

STRATEGIC
GOAL

4

SUSTAINABLE MANAGEMENT OF RESOURCES AND PROMOTION THE CIRCULAR ECONOMY

SPECIFIC GOALS

- 4.1. BE MORE ENERGY EFFICIENT AND SAVE ENERGY.
- 4.2. OPTIMISE AND REDUCE WATER CONSUMPTION.
- 4.3. PROMOTE THE MATERIALS CYCLE.
- 4.4. REDUCE WASTE AND PROMOTE ITS RECYCLING.

Cities are the main engines of the economy and the main source of consumption of natural resources (75%) and waste generation (50% of global production). They also generate between 60% and 80% of greenhouse gas emissions, as the United Nations notes in its report, “Resource Efficiency as Key Issue in the New Urban Agenda”. Cities participate in and are jointly responsible for the environmental impacts and high consumption of natural resources generated by the linear economic model. They must therefore play an essential role in the transition to a circular economic model that ensures the quality of life in cities and makes them an appealing place to live.

Efficiency is related to urban metabolism itself, i.e., to the flows of materials, water and energy. The use and management of natural resources must achieve maximum efficiency, while minimising upsets to ecosystems. Land and urban planning, mobility, building, water flows, material usage and waste generation, together with certain lifestyles, are involved in creating scenarios that save or waste energy.

Proper water management is also key, because Spain will be an even drier country as a result of climate change. Hence, systems for retaining, storing, efficiently using and reusing water must be a priority in any urban agenda. Integrated management, at both the local level and the basin level, requires seeking maximum water self-sufficiency that combines capture measures with saving and efficiency measures. It is therefore essential to link urban development with the local water cycle (rainwater capture, reuse of reclaimed water) and to avoid everything that can lead to its pollution.

Another element to consider as a matter of priority is waste. A waste management model that employs sustainability criteria will try to apply the waste hierarchy, especially prevention, reduction, recycling and reuse, which will allow us to move forward as a society that is efficient in its use of resources, which in turn reduces the impact of pollution and improves the availability of raw materials. The objectives pursued by European policy for this sector, which are included in the CEP (Circular Economy Package), are a good guide to steer the choice of actions, their prioritisation and their effective implementation. These objectives are as follows:

- Achieve preparation rates for reusing and recycling municipal waste of 55% by 2025, 60% by 2030 and 65% by 2035.
- Achieve mandatory recycling rates for all packaging of 70% by 2030, to be distributed as follows: 55% for plastic containers, 30% for wood, 80% for iron metals, 60% for aluminium, 75% for glass and 85% for paper and cardboard.
- Prohibit the dumping of recyclable waste by 2030.
- Require that all plastic containers be recyclable by 2030.



Last but not least, it is necessary to focus on agriculture for the home market, meaning that involving the capacity for self-sufficiency, reducing the agri-food footprint and promoting food sovereignty. Consumer societies are unaware of the global implications of the geographic origin of food, the widespread absence of local products, the cost of imports, the energy consumed to transport them and, of course, the quality of the products consumed by the population.

All of this has a lot to do with the need to achieve a circular economy, that is, a closed cycle model.

The set of specific goals and the lines of action proposed to achieve this strategic goal are as follows:

SPECIFIC GOAL

4.1. BE MORE ENERGY EFFICIENT AND SAVE ENERGY.

LINES OF ACTION

- ✓ Support **the energy transition in and of cities**: the key lies with them. **The distributed generation and self-consumption** of energy in the urban environment are basic tools for this change in the energy model.
- ✓ Contain and even reduce energy consumption, promote energy saving and efficiency through **plans, strategies or other measures**. These include: taking into account urban morphology and the bioclimatic conditions of the city; incorporating passive **bioclimatic architecture criteria** or **maximising the provision of heating, cooling or lighting services**, with the minimum possible consumption.

- ✓ Include **prevention and resilience measures** that prevent and minimise energy risks (e.g. electricity grids that allow for alternative sources, etc.)
- ✓ Include **decarbonisation targets**.
- ✓ Promote the use of **renewable thermal energies**, especially in the building stock, which should take advantage of its relative low energy demand and solar capture potential.
- ✓ Promote the **sharing** of infrastructure networks for the various urban services.
- ✓ Promote the use of electricity to the extent that it allows contributing to the energy efficiency and renewable energy goals and to delocalising emissions outside cities.
- ✓ Design ordinances and layouts that favour the **smart location** of buildings by taking into account the actual needs of users.
- ✓ Have resilient energy systems, meaning those that can withstand potential disturbances without cutting off the energy supply to consumers. The **distributed generation of renewable origin**, or in-situ generation, would provide energy from various sources located in places as close as possible to the loads.
- ✓ Facilitate **self-consumption in municipal roofs**, urban furniture, above-ground car parks, etc., and incentivise self-consumption on the roofs of private buildings through tax measures at the local level (building licences, property taxes, etc.)
- ✓ Encourage the procurement of energy services in public buildings.

SPECIFIC GOAL

4.2. OPTIMISE AND REDUCE WATER CONSUMPTION.

LINES OF ACTION

- ✓ Adopt measures to reduce water consumption and the energy use and emissions associated with the **distribution and treatment** of this resource.
- ✓ **Treat and recover** natural water channels and underground resources as a basis for supplying urban areas, applying, if necessary, new treatment technologies (reverse osmosis, nanofiltration) to achieve maximum quality.
- ✓ Develop a policy to protect recharge areas for those **aquifers** that are intended in whole or in part to supply water and avoid the implementation of activities that may affect their quality.
- ✓ Respect and assess the distribution of land uses in **wet areas**.
- ✓ Strictly monitor land processes and actions that can generate **diffuse pollution** and have the potential to affect water resources intended for cities.
- ✓ Whenever possible, separate **surface resources** for urban use from those intended for other uses, thus effectively protecting catchment areas.
- ✓ Adapt the water quality to each specific use, promoting the use of **grey water recovery systems**.

- ✓ Promote **selective collection, separate sanitation networks** and ensure the user's proximity to these systems in order to promote this activity.
- ✓ Build environmentally friendly water **purification** systems. At the local level, use treatment methods that prevent returning water to nature in a way that pollutes it or destroys biodiversity.
- ✓ Foster building types with lower **water demands** and rainwater collection and reuse systems.
- ✓ Use rainwater retention and filtration systems, encourage the use of **permeable pavements** and include indigenous or water-saving **landscaping** designs through efficient irrigation systems.

SPECIFIC GOAL

4.3. PROMOTE THE MATERIALS CYCLE.

LÍNEAS DE ACTUACIÓN

- ✓ Gradually close out cycles in the **metabolism** of cities by promoting waste reduction, including “life cycle” criteria in the consumption of materials and reusing and recycling.
- ✓ Foster responsible consumption, repair, reuse and re-manufacture initiatives and collaborative and shared systems for goods and services.
- ✓ Encourage the use of **secondary raw materials** and easily recyclable materials from local environments.
- ✓ Adopt measures to separate waste at the source and manage **construction** waste such that it is used in new construction or remodelling works, whenever technically, environmentally and legally possible, and encourage the approval of plans for reusing construction waste.
- ✓ Promote production that relies on **ecodesign** (ecological, reusable and recoverable materials) parameters and encourage the use of these materials.
- ✓ Approve and implement municipal **infrastructure renewal plans**.
- ✓ Propose **action plans** for those activities to be carried out involving public services.
- ✓ Establish criteria for **circular public procurement at the local level** that allows closing the materials cycle by including the purchase and use of second-hand products and materials. Specifically, encourage the use of life-cycle criteria for materials in **public contracts**.

SPECIFIC GOAL

4.4. REDUCE WASTE AND PROMOTE ITS.

LINES OF ACTION

- ✓ Enhance the **use of deposit and return systems**, with the consequent saving of resources and reduced environmental and socio-economic impacts. This line of action is essential to the de-

velopment of a circular economy, as are waste management plans or equivalent instruments.






- ✓ Through planning, set aside the **most suitable areas** to solve the problems of waste collection and treatment, and ensure these areas exist in sufficient quantity and quality. In particular, land should be set aside for composting and treating **plant and bio-waste**.
- ✓ Dissociate the generation of waste from **economic development** through waste prevention initiatives that use resources more effectively, and shift towards more sustainable consumption patterns.
- ✓ **Manage** waste so as to reduce its impact, and require the treatment of all waste (whether it is hazardous or not).
- ✓ Promote the **separation at the source** of textile waste and organic waste and manage it, and enhance commercial pick-up at the source.
- ✓ Study and apply new environmental education models to create environmental awareness and sensitivity to waste consumption and generation.

The **descriptive data** related to strategic goal #4 “*Sustainable management of resources and promotion the circular economy*”, are as follows:

STRATEGIC GOAL #4. RELATED DESCRIPTIVE DATA

D.01	Population change	D.06	Population density in urban land	D.08	Housing density
D.14	Age of the building stock	D.15	Water consumption	D.33	Expand the housing stock
D.ST.06	Homes planned in development areas with respect to the housing stock	D.ST.07	Number of homes planned in development areas	D.39	Urban agenda, strategic planning and Smart Cities

The relationships between this strategic goal and the SDGs and the goals of the 2030 Agenda for Sustainable Development and other international projects can be summarised as follows:

SPANISH URBAN AGENDA	17 SDGS: GOALS	NEW INTERNATIONAL URBAN AGENDA	EUROPEAN URBAN AGENDA (PARTNERSHIPS)	EDUSI SPECIFIC GOALS 14-20
4.1. Be more energy efficient and save energy	 <p>7.1 Universal access to energy 7.2 Renewable energies 7.3 Energy efficiency 7.a Research and investment in clean energy 7.b Infrastructure and technologies in developing countries</p>	21; 34; 50; 54; 55; 74; 75; 82	Circular economy Energy transition Climate Change	S.G.4.5.3 Improve energy efficiency and increase the use of renewable energies in urban areas O.E.6.5.2. Integrated actions to revitalise cities, to improve the urban environment
4.2. Optimise and reduce water consumption	 <p>6.1. Access to potable water 6.2. Access to sanitation and hygiene 6.3. Water quality 6.4. Increase the efficient use of water resources 6.5. Implement integrated resource management 6.b Support local entities in water management and sanitation</p>	55; 79		
4.3. Promote the material cycle	 <p>12.2 Efficient use of natural resources</p>	71		
4.4. Reduce waste and promote its recycling	 <p>12.2 Efficient use of natural resources 12.3 Reduce food waste in production and supply chains 12.4 Manage chemical rights and products 12.5 Prevent, reduce, recycle and reuse waste</p>	122; 123		
	 <p>11.6 Waste and pollution in cities</p>			