



Circular
land
management

Circular land management

Space for today.
Space for tomorrow.



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
DIRECTORATE FOR SPATIAL PLANNING AND CONSTRUCTION



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA



THE RECOVERY
AND RESILIENCE
PLAN



Funded by
the European Union
NextGenerationEU



SLO4D

Circular land management

Space for today. Space for tomorrow.

Authors: Barbara Černič, Geodetic Institute of Slovenia
Katarina Kuk, Geodetic Institute of Slovenia
Edvard Mivšek, Geodetic Institute of Slovenia
Peter Lamovec, Geodetic Institute of Slovenia
Marina Lovrić, Geodetic Institute of Slovenia
Ajda Kafol Stojanović, Geodetic Institute of Slovenia
Tomaž Černe, RaSIS s.p.
Ines Lupše, Ministry of Natural Resources and Spatial Planning,
Jelena Torbica, Ministry of Natural Resources and Spatial Planning,

Publisher: Ministry of Natural Resources and Spatial Planning,
Spatial Planning and Construction Directorate

Translation: Polona Glavan, Secretariat-General of the Government of the Republic
of Slovenia

**Image and
graphic
credits:** Marina Lovrić, Geodetic Institute of Slovenia
Freepik.com
Adobe Stock

Design: Marina Lovrić, Geodetic Institute of Slovenia

Print: Printed in Slovenia

Ljubljana, 2026

Space for today.
Space for tomorrow.

The concept of circular spatial management was developed as part of the Green Slovenian Location Framework (SLO4D) project, co-financed by the Recovery and Resilience Plan, and represents a starting point for the further development of data-supported approaches to sustainable spatial management.



Circular land management

An approach for sustainable
spatial development

Circular land management is about translating the principles of the circular economy into spatial development. Rather than abandoning built structures, it encourages their re-use, the renovation of buildings and built-up land. This approach reduces negative impacts on the environment and contributes to the conservation of natural resources.

To put these principles into practice, in 2023 the Ministry of Natural Resources and Spatial Planning prepared the Strategic Plan on Circular Land Management 2024–2030.

Circular land management aims to support the green transition and create a high-quality living environment resilient to climate change.



Economic and commercial zones

Growing tourism

Agricultural land protection

Renewable energy sources

Construction of (public) housing

Infrastructure

Protection of water areas and nature conservation areas

Conservation of cultural heritage

Space is a limited and valuable resource

Past and current patterns of land use largely follow a linear economic model of “take-make-use-dispose”, which is based on high consumption of materials and energy. In spatial development, this pattern is manifested in the continuous development of new land, with many buildings and land remaining abandoned or underused after they no longer fulfil their original functions.

The continuous expansion of built-up land has a negative impact on both the environment and quality of life, causing:

- loss of biodiversity,
- soil degradation,
- lower climate resilience,
- additional waste,
- higher risk of natural disasters,
- threats to food security,
- increase in traffic,
- loss of spatial identity.

Land take and building stock situation

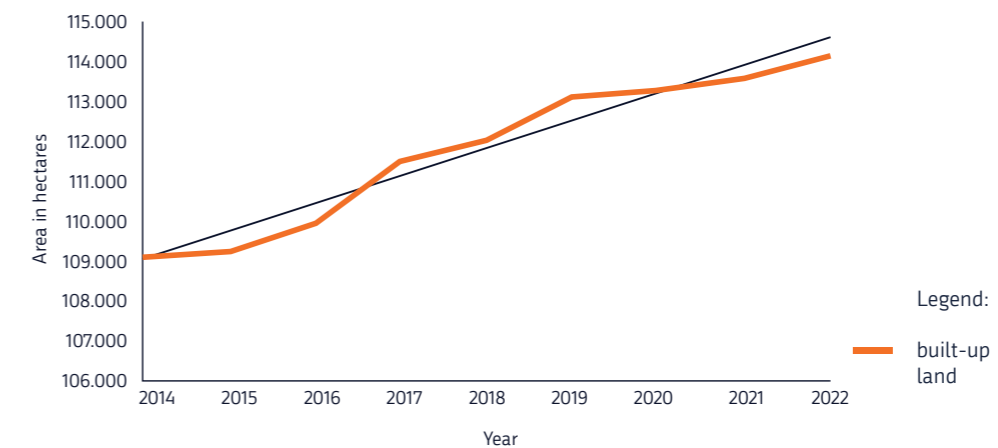
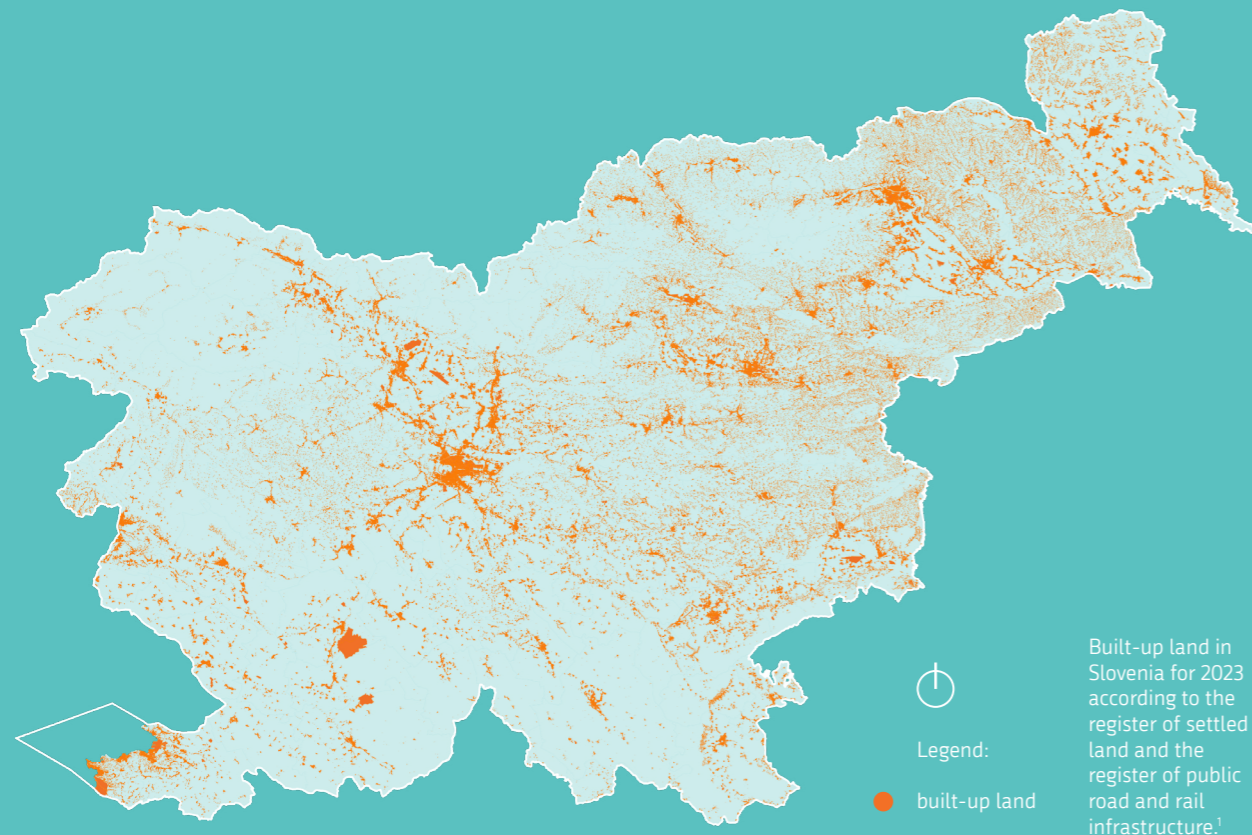
An analysis of land take and the building stock indicates that Slovenia continues to develop a significant amount of new land each year, despite the presence of numerous older buildings requiring renovation, vacant dwellings and degraded areas.

The average annual net land take between 2014 and 2022 is 630 ha per year.²

State of the built-up land in Slovenia

Expansion of built-up land

The area of built-up land (as defined in the Spatial Planning Act) in Slovenia is 115,523 ha, which covers 5.70% of Slovenia's surface area.¹



Trends in the area of land (ha) classified as "built-up and related land" according to the Register of actual land use of agricultural and forest land in the period 2014–2022.²

Areas of planned land use in Slovenia

Expansion of planned building land use and contraction of planned agricultural land use

As shown in the Spatial Development Report from 2021, a comparison of the basic planned land use between 2015 and 2020 shows an increase in the share of building land from 6.7% to 6.91% (index 103.06), which amounts to more than 4,000 ha in five years.

Conversely, during the same period, primarily due to the expansion of building land areas, as well as the expansion of forest land, the share of agricultural land decreased from 34.50% to 33.11% (index 95.95), representing a reduction of just under 28,000 ha.³

Categories of basic planned land use	2015 (%)	2020 (%)	2020 (ha)	Index 2015/2020*
building land areas	6,70	6,91	142.595,02	103,06
agricultural land areas	34,50	33,11	683.519,17	95,95
forest land areas	55,85	57,06	1.177.991,69	102,16
water areas	1,02	1,04	21.434,00	101,41
other land areas	1,92	1,89	38.973,73	98,43
total area	100,00	100,00	2.064.513,61	

Source: Ministry of the Environment and Spatial Planning, 2020

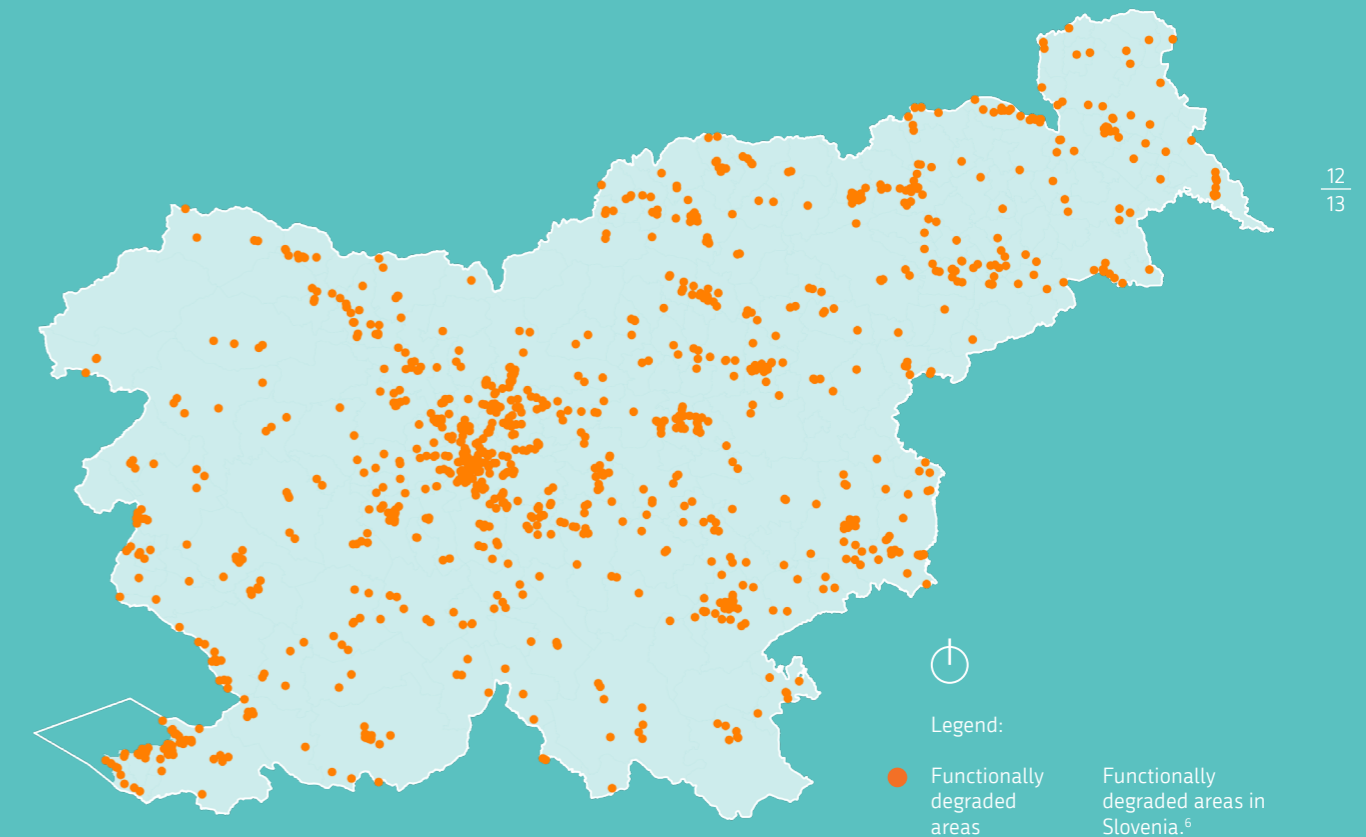
*The index is calculated on the basis of shares.

Areas of planned land use in Slovenia.³

Degraded areas

Large extent of functionally degraded areas

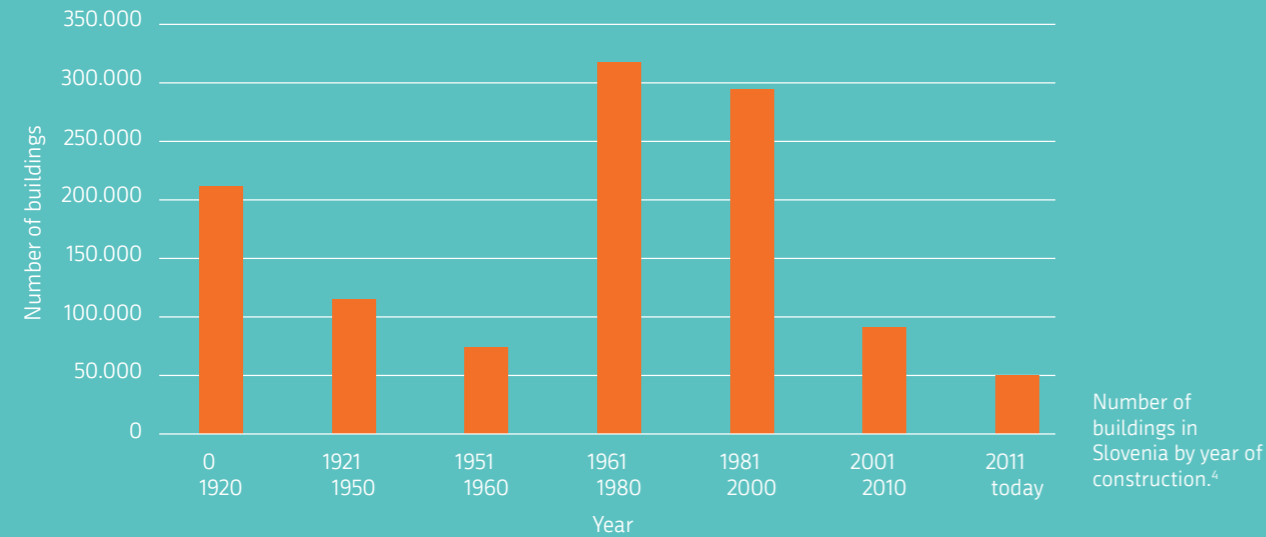
According to the national register of functionally degraded areas, 1,070 functionally degraded areas were recorded in Slovenia in 2023, covering a total area of 3,225 hectares, which represents approximately 0.16% of the country's total territory. These areas offer significant potential for circular land management—through regeneration, reuse, and the introduction of new functions, without further encroachment on undeveloped land.⁶



Building stock volume

According to the data from the Real Estate Cadastre of March 2023, there were 1,164,087 registered buildings in Slovenia.

The Slovenian building stock is strongly characterised by intensive construction after 1960, particularly during the period 1971–1990, when a large share of residential buildings was constructed.



Number of vacant dwellings

According to the Statistical Office of the Republic of Slovenia (SURS), there were 152,200 vacant dwellings in Slovenia in 2018, which is 18% of all dwellings. The graph shows the number of vacant dwellings by year of construction. A total of 64.5% of the currently vacant dwellings were built before 1980.⁵

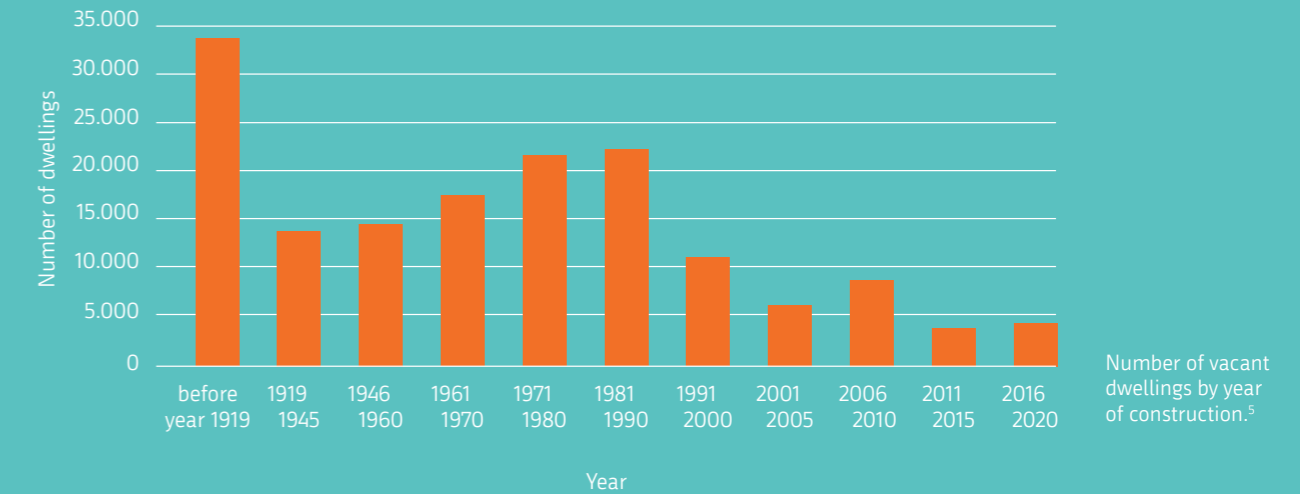




Photo source: Stanovanjski sklad RS Facebook

Factors contributing to land take in Slovenia

1. The public is not sufficiently aware that **any development of land brings an additional burden on the environment. The continued expansion of built-up land** is becoming a serious environmental problem, destroying soil ecosystem functions and reducing biodiversity.
2. **Investors often prefer to build on vacant building land**, as it is usually cheaper than renovating buildings or redeveloping degraded areas.
3. **Ministerial policies are not aligned with spatial policy**, as they are often adopted without a land development impact assessment.
4. **Tax policy does not encourage the economic use of real estate**, as it does not incentivise owners to make active use of buildings and vacant building land within areas of consolidated urban development.
5. **The State and municipalities are not implementing land policy measures effectively enough**, making it difficult to develop and make available serviced building land for public and private needs.
6. **Cultural heritage sites often remain unused and dilapidated** because there is a lack of incentives and mechanisms for their restoration and re-use, despite spatial needs.
7. **The guidelines from spatial planning authorities and databases for settlement are not sufficiently clear and uniform**, leading to inefficient planning and unjustified expansion pressures.



Stopping the expansion of built-up land and promoting the circular land use must be central to spatial development.

Starting points for the concept of circular land management

The need to introduce the circular economy concept in spatial development is **based on key European and national strategic documents** and an analysis of the current situation and trends regarding the land take, functionally degraded areas and the building stock in Slovenia.

The key starting points for the Strategic Plan on Circular Land Management are:

- Roadmap to a resource-efficient Europe (European Commission, 2011),
- Seventh General Union Environment Action Programme to 2020 (Official Journal of the European Union, L 354/171, 2013),
- EU Soil Strategy for 2030 (European Commission, 2021),
- Eighth Environment Action Programme to 2030 (Official Journal of the European Union, L 114/22, 2022),
- Directive (EU) 2025/2360 on soil monitoring and resilience (Soil Monitoring Law) (the European Parliament and the Council, 2025)

These documents set out the European Union's policy framework for addressing land take and soil degradation, with the long-term goal of no net land take by 2050.

Slovenia has included no net land take targets in the Resolution on the National Environmental Action Programme 2020–2030 (Official Gazette of the Republic of Slovenia [Uradni list RS], No 31/20 and 44/22 – ZVO-2) and the Resolution on the Spatial Development Strategy of Slovenia 2050 (Official Gazette of the Republic of Slovenia, No 72/23), thus taking an important step towards circular land management and sustainable spatial development.



Cover page of the document

Strategic Plan on Circular Land Management

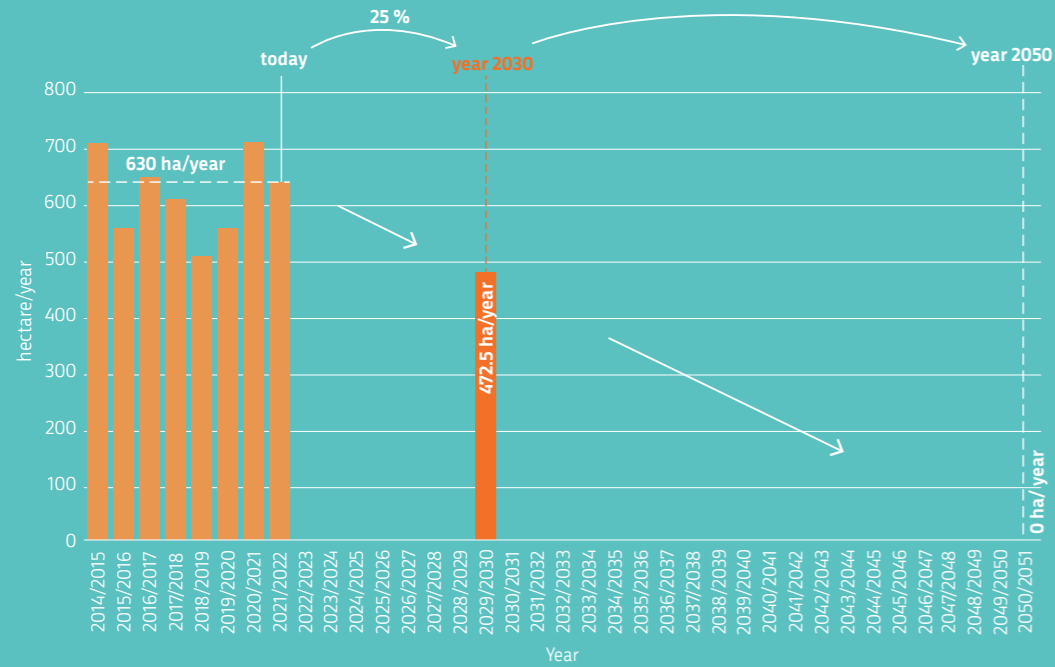
In 2023, the Ministry of Natural Resources and Spatial Planning prepared the **Strategic Plan on Circular Land Management 2024–2030**.⁷

The document was drafted as part of the project Common spatial information infrastructure in the Green Slovenian Location Framework project (GreenSLO4D)– planning, establishment and management.

Strategic Plan on Circular Land Management 2024–2030

Key content

- goals of circular land management
- principles of circular land management
- measures to promote circular land management



Flow chart of the scenario for achieving the strategic objective.⁷

The strategic objective does not require an immediate halt to the expansion of built-up land, but envisages a gradual reduction to zero in 2050.

This means that, assuming a linear decline in the expansion of built-up land, up to a maximum of 8,505 ha of new land will be built on by 2050, which is about 50% less than would be the case under current trends.

Goals of the Strategic Plan on Circular Land Management

The Strategic Plan on Circular Land Management is a roadmap for achieving one of the most important environmental protection objectives, i.e. the gradual reduction of net land take to 0 ha in 2050.

REDUCE NET LAND TAKE BY
25 %
by 2030

0 %
NET LAND TAKE
from 2050 onwards



Illustration of the strategic target by 2030 and 2050.

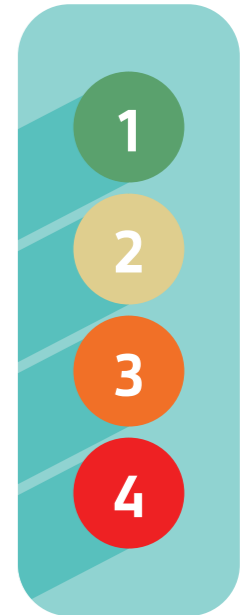


Circular land management does not bring new bans, but it does require finding innovative solutions for the renewal of Slovenian space.

Principles of circular land management

The principles of circular land management foresee the following order of acquisition of sites for the development of new activities:

1. restoring degraded land and buildings instead of building on vacant building land:
 - renovation of the building stock instead of new construction (only if less energy and materials are used than if the building is demolished and a new one built);
 - replacement construction instead of new land development (demolishing old buildings and building new ones on the same site);
 - building on vacant building land in functionally degraded areas;
2. building on vacant building land that is already serviced and meeting the spatial planning requirements regarding plot shape or size (development stage: regulated building land);
3. building on remaining vacant building land with already established public passenger transport, which uses the least new resources for new community infrastructure and adds the least to the environmental burden (development stage: land without services and partially serviced land);
4. re-purposing of agricultural and forest land in areas that are least likely to contribute to pollution and encroachment, taking into account compensatory measures (priority given to functionally degraded areas).





The concept of circular land management encompasses not only spatial planning, land policy and property management, but also objectives related to improving the urban and other ecosystems in which we live.

More planning is needed to ensure high-quality spatial development. Planning involves not only identifying new locations but also anticipating the capacity requirements of activities.

It is not merely about designating new building land, but above all about reconciling conflicting needs.



Expected impacts of implementing circular land management measures

Implementing circular land management means extending the principles of sustainability to the land use as a natural and economic resource. The planned actions also have implications for spatial planning and related social, environmental and economic processes.

Impact on society and individuals

- Higher-quality living environment.
- Better access to housing through the renovation of the building stock.
- Fewer costs and faster procedures for individual investors.
- Increased self-sufficiency in locally produced food.
- Access to spatial data for better public participation.
- Greater involvement of residents in shaping the space.

Impact on the environment and nature

- Less development in natural areas.
- Reduced environmental impacts due to the use of infrastructure.
- Less air and soil pollution as a result of sustainable mobility.
- Better management of environmental risks and better climate resilience.

- Establishment of the green and blue infrastructure.
- Maintaining ecosystem health.
- Maintaining landscape diversity.

Impact on food and self-sufficiency

- Protection of agricultural land from further loss.
- Maintaining and increasing food self-sufficiency through better use of land, which also entails:
 - keeping rural areas populated,
 - strengthening agriculture as a value-added activity.

Impact on the image of slovenian space

- Renewed buildings.
- Revitalised cultural heritage.
- Restored degraded areas.
- Strengthening recognisable spatial identity.
- Strengthened societal attitudes towards space as a value.



Impact on spatial and environmental policy makers

- Improved achievement of Green Transition and spatial policy objectives.
- Clear guidelines enabling simpler and more efficient work of administrative authorities.
- Clear rules for coordination between sectoral interests.
- Support to municipalities in development of spatial and land policy.
- Contributing to a more harmonious development and a better quality of life.
- Faster procedures and preparation of spatial acts through digitalisation.

Increased competitiveness of slovenian cities and towns

- Fewer costs and more safety for investors.
- More investment in housing and commercial construction.
- Incentives for the development of an active land policy at municipal level.
- More income of municipalities from benefits and land management.
- Savings in drafting spatial acts and procedures.
- Opportunities for the construction sector in renovations and knowledge export.
- Increasing the revenue of the national budget.
- Possibility of better and fairer property taxation.



Achieving the objectives of circular land management requires more than a strategy – it requires concrete action and cooperation.

Who can participate and how?

The implementation of the principles of circular economy is based on the cooperation of various actors, whose roles and responsibilities contribute to the effective implementation of measures.

State authorities and institutions

- Integrate the principles of circular land management into legislation, regulations and strategies.
- Create the human, organisational, financial and systemic conditions for implementing measures at national level.
- Finance the renovation of degraded areas and the renewal of the building stock.
- Ensure that sectoral policies are aligned with the objectives of circular land management (environment, transport, energy, agriculture, etc.).

Municipalities

- Integrate the principles of circular land management into municipal spatial implementing acts.
- Actively implement land policy by managing development in settlements.
- Renew public buildings and encourage renovation of private ones.
- Involve public and encourage participative planning.

Professional service providers

(e.g. urban planners, architects, landscape architects, surveyors, spatial planners)

- Prepare spatial plans and expert bases in line with the principles of circular land management.
- Advise municipalities and the state on spatial development.
- Use spatial data to plan efficient land use.

Economic operators and investors

(e.g. companies, real estate developers, construction sector)

- Invest in renovation of projects and areas instead of in extension.
- Work with municipalities to develop projects in degraded areas.
- Use spatial data and services for better decision-making.
- Prepare solutions reducing impacts on the environment and land.

Residents and civil society

- Actively participate in public discussions and decision-making processes.
- Renovate and use buildings and dwellings.
- Choose sustainable ways of living and mobility.
- Recognise the value of space as a limited common good.



Key terms

Circular land management, as part of sustainable spatial development, is a sustainable process of reusing space (buildings, land, infrastructure).⁸

A circular economy⁹ is a way of organising production and consumption based on sharing, reusing, repairing, refurbishing and recycling materials and products for as long as possible. This extends the lifetime of products and reduces waste.¹⁰

Planned land use refers to the use of land and buildings as determined by spatial planning acts, which, taking into account the predominance and interplay of permitted activities, define the purposes for which they may be used.¹¹

The actual land use means the current use of land in its natural state, used as agricultural, forest, water, built-up or barren land. Data on individual actual land uses are determined on the basis of the situation on the ground, as identified through aerial imagery and verified by field surveys.¹²

Built-up land¹³ comprises:

- building plots,
- associated land of buildings,
- associated land of public roads and public railway infrastructure,

- land associated with other civil engineering works, including in particular camping grounds, sports and recreation grounds, park grounds, allotment grounds, communal green areas, other open areas in public use, defence grounds, protection and rescue grounds, parking grounds, airport grounds, heliport grounds, energy infrastructure grounds, cemetery grounds, environmental infrastructure grounds, communication infrastructure grounds and areas of roads and railways other than public roads and railways.

Built-up land does not include the associated land of simple buildings which are not functionally connected to a building having a defined building plot, the associated land of non-complex agricultural and forestry buildings outside the built-up land, the associated land of roads and railways other than public roads and railways, which are located outside the building land.¹¹



Net land take means the increase in built-up land in one year, calculated using the following equation: built-up land = built-up land in year n – built-up land in year n-1 (adapted from the National Environmental Action Programme 2020–2030 for the purpose of the plan).⁷ Built-up land is defined as the building plots and civil engineering works with associated land.¹¹

No net land take means that there is no increase in built-up land compared to the previous observation period.⁸

Building land is land that is designated for the construction of buildings in the spatial planning acts.¹¹

Undeveloped building land is a plot or several plots or parts of plots that are designated for the construction of buildings by a municipal spatial implementation act and are not built-up land.¹¹

Degraded areas (land and buildings) are areas which, as a result of inappropriate or abandoned use, have a reduced economic, social, environmental or visual value or value under cultural heritage protection criteria and are in need of rehabilitation.¹¹

Land policy measures are measures through which the state and one or more municipalities jointly enable the achievement of spatial development objectives and guide the development of settlements by:

- developing building land to ensure that it is sufficient and accessible for living, working and recreation,
- creating the conditions for effective land management in the public interest,
- enabling the acquisition of land and rights over land necessary for the implementation of planned spatial development,
- ensuring that land use is properly organised, facilitating its general use and protecting the built public good.¹¹



Data and text sources

- 1 Ministry of Infrastructure, Slovenian Infrastructure Agency. 2023. Data of the actual use of public rail and road infrastructure. Ministry of Natural Resources and Spatial Planning. 2023. Settlement land proposal data.
- 2 Ministry of Agriculture, Forestry and Food. 2014–2022. Data of RABA.
- 3 Ministry of Natural Resources and Spatial Planning. 2021. Spatial Development Report for Slovenia 2021. Set and overview of indicators: annex. source: https://www.gov.si/assets/ministrstva/MNVP/Dokumenti/Prostorski-razvoj/porocilo_prostorski_razvoj_2021.pdf
- 4 Ministry of Natural Resources and Spatial Planning. Surveying and Mapping Authority of the Republic of Slovenia. 2023. Real estate cadastre data . (marec 2023)
- 5 Statistical Office of the Republic of Slovenia. 2018. SURS data.
- 6 Department of Geography, Faculty of Arts, University of Ljubljana. 2023. National Register of Functionally Degraded Areas (Slovenia). Base owned by: Ministry of Natural Resources and Spatial Planning; base co-financed by: Ministry of Cohesion and Regional Development. (last update March 2023) source: <https://podatki.gov.si/dataset/adp-fdo23>
- 7 Bangiev, G., Čeh, M., Černe, T., Črnič, P., Grilc, M., & Kafol Stojanovič, A., idr. 2023. Strateški načrt krožnega gospodarjenja s prostorom 2024–2030. Ljubljana.
- 8 Definition for the purposes of the Strategic Plan on Circular Land Management 2024–2030.
- 9 European Parliament. 2016. Closing the loop: New circular economy package. source: https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/573899/EPRS_BRI%282016%29573899_EN.pdf
- 10 European Parliament. 2018. Ravnanje z odpadki v EU. source: <https://www.europarl.europa.eu/topics/sl/article/20180328STO00751/ravnanje-z-odpadki-v-eu>
- 11 Spatial Planning Act, ZUreP-3 (Official Gazette of the RS [Uradni list RS], Nos 199/21, 18/23 – ZDU-10, 78/23 – ZUNPEOVE, 95/23 – ZIUOPZP, 23/24, 109/24 and 25/25 – Constitutional Court Decision and 75/25).
- 12 Ministry of Natural Resources and Spatial Planning of the Republic of Slovenia, Surveying and Mapping Authority of the Republic of Slovenia. 2025. E-prostor: portal Prostor. source: <https://www.e-prostor.gov.si/>
- 13 The definition of built-up land still needs to be coordinated with the line ministries in order to be appropriate for monitoring circular land management and achieving no net land take.

Circular land management

Where to find more information?

Where to find more information?

For more information on the Circular Land Management project, visit the website:

<https://www.gov.si/en/registries/projects/circular-land-management/>

How to find out more?

Detailed information can be found in the Strategic Plan on Circular Land Management 2024–2030:

https://www.gov.si/assets/ministrstva/MNVP/Projekti/krozno_gospodarjenje_s_prostorom/Strategija_kroznega_gospodarjenja_s_prostorom.pdf





For more information on the Circular Land Management project, visit the website:

<https://www.gov.si/en/registries/projects/circular-land-management/>



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
DIRECTORATE FOR SPATIAL PLANNING AND CONSTRUCTION



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
SLOVENIAN WATER AGENCY



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
WATER DIRECTORATE



REPUBLIC OF SLOVENIA
MINISTRY OF THE ENVIRONMENT, CLIMATE AND ENERGY
SLOVENIAN ENVIRONMENT AGENCY



REPUBLIC OF SLOVENIA
MINISTRY OF THE ENVIRONMENT, CLIMATE AND ENERGY
ENVIRONMENT DIRECTORATE



THE RECOVERY
AND RESILIENCE
PLAN



Funded by
the European Union
NextGenerationEU



SLO4D

