

## **4.1.1 Waste Generation**

Daniela Gavrilescu, Petru Apopei, Carmen Teodosiu

“Gheorghe Asachi” Technical University of Iasi, Romania

S1 Welcome to Training Module 4 entitled Waste Management in Rural Communities!

My name is Daniela Gavrilescu, I am Lecturer at the "Gheorghe Asachi" Technical University of Iași, within the Department of Environmental Engineering and Management and together with my colleagues, Prof. Carmen Teodosiu and Dr. Petru Apopei,

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we will present to you information on the generation and material composition of solid waste in rural communities, as well as the main components of solid waste management: stakeholders, financial sustainability and technical component.

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To begin with, we need to clarify which are the 2 main constituents of waste in the rural environment. According to scientific literature, there are 2 large categories of waste: household waste, generated in homes and individual households, and waste from economic activities, which in turn can be similar to household waste or not. From the point of view of treatment possibilities, in rural areas, we encounter biodegradable waste approximately 64% and non-biodegradable waste in proportion of 36%.

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The solid waste generation rate or in rural communities is a quantity that measures the amount of waste generated by an inhabitant, in a certain period of time, usually a day, but it can also be estimated for other periods of time, for example a year. Thus, in rural communities in India, 1.27 kg waste/inhabitant/day is generated, in China 1 kg/ inhabitant /day, in Iran 0.65-0.84 kg/ inhabitant /day, while in Romania this indicator has the value of 0.31 kg/ inhabitant /day .

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in Romania we can say that the rural area contribute with small amounts of waste to the total amounts generated and that in general, the annual variations that are recorded in the total quantities can also be observed in the quantities generated specifically in the rural environment. For the last 4 years, 2022-2025 included in the graph, the values represent the forecasts proposed by the last Romanian National Waste Management Plan, launched in 2018.

The annual waste generation rate in rural areas has varied, from 2014 to 2025. As we stated previously, the values related to the years 2022-2025 represent projections or estimates. In general, a sharp decrease of this indicator can be observed. This is due on the one hand to the demographic decline that Romania is facing and on the other hand to a calculation methodology based on estimates and less on exact data. This graph also shows the total average annual income for a rural resident. It can be noted that there is a tendency to decouple economic growth from waste generation (the higher the income, the lower the amount of waste generated).

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The waste generation indicator also depends on the economic and development conditions of a region. Thus, we observe the regional variation of the daily waste generation rate in rural Romania. The data presented in the table take into account the classification of communities as communities with less than 500 inhabitants, communities with a population between 500-14,999 14 thousands 9 hundred and ninety nine inhabitants and communities with more than 15,000 inhabitants. The maximum value of the daily waste generation indicator is 0.66 kg/inhabitant /day in the Bucharest-Ifov region, the figures being influenced by the proximity of the capital, while the minimum value of the same indicator is 0.28 kg/inhabitant /day recorded in the South region.

S8 Thank you for your attention!