechia

- Almost 700 municipalities
- 1.2 mil. population
 - Avg municipality size 1 760, median size 602
- 7 200 km², density 170/km²
- Warmest climate in Czechia
- Good conditions for agriculture
 - Mainly lowlands, 60% of region is agriculture land



Home composting



Collection through bins



General instructions how to/not

rostlinný BIOODPAD



Patří sem:

- tráva, listí, plevel, košťály
- zbytky ovoce, zeleniny, rostlin
- čajové sáčky, kávová sedlina
- zemina z květináčů
- drny se zeminou
- větvičky, štěpka z větví
- papírové proložky na vejce
- piliny, hobliny, kůra
- seno, sláma

Zakázáno odkládat:

- plastové sáčky
- obalové materiály, sklo
- živočišné zbytky z kuchyně
- mléčné výrobky, tuky, oleje
- zvířecí exkrementy, uhynulá zvířata
- peří, chlupy, vlasy
- znečištěné piliny, hobliny, podestýlky
- nebezpečné odpady
- kamení

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BIO odpad



PATŘÍ SEM:

Z domácností:

- ✓ zbytky jídel rostlinného původu
- ✓ zbytky ovoce a zeleniny,
- ✓ květiny a čajové sáčky
- ✓ kávový odpad včetně
- ✓ filtrů a ubrousků

Ze zahrady:

- ✓ tráva, plevel
- ✓ košťály a celé rostliny
- ✓ zbytky rostlin
- ✓ listí
- ✓ seno a sláma

NEPATŘÍ SEM:

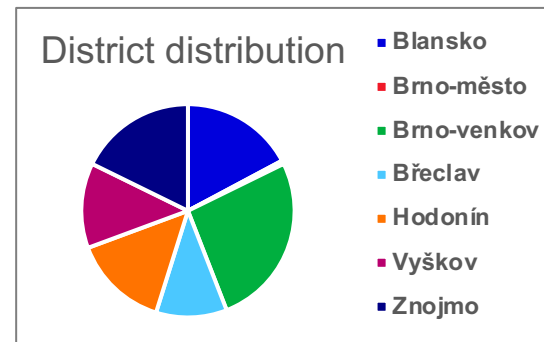
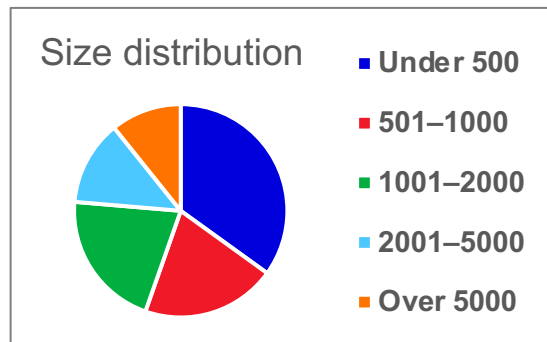
- * zbytky jídel živočišného původu
- * plasty, sklo, kovy, kameny
- * nebezpečný odpad
- * směsný komunální odpad
- * stavební odpad, zemina

- * textil
- * cigarety
- * popel a uhlí
- * jednorázové pleny
- * uhynulá zvířata

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vzduch a přírodu

Data collection – municipalities

- Electronic questionnaire distributed to the municipalities in the region (10+11/2022)
 - Response from 186 municipalities (almost 30%)
- 21 questions with 19 focused on how are municipalities dealing with biowaste

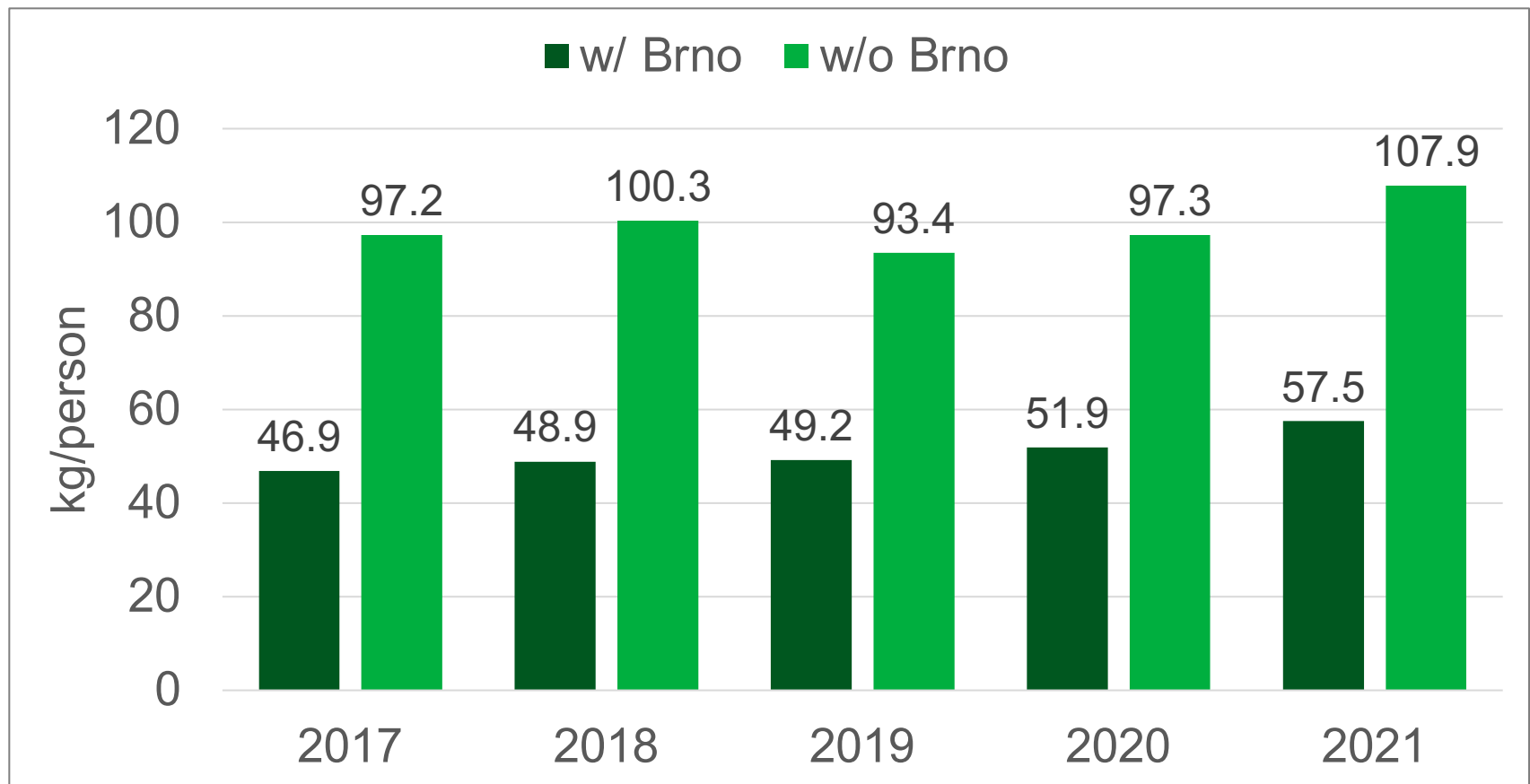


Findings – municipalities

- 76% of municipalities use bins w/ pickup
 - Most common pickup schedule frequency is biweekly (seasonal)
 - Either larger shared bins or smaller bins for individual households
- Other practices include:
 - Designated central place in municipality/HWRC (44%)
 - Large designated container (44%)
 - Household composters (52%)
 - Composting plant (3%)



Biowaste collection development

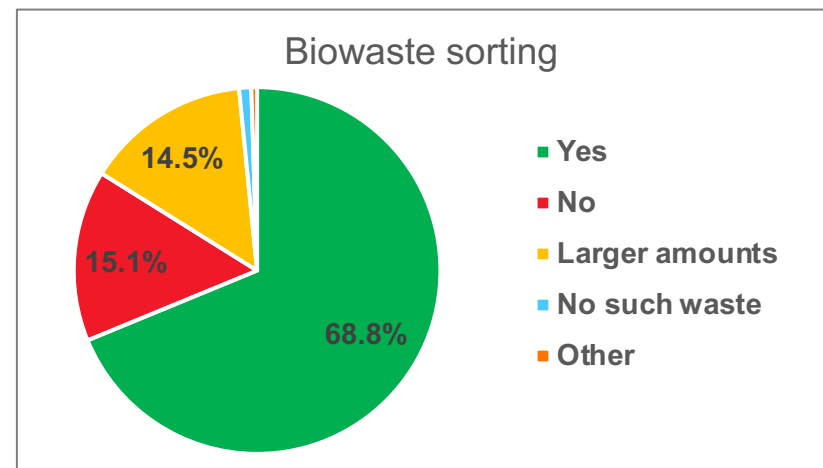


Municipal perspective

- Biowaste collection considered quite expensive
 - 78% municipalities making loss; only 15% breaking even
 - Most do not see any realistic potential for making profit
 - However, only 12% cooperate with other municipalities
- Collecting biowaste represents a significant economic impact on WM for 42% municipalities
- But only minimum complaints from citizens
 - Generally appreciated “public” service that requires subsidizing

Data collection – citizens

- Mainly electronic questionnaire distributed through social media and with aid/promotion from municipal representatives (10/2022)
 - 1 589 responses
- 29 questions
 - With 20 focused on biowaste



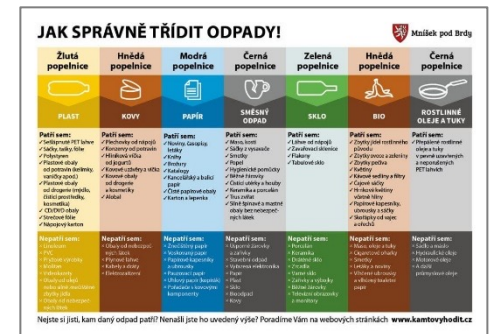
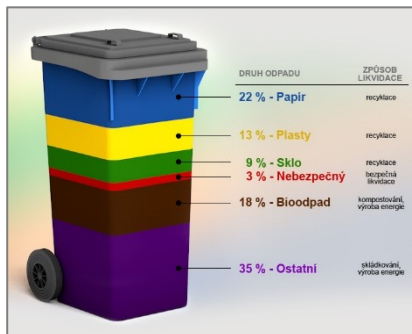
How to further motivate people?

- Better information provision (30%)
- Lower distance to the bins (29%)
- More bins available (29%)
- Lower collection costs for people (18%)
- More frequent collection (5%)
- No need, already sorting biowaste at max (13%)

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- Main communication channels that municipalities use include webpage (80%), municipal radio (46%), municipal notice board (38%)
 - Usually at least two channels for information provision
 - Municipalities consider citizens to be well-informed, however only 68% respondents agree – an important gap identified



Further suggestions

- Conduct municipality-specific research on proper communication channels and information
 - General suggestions available, but no one-size-fits-all solutions
- Utilize intermunicipal cooperation
 - More infrastructure available, economies of scale – lower costs
- Promote home and community composting
 - Lowest distance, if enough space – most convenient, closest
 - Provision of home composters for free or significantly subsidized
 - Incentives in form of waste charge reduction

Thank you for your attention

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