Ecological consumption and production

21 September 2022

DOI: 10.5281/zenodo.7063866









Outline

14:00 - 14:20

> Martin Vávra:

Czech social science data archive as a gateway to data (not only) on ecological consumption and production

- 14:20 15:00
 - Jan Vávra

Sociological insights into the food gardening in the heart of Europe

15:00 - 15:30

> Radka Hanzlová

Environmental behaviour of Czech households and individuals with a focus on food waste





Czech social science data archive as a gateway to data (not only) on ecological consumption and production

Presenting: Martin Vávra, CSDA

21 September 2022, Webinar - Ecological consumption and production









What is a data archive

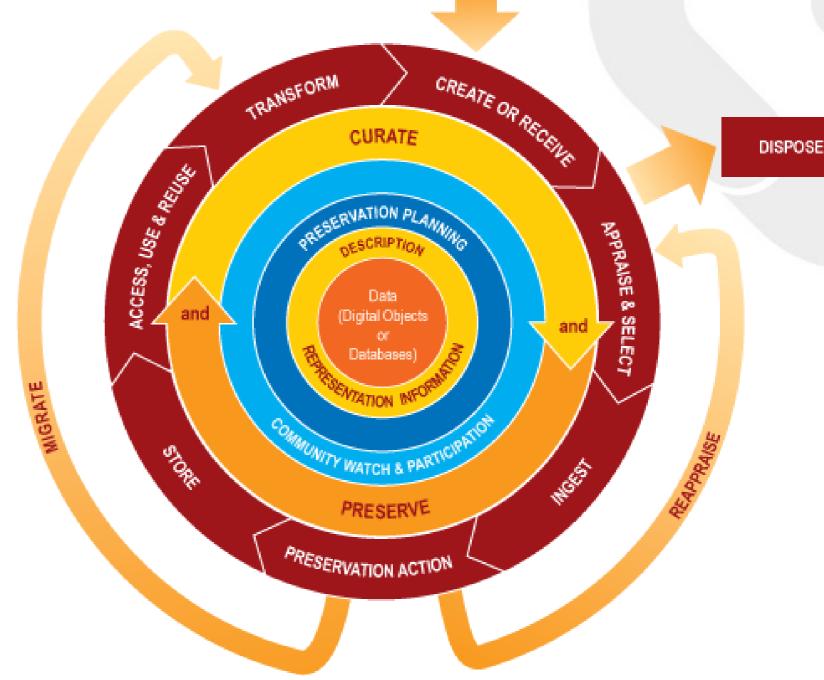
- Data archives in social sciences are organizations active in data acquisition, documentation and long-term preservation of data.
- Important part of archives' mission is making data accessible for researchers (under FAIR principles)

Data depositors are typically public research institutions but in recent years it is more common that data sets come to archives from public administration or commercial companies



Data Curation Lifecycle Model

- Data-centric model of data curation
- Data curation should be kept in mind at all stages of life cycle of data (data management plan)



Source: Digital Curation Centre



CONCEPTUALISE

Czech social science data archive

- <u>Czech Social Science Data Archive (CSDA)</u> is a department of the Institute of Sociology of the Academy of Sciences of the Czech Republic. CSDA serves as a national center providing open access to electronic files of primary data from research projects
- CSDA holds Core Trust Seal certification for trustful digital archives
 - We currently have circa thousand (unfortunately only small part is translated into English) data files from research (mostly originating in sociology) in our collection, which we make available in our <u>online catalog</u>
 - In some cases, we publish tables with summary data from studies where primary data is lost.
- We have some qualitative datasets (Medard archive)



CSDA is national node of European data infrastructure

Consortium of European Social Science Data Archives

- CESSDA was founded in 1976 as an informal platform for the cooperation of European data archives
- Since 2017, it has acquired the legal form of the European Research Infrastructure Consortium (ERIC), while the Czech Republic was one of the founding members of this consortium
- The aim of CESSDA is to support and organize social science data archives, to promote research results in the field of social sciences and to support social science research at the international level.
- CESSDA emphasizes the entire process leading to data publication i. e. long term archiving and making data available together with accompanying description and materials. Currently, CESSDA has 22 members (+1 observer) countries and is constantly working on its widening



• cessda

Members (22) / Observers (1)
Partners (12)





CESSDA activities

- ✓ <u>Data Management Expert Guide</u> online learning module; source of information on data publication and management of research data, it targets both academic and non-academic audiences from the social science field, whom it wants to help properly deal with research data and teach them to work with them effectively.
- ✓ <u>Data catalog</u> ("one stop shop") in which data collections of member archives can be searched through.
- ✓ Project <u>BeYond-COVID</u> on open multidisciplinary data on SARS-CoV-2 and other infectious diseases.







BY-COVID



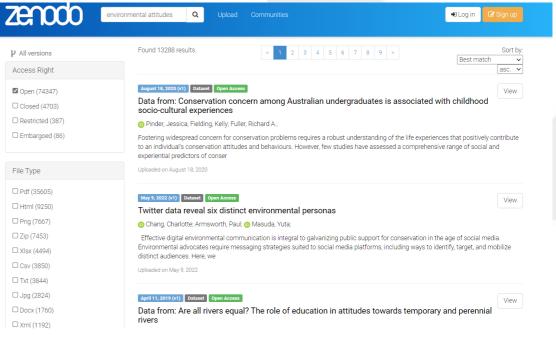
How to find data on ecological consumption, production etc.

- Data Management Expert Guide chapter on Data discovery
- General repositories (Zenodo, Figshare)
- Data search tools (<u>Gesis data search</u>, Google data set search)
- Social science domain repositories (e.g. CESSDA archives)



Q Find Social and Economic Research Data



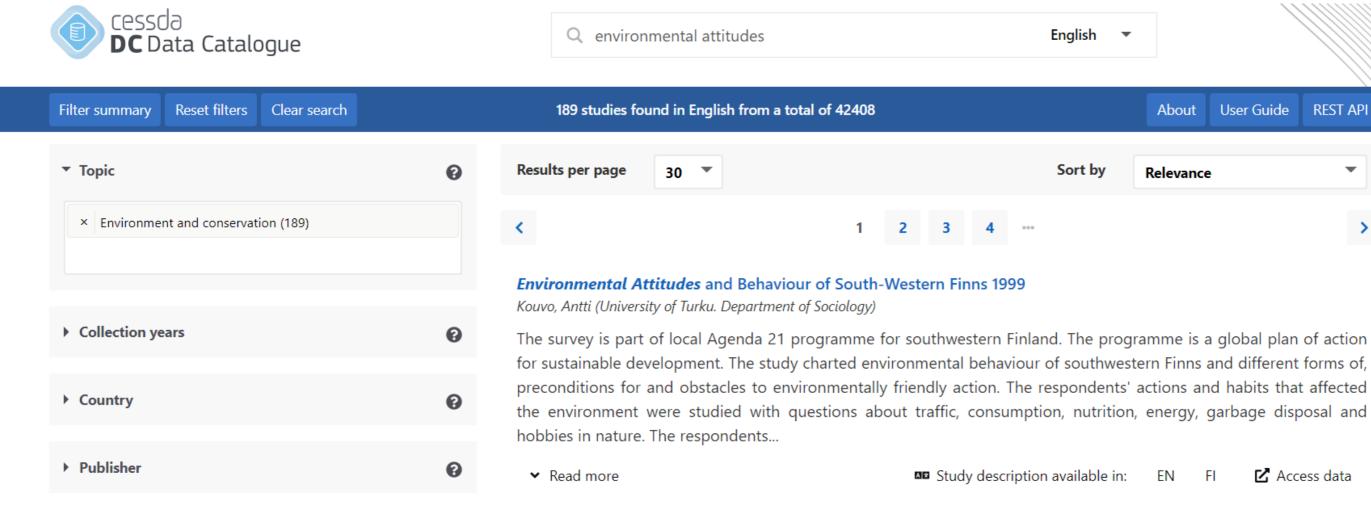


gesisDataSearch

Search for social and economic research data across a diverse portfolio of data repositories and metadata services



CESSDA Data Catalogue https://datacatalogue.cessda.eu



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Attitudes to Questions of Environmental Protection (1992)

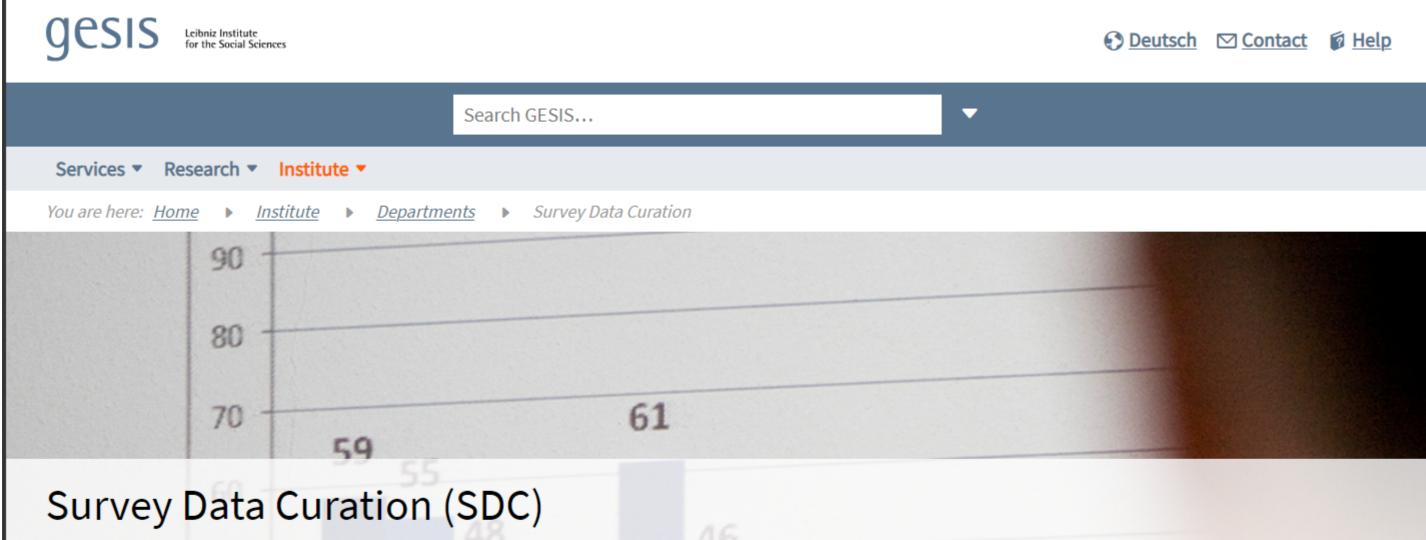
Institut für praxisorientierte Sozialforschung (IPOS), Mannheim

Attitude to environmental protection and waste disposal Tonics: 1. General judgement on environmental protection

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C Access data

Data catalogue of GESIS institute



The department processes and prepares social science research data across a diverse range of data types to support research, especially in comparative perspectives across space and time. The curated data include long-term national (e.g., ALLBUS, GLES, Politbarometer, FReDA) and international (e.g., ISSP, EVS, CSES, Eurobarometer) survey programs with large user communities. The department is responsible for data documentation and curation according to the highest quality standards. We strive to improve the FAIRness of the data by preparing rich domain specific metadata and multilanguage data and documentation in different formats. The data are prepared for immediate re-use for research and teaching purposes. In addition, data products including small scale regional (e.g., counties, municipalities) and spatial (e.g., ZIP-codes, INSPIRE-Grids) identifiers are provided. The department also offers services for linking surveys with geo-data and digital behavioral data.

Research activities focus on contemporary societal issues with special attention to comparative studies of democratic societies.





Data catalogue of GESIS institute

Many international datasets are available here including surveys relevant for e.g. environmental attitudes analysis (EVS, ISSP, Eurobarometer)

- **ISSP** Environment: 1993, 2000, 2010, 2020
- Eurobarometer
- European Values Study (EVS) 1991, 1998, 2008, 2017)
 - article publication section on Environment in ESS Round 8





Surveys by theme



Agriculture and Fisheries



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About Eurobarometer ~ Browse by category ~

Climate Action and the Environment



Digital Society and Technology

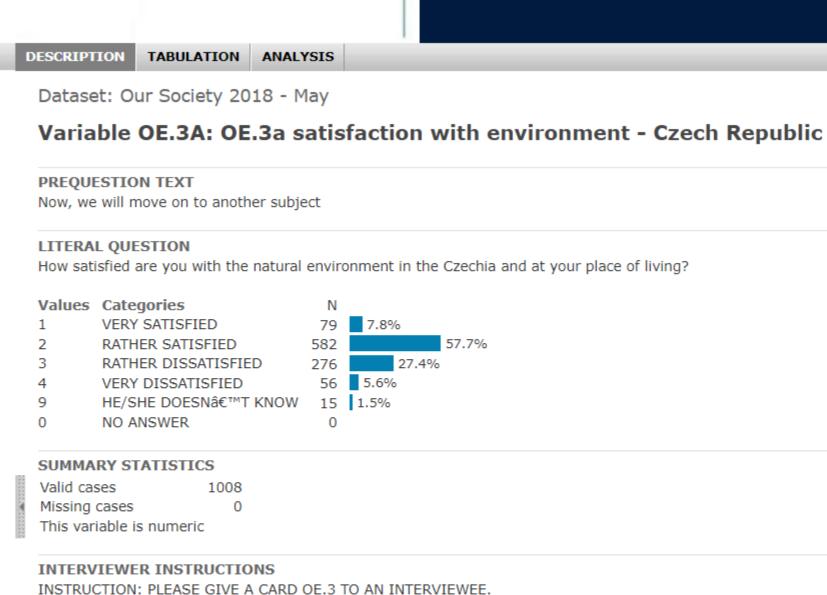
Online catalogue of CSDA



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I ČSDA
🗄 Česky
🖃 English
Class and Social Structure Survey
COVID-19 Pandemic Research
CVVM_en (Public opinion research center)
1 2017
□ 2018
🖽 Our Society 2018 - January
🛄 Our Society 2018 - February
🔲 Our Society 2018 - May
🛨 Metadata
Variable Description
Political preferences and election model in May 2018
Trust towards top political figures – May 2018
Satisfaction with life and evaluation of the economic
situation in the Czech republic and household
Trust to political institutions
Rights of minorities
Environment
OE.3a satisfaction with environment - Czech Republic
OE.3b satisfaction with environment - place of living
OE.27a Satisfaction at place of living - cleanliness of
nature
OE.27b Satisfaction at place of living - availability of
wildlife
OE.27c Satisfaction at place of living - clean air
OE.27d Satisfaction at place of living - clean surface
waters
OE.27e Satisfaction at place of living - drinking water
quality
OE.27f Satisfaction at place of living - noise levels
OE.27g Satisfaction at place of living - traffic density
OE.27h Satisfaction at place of living - light polution
OE.27i Satisfaction at place of living - water supplies
OE.4a Situation - punishment for those who harm the

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Online catalogue of CSDA

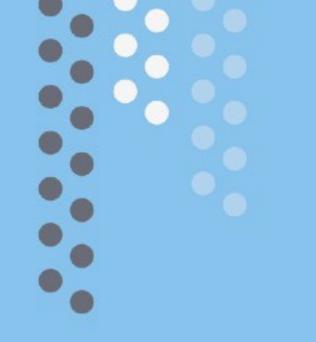
Data on environmental issues (mostly only in Czech):

- Survey Formy a hodnoty alternativních ekonomických praktik v České republice (Forms and values of alternative economic practices in the Czech Republic)
- Surveys of <u>Public Opinion Research Centre</u> thematic modules with questions on environmental attitudes and behavior are included quite frequently – e.g. on food waste in households
- Czech versions of ISSP and EVS surveys

You can use search tool to find relevant data in the <u>catalogue</u>



Výzkumy týkající se životního prostředí
 Půda - kompetence a zájem veřejnosti 2017
 Lesy jako součást krajiny a zdroj poznání 2017
 Postoje české veřejnosti k přírodě blízkému lesnímu hospodaření a odpovědné spotřebě 2018
 Vnímání stromů v krajině 2020
 Potraviny 2020
 Potraviny 2021





Thank you!

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🗞 cessda.eu









Sociological insights into the food gardening in the heart of Europe

Jan Vávra

Institute of Sociology, Czech Academy of Sciences

CESSDA webinar **Ecological consumption and production** 21. 9. 2022









Introduction

- Context of food gardening
- Data source and questionnaire
- Three examples of data analysis
 - Food in the perspective of resilience
 - Environmental aspects of food growing
 - Food sharing
- Some (wider) takeaways
- Themes yet to be analysed

Gardening, really?

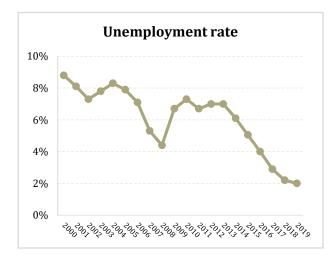
- Gardening = food growing by non-professional farmers
 - Food self-provisioning, informal food production, horticulture, subsistence (farming), etc.
 - Typically in home, allotments, community or weekendhouse gardens
- Widespread among many Global North countries
 - Canada, US, UK, Luxembourg, Germany, Hungary, Slovakia, Poland, Croatia, Moldova, Russia, Czechia
 - Teitelbaum & Beckley 2006; Schupp & Sharp 2012; Rochovská & Majo 2013; Vávra et al. 2018; Alber & Kohler 2008, Piras 2019
- Gardening is important topic of food sovereignty, alternative food networks and urban agriculture debates (e.g. Daněk et al. 2022)

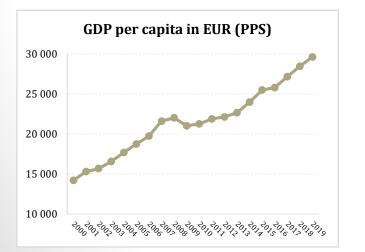
Positive aspects of gardening

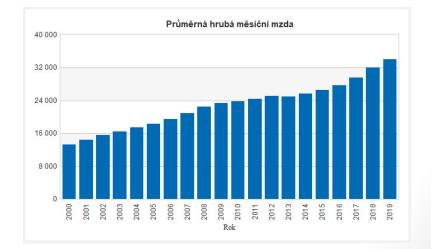
- Health –physical activity, well-being, healthy food (Waliczek et al. 2005; Van den Berg et al. 2010)
- Social strenghtening of social connections, local community, cultural aspects, food sovereignty, alternative to the market (Gray et al. 2014; Larder et al. 2014; Jehlička & Daněk 2017)
- Environmental biodiversity, CO₂ mitigation, ecosystem services (Cameron et al. 2012; Cleveland et al. 2017; Vávra et al. 2018)
- Resilience of food systems mostly urban ones (Barthel et al. 2015; Toth et al. 2016; Jehlička et al. 2019)

Czech context

- 10.7 millions inhabitants
- 78.9 thousand km² area
- pop. density 136 pers./km²
- OECD and EU member
- 32nd in HDI for 2021







Data from Czech Statistical Office. Map from https://cs.wikipedia.org/wiki/%C4%8Cesko.

Data source

- Data collected as a part of Forms and norms of alternative economic practices in the Czech Republic project
 - Led by ecological economist Nadia Johanisová
 - Masaryk University, 2014–2016
 - Funded by Czech Science Agency (GA14-33094S)
- CAPI survey (face-to-face) in Czechia
 - N=2058, data collection April/May and June 2015 by Focus Marketing & Social Research
 - Quota sampling representative for 18+ population
 - Quotas: gender, age, education, municipality size, region
 - Average questionnaire time 24 minutes
 - Non-weighted
 - Questionnaire designed Nadia Johanisová, Petr Jehlička, Petr Daněk and Eva Fraňková

Questionnaire

- Food self-provisioning and sharing; other ways of sharing and help
 - Food self-provisioning who, where, how much, how
 - Food sharing who, how much, with whom
 - Other sharing and help borrowing and sharing of things, activities (work), compensations, financial support
 - Motivation for sharing, help and food production
 - Geographical aspects where people of the sharing network live
 - Changes in food production, sharing, help and living standard in last 10 years
 - Values
 - Socio-demographic questions
 - Personal but some questions ask for whole household's behaviour

Special section / Section Thématique: Post-socialist smallholders: silence, resistance and alternatives / Petits exploitants agricoles en contexte post-socialiste: silence, résistance et alternatives

Rethinking resilience: home gardening, food sharing and everyday resistance

Petr Jehlička 🔄, Petr Daněk & Jan Vávra

Pages 511-527 | Received 22 Jun 2017, Accepted 23 Apr 2018, Published online: 06 Aug 2018

Table 1. Sources of selected types of food in food-growing households, Czech Republic, 2015.					
Type of food	Household food self-provisioning (%)	Received gifts or sharing (%)	Retail sector (%)	Total (%)	38 % food
Vegetables	34.8	5.8	59.4	100.0	growers in
Fruits	32.6	7.6	59.8	100.0	
Potatoes	27.9	6.7	65.4	100.0	adult
Eggs	27.4	10.2	62.4	100.0	population
Meat	8.4	4.3	87.3	100.0	population
Honey	4.7	22.5	72.8	100.0	

Table 1. Sources of selected types of food in food-growing households,^a Czech Republic, 2015.

Note: ^aBased on respondents' estimates. Only households with access to land and producing some food are included (N = 782). Data source: Large-scale (N = 2,058) representative survey conducted in the Czech Republic in 2015.

Table 2. Sources of selected types of food in both food-growing and non-growing households, ^a Czech	
Republic, 2015.	

Type of food	Household food self-provisioning (%)	Received gifts or sharing (%)	Retail sector (%)	Total (%)
Vegetables	14.2	5.1	80.7	100.0
Fruits	13.4	6.6	80.0	100.0
Potatoes	11.1	6.1	81.8	100.0
Eggs	11.1	8.9	80.0	100.0
Meat	3.4	3.2	93.4	100.0
Honey	2.1	16.9	81.0	100.0

Note: ^aBased on respondents' estimates. Data source: Large-scale (N = 2,058) representative survey conducted in the Czech Republic in 2015.

https://www.tandfonline.com/doi/abs/10.1080/02255189.2018.1498325



Journal of Cleaner Production Volume 185, 1 June 2018, Pages 1015-1023



What is the contribution of food selfprovisioning towards environmental sustainability? A case study of active gardeners

Jan Vávra ^{a, b} ∧ ⊠, Petr Daněk ^{b, c} ⊠, Petr Jehlička ^{b, d} ⊠

J. Vávra et al. / Journal of Cleaner Production 185 (2018) 1015-1023

1019

Table 1

Comparison of active gardeners with the general population of the Czech Republic.

	Characteristic	Active gardeners (%)	General population (%)
Age	<35	21.9	27.6
	35-54	34.3	35.3
	>54	43.7	37.2
Education	Primary	15.2	6.6
	Lower secondary	35.1	36.2
	Higher secondary	34.3	34.9
	Tertiary	15.4	22.2
Municipality size (inhabitants)	<5000	51.9	38.9
,	\geq 5000	48.1	61.1

Note: The share of the given age category in the general population aged over 18 years is shown. The figures for educational levels refer to shares of the general population between 25 and 64.

Source: Authors' survey for active gardeners and Czech Statistical Office (n.d.; 2016a) for general population.

https://www.sciencedirect.com/science/article/abs/pii/S0959652618305936

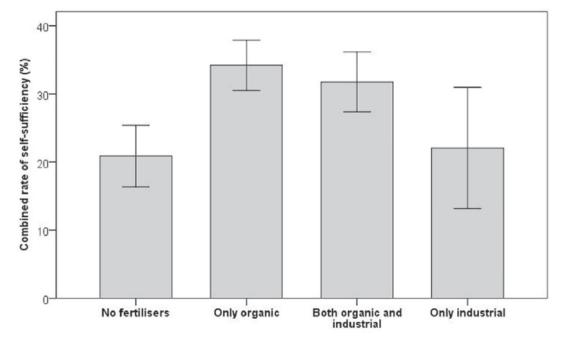


Fig. 1. The combined rate of self-sufficiency and use of fertilisers. Note: N = 378. Error bars show 95% confidence interval. Source: Data processing by the authors.

Table 3

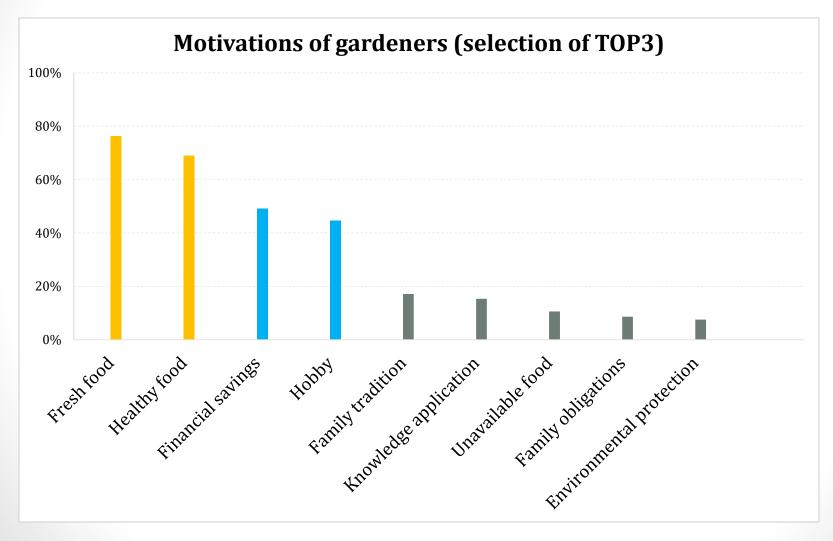
Self-sufficiency rates related to types of fertiliser used.

Use of fertilisers	N	Rates of self-sufficiency		
		Fruit (%)	Vegetables (%)	Potatoes (%)
No fertilisers	64	26.7	24.4	11.6
Only organic fertilisers	167	34.4	39.7	28.3
Both organic and industrial fertilisers	125	33.5	34.5	27.4
Only industrial fertilisers	22	28.0	22.6	15.7
Total	378	32.4	34.7	24.5
Brown-Forsythe F		1.819	7.461	4.928
ANOVA p		0.146	0.000	0.001

Source: Data processing by the authors.

- Average rate of selfsufficiency of food growing households 32.5%
- This means 43,6 kg yield person/year (given average fruit, vegetables and potatoes consumption)
- CO2 mitigation potential 42-92 CO2eq/person/year
- Roughly 1% of household's emissions

Motivation of gardeners





Examining Relations Between AFN Practices and Transition

Rendering the Actually Existing Sharing Economy Visible: Home-Grown Food and the Pleasure of Sharing

Petr Jehlička 🔀, Petr Daněk 🔀

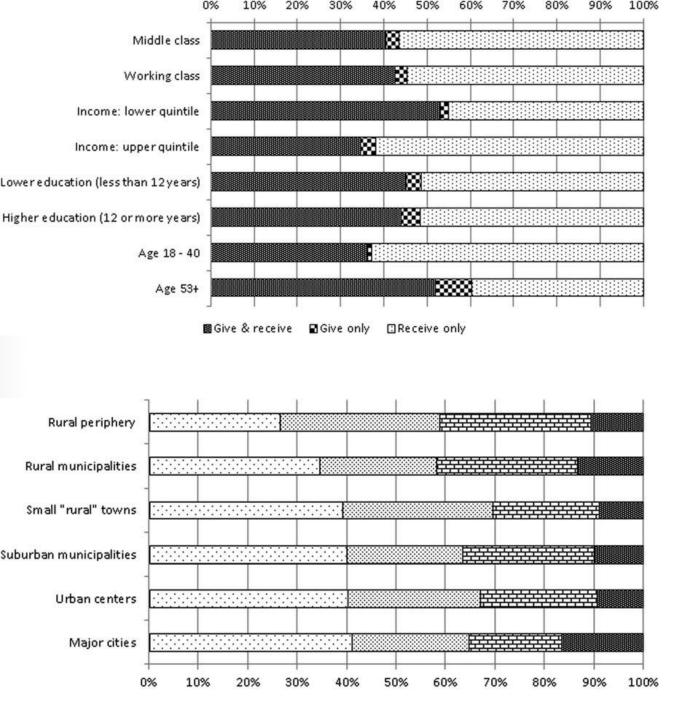
First published: 11 July 2017 | https://doi.org/10.1111/soru.12160 | Citations: 38

Table 5: Types of food-sharing interactions (only non-monetary inter-household food transfers considered)

Type of transaction: households	Number of households	Percentage (total sample, N = 2058)	Percentage if only those who share are counted (N=1310)
receive and give	584	28.4	44.6
receive only	673	32.7	51.4
give only	53	2.6	4.0
neither receive nor give	748	36.3	n/a
Total	2 058	100.0	100.0

Source: Large-scale quantitative survey (N = 2058) conducted in April, May and June 2015 in the Czech Republic. The quota-sampling method makes the data representative of the country's population.

https://onlinelibrary.wiley.com/doi/10.1111/soru.12160



□No sharing □Sharing less than 1/10 □Sharing 1/10+ ■Sharing 1/4+

Table 4: Motivations for sharing home-grown food (comparison of households sharing at least 1/10 of their produce with those sharing less or sharing nothing)

Reasons given for sharing domestically produced food	People sharing more than 1/10 of produce	Sharing less than 1/10 of produce and sharing nothing	Total
Joy of pleasing other people	21.0	23.0	22.0
Feeling good about giving a gift	21.0	11.7	16.4
It is good when people can help each other	15.1	17.0	16.0
To maintain good relations with friends and neighbours	13.1	13.4	13.2
To enjoy time with friends	8.9	8.5	8.7
To show the results of my labour	7.2	8.1	7.7
To help people in need	7.9	7.4	7.7
Obligation: to give something in return	3.4	4.6	4.0
Other reasons	2.4	6.3	4.3
Total	100.0	100.0	100.0
Sample size	291	283	574

Some (wider) takeaways

- Food gardening is socially inclusive and stable activity
- Important aspects of caring, sharing and joy
- Inherently multifaceted and flexible overlapping motivations
- Gardening as example of alternative food networks
 - Original, local, though tended to be underestimated
- Various interpretations (according to Daněk et al. 2022):

TABLE 1 Overview of the discourses on the food self-provisioning (FSP) with brief identification of prevailing interpretations and epistemological underpinnings

	FSP as coping strategy	FSP as cultural tradition
Practitioners' agency	Reactive/defensive	Passive acceptance
Valorisation	Negative	Neutral
Epistemology	Neoclassical economics, modernisation theory	Structuralism
	FSP as hobby and source of good food	Reading FSP as transformative practice
Practitioners' agency	Active	Active, creative, performative
Valorisation	Positive	Positive
Epistemology	Post-structuralism, feminism	Post-structuralism, feminism, decolonial critical theory

Themes yet to be analysed

- Various aspects of help and sharing
 - Effect of sociodemographic characteristics
 - Interactions between particular types of help and sharing
 - Relation of food growing and sharing
- Specifically focused analyses
 - Age, education, geographic subgroups
- Further theoretical considerations and interpretations
 - Sociology, social geography, environmental studies, political ecology, leisure studies, economics, food & agriculture studies

Thank you for your attention

Jan Vávra, PhD

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<u>https://www.soc.cas.cz/en/lide/jan-vavra</u>





http://alternativniekonomiky.fss.muni.cz/



https://tichaudrzitelnost.geogr.muni.cz/en/









Environmental behaviour of Czech households and individuals with a focus on food waste



Radka Hanzlová, Institute of Sociology of the Czech Academy of Sciences Webinar 'Ecological consumption and production' September 21, 2022, online





Structure of the presentation

- General facts about food waste
- Technical parameters of the data
- Food waste and environmental impact
 - Dietary choices
 - Shopping and consumer behaviour
 - Food waste management of organic waste
 - Other related behaviours and activities
- Conclusion







General facts about food waste



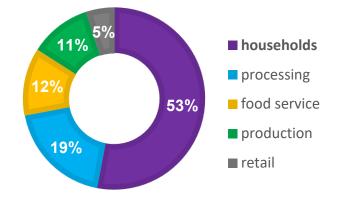
1/3 of all food is wasted every year= 1.3 billion tons



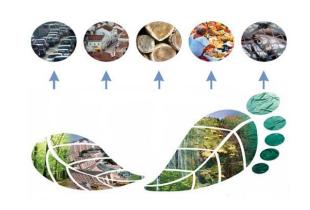
approx. 1 trillion USD costs



more than 800 million people suffer from hunger









Source: FAO 2011, 2013; Stenmarck et al., 2016.





Data sources

- 1. "Food"
 - Project Strategy AV21 'Food for the Future'
 - Topics:
 - Food waste in general
 - Shopping and consumer behaviour of Czech households
 - Pro-environmental behaviour of households
 - Dietary regime, Data labelling
 - Eating culture, ordering meals through food delivery apps
 - Composting
 - Food self-provisioning and gardening
 - Food from genetically modified crops (GMO)
 - Food banks

• 2. "Our Society"

- Topics:
 - Ecology
 - Environment
 - Climate change
 - Energetics





Technical parameters of the data

- Public Opinion Research Centre, Institute of Sociology, Czech Academy of Sciences
- Data collection: F2F
- N = ~ 1 000 respondents 15+
- Quota sampling (sex, age, education, region, size of place of residence)
- Outputs: press releases
- <u>https://cvvm.soc.cas.cz/cz/</u>



Sociologický ústav AV ČR, v.v.i. Jilská 1, Praha 1 / tel.: 210 310 591 e-mail:cvvm@soc.cas.cz

Tisková zpráva

Postoje a aktivity české společnosti vzhledem k životnímu prostředí – červenec 2021

- Necelá třetina (32 %) dotázaných si myslí, že se Česká republika "nedostatečně" stará o ochranu životního prostředí, více než tři pětiny (62 %) se kloní k názoru, že se stará "přiměřeně", a pouhá 2 % dotázaných se domnívají, že se stará "příliš mnoho".
- O informace spojené s šetrným chováním k životnímu prostředí se zajímají téměř tři čtvrtiny (73 %) české veřejnosti, oproti tomu přibližné čtvrtina (26 %) se nezajímá.
- Více než dvě třetiny (69 %) respondentů mají dle svých slov dostatek informací o šetrném chování k životnímu prostředí, naopak čtvrtina (25 %) jich má nedostatek.
- Z prospěšných aktivit pro životní prostředí české domácnosti nejvíce třídí běžný (88 %) a nebezpečný (81 %) odpad, nejměně pak nakupují biopotraviny (22 %) a omezují jízdy autem (21 %).

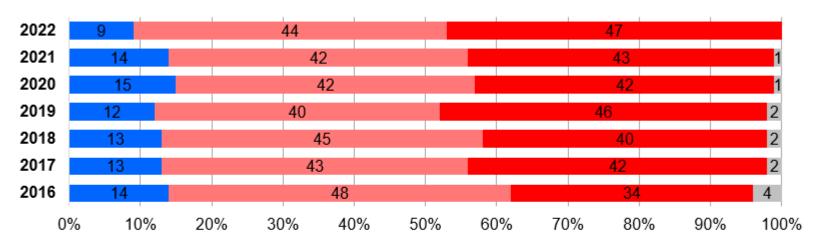
Zpracovala: Radka Hanzlová Centrum pro výzkum veřejného minění, Sociologický ústav AV ČR, v. v. i. Tel.: 210 310 587; e-mail: radka.hanzlova@soc.cas.cz





Opinion on food waste

Opinions on how urgent the problem of food waste is (in %)



- Food waste is not a problem in society
- Food waste is wrong, but there are more urgent problems that need solving
- Food waste is a big problem
- Don't know

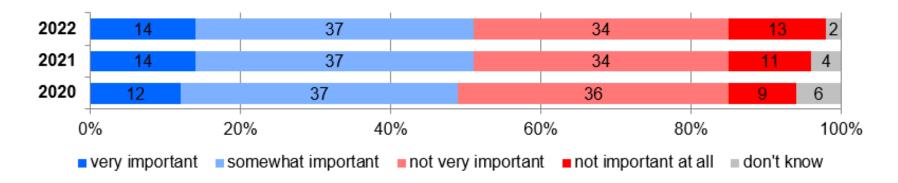
Source: Public Opinion Research Centre, Institute of Sociology, Czech Academy of Sciences, Our Society, 'Food'.





Environmental impact of food

How important is the environmental impact of a food's production for consumers? (in %, only those respondents who shop for food)



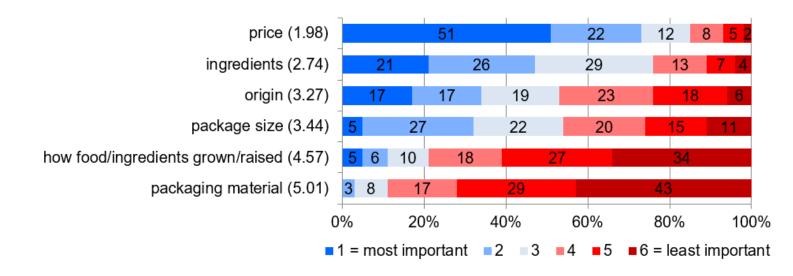
Source: Public Opinion Research Centre, Institute of Sociology, Czech Academy of Sciences, 'Food'.





Factors influencing shopping food

Various factors people take into consideration when shopping for food – ranked by their importance (in %, only those respondents who buy food)



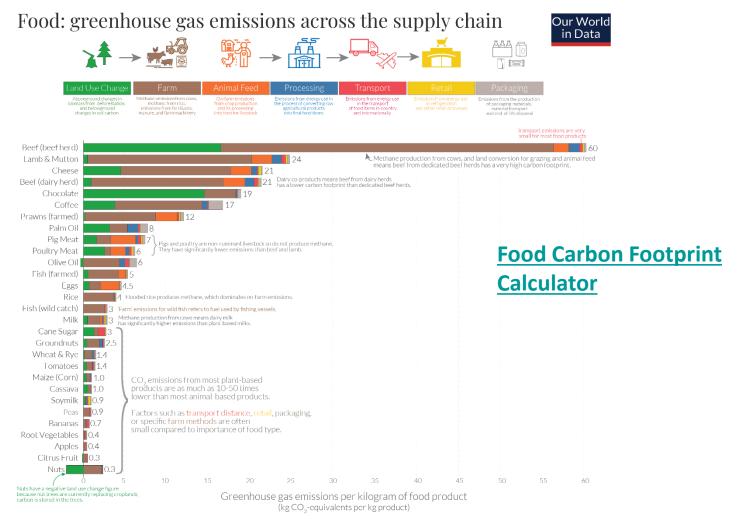
Note: Items are ranked in order according to average scores (in parentheses) from the lowest to the highest average scores. The data in the figure show the distribution of responses after excluding 'don't know', which accounted for 1% of the total sample.

Source: Public Opinion Research Centre, Institute of Sociology, Czech Academy of Sciences, 'Food', 14 July–4 September 2022, 705 respondents over the age of 15 who said they at least occasionally buy food for their household, face-to-face interviews.





Food carbon footprint



Note: Greenhouse gas emissions are given as global average values based on data across 38,700 commercially viable farms in 119 countries. Data source: Poore and Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Science. Images source from the Noun Project. OurWorldinData.org – Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.

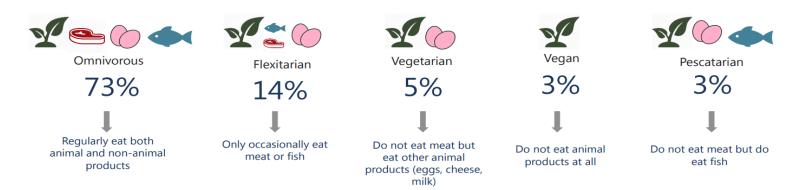




Dietary choices

Type of diet	Carbon footprint	
Rich in meat and dairy products	2,624.4 kg CO ₂ e/person/year	
Average amount of meat and dairy products	2,055.0 kg CO ₂ e/person/year	
Small amount of meat and dairy products	1,704.6 kg CO ₂ e/person/year	
Pescatarian	1,427.2 kg CO ₂ e/person/year	
Vegetarian	1,390.7 kg CO ₂ e/person/year	
Vegan	1,054.9 kg CO ₂ e/person/year	

Source: Arnika, 2018.



Source: Ipsos MORI Global Advisor Survey, 2018, N = 20 313, 28 countries.





Dietary choices

Czechs' dietary choices (in %)



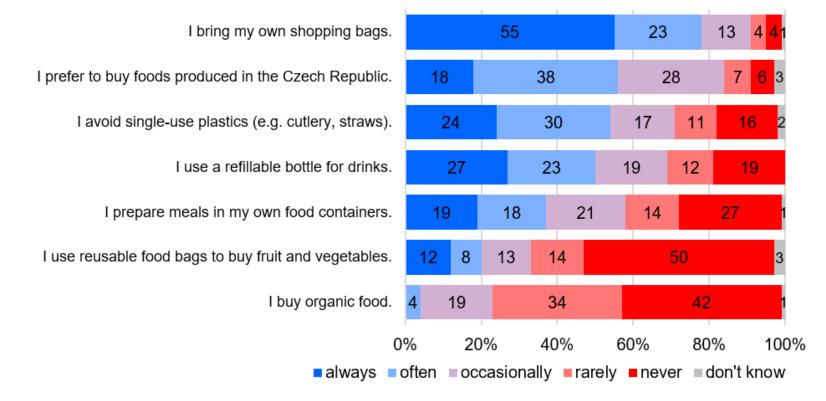
Source: Public Opinion Research Centre, Institute of Sociology, Czech Academy of Sciences, 'Food', 14 July-4 September 2022, 821 respondents over the age of 15, face-to-face interviews.





Shopping and consumer behaviour

How often do households engage in various environmentally friend behaviours? (in %)



Note: Items are listed in order according to the sum of responses 'always', 'often', and 'occasionally'.

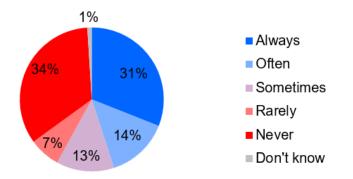
Source: Public Opinion Research Centre, Institute of Sociology, Czech Academy of Sciences, 'Food', 14 July-4 September 2022, 821 respondents over the age of 15, face-to-face interviews.





Food waste management of organic waste

How often do Czech households sort organic waste? (in %)



Source: Public Opinion Researach Centre, Institute of Sociology, Czech Academy of Sciences, 'Food', 14 July-4 September 2022, 821 respondents over the age of 15, face-to-face interviews.

Methods used to sort organic waste (multiple choice)

	Number	Percentage (%)
Garden composting	291	55
Brown-bin organic waste container	259	49
Waste collection yard	62	12
Large-volume container (skip)	58	11
Household vermicomposter/bokashi	15	3
Community garden	7	1
Other methods (neighbours, to feed animals)	6	1

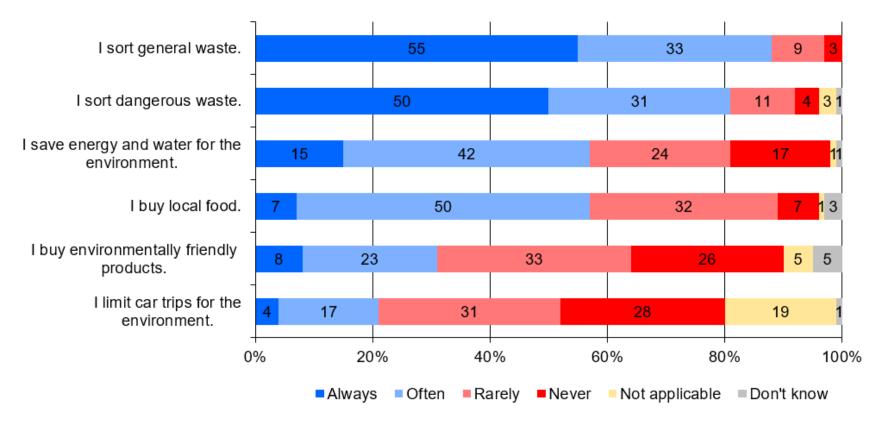
Source: Public Opinion Researach Centre, Institute of Sociology, Czech Academy of Sciences, 'Food', 14 July-4 September 2022, 532 respondents over the age of 15 who at least rarely sort organic waste, face-to-face interviews.





Other related behaviours and activities

Environmental activities of households (in %)



Source: Public Opinion Researach Centre, Institute of Sociology, Czech Academy of Sciences, 'Our Society', 26 June–11 July 2021, 904 respondents over the age of 15, face-to-face interviews.





Conclusion

- Food waste is a broad problem worldwide with huge impacts.
- People waste food the most. >> **TAKE TAKE ACTION**
- Not throw away only food, but also other resources (water, land, energy).
- Everyone should start with themselves!
- Set an example for others!
- THERE IS NO PLANET B



Thank you for your attention!



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