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Overview of Best Practices in Sustainable Waste Management in Rural Areas

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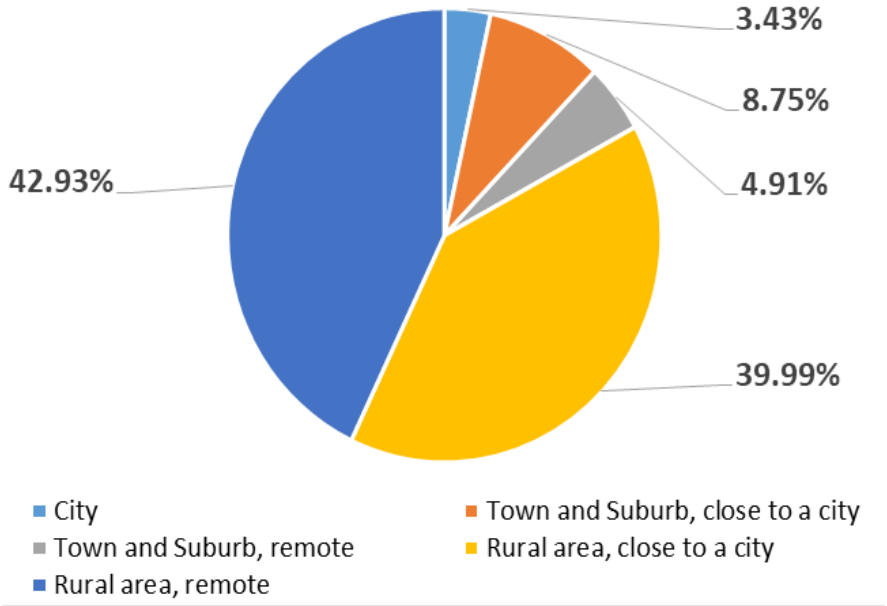
Key concepts: Rural areas

- **rural areas** (thinly populated areas) = where more than 50 % of the population lives in rural grid cells (1 grid cell =1 km^2) (Eurostat)



83% of the total EU area

30.6% of the EU's population lives in rural areas (population is older on average)
22.4% population at risk of poverty and social exclusion

- Lower waste generation rates
- Lower percentage of population covered by sanitation services (waste collection)
- Longer distances for waste transportation to waste treatment facilities
- Waste composition (by source): household waste and agriculture, forestry and fishery waste

Key concepts: sustainable waste management

The management of waste (all activities from collection to final elimination operations, with the infrastructure needed and interested parties, under the current legislative framework) performed so as to achieve an equilibrium between:

- economics of all waste related activities
- social acceptance, awareness and engagement
- environmental protection of resources

Change of vision

WASTE

Best practices in rural areas

- **Zero Waste Strategy for rural communities**

The Zero Waste Master Plan, 2020

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Best practices in rural areas

- **Zero Waste Strategy for rural communities (3.000-12.000**

Municipality	Year of Zero Waste Commitment	Total MSW generated per capita (2020)	Reduction in MSW generation since zero waste commitment	Separate collection % (2020)	Future targets
Salacea	2018	77	55%	70% (2021 recycling rate of 53.04%)	90% landfill diversion 0% incineration 40 kg residual/cap
Tg Lăpuș	2014	80	20%	75%	90% landfill diversion 0% incineration 70 kg residual/cap
Valea lui Mihai	2020	89	20%	50% (2021 recycling rate of 44.06%)	90% landfill diversion 0% incineration 40 kg residual/cap
Cociuba Mare	2019	70	30%	60% (2021 recycling rate of 49.82%)	90% landfill diversion 0% incineration 40 kg residual/cap
Brănești	2020	252	TBD	17%	90% landfill diversion 0% incineration 100 kg residual/cap

The State of Zero Waste Municipalities Report, 2021

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Best practices in rural areas

Zero Waste Strategy for rural communities

- Salacea is the **benchmark** for a municipality located in a remote rural area that has successfully implemented ZW Strategy (3,000 inhabitants; 1,000 households)
- 2018: Pilot program- new for Romania- introduced door-to-door **household waste separate collection for 5 fractions** (paper and cardboard, plastic and metal, glass, bio-waste, residual waste) + multilingual stickers on bins (3 languages)
- A comprehensive **4 weeks education program** was implemented before changing the collection **infrastructure-interaction with the citizens** in churches, schools, local pubs, local cultural center
- **Main stakeholders:** Salacea City Hall, EcoBihor (waste treatment plant, compost and landfill operator), SC Ave Bihor SRL (local waste collector operator), Zero Waste Romania
- **Cost:** 20,000 EUR (new infrastructure) funds of the municipality and donations

https://zerowastecities.eu/bestpractice/the-story-of-salacea/

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Best practices in rural areas

Zero Waste Strategy for rural communities

Salacea key figures after 3 months of system implementation compared to the amount of collected waste previously:

- Total generated waste reduction rate: increased from 0% to 55%
- Landfilling: reduced from 99% to 55 % (including 16% of non-recyclable waste and 39% residual waste from households)
- Separate collection rate: raised from 1% to 61%
- Recycling rate: raised from 1% to 40%
- Home Composting: performed by 97% of the inhab.
- Rates of local citizen engagement increased from 8.4% to

E *https://zerowastecities.eu/bestpractice/the-story-of-salacea/*

Best practices in rural areas

- **Biowaste valorization and renewable energy production**

The Genesis BIO1 biogas and cogeneration plant built by Genesis Biotech in the rural town of Filipeștii de Pădure (11.000 inhab), Prahova, Romania, near CrisTim

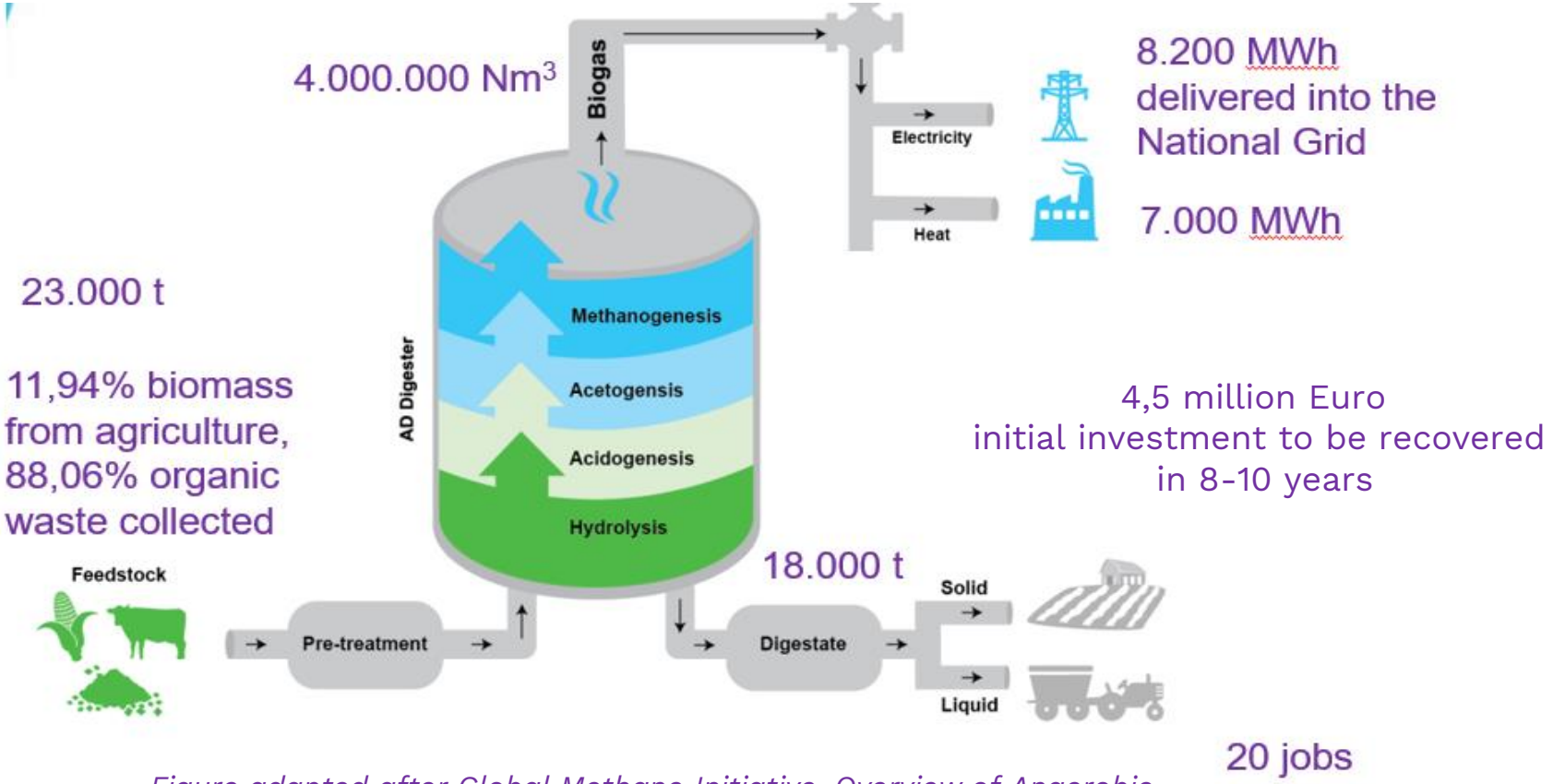

Figure adapted after Global Methane Initiative, Overview of Anaerobic Digestion for Municipal Solid Waste, 2016

EU Long term vision for rural areas (by 2040)

- ✓ Agroecology - Circular approaches to nutrients and materials management reconnect farm and fork, food waste is a thing of the past, agricultural waste is not burnt but recycled into the farm system
- ✓ More attention is needed to:

plastic waste (agricultural plastic films and the packaging of toxic materials) (especially soil and water pollution)

methane emissions reduction targets

more ambitious ammonia emissions reductions + continuous air quality monitoring in rural areas.

- ✓ Sharing, re-using and repairability are the norm, waste prevention has creats new profitable activities, and the remaining waste is recycled
- ✓ Waste management infrastructure and services in rural areas improves and inspection and enforcement measures to avoid

European Network for Rural development, 2021, Long-term Vision for Rural Areas, EU Rural

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