

## City of Freiburg: joint soil management in progress shall relieve pressure on landfills

**Freiburg im Breisgau, in Germany, has become a pioneering city in terms of sustainable development over the last decades.** "Green City" is an established program and "Ecological Capital", "Champion of the national solar league" and "National capital of climate protection" were awards of the city.

To live up to this claim and reputation a sustainable solution for a huge demand has to be found: The construction activity in the city and the region is particularly high and the landfill situation in the region is extremely tense. From 2014 to 2018, the volume of excavated soil to be delivered to landfills has increased 4 - 5 times, accompanied by a tripling of the costs. At the same time the existing landfills for Freiburg and the neighbouring districts have reached their limits and a new landfill will only go into operation in 2022.



### Closing the loop

Initiated in 2018 by the EU Interreg project Green-cycle the City of Freiburg and the district of Breisgau-Hochschwarzwald were able to sound out a joint soil management together with the waste management company and the municipal building society for the next years.

The objective was to close the loop for excavation material within the city's boundaries. While some construction sites have excess material, others need material for installation. For the construction of the newly planned district of Dietenbach, enormous quantities of soil material will be needed to fill up parts of the area to form streets and plazas and building ground. To gather that material from other construction sites in the urban area minimizes transportation and is a circular economy solution.

As a first pilot project, the planning of an interim storage facility for excavation soil for the planned new city district of Dietenbach started. The authorisation process is ongoing and the operation is expected to start at the end of 2020.

## Vorau: an energy self-sufficient building

**Vorau is a medium-sized Austrian town, which has made the environment the focus of its attention.**

The main idea of the pilot project is to reduce waste flows by creating loops and to reduce energy consumption by using renewable energies in buildings. The "Impulszentrum Vorau" was chosen as a model. Several sustainable energy systems (solar boiler, rainwater harvesting and natural cooling, PV system, energy storage, energy monitoring, electric cars, biomass heating system) have been installed, and user training has been provided.

Vorau wanted to emphasize that the users are the main actors in the implementation of good practice.

Vorau's pilot project focused on energy consumption and potential savings: ventilation is for example turned off in rooms where there are sufficient windows.

These rooms are ventilated more often, the light is switched on only when necessary, computers are disconnected from the electricity grid at night, on Sundays and holidays, and a fleet of electric cars is set up and allocated to those with the most kilometers.

Vorau's long-term ambition is to make this building 100% energy self-sufficient.



## Trento: a study to identify materials, waste, foodstuffs that could be reused or recycled, improving the citizen habits

**The City of Trento, located in north-eastern Italy, is starting to move into the circular economy** and has therefore focused its pilot project on a feasibility study to identify materials and waste that can be reused or recycled.

The municipality is seeking to find out what difficulties will be encountered, whether it is possible to recover goods initially destined for landfill, and which can be used in a second phase. The municipality supported some of the local actions in the direction of the reuse of products and worked to implement an experimentation about the creation of a re-use centre in the city, a space devoted to store and give away goods that can be used yet, to enhance the reduction of the wastefulness, the circularity of the materials and the promotion of the local resources.

The municipality would also like to see if it is possible to recover foodstuffs and to reduce food waste in partnership with local producers through the “Nutrire Trento” initiative that was born as a collaboration between the Municipality and the University, that involves researchers, citizens, and



also associations, economic categories in order to gather information for sustainable consumption, sustainable production of food and logistic rationalization.

The digital platform of Nutrire Trento with all the gathered information is developed by the Greencycle platform.

The City of Trento is connecting with the surrounding cities to push forward the implementation of circular economy policies in wider areas (Udine, Prato, Trentino Municipalities). It also wishes to focus its environmental policy on consumer behaviour and awareness, in order to facilitate critical consumption.

## Vienne Condrieu Agglomeration: an initiative in favour of circular economy

**Vienne Condrieu Agglomération, in France, has developed one of its flagship actions in terms of circular economy:** the Reventin Vaugris wastewater treatment plant has built a methanisation unit to recover biogas from sludge digestion. A minor part of the biogas produced is recovered via a cogeneration engine, which produces electricity and heat that is reused on site. Most part of the biogas is purified to produce biomethane, which is injected into the gas distribution network.

This biomethane is also used to power five heavy vehicles running on CNG. Indeed 2020 will see three city buses and two garbage trucks running on gas produced by the purification plant. The construction of one private service stations on the territory in 2020 will complete the biomethane recovery loop. This project is part of Vienne Condrieu Agglomération energy and circular economy strategies.



## Maribor: a municipality committed to a circular economy policy

**The town of Maribor, in Slovenia, has embarked on a policy of circular economy based on 3 axes: waste, water management and energy.** How? By creating the Wcycle Institute Maribor by five Maribor public utility companies operating in the fields of waste management, construction, district heating, water supply and public transport.

Within the framework of this programme, 20 projects related to the circular economy have been selected and will be gradually implemented as a construction waste treatment unit, a biomass power plant for energy production from wood and waste water recovery. One of the first operational projects is the waste sorting centre which started operating in July 2018.

The beneficial effects of this policy of developing the circular economy can be seen in the territory of Maribor through the development of new activities allowing the creation of green, local and non-relocatable jobs. You can find out more about this here: [https://circulareconomy.europa.eu/platform/sites/default/files/strategy\\_wcycle\\_final.pdf](https://circulareconomy.europa.eu/platform/sites/default/files/strategy_wcycle_final.pdf)