

TURNING WASTE INTO FERTILE IDEAS FOR A MORE SUSTAINABLE FUTURE

Kosovo's Eco Solutions Research start-up



When Alberina Gashi and Kaltrina Osmani met up over a coffee in Pristina, Kosovo, they came up with a really 'rubbish' idea!

The two university friends – Alberina, a chemical engineer, and Kaltrina, an architect – were brainstorming visions for a business start-up they dreamed of. The result was Eco Solutions Research, which emerged as a bonding of architecture and chemical engineering to bring projects of all forms of innovation in science, technology and engineering. In the period 2016-2021, Eco Solution Research engaged only in scientific research, but since April 2022 it has been registered as an enterprise.

During the last seven years, their projects have researched different engineering fields and have always been based on sustainability, but it is their current project that is taking them closer to achieving their vision.

By addressing a major ecological problem, namely the management of food waste, they are providing solutions to two other important problems: the lack of electricity and the damage to fertile soil that affects food security. This goal of creating a recycling plant to process the tonnes of food waste produced by restaurants and catering facilities in Kosovo every day is inching closer.

'Our interest in the research and implementation of sustainable solutions started while we were still at Pristina University with a grant from the UNICEF Innovation Lab,' Alberina, a graduate of the Chemical Engineering Department, says. She has since taken two professional waste treatment courses at institutions in Germany and Holland.

Kaltrina, who did her Master's thesis on the regeneration of public spaces in Pristina, recalls: 'We'd been friends for years and just grabbed a coffee to talk over what possibilities there were if we put together our skills as a chemical engineer and urban designer. How could we merge our knowledge and explore ways to find something sustainable that could have an

impact on the environment and society?'

Alberina, now 28, and Kaltrina, 29, are talking over another coffee in Turin at the European Training Foundation's launch conference for a four-year project (2022-2025), 'Skilling Up the Western Balkans agri-food sector: digitalising, greening.'

The conference, which ran over two and a half days late September, brought together around 30 entrepreneurs, managers and business people from the region. With a focus on how to encourage and develop productivity-enhancing skills in the region, there were presentations on accessing EU business and training support funding, talks demonstrating best practices from Turin's Piedmont region, meetings with representatives of the regional chamber of commerce – and a morning at the city's famous Terra Madre Salone del Gusto (Slow Food Fair).

Eco Research Solutions is currently continuing its detailed research into the resources available to produce bio-gas and organic fertilisers from food waste. Alberina and Kaltrina have also developed a prototype machine to process their products, and plan to patent it for a later scaled-up version.

The importance of such processes to meeting sustainability goals and helping address global warming and climate change cannot be underestimated, Alberina says: food waste generates 25 times more methane than CO₂, both potent greenhouse gases. Food waste globally accounts for 3.5 billion tonnes of CO₂ every year, with a third of all food lost during production processes. The global annual cost of food waste is estimated at USD 1 trillion.

'If we could use just a quarter of waste food it would address world hunger,' Alberina asserts.

To bring this idea to life, during the course of this year they have participated in no less than five national and international competitions, where they have been announced 1st place winners in all of them so far! In addition, they have recently been invited for discussions with the Municipality

of Pristina to discuss ways in which this solution can be incorporated in the city of Pristina.

It has been a challenge to establish the start-up and the pair envisage it will also be a challenge to find the qualified staff they shall need later. The skills they need include mechanical and chemical engineers, marketing and business development.

‘We want to encourage young people to work in our country, take the best practices from other countries and bring those practices and skills to our country. Only in this way can we hope to effect change in our society,’ they say.