

Circular Economy Through Plastic Recycling in Romania



Recycled PET consumes 45 per cent less energy than is needed to produce virgin material.
Picture: Greentech S.A.

This climate protection project promotes the recycling of used PET bottles and other plastic waste. The PET flakes and granulate obtained from the recycling process are reused, for example, in the packaging industry or for insulation in the construction sector. As a result, resources are saved and the burden on the climate is reduced.

In Europe, 29 million tonnes of plastic waste are produced each year; and this number continues to increase. Only 32 per cent of this is recycled, almost 40 per cent is burned to generate energy. A further quarter, that is over 7 million tonnes, ends up in landfill sites – precious resources, which can no longer be used and are hardly biodegradable.

The European Plastic Strategy, published in 2018, envisions a number of measures to address this problem across the whole of Europe. Among other things, from 2030 all plastic packaging on the EU market must be recyclable. Likewise, a better, standardised system for segregation, collection and sorting of waste must be established across the entire EU. These new provisions should enable the EU member states to meet a recycling of 55 per cent of plastic packaging waste by 2030.

Many EU member states are a long way from achieving this goal. In the south-eastern European countries, the recycling rate for plastic and other synthetic materials is considerably lower, in the project country Romania it is just 14 per cent.

Plastic recycling creates jobs in Romania

Since 2003, GreenTech Romania has been working on increasing the plastic recycling capacity in Buzău, north-east of Bucharest. From the once small factory with a capacity of 12, 000 tonnes of plastic recycling per year, a modern business group has developed, which, with a capacity of 100 000 tonnes per year, produces recycled PET flakes, PET strapping and

Project type:

Waste Management and Compost

Project location:

Buzău, Romania

Project status:

In operation, credits available

Annual CO₂ reduction:

Approx. 58,000 t

Situation without project

Production of plastic from virgin (fossil) materials

Project standard

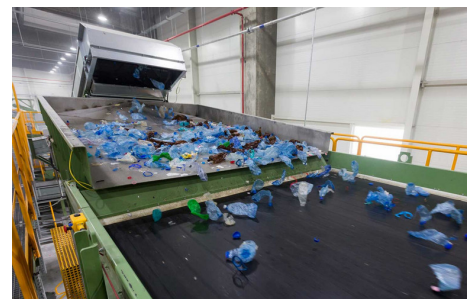
Gold Standard[®]

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Impressions



Children are the future. On-site environmental education. Picture: Greentech S.A.



Conveyor belts carry PET bottles between sorting and washing facilities. Picture: Greentech S.A.

PET granulate. These products are used in the automotive and construction sectors and in the manufacture of hygiene products and filters. In 2022, GreenTech merged with their sister company GreenFiber and now also processes PET flakes into recycled polyester fibres. With hundreds of jobs, the two companies have become the biggest employers in Buzău, a somewhat underdeveloped region in which the rate of unemployment is twice as high as the national average.

The work at GreenTech has definitely changed my perception of waste. We are not talking about garbage or waste here, but valuable materials and resources. It is astounding to see how much we can save through recycling and the extent to which our activities are preventing plastic waste from simply being dumped in landfill sites and polluting our country.

Tudor Mihail Aurel, employee at GreenTech since 2005

GreenTech sees itself as an ambassador for a circular economy, promoting an efficient use of resources and a keen awareness for the importance of recycling and waste prevention. In this way, the company's goal is to help curb the increasing marine and countryside pollution through plastic waste. In the recent years, despite a still very low recycling rate, GreenTech observes a growing demand in their expertise, and they are confident that – also with the support of carbon financing – will continue to grow into a strong company with modern technologies that contributes to a sustainable world. For example, in 2022 they were able to install a new, fully automated weighting and labelling system to allow full traceability and a much higher efficiency for processing the collected plastic waste into recycled products.

Taking action for local education, health, communities and biodiversity

For many years, the company has been very active in running awareness campaigns and workshops for school classes and communities. They are also supporting the community of Buzău socially and working towards improving the local nature and biodiversity.

GreenTech offers school classes trips to the plant, which enable visitors to see first hand the importance of the topic and learn about the processes involved in recycling. More than 8,000 children have taken part in the workshops to date. In addition, they helped to develop the first Zero Carbon School in Romania, providing the waste collection infrastructure. In 2022 GreenTech also built a football field for the Tinesti community and donated to local hospitals to help strengthen the local community.

In so-called “circular economy partnerships”, together with the city of Buzău and other communities in Romania, the project partner encourages the implementation of better waste separation and recycling infrastructures. The project “Circular Buzău” was created by Greentech with local partners. They aim to work towards a circular economy for Buzău by engaging with the local communities through various activities: creating a park as an urban regeneration project in Buzău that also



Among other things, polyester fibres made from recycled PET bottles are used in textile production. Picture: Greentech S.A.



Laboratory check. Picture: Greentech

functions as a meeting place hosting events to spread awareness about their mission and working on launching a modern waste collection infrastructure in Buzau: “The Good Deeds Machine”.

To contribute to a healthy environment and increase biodiversity, the company recently installed a litter trap on the local Crisul Repede river, collecting plastic waste that is polluting the river. On the now cleaner river, they successfully reintroduced a long-lost species of fish, strengthening the ecosystem.

With income from the sale of carbon credits, they plan to establish capacities for the professional recycling of hazardous waste materials, such as e-waste or medical waste, which do not yet exist in Romania. In addition, the development of recycling activities in other regions of Romania and Eastern Europe is planned in order to promote the collection, separation and recycling of plastic waste in the spirit of a circular economy. GreenTech is the first and only recycling company in Europe to have its activities as a carbon offset project certified by Gold Standard. The company and its employees take particular pride in their role as pioneers and ambassadors.

This project contributes to 10 SDGs (as of end 2021):

Find out how myclimate reports these SDGs in our FAQ.

The following SDGs are verified by the Gold Standard:



The project provided 2,183 training sessions on safety and health in the recycling plants and 24 trainings on fire and safe protection in 2020.



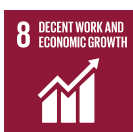
1,000 school children and students have taken part in awareness trainings on recycling, sustainable development and circular economy in 2020.



GreenTech places particular importance on equality. 226 women are employed, which makes 40% of all positions. 58% of managerial positions right up to the CEO leadership level are taken by women.



In 2020 electricity savings reached over 45,000 MWh and fossil fuel savings almost 227,000 MWh as recycling replaces a more energy-intensive production of virgin materials.



563 staff members were employed at the end of 2020. GreenTech and its group members are the biggest employer in the city of Buzău.



Greentech offers employment in a somewhat underdeveloped region. 99% of the staff are local people from Buzău and its suburbs.



Over 4 million Euros foreign exchange saved represented by the volume recycled multiplied with the respective import price per ton.



Over 80,000 tonnes of used plastic, primarily PET bottles, was collected and entered into the recycling process and kept away from landfill or incineration in 2020.



Greentech ran 4 programs to encourage more environmentally-friendly and responsible products and services in 2020.



Through its activities, the company prevents more than 50,000 tonnes of CO₂ emissions each year.