

Municipal expenditures on the environment

Vilém Pařil

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Project Impact Assessment
Transport Planning
Public Sector Role
Commuting
Labour Markets

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Centre for Nonprofit Sector
Research

Project Impact Assessment
Public Sector Role
NGO Mapping
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NGO Effects
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Theoretical Background

- Economy
 - Environment
 - Sustainable Development
 - Public budget
 - Environmental Goods
 - Methods on Valuation of Environmental Goods
- Objectives
 - Short term
 - Long term

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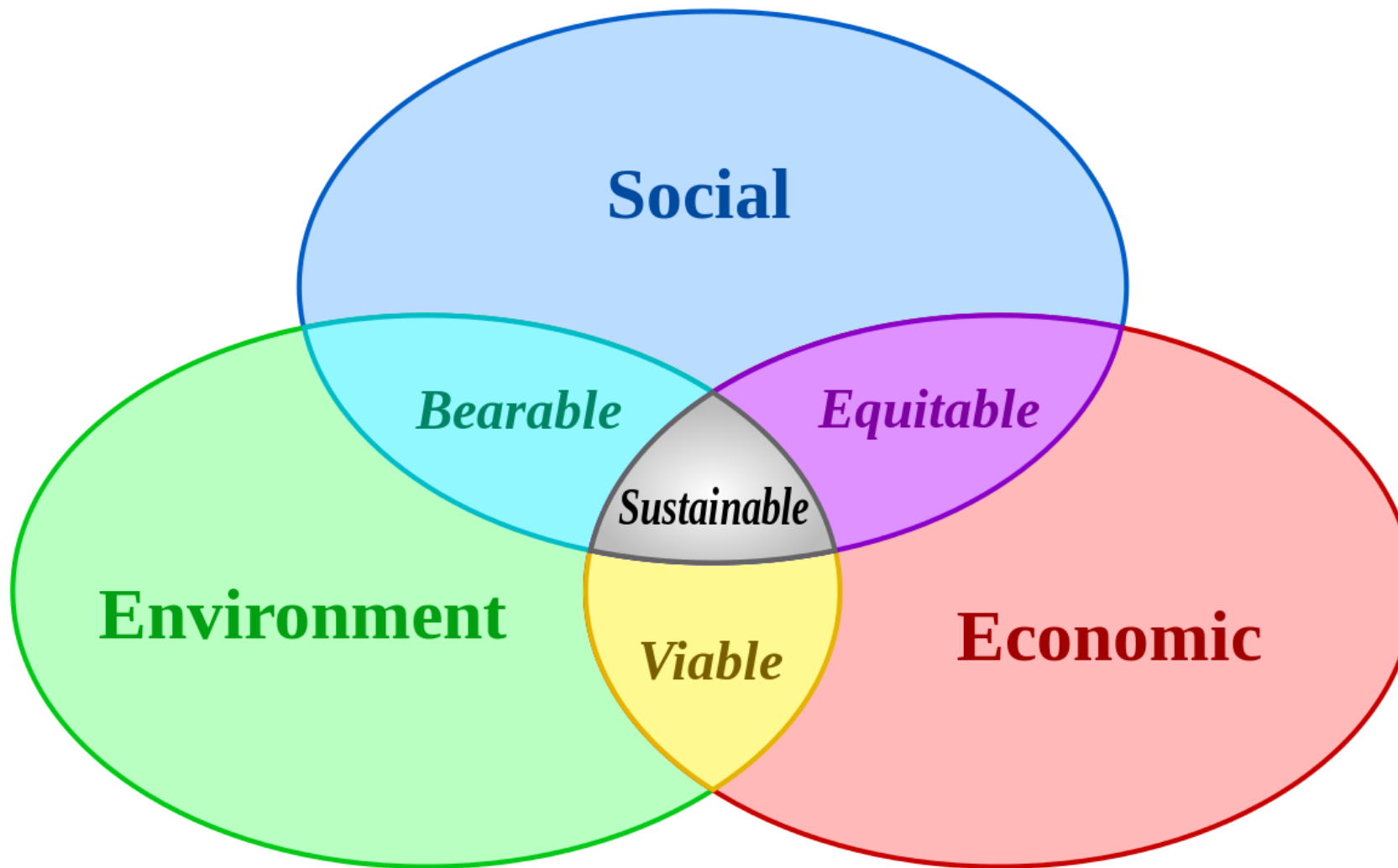
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Relationships

- Economic
- Social
- Environmental



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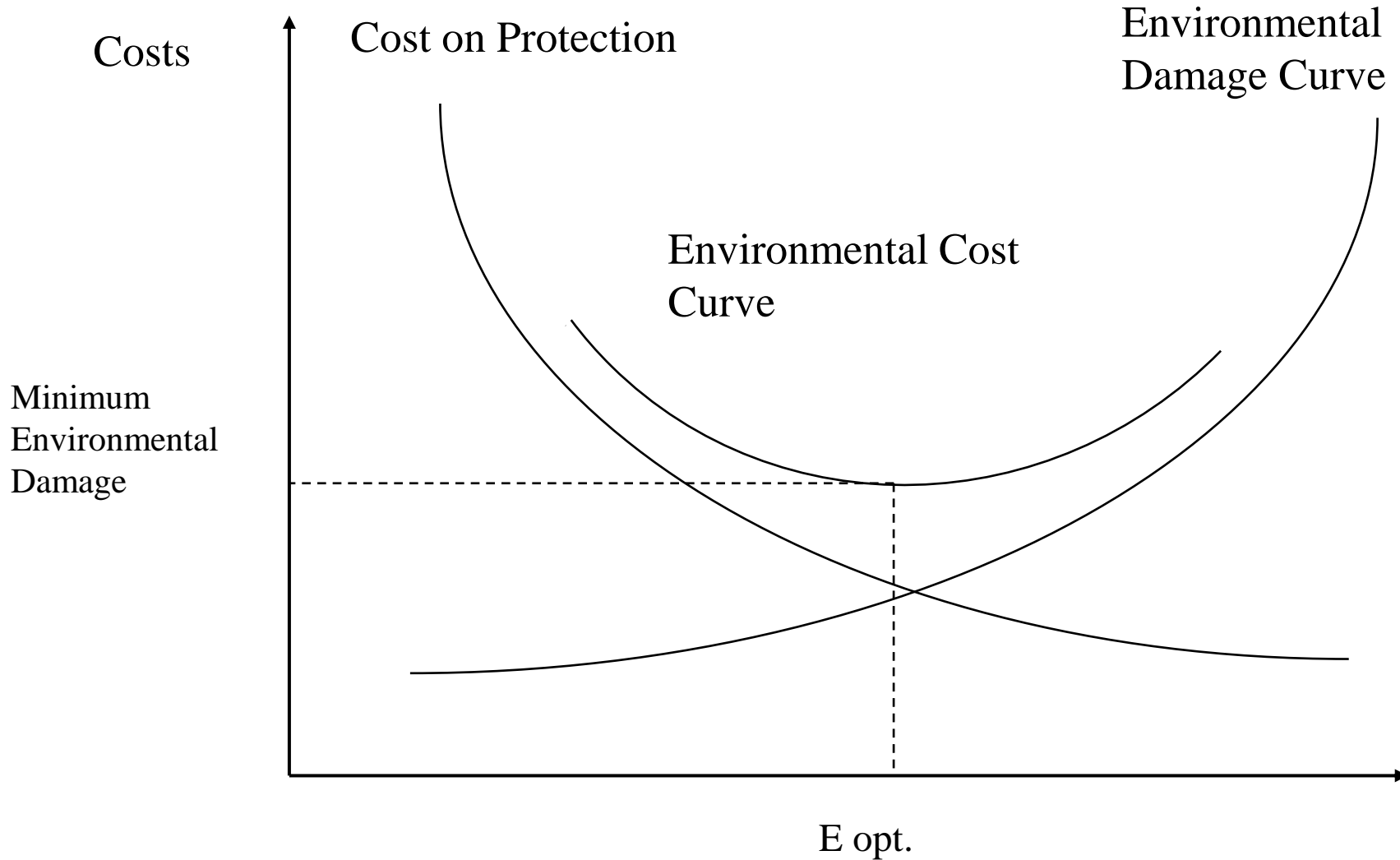


Sustainable Development

- The Limits to the Growth (Meadows et al., 1972)
- "Such a development that meets the needs of the generations present, without jeopardizing the ability to fulfill them to future generations."
(Brundtland, 1991)
- Czech Legal Framework
 - "Such a development that preserves the present and future generations of the opportunity to meet their basic life needs while not diminishing the diversity of nature and preserving the natural functions of ecosystems."



Environmental Quality



Macroeconomic optimum

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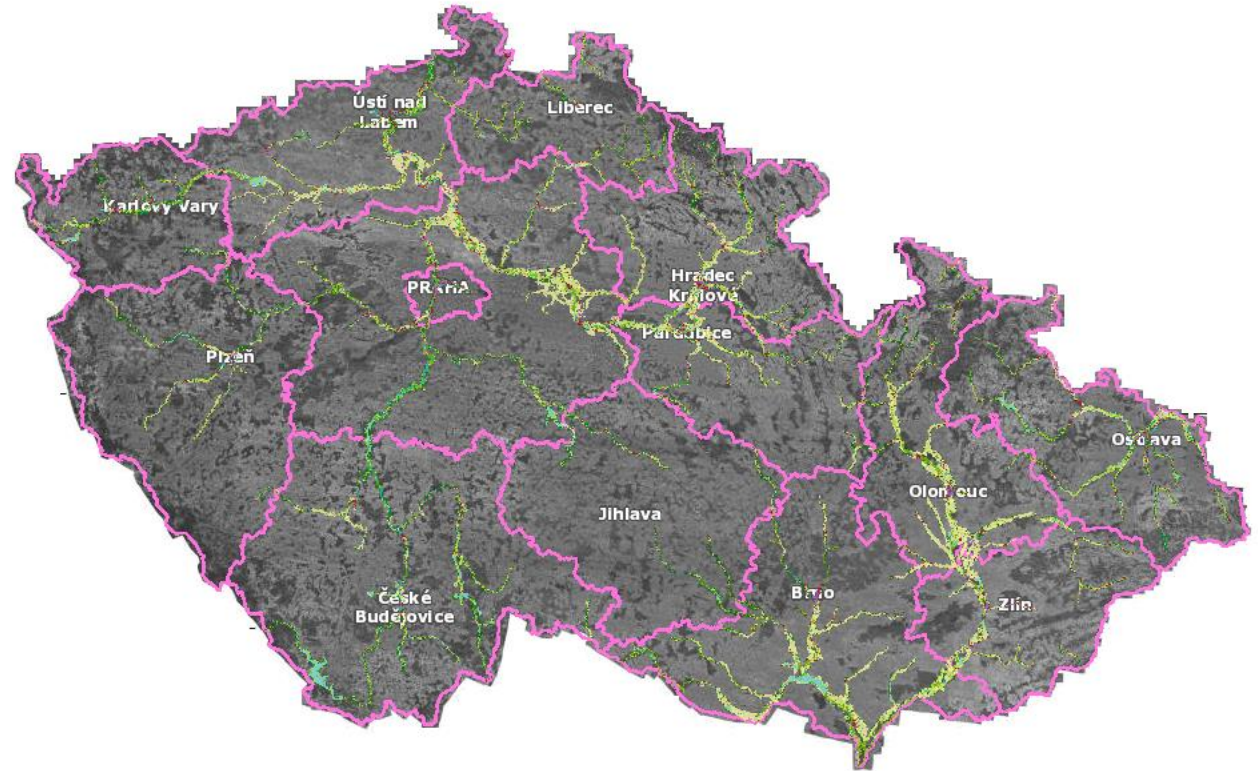
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Institutional background

- Law

- Act No. 17/1992 Coll. on Environmental Law
- 6258 municipalities
- 14 regions (NUTS3)
- 8 cohesion regions (NUTS2)



- Role of municipalities

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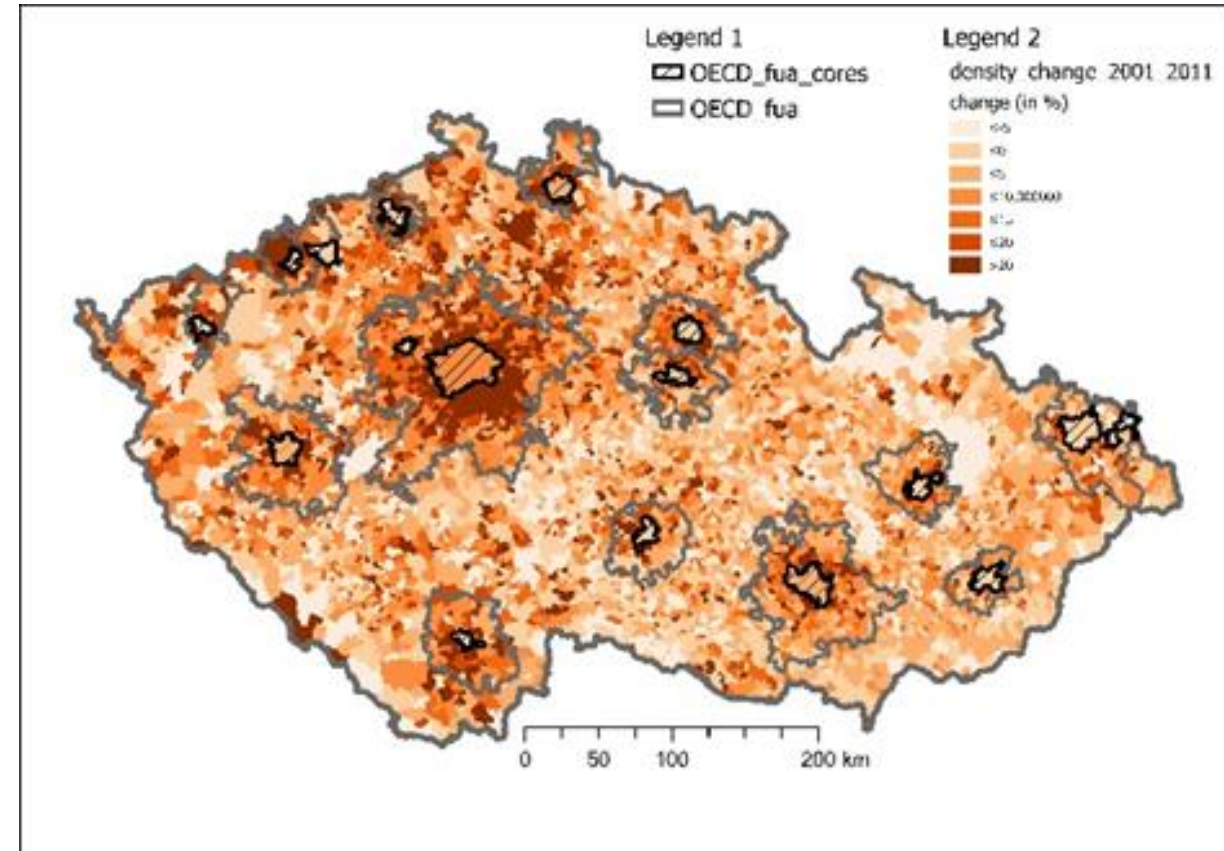
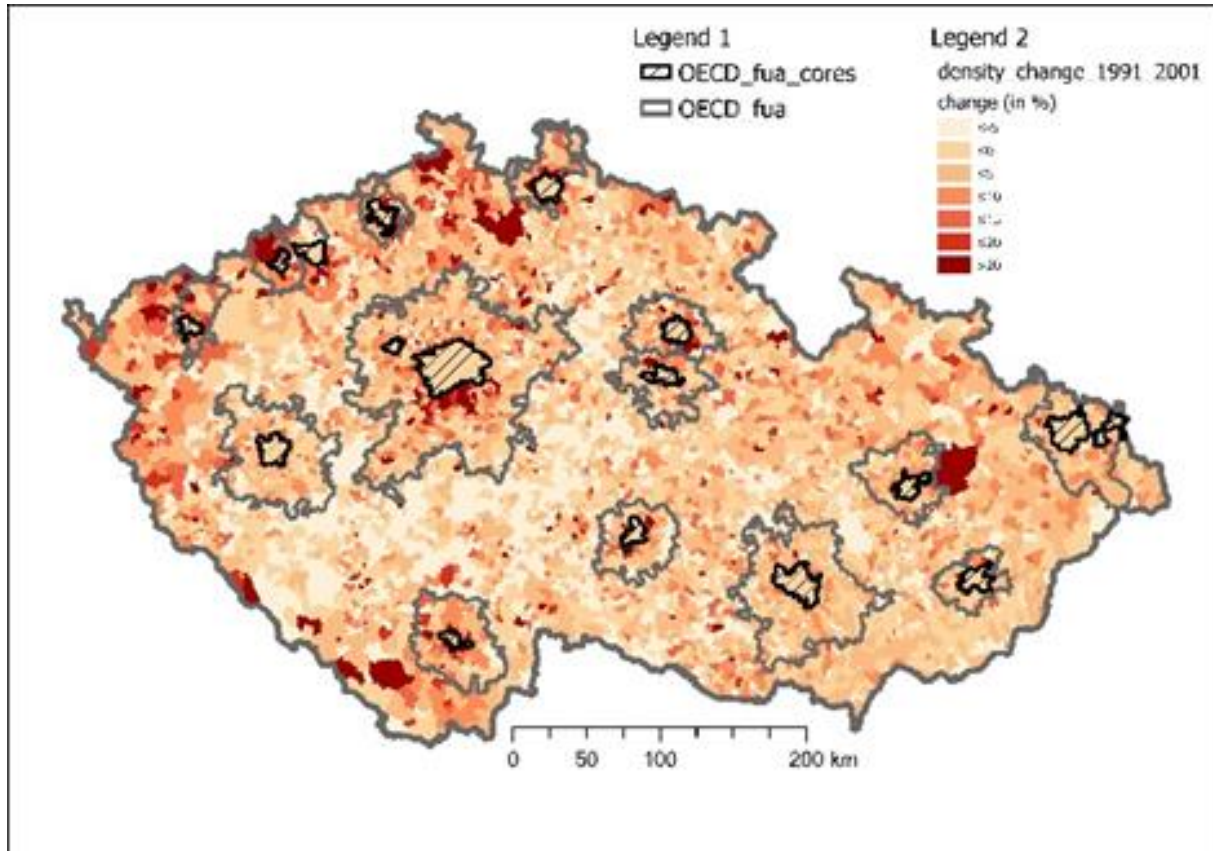
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Context



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Expenditures on Envi protection

water	
2321	Drainage and treatment of sewage, sludge
2322	Prevention of water pollution
2329	Drainage and wastewater treatment jn.
2331	Adjustments to water management. significant water and water flows
2333	Adjustment of small watercourses
air	
2115	Thermal insulation and energy saving programs
2542	Meteorology
3711	Removal of solid emissions
3712	Emission of gaseous emissions
3713	Changes in heating technology
3714	Measures to reduce greenhouse gas production
3715	Changes in production technologies to eliminate emissions
3716	Monitoring of air protection
3719	Other air-conditioning activities nec

waste	
2122	Collection and processing of secondary raw materials
3721	Collection and transport of hazardous waste
3722	Collection and transport of municipal waste
3723	Collection and collection of other wastes
3724	Use and disposal of hazardous waste
3725	Usage and disposal of municipal waste
3726	Use and disposal of other waste
3727	Prevention of waste generation
3728	Waste management monitoring
3729	Other waste management jn.

soil and underground water	
2342	Anti-rooting protection
2541	Geology
3731	Soil and groundwater protection against polluting infiltrations
3732	Soil decontamination and ground water cleaning
3733	Monitoring soil and groundwater
3734	Prevention and remediation of salinisation
3739	Other protection of soil and ground water jn.
biodiversity and landscape	
1037	All-forest functions of forests
2334	Revitalization of river systems
3741	Protection of species and habitats
3742	Protected parts of nature
3743	Reclamation of land as a result of mining and mining activities
3744	Anti-radiation, anti-vanguard and fire protection
3745	Caring for the appearance of villages and public greenery
3749	Other activities for nature and landscape conservation jn.

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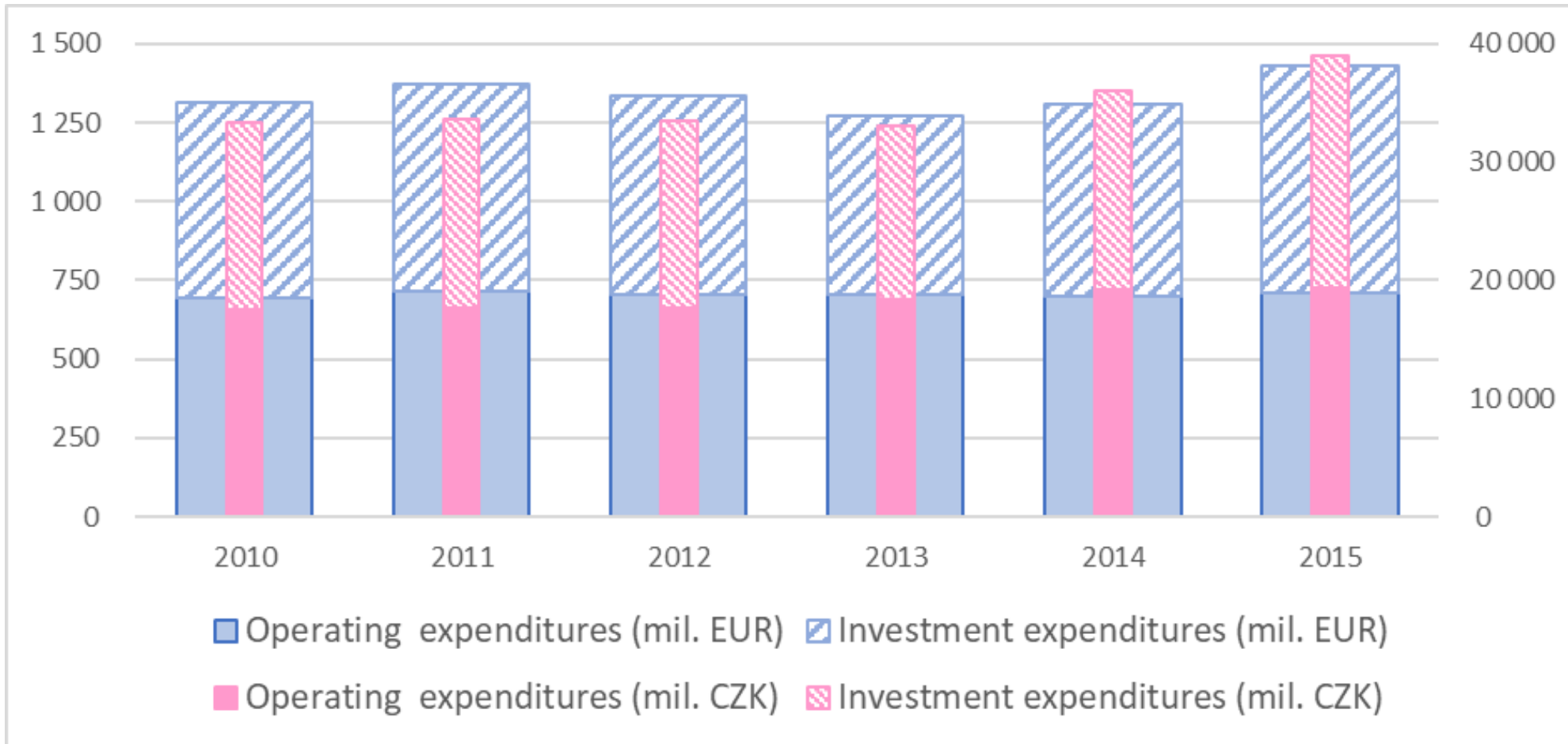
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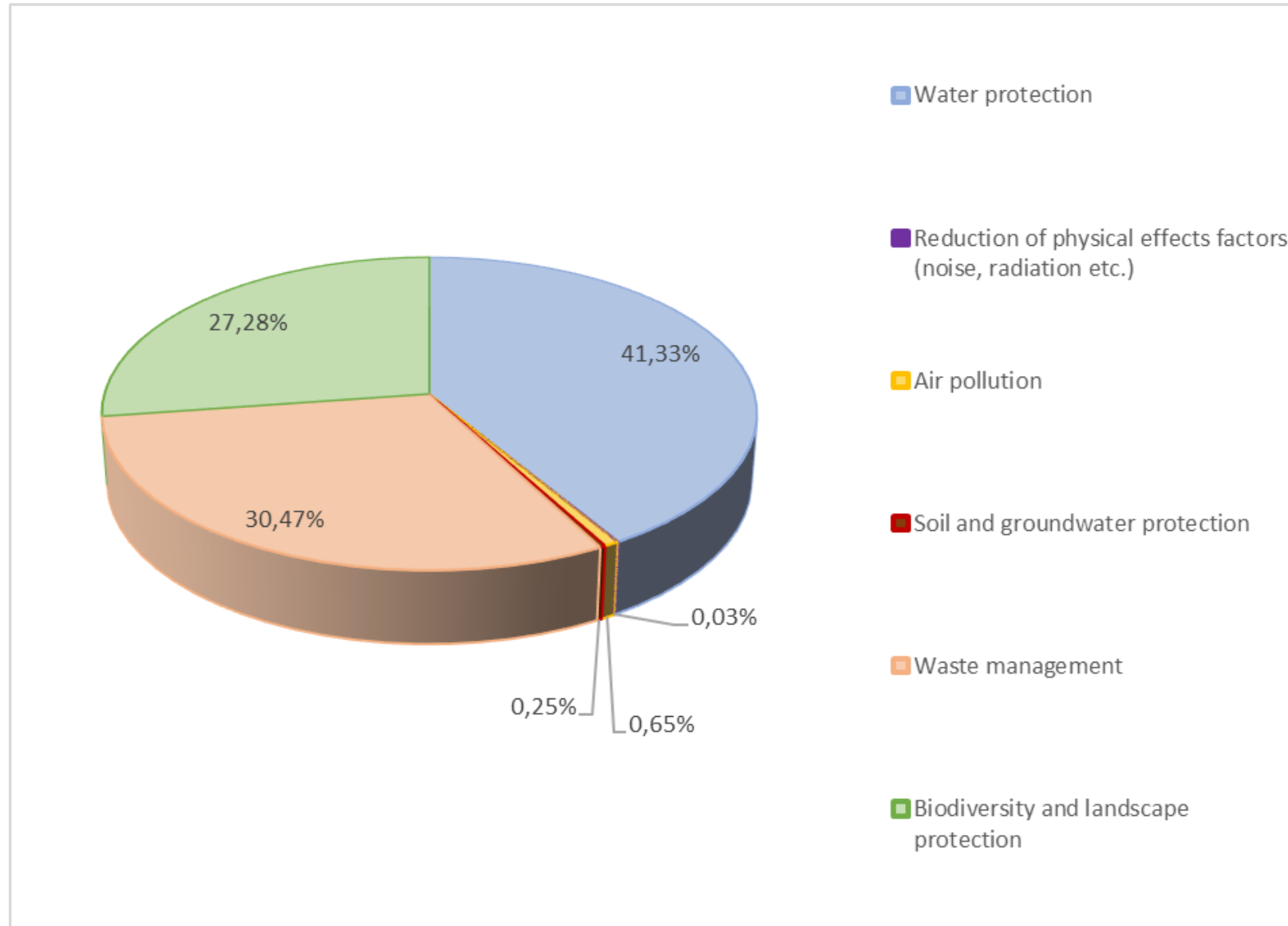
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Municipality expenditures on environmental protection



Municipality expenditures on environmental protection



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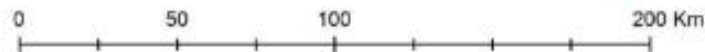
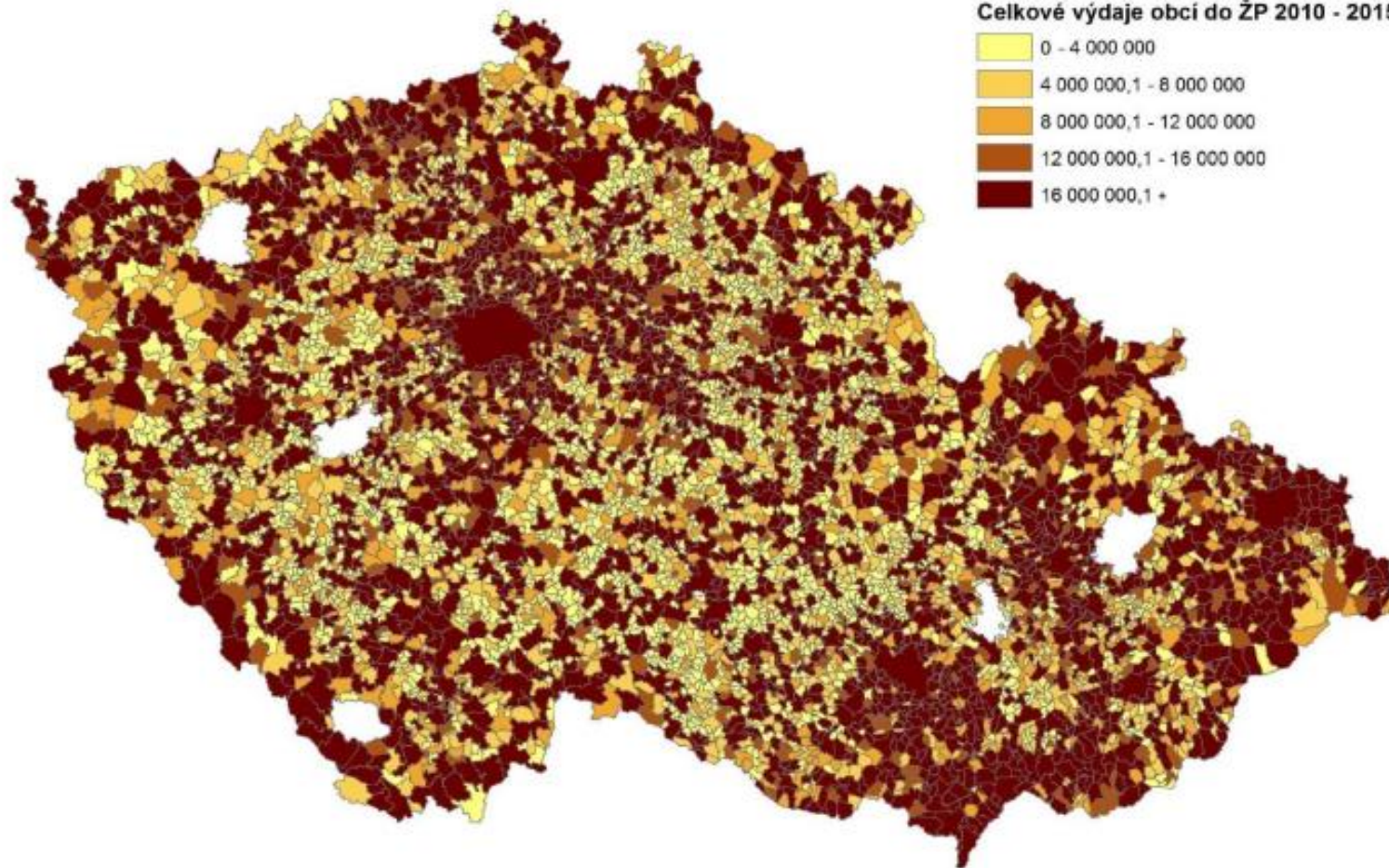
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Total municipality expenditures

Legenda

Celkové výdaje obcí do ŽP 2010 - 2015



- Expenditures on environmental protection
- CZK
- 2010 to 2015

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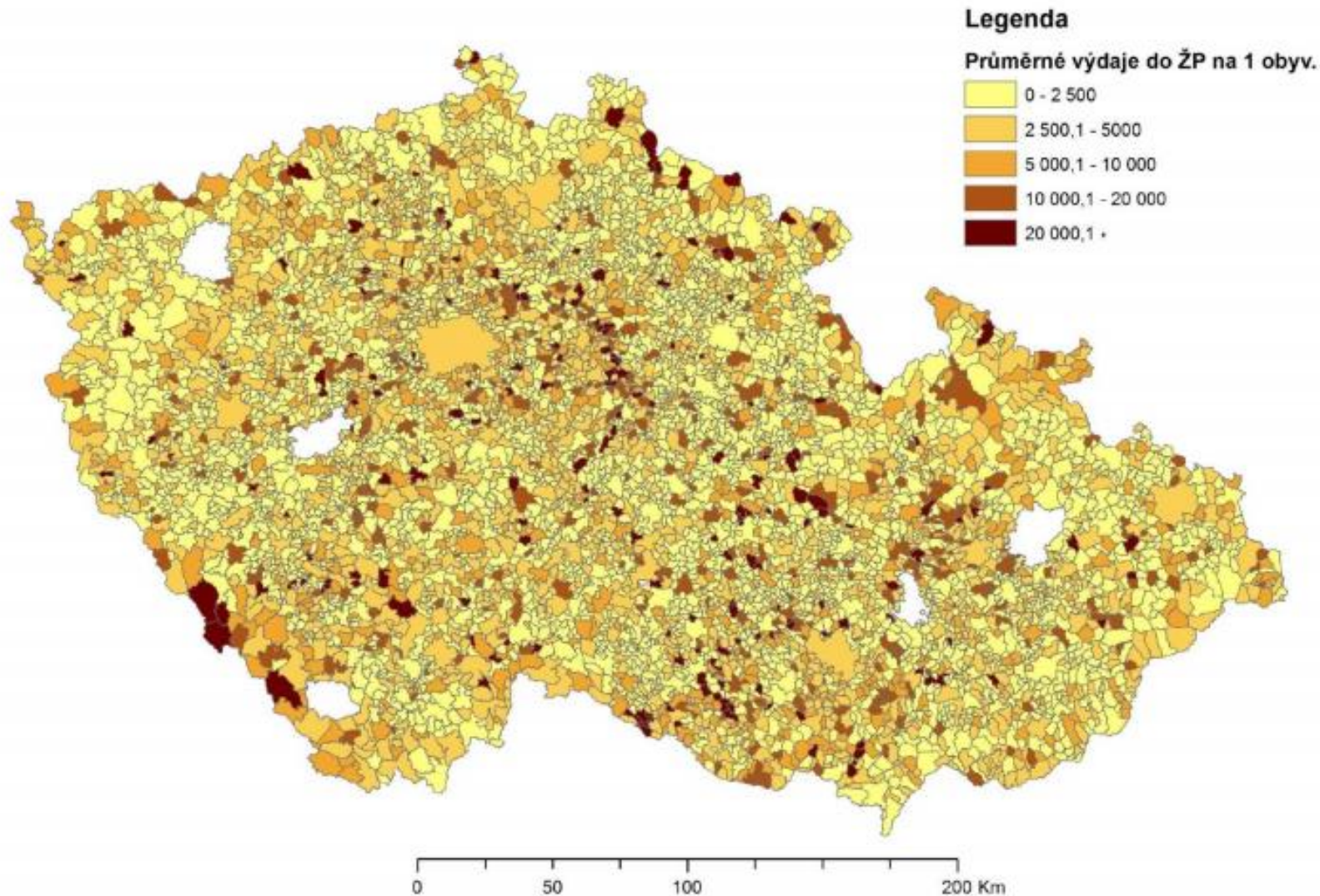
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Municipality expenditures per capita



- Average expenditures per capita
- CZK
- 2010 to 2015

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Circular Economy



- Reflection of Life Cycle Assessment
- Island Economy

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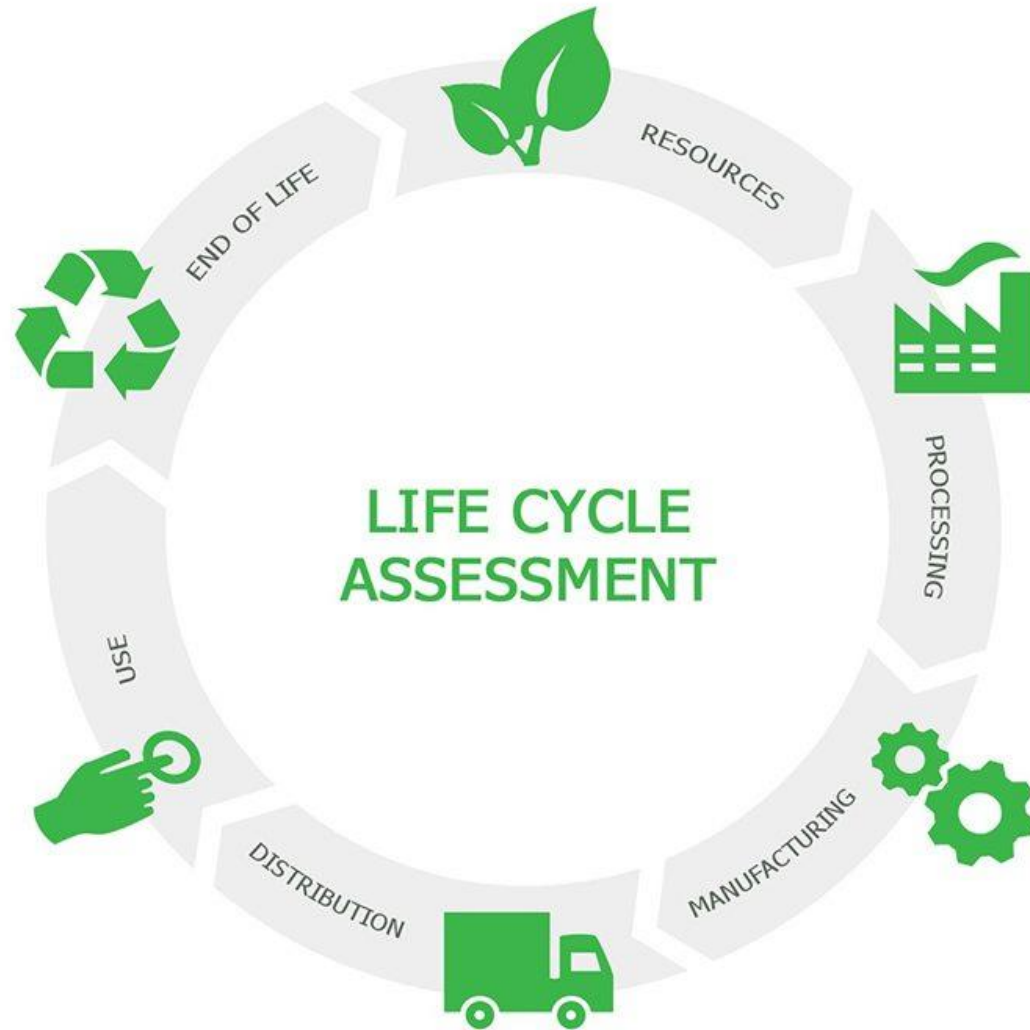
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Life Cycle Assessment



- Phases

- Resource
- (Mining / Harvesting)
- Process
- Manufacturing
- Distribution
- Use
- Waste disposal / Recycling etc.

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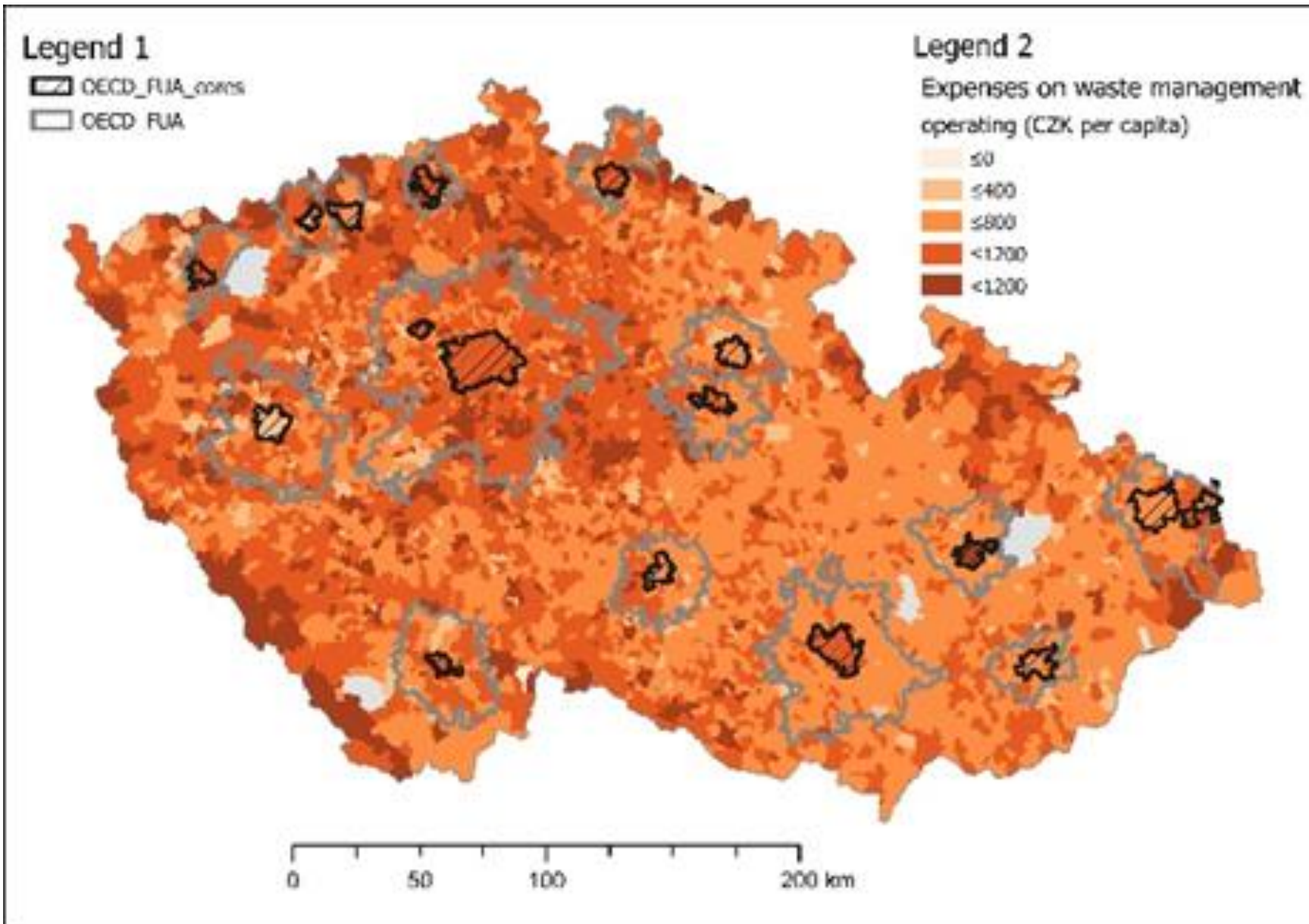
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Municipality expenditures for waste management



waste management

- Average operating expenditure per capita in CZK
- 2010 to 2015

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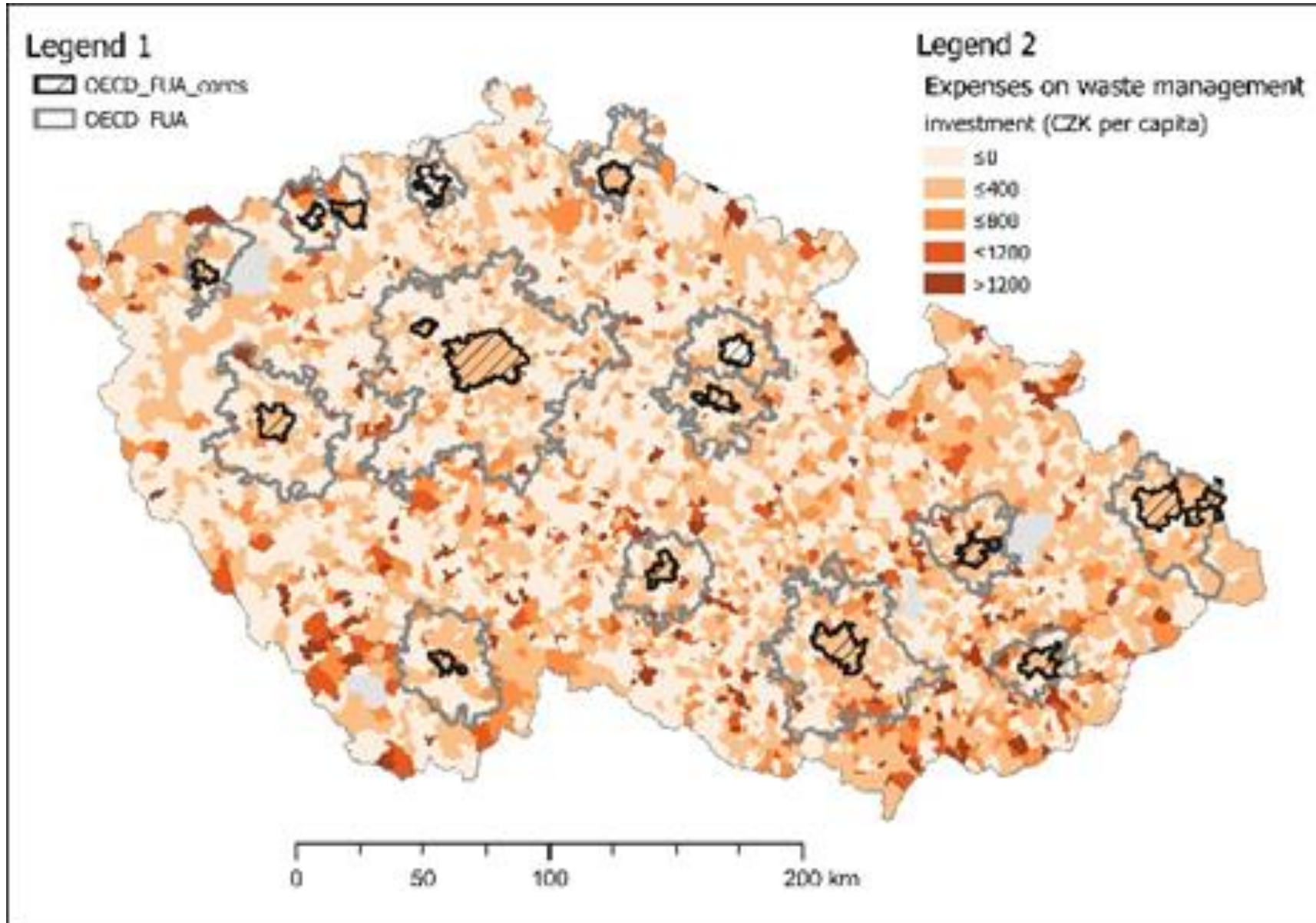
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Municipality expenditures for waste management



waste management

- Average capital expenditure per capita in CZK
- 2010 to 2015

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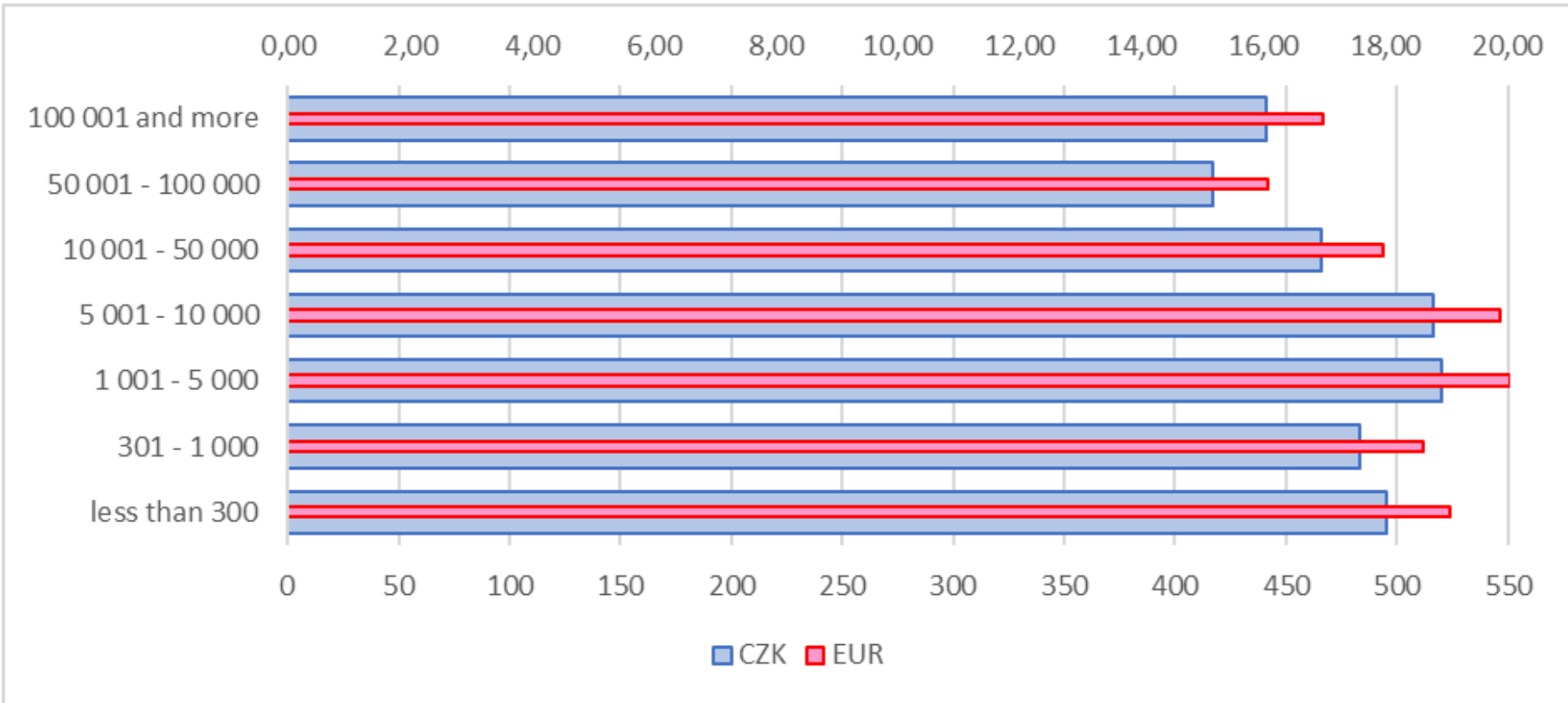
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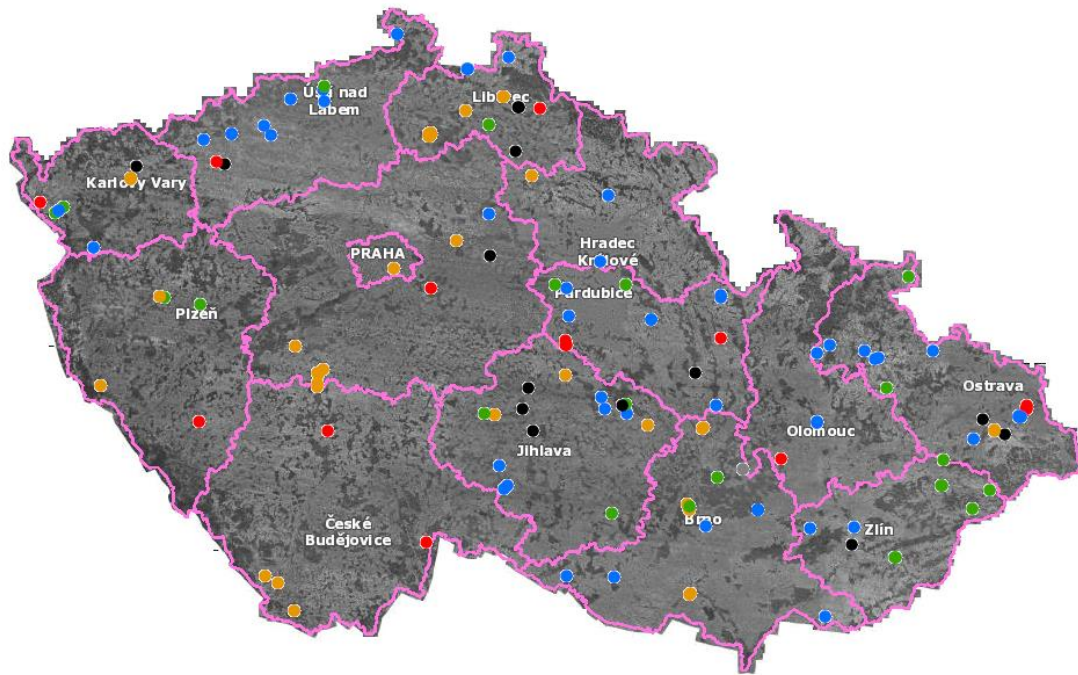


Municipality Population vs. expenditures

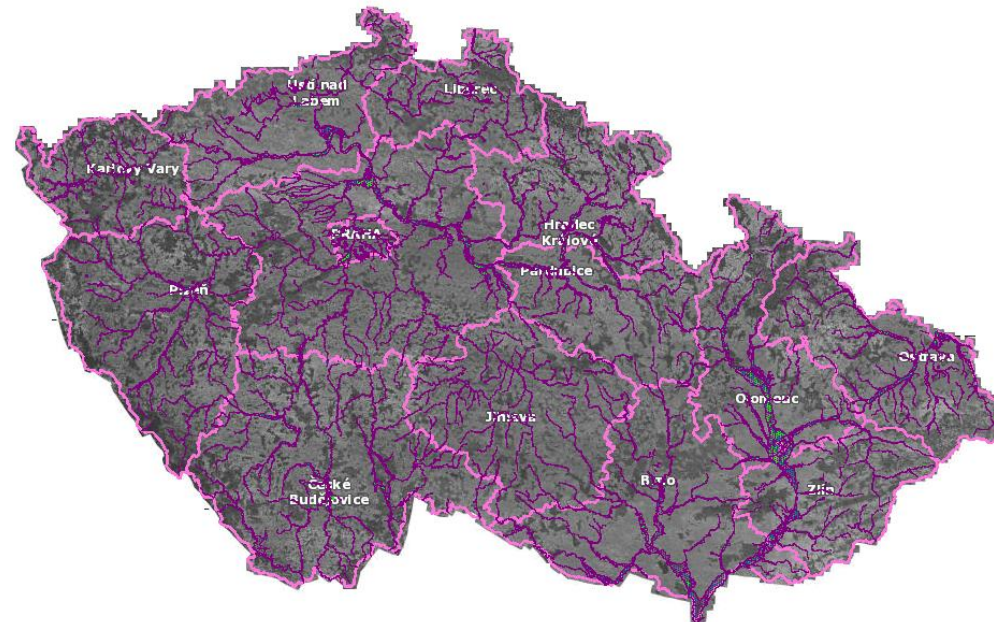


- Average expenditures per capita in CZK
- 2010 to 2015

Water



- Water quality for swimming areas 2018



- Flood areas

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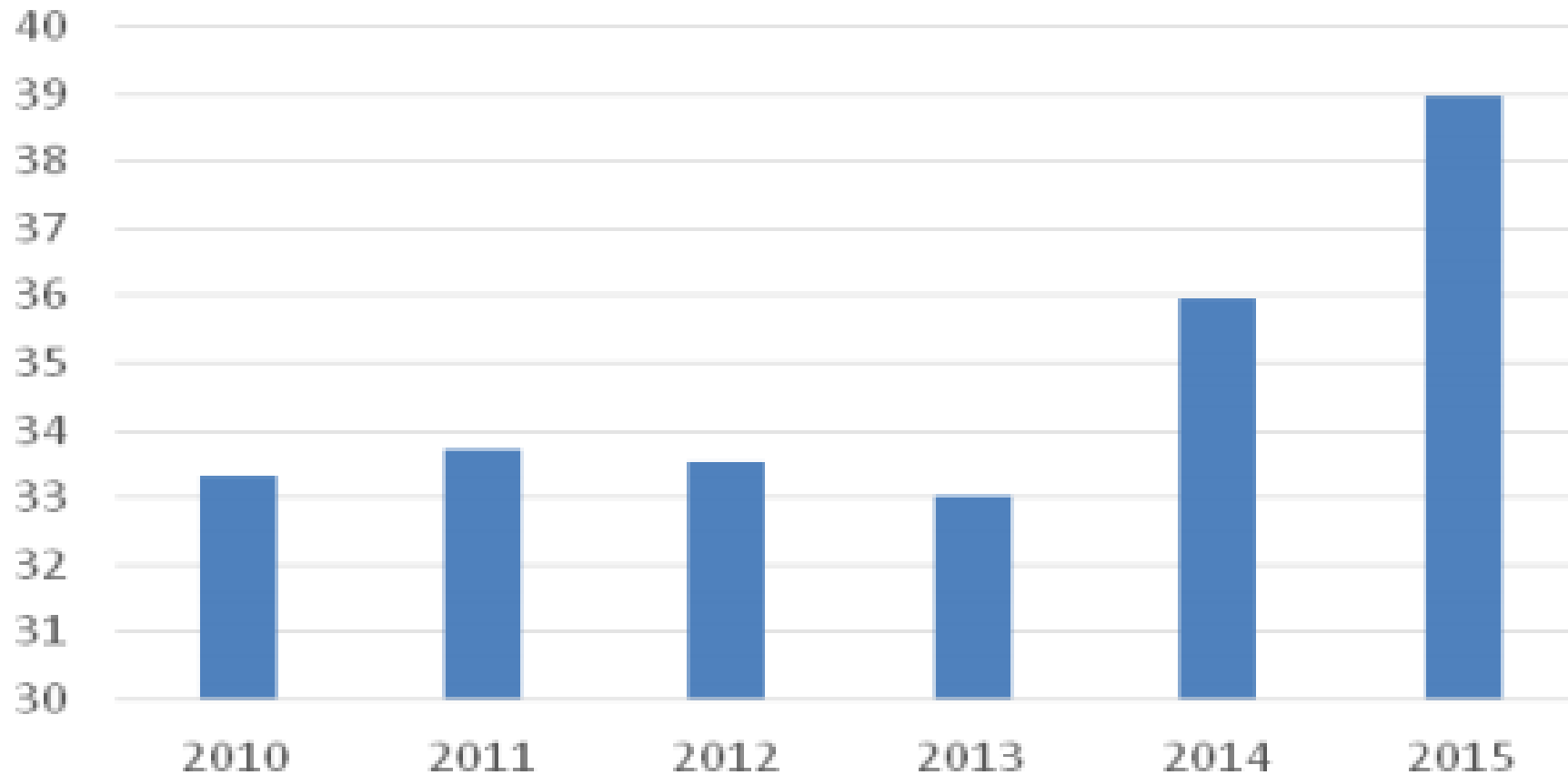
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Municipality expenditures for water protection



- expenditure in billions CZK
- 2010 to 2015

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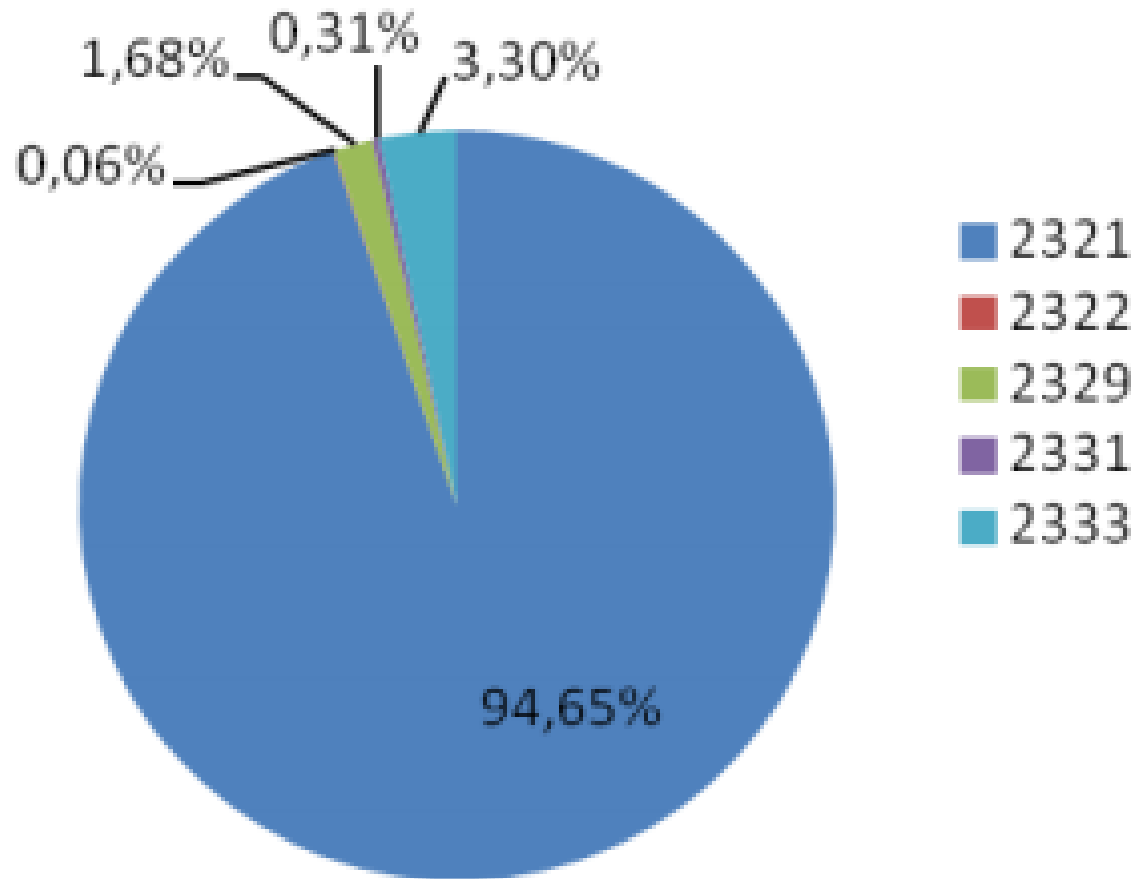
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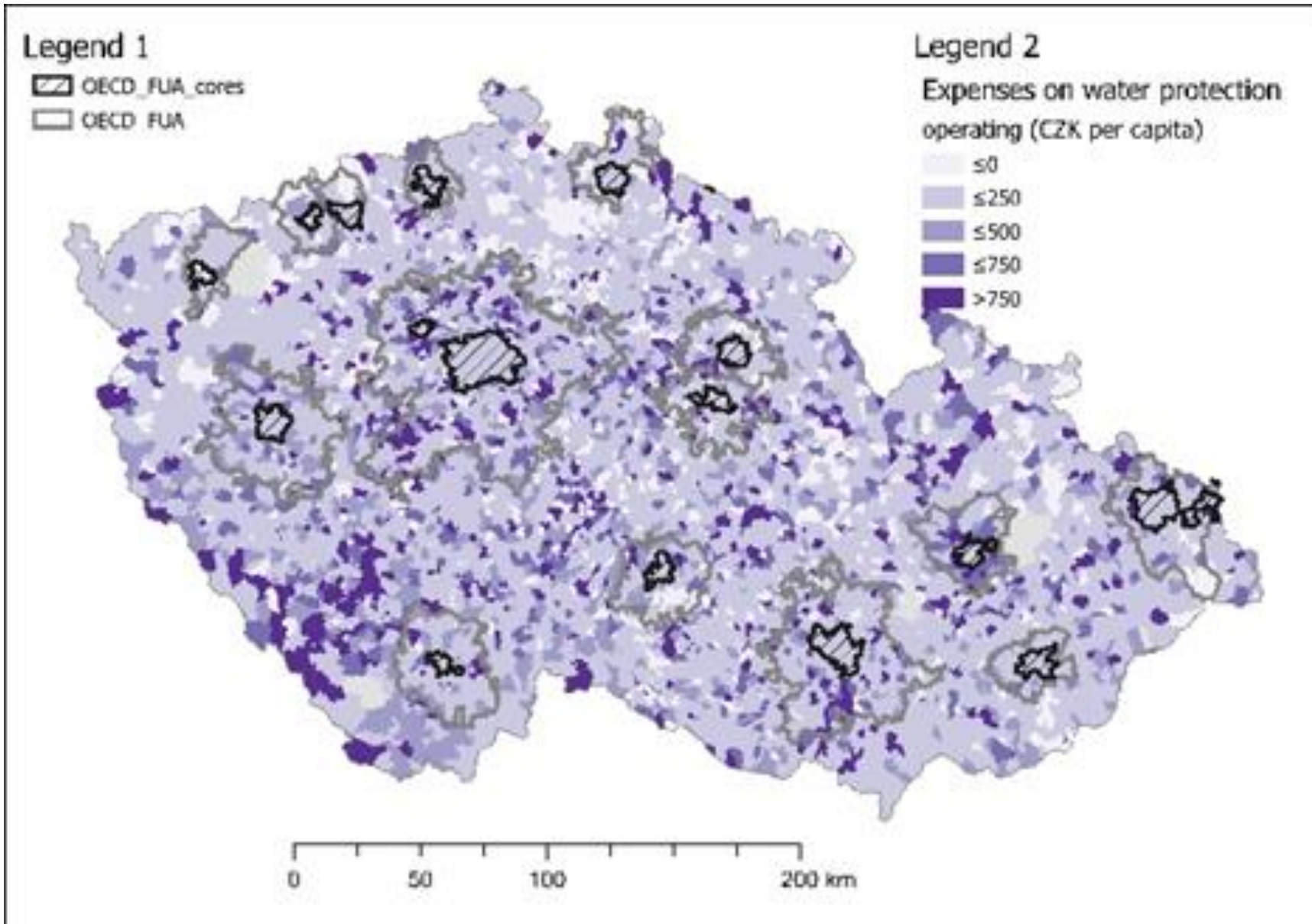


Budget Structure for expenditures on water protection



- 2321
 - Drainage of waste water
- 2322
 - Prevention of water pollution
- 2329
 - Drainage and wastewater treatment jn.
- 2331
 - Adjustments to water management. significant water and water flows
- 2333
 - Adjustment of small watercourses

Municipality expenditures for water protection



- Average operating expenditure per capita in CZK
- 2010 to 2015

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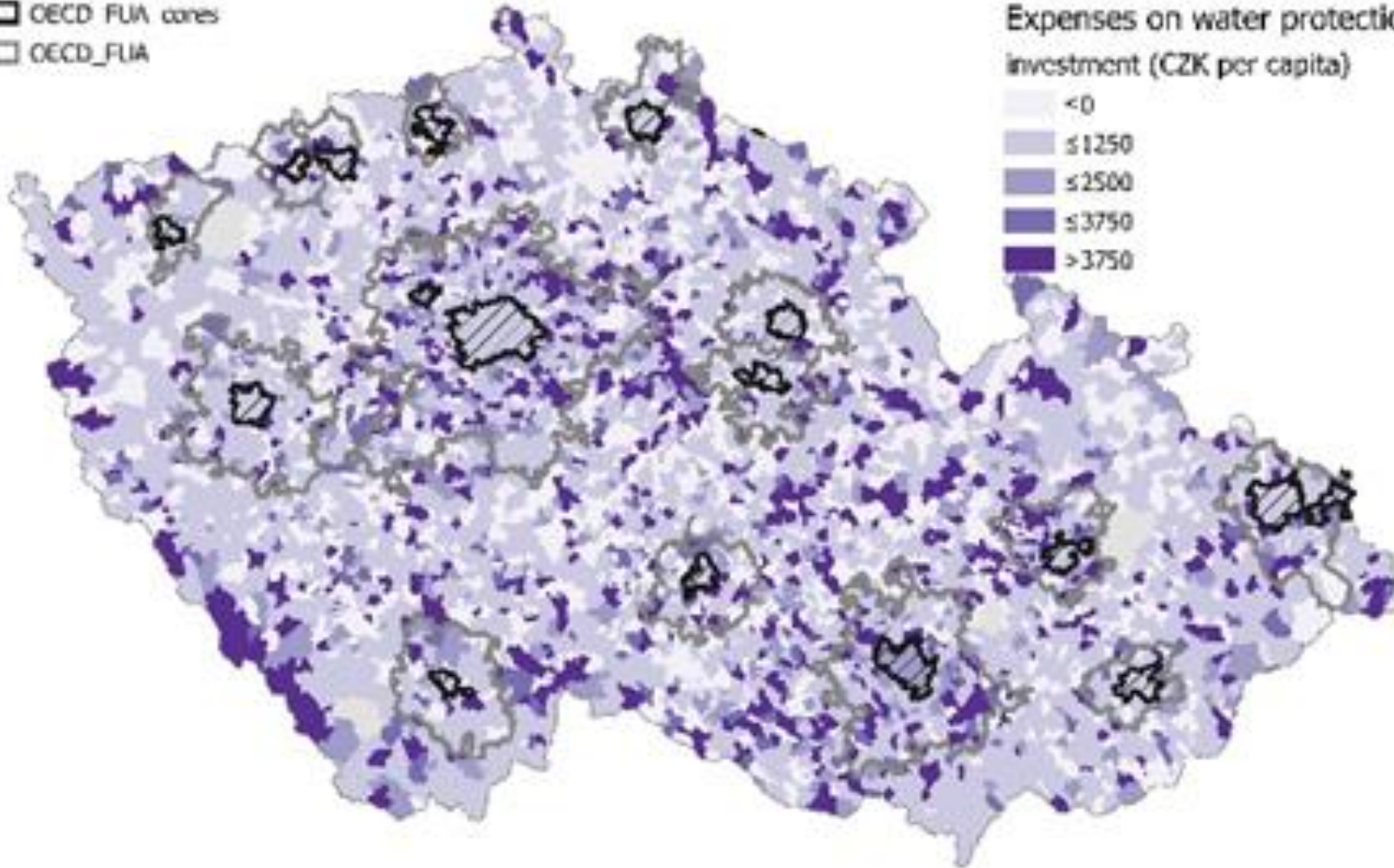
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Municipality expenditures for water protection

Legend 1
▨ OECD FUA cores
□ OECD_FUA

Legend 2
Expenses on water protection investment (CZK per capita)
◻ <0
◻ ≤1250
◻ ≤2500
◻ ≤3750
◻ >3750



0 50 100 200 km

protection

- Average capital expenditure per capita in CZK
- 2010 to 2015

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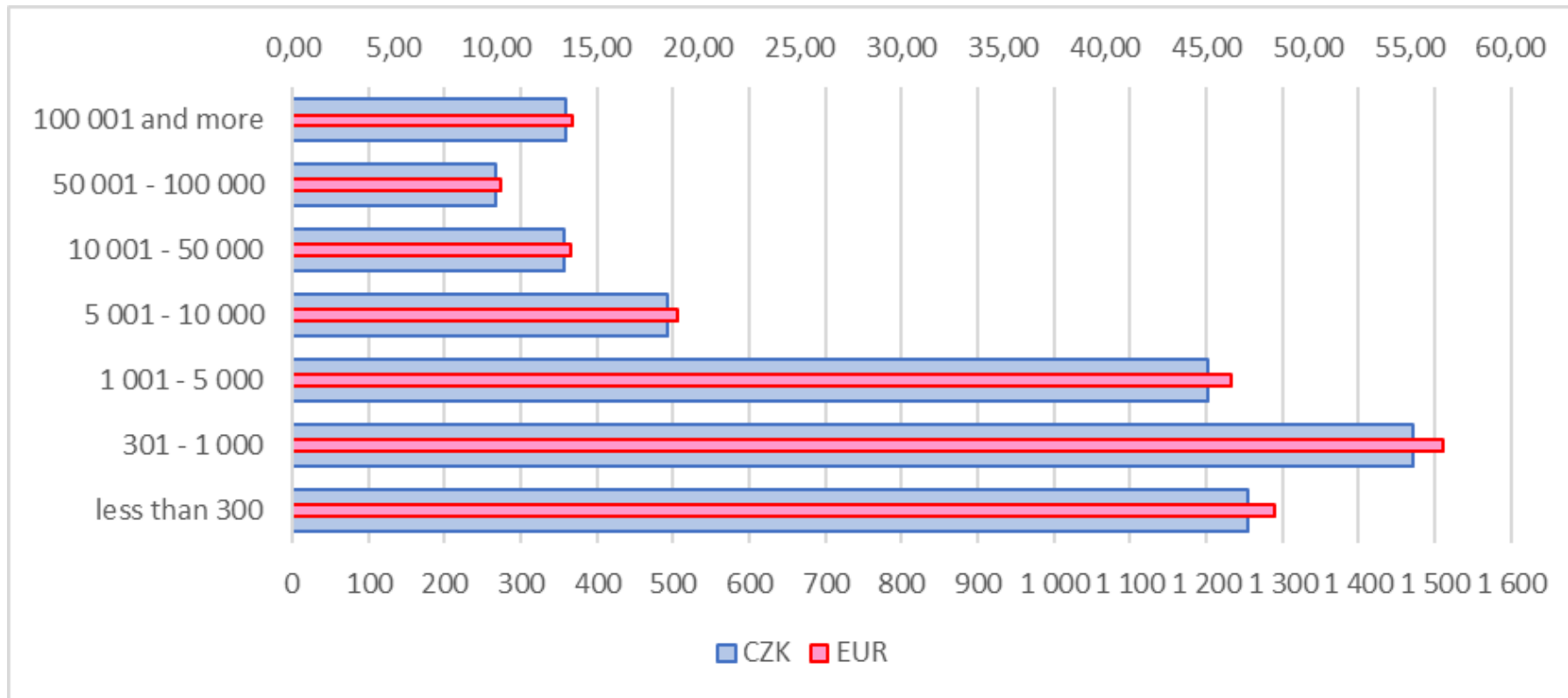
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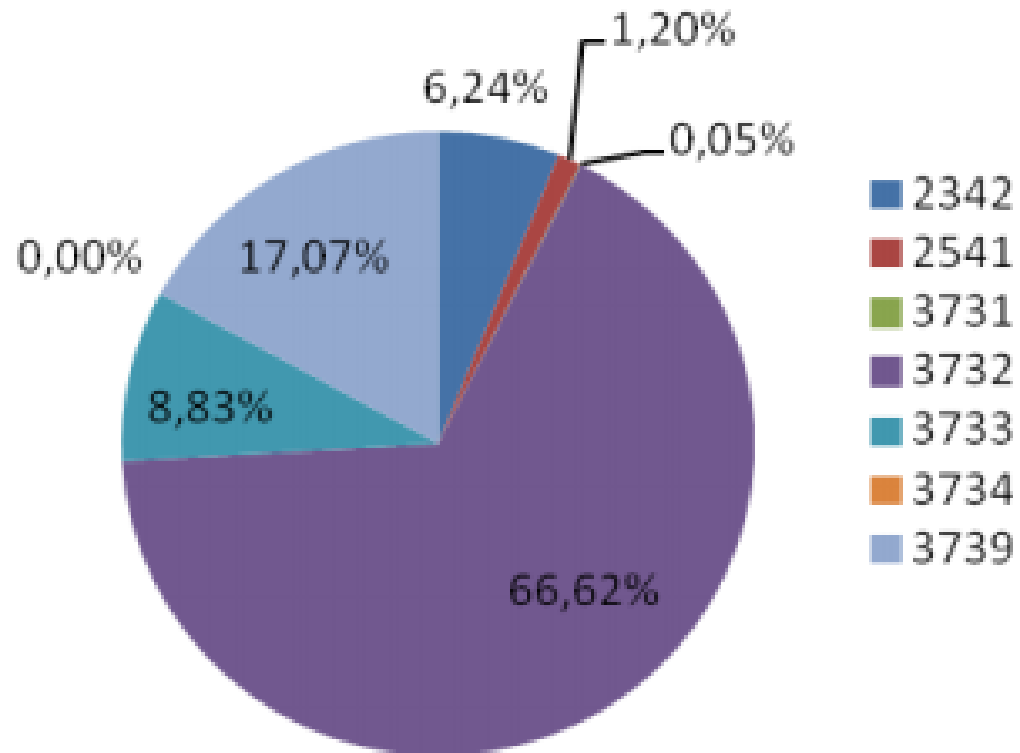


Municipality population and water protection

- Average expenditures 2010 – 2015
- In CZK per capita



Municipality expenditures for water protection



- 2342
 - Anti-erosion protection
- 2541
 - Geology
- 3731
 - Soil and groundwater protection against polluting infiltrations
- **3732**
 - **Soil decontamination and ground water cleaning**
- 3733
 - Monitoring soil and groundwater
- 3734
 - Prevention and remediation of salinisation
- 3739
 - Other protection of soil and ground water


Water protection areas

Legenda

CHOPAV


 CHOPAV

Ochranná pásma vodních zdrojů

 I. stupeň

 II. stupeň

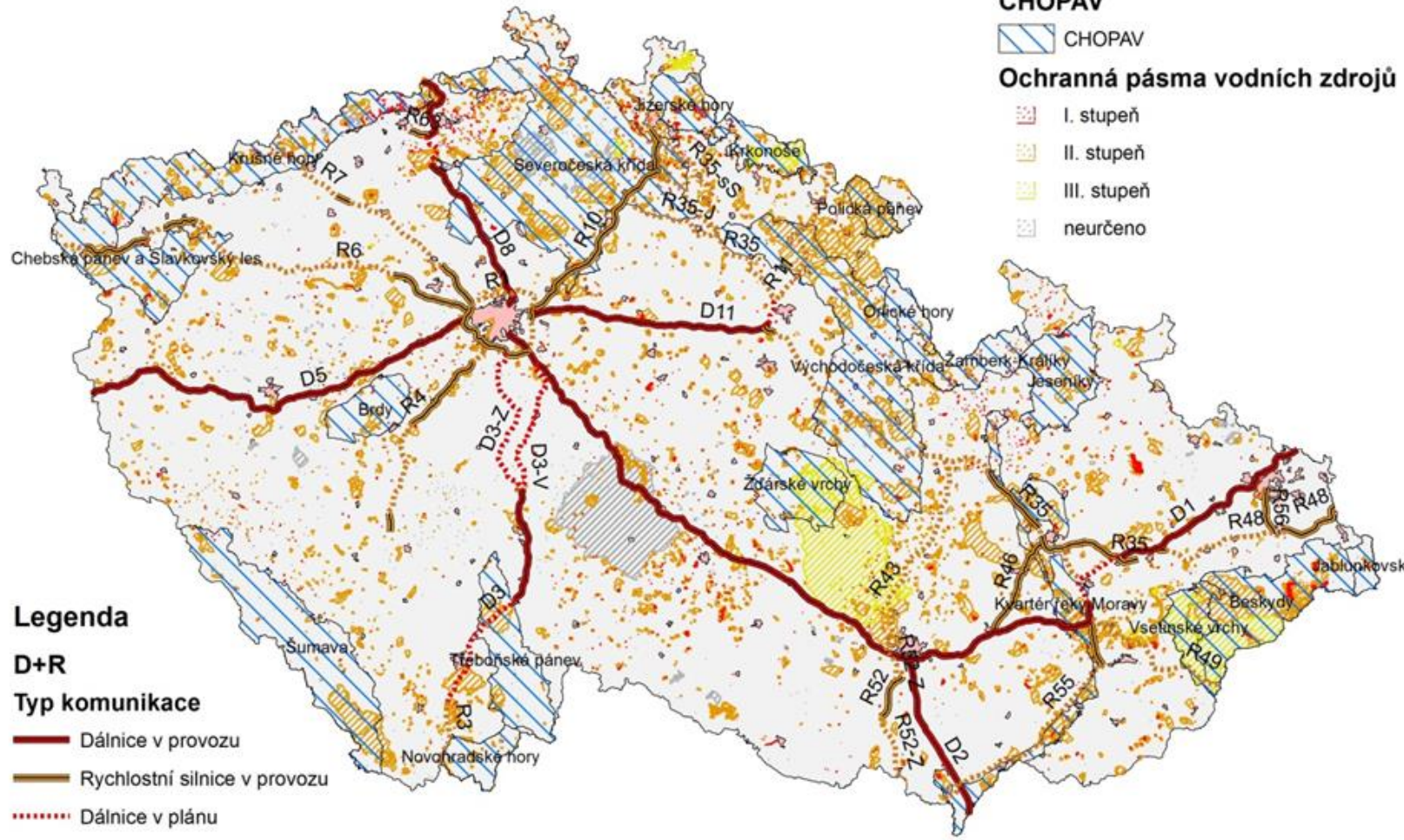
 III. stupeň

 neurčeno

- 2018

- Water sources (yellow)

- Water accumulation areas (blue)




Legenda

D+R

Typ komunikace

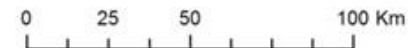
 Dálnice v provozu

 Rychlostní silnice v provozu

 Dálnice v plánu

 Rychlostní silnice v plánu

 Sídla Plochy



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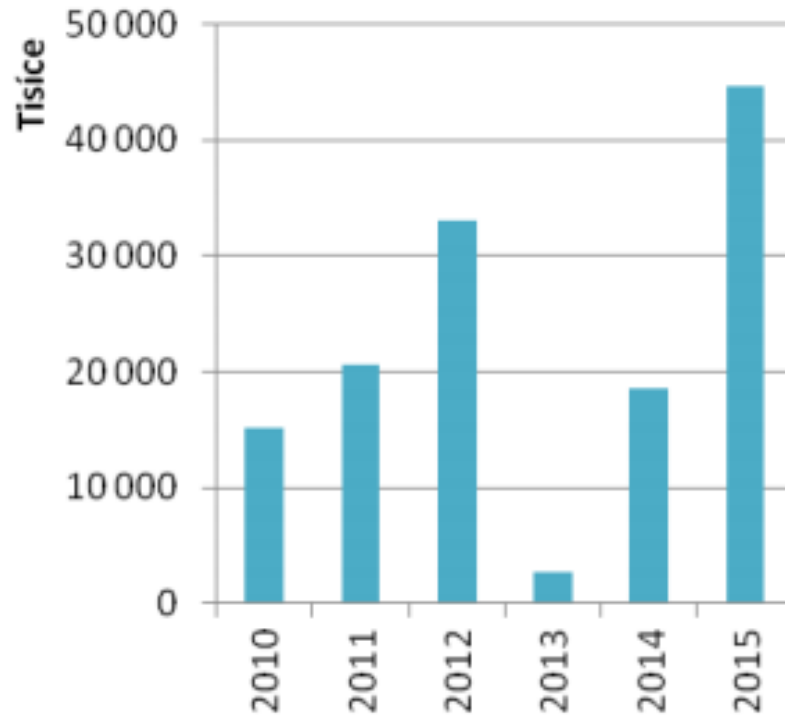
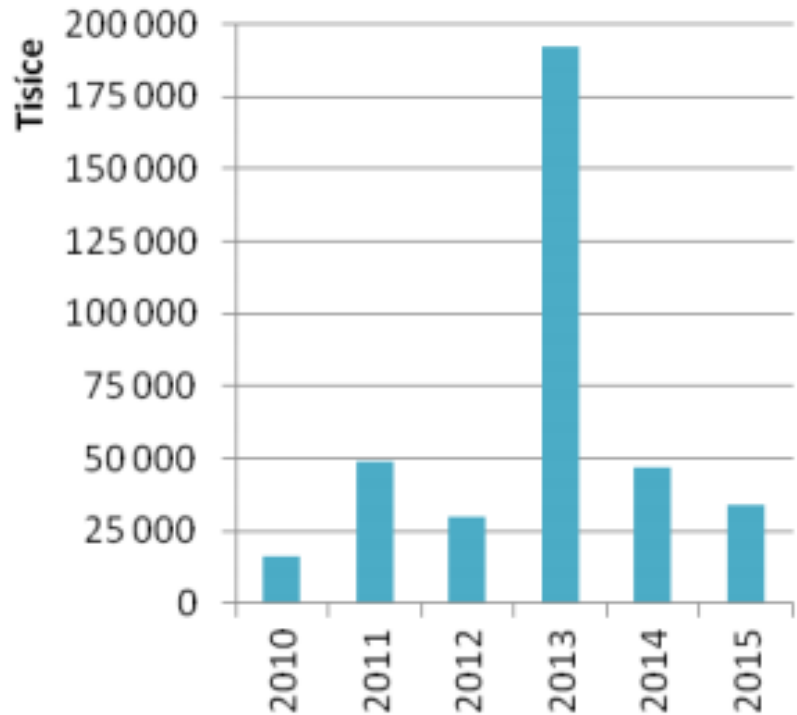
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Municipality expenditures on soil and underground water protection

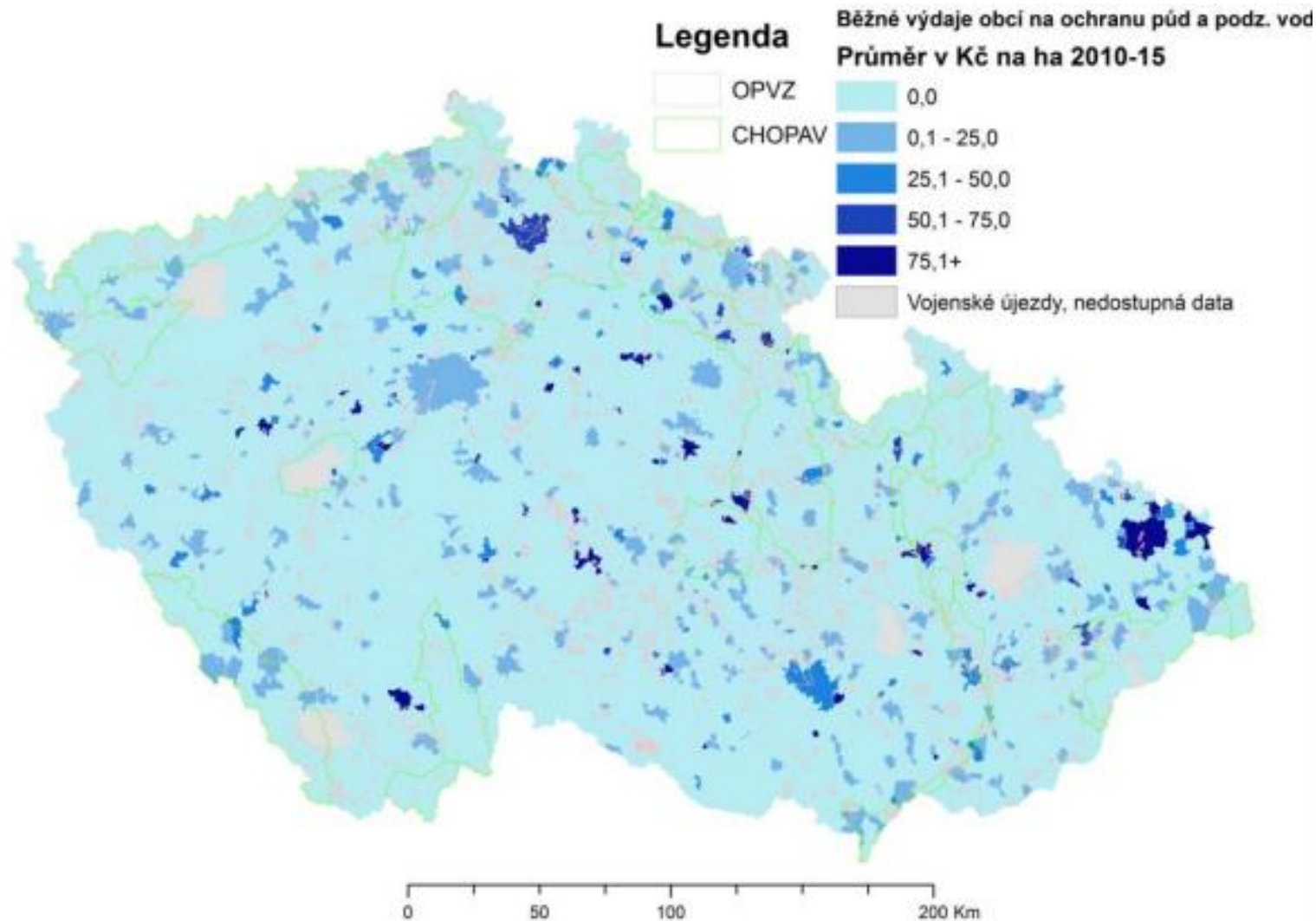


- Average capital expenditure per capita in thousands CZK
- 2010 to 2015

- Operating expenditure CZK

- Capital expenditure CZK

Municipality expenditures on soil and underground water protection



- Average operating expenditure (CZK/ha)
- 2010 to 2015

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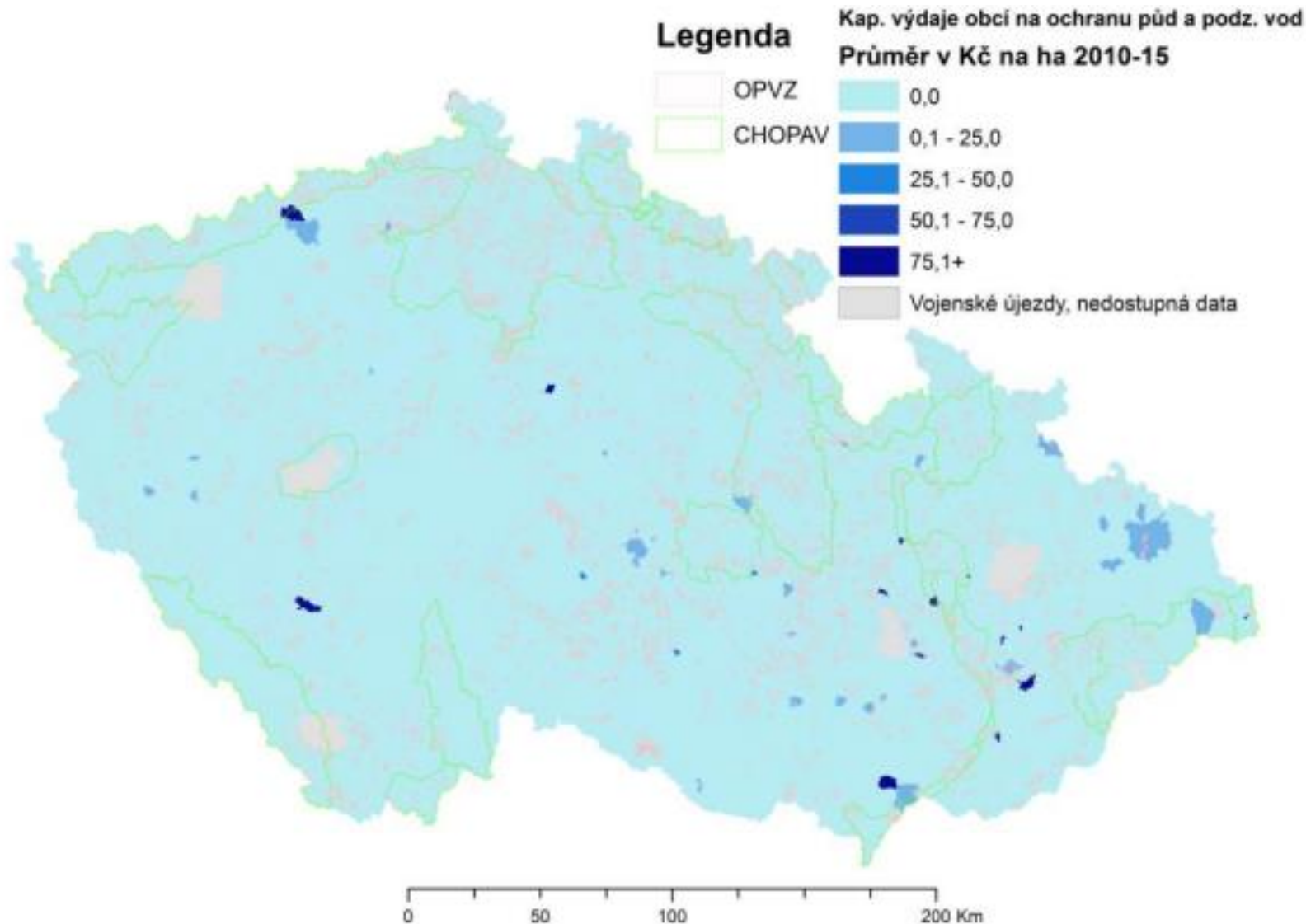
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Municipality expenditures on soil and underground water protection



- Average capital expenditure (CZK/ha)
- 2010 to 2015

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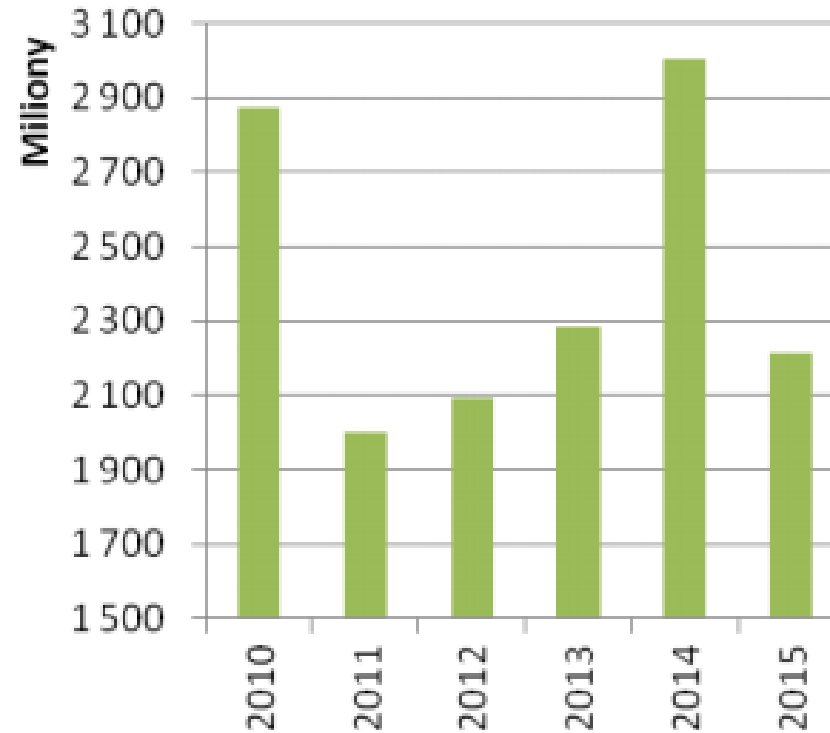
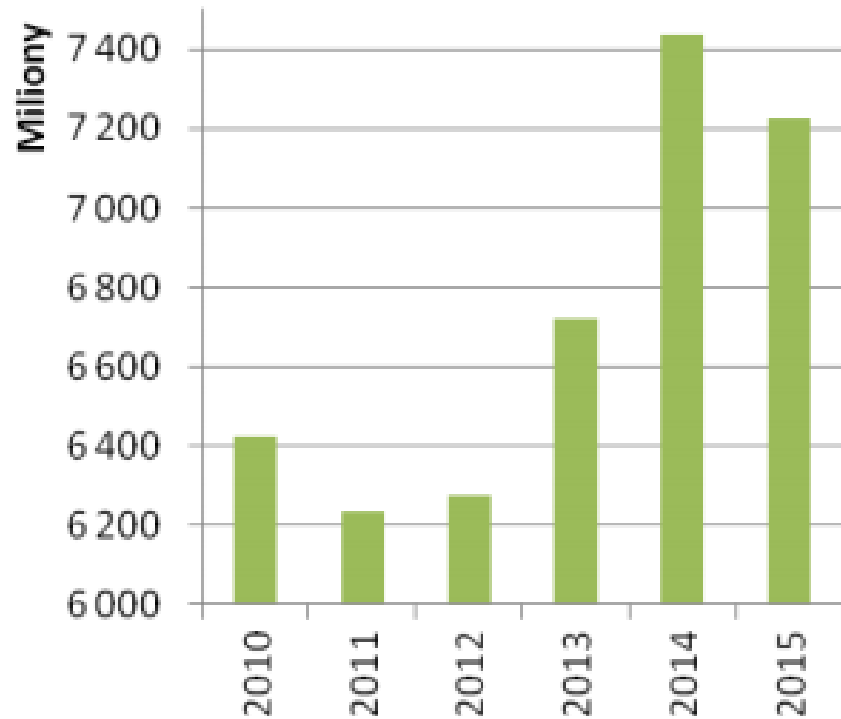
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Municipality expenditures for biodiversity protection



- Average capital expenditure per capita in millions CZK
- 2010 to 2015

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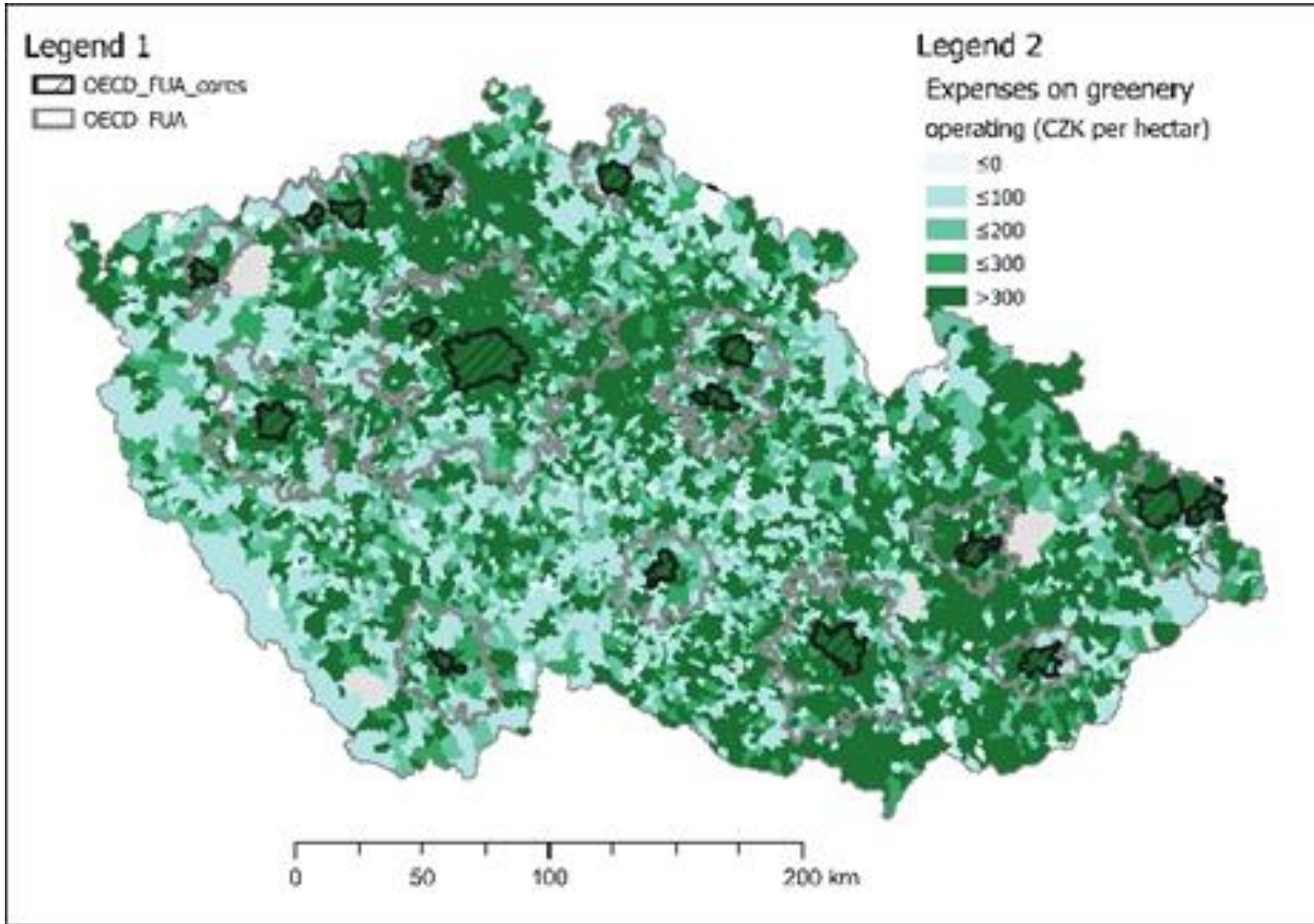
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Municipality expenditures for biodiversity protection



- Average operating expenditure CZK / ha
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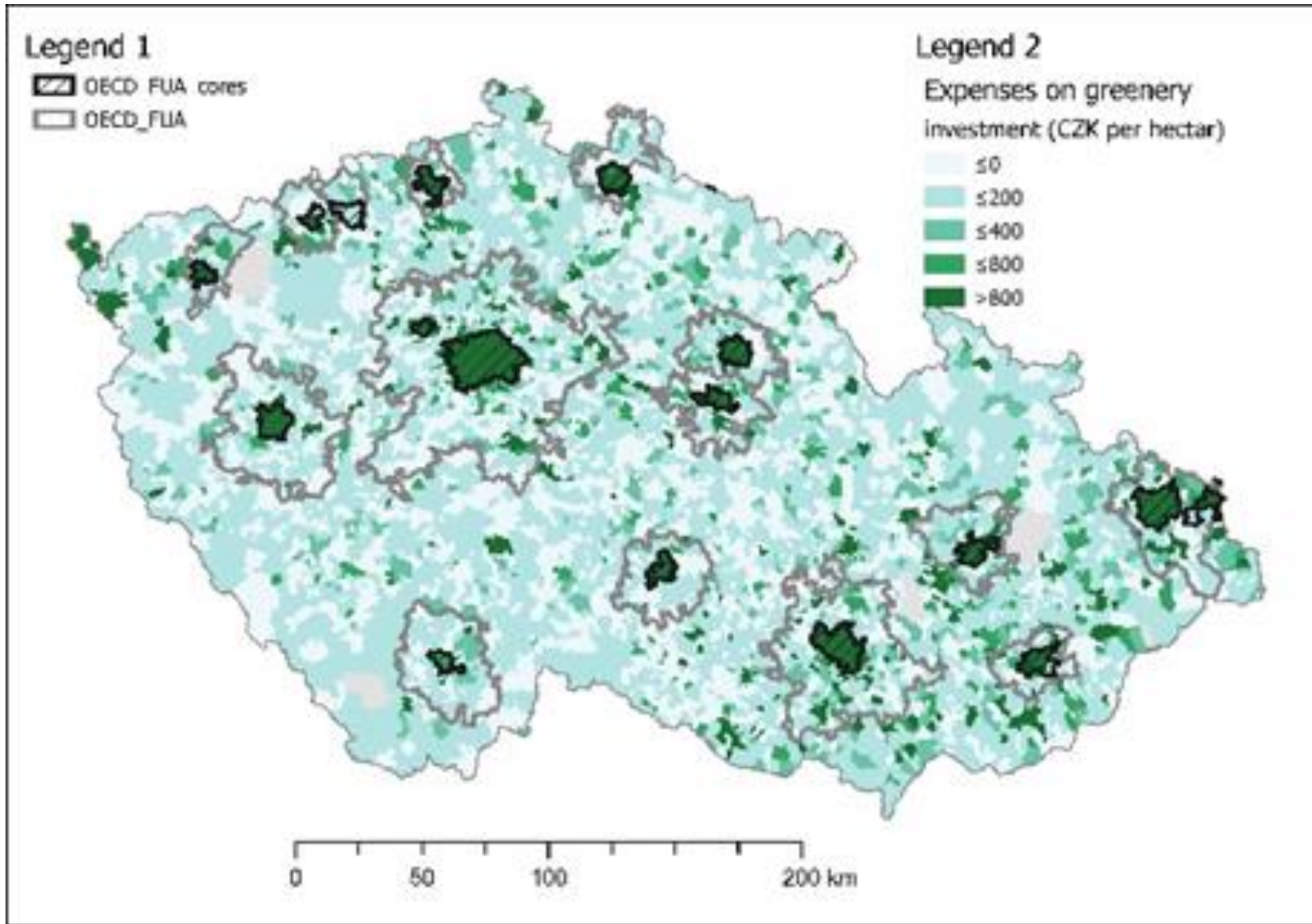
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