



LIFE GREEN ADAPT press release 18<sup>th</sup> January 2024

## LIFE GREEN ADAPT is changing the game of landfill resilience

The LIFE GREEN ADAPT project is co-funded by the European Union's LIFE programme (LIFE20 CCA/ES/001795) and is entering its 4<sup>th</sup> year in 2024. The project aims to increase the resilience of the European Union waste management infrastructures against climate change, (specifically landfills) by demonstrating Blue-Green Infrastructures (BGI) and ecosystem-based approaches.

The risk of landfills being affected by climate change increases due to the longevity of infrastructures, some landfills are operated and remain active for 140 years, yet even after closure a landfill continues to produce leachate for up to 25 years. This lifespan is a significant increase from when many waste facilities had a lifetime of between 20 and 40 years. This increased longevity means these types of infrastructure will need to continue to operate under changing climate conditions that will be experienced in the future, furthermore, any new infrastructures will need enhanced resilience to account for climate change and increasingly extreme weather events.

Landfills are commonly recognised as a source of environmental pollution, as waste decomposes in landfill sites it releases toxins that create leachates that can pollute the surrounding land, water, and air as they release methane and are large contributors to greenhouse gas emissions. These risks increase with extreme weather events and severe temperature changes resulting in landfill sites being particularly vulnerable to climate change impacts. Extreme temperatures associated with climate change can lead to landfill fires that are incredibly difficult to control and release toxic fumes into the air that can endanger the health of surrounding communities and the environment.

The LIFE GREEN ADAPT project aims to develop nature-based solutions for landfill sites to reduce the pollution they produce when affected by extreme weather. The project will further implement and demonstrate actionable solutions to trigger significant improvements on landfill resilience using bio-technosoils and treatment wetland (TW) systems to enhance their adaptation against climate related hazards such as water scarcity, storms, floods, landslides, and fires.





Within the LIFE GREEN ADAPT project, a set of innovative TWs for landfill polluted leachate and run-off water were recently under construction at **XILOGA's** landfill site in Galicia, Spain. These TWs will deliver quality water, enhancing water reuse, for safe discharge into the environment.

Additionally in 2023 the project consortium developed novel biotechnosoils that now cover the landfill site. The bio-technosoils are made of wastes from the landfill site and aim to increase the soil quality by boosting the nutrient supply and improving its survival.

BEFORE - GREEN INFRASTRUCTURE BIO-TECHNOSOILS



DURING - GREEN INFRASTRUCTURE BIO-TECHNOSOILS



AFTER - GREEN INFRASTRUCTURE BIO-TECHNOSOILS



The LIFE GREEN ADAPT project is set to achieve its objectives due to the work and collaboration of an incredible consortium. The project consortium includes 7 individual companies, each with a unique industry related skill set. In June 2023 the consortium met in person for the 2<sup>nd</sup> General Assembly meeting which included a site visit to the demo landfill site at **XILOGA's** facilities. This event gave our project partners the opportunity to see the technology work its magic!



Find out more about our project consortium below:

- <u>AIMEN Centro Tecnologico (AIMEN)</u>
- Aarhus Universitet (AU)
- Global Factor (FACTOR)
- Isle Utilities (ISLE)
- <u>LIMNOS</u>
- Universitat Politecnica de Catalunya (UPC)
- Xiloga (XILOGA)

The LIFE GREEN ADAPT project is making great progress with the original project objectives and is committed to its journey towards resilient waste infrastructures in the EU. The project will continue to progress for at least 1 more year, sharing the knowledge of the project results with industry relevant professionals to ensure a replicable innovative technology is available for the future.

To find out more about the LIFE GREEN ADAPT project, visit our <u>website</u>, and follow us on <u>LinkedIn</u> and <u>Twitter</u>.