SLOVENIA

LJUBLJANA

INHABITANTS: 292,988
2020 TARGET: -21% OF GHG SINCE 2008
2030 TARGET: -30% OF GHG

Stricking a balance between nature and city

Climate policy governance and integration

The "Ljubljana Vision 2025" (2007), recognised the limitations of the available environmental capability of Ljubljana and the necessity to connect the different ecosystems. This vision is now being followed up in the frame of the Environmental Action Programme 2014–2020. Ljubljana received in 2016 the "European Green Capital Award" for its consistent records of achieving high environmental standards, and "Ljubljana for you" 2015 compiled for the occasion the implemented actions.

The City of Ljubljana is now preparing its first Sustainable Energy and Climate Action Plan (SECAP) within the Covenant of Mayors and should be adopted by 2020. There is no national legislation making local climate plans compulsory for Slovenian local governments, but 36 cities are part of the Covenant of Mayors process.

Climate policy tracking

In 2017 and 2018, a general increase in the use of energy source occurred. The increase of use is present in all sectors (except in agriculture) which is primarily due to further economic growth and new inhabitants in the wider urban area. Total energy consumption in Ljubljana grew 1.5% in 2017 – 2.7% for energy converters, 2.6% in the industry sector, 0.8% in the transport sector and 0.9% for other energy use. In the Agriculture sector, which represents a minority share of energy consumption, consumption fell by 2.7%.

In 2017 the estimated total value of CO_2 emissions increased by 1.1%, or approximately 25 tons, compared to 2016, because of increased energy use. A rise is also expected in 2018, by around 6.7%. CO_2 is prominently emitted by the energy transformation (electricity and heating 39.5%) and transport (38.9%) sectors, accounting for more than 78% of total CO_2 emissions in 2017.

With increasing traffic, regardless of the fleet structure and emission standards, CO_2 emission levels continue to climb. CO_2 data from motor vehicles by type of fuel (diesel / petrol) show a rise in CO_2 emissions due to an increase in diesel-powered vehicles within the city.

Urban planning - A strong interaction between the built and natural environments

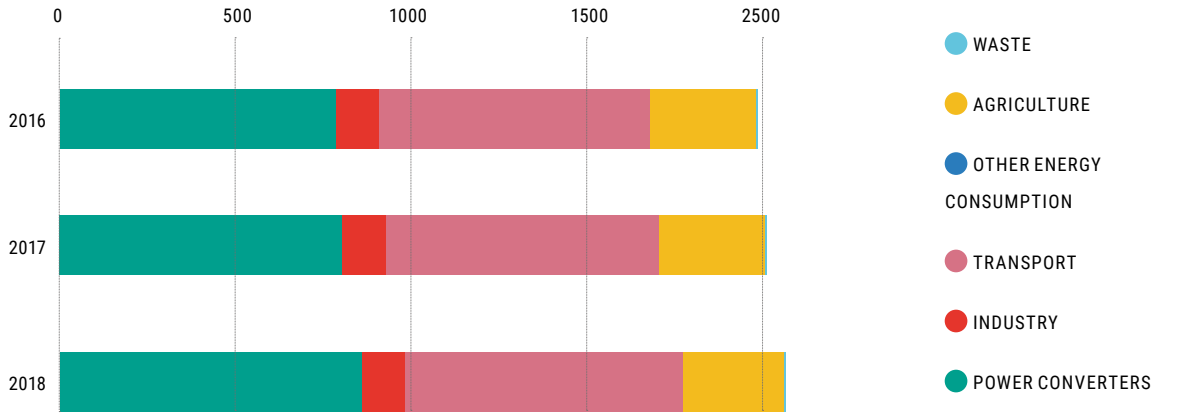
The FAO revealed in 2018 that natural forest still covers over 46% of the municipal area, and Ljubljana residents enjoy 70m² of green areas per person. 92% of this forest is privately owned. Involving and educating people about forests is therefore crucial. For this purpose:

- The City declared about 1,150 hectares (5% of the total land area) of the forest as "special-purpose forest" ensuring public access and dedicated to recreation and physical and mental fitness.
- The instrument of land purchase created in 2014 by the City, aimed at interlinking the entire urban and peri-urban forest through a network of paths, trails, skid roads and other forest infrastructure by setting priorities in terms of the public interest to be fulfilled for private acquisition.
- The establishment of an environmental education centre called "Forest of Experiments", allows researchers to share knowledge to schoolteachers, or to wider public through the forest "classroom".

Similar planning perspectives have been adopted to renovate riverbanks within the city: bridges for pedestrians, cyclists, riverboat piers, and to transform brownfields into green areas. Citizens have been given the possibility to rent a garden plot on municipal land, gardeners are in touch with owners of private land (Ljubljana, 2015).

As for buildings, €14.8 million have been invested in the Energy-saving retrofits of public buildings, in accordance with Slovenian national legislation and EU Cohesion policy (EOL 1): 48 public buildings (educational, sports, health, administration, cultural) were energy retrofitted, among which 25 deeply energy retrofitted (51% of investment covered by private partners, 40% by Cohesion funds and 9% by the COL) and 23 partially retrofitted (51% invested by private partners, 49% by COL). Deeply retrofitted buildings imply 25% share of energy from renewable energy sources. EOL1 contributes to annual energy savings through improved energy efficiency (8.245 MWh or 1 million euros) and the reduction of GHG emissions that amounts to 2,956 tons (about 150,000 trees or 340 ha of forest).

LJUBLJANA - GHG EMISSIONS BY SECTOR ($KTCO_2$)



Waste – A strategy rather organisational than technological to achieve zero waste

The city operated a major shift in its waste management policy in less than two decades. From 100% of waste going to landfills in the early 2000s, 68% of it is now recovered material. Ljubljana is even the first European capital to commit to going zero-waste with the intermediary step of separation rate 75% of waste by 2025. First, the separate collection for paper, glass and packaging was introduced, before collecting biodegradable waste door-to-door and opening two household waste collection centres where citizens' cars dispose of their rubbish and where reusable items are cleaned and sold again (Guardian, 2019). The city also reduced the frequency of collection of residual waste by half, encouraging people to separate their rubbish more efficiently.

In terms of technology, in 2015 the city built the most modern plant in Europe for treating residual and biological municipal waste: The Regional Centre for Waste Management (RCERO) Ljubljana. The centre uses natural gas to produce its own heat and electricity and processes 95% of residual waste into recyclable materials and fuel. Separately collected organic waste is treated to become compost. RCERO Ljubljana as the biggest project in Slovenia, funded by the European Union through a cohesion fund, prioritizes better practices of waste management and reduces landfill quantities and therefore methane emissions.

Mobility – Towards an equal modal share between car, public transport and low-impact mobility

The first "ecological zone" in Ljubljana was created in 2007 in the old city centre. This entailed closing an area of around 100,000m² to motorised vehicles, and the refurbishing of the area and the main traffic artery to make it more attractive for pedestrians and cyclists. The new traffic regime of this area allowed black carbon levels to fall by 58% (Ljubljana for you, 2015).

Within the European project Civitas Elan launched 10 years ago, Ljubljana took 17 measures, with the objective to shift the current modal share (67% private cars, 33% public transport, 20% walking and cycling) to an equal repartition among these 3 modes of transport by 2020. The first phase focused on providing efficient and customer-friendly buses with hybrid, methane or natural gas (many old buses have been replaced with 5 hybrid and 20 CNG), then on extending cycling facilities and parking spaces, as well as pedestrian zones. Lastly the 24-hour bike-sharing system BicikeLJ (introduced in 2011) exceeded all expectations, with over 3.7 million journeys made (ICLEI, 2017).