LIFE GREEN ADAPT Newsletter 3

June 2024

Project Progress Update
LIFE GREEN ADAPT

Welcome to the third LIFE GREEN ADAPT newsletter, your one stop shop for all project updates and news, if you are part of our mailing list you will gain an exclusive first look at all project newsletters before they are uploaded to our website.

The LIFE GREEN ADAPT project is a European project funded under the LIFE programme (GA no). The project falls under the policy priority Nº2: “Resilience of Infrastructure, including application of BGI and ecosystem-based approaches to adaptation” as the project is implementing and demonstrating actionable solutions to immediately trigger improvements on landfill resilience!

Modern landfills have been designed specifically to reduce their negative impacts on the environment, however, this is not always a realistic expectation. Continuous temperature rises are increasing the negative effect landfills have on the environment as they result in higher gas production and CO2 emissions. Therefore, with the current climate change crisis it is imperative that landfill resilience is prioritised on the agenda.

The LIFE GREEN ADAPT project is taking charge of this action by aiming to increase the resilience of the EU waste infrastructure against climate change.

This groundbreaking achievement is presented through the demonstration of potential blue-green infrastructures (BGIs) and ecosystem-based approaches to manage flash flooding and run-off caused by heavy rainfall, the solutions involved in the LIFE GREEN ADAPT project also prevent fires and explosions caused by droughts and unusual heat waves.

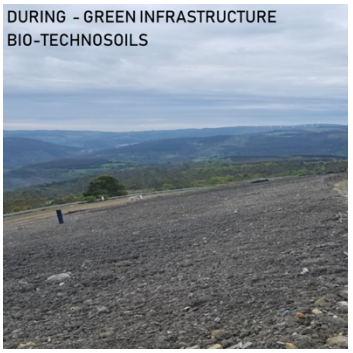
Project Success

The LIFE GREEN ADAPT project is increasing the resilience of EU waste infrastructures through **three separate avenues:**

1) The use of bio-technosoils for soil stabilisation with the aim of preventing landslides caused by extreme rain and floods.
2) The combination of innovative treatment wetlands to store and treat leachates as well as the polluted run-off water.
3) The reuse of treated wastewater to mitigate and cope with the effects of high temperatures preventing fires or explosions whilst guaranteeing water availability.

The development of bio-technosoils

In 2023 the project consortium developed novel bio-technosoils that cover the landfill and recover them by increasing their soil quality and boosting their nutrient supply, this will ensure the vegetation is able to grow on the landfill.



The construction of Treatment Wetlands (TW)

The construction of TW for landfill polluted leachate and run-off water treatment was completed at XILOGA's landfill site in Galicia, Spain.

XILOGA are a waste management company, and owner of the landfill site where the LIFE GREEN ADAPT demonstration site is located. Additionally LIMNOS led the design of the TW for the project. TW's play a significant role in the journey towards climate change mitigation. They can improve the water quality of stormwater runoff and manage watershed nutrients as well as the treatment of wastewater and other industrial contaminants.

Additionally, the TW's will reduce the effects of high temperatures and help prevent droughts so treated water can be discharged into natural waters reducing the effects of drought in water scarce regions.

The reuse of treated wastewater

Once the construction of the TW's was completed the LIFE GREEN ADAPT consortium progressed to the next stage of the project, which included the addition of specifically selected plants to the TW's with the aim of absorbing the chemicals found within the water.

This next stage included various aspects of plant testing within the TW's to ensure the plants with the highest chemical absorption rate were chosen to be used within the TW. Some plants that were used during the original testing phase did not grow at the expected rate and eventually died within the TW. This told our project team that the roots of these particular plants were not strong enough to absorb the chemicals within the water.

After increased plant testing we are happy to announce that the plants are currently growing whilst absorbing chemicals found in the water, this water will then be treated. This enables not only water reuse but a controlled discharge into natural waters of the treated water, which will eventually reduce drought effects in water scarce regions.

Events

Overall the LIFE GREEN ADAPT project has been presented at 9 industry specific conferences, 1 workshop and 1 webinar.

Most recently the LIFE GREEN ADAPT project was presented by CINEA at IFAT Worldwide, the world's leading fair for environmental technologies. IFAT is a two-day event and the LIFE GREEN ADAPT project was positioned at the CINEA stand along with other LIFE programme funded projects. A specialised presentation surrounding the LIFE GREEN ADAPT was presented by CINEA on the blue stage during the LIFE programme session titled "Discover opportunities from the EU's funding instrument for the environment and climate change". The project consortium was delighted to be invited by CINEA to the event!

Our project consortium will continue to present the progress made by the LIFE GREEN ADAPT at industry conferences to continue increasing the impact of our project results and keep everyone up to date on our project progress.

For regular project updates don’t forget to follow us on our social media channels and visit our website for more information! (*Add links to mailchimp version*)