



**LAND MANAGEMENT, ENVIRONMENT & SOLID-WASTE:
INSIDE EDUCATION AND BUSINESS IN CENTRAL ASIA
ERASMUS-EDU-2023-CBHE Project Number: 101129032**

MICRO-CREDENTIAL

**CIRCULAR ECONOMY FOR LAND AND WASTE
MANAGEMENT**

**13.- Assessment Tools and Indicators of Circular
Economy**

Reading 2

Indicators for land and waste sustainability



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This reading links circular economy assessment with official sustainability indicators for land and waste systems. It allows students to understand that circular economy performance should be assessed not only through material recovery, but also through land consumption, degradation of land resources, controlled waste management, recycling performance and the environmental consequences of waste and material flows.

Students should focus on four indicators:

- SDG 11.3.1: Ratio of land consumption rate to population growth rate.
- SDG 11.6.1: Proportion of municipal solid waste collected and managed in controlled facilities.
- SDG 12.5.1: National recycling rate and tonnes of material recycled.
- SDG 15.3.1: Proportion of land that is degraded over total land area.

These indicators are particularly relevant for land and waste management because they connect spatial planning, waste infrastructure, recycling systems, soil degradation, urban expansion and environmental protection. They also show the need to combine circular economy indicators with broader sustainability indicators when evaluating policies, projects or territorial strategies.

<https://unstats.un.org/sdgs/metadata/>

Short reflection questions

1. How does the circular economy differ from a conventional waste-management approach focused mainly on collection, treatment and disposal?
2. In land and waste management, which interventions would contribute most clearly to “designing out waste and pollution”?
3. Why does circular economy require systems thinking rather than isolated technical solutions?
4. What actors should be involved in a circular land and waste-management strategy: public authorities, companies, citizens, waste operators, land-use planners, or others?
5. Identify one example where solving a waste problem at the end of the chain could create new environmental or social problems elsewhere in the system.
6. How can land-use planning, infrastructure design and waste prevention be connected within a circular economy model