MERLIN INNOVATION AWARDS 2025

MIA 2025 Finalists

→ **PRODUCT OF THE YEAR 2025** (5 Finalists)
→ **SERVICE OF THE YEAR 2025** (5 Finalists)

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CONNECTOLOGY

The MERLIN project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036337.

MERLIN INNOVATION AWARDS 2025

PRODUCT OF THE YEAR 2025
Finalist #1

Product Name:

ALGAESYS ARCADIA

ALGAESYS

Company Description:

ALGAESYS redefines our relationship with water, deploying low lifecycle cost circular water solutions to deliver water security affordably and equitably to all demographics worldwide. Our high-performance carbon-negative systems use natural photosynthetic organisms and substitute costly wastewater treatment with profitable resource recovery, promoting local economic growth.

We currently deliver on a turn-key basis but also offer operations support to customers. We are active in Europe, Australia, and selected parts of Southeast Asia and have some experience in the U.S. market.

Target segments include small communities and municipalities, a variety of industries, and food & beverage sectors, including the recovery of raw sewage to cooling/boiler feed water quality for industry and data centres. A richly diverse and vibrant growing team, our founders each have over 30 years of international experience in water and environmental protection.

We have an ongoing research programme with several new technologies applying algae. ALGAESYS is a World Economic Forum Uplink Top Innovator.

Product Description:

ALGAESYS circular water recovery systems can vary from 25 m^3/d to 10,000 m^3/d, and we are being asked to look at systems for 45,000 m^3/d. Our system is robust to fluctuations and shock loads; the process is carbon negative with sequestration of atmospheric and pollutant carbon into the biomass. This biomass has a higher energy value than conventional sludges plus a high bio-polymer concentration, which can be extracted as chemical feedstock or, as whole biomass, used as a nutrient & diatomaceous-rich soil conditioner with properties that enhance root uptake of nitrogen.

ALGAESYS' modular design, low land footprint photo bio-reactor systems employ naturally occurring (locally sourced) phototrophic organisms. The process creates a high-rate oxidative reaction in the regulated absence of non-photosynthetic organisms. This propagates conditions for disinfection and the destruction of persistent organic chemical pollutants. We offer superior metals and micro-particulate removal (boron, silica, plastics). Unlike other algae systems we provide full wastewater treatment to higher quality standards and levels of reliability. Our oldest asset has been operating continuously to specification without equipment replacement for over 10 years.

Product Differentiation:

Our product is highly disruptive with order-of-magnitude differentiation from conventional and other algae treatment/reclamation systems. This includes:

- Unlike other conventional biological and algae systems, we can destroy persistent organic chemical pollutants to very low levels or not-detectable – without peroxide, ozone, UV, Fenton's reagent, or absorbents, thus making reuse affordable.
- Stability & reliability under high flow and load fluctuations, including from industrial discharges and seasonal variations.
- Very low operation & maintenance burden – 80 – 90% REDUCTION in energy costs without chemicals and consumables, very low maintenance and labour costs.
- We produce high-quality reuse water for a fraction of the cost of conventional systems: 50~80% REDUCTION in the lifecycle cost.

Place, client, and respective year the product was implemented and tested successfully:

2013, Virginia, USA – Pilot: Mixed industrial treatment for nitrogen & persistent chemical removal. MEKO reduced from 6 mg/L to undetectable. **2013, Florida, USA** – Pilot: RAS aquaculture (sea & freshwater fish). Reduced water management costs, 15% fish kill reduction, 20% yield increase, 70% reduction in fingerling mortality. 2013, Disneyworld, USA – Improved tropical aquarium water quality and coral maintenance.

2014, Indiana, USA – First commercial plant (275 m^3/d), Summit Lake Park. **2016-17, Kunshan, China** – Development plant (200 m^3/d), intensive 8-month trials: E. coli < 800 cfu/100ml, TN < 0.2 mg/L, TP < 0.2 mg/L, TSS < 1 mg/L, COD < 10 mg/L, BOD < 6 mg/L. **2022, GinGin, Australia** – Retirement eco-village (25 m^3/d). **2023, Porto, Portugal** – SuperBock Brewery proof of concept & biopolymer trials. **2024, Bolnhurst WRC, UK** – Anglian Water Services asset replacement & upgrade (360 m^3/d) for full N&P removal.

https://www.algaesys.earth/ **Portugal**

MERLIN INNOVATION AWARDS 2025

PRODUCT OF THE YEAR 2025
Finalist #2

Product Name:

BeadaHumok®

Company Description:

BeadaHumok is a climate action business dedicated to the sustainable production of Sphagnum for peatland restoration. An independent, family-owned company committed to growing Sphagnum (and other species) without causing any damage to existing peat bogs.

We take tiny fragments of Sphagnum from regions or sites where Sphagnum has been damaged and restoration is required. These are bulked up using micropropagation, and then a range of species is grown together into each BeadaHumok® (a small clump of Sphagnum). Thus, mixed species of local origin can be replanted into the damaged peatland, and appropriate species will be established depending on specific micro-topography.

We currently supply Sphagnum to many UK restoration projects in upland and lowland areas and to Ireland, the Netherlands, and Germany. We hold a library of Sphagnum species from many different origins across Europe.

In 2024, we produced over 6 million BeadaHumok®. All plants are grown 100% peat-free, using renewable energy sources and sustainable practices. We also grow other bog species for peatland restoration.

Product Description:

BeadaHumok® are sustainably produced, multi-species Sphagnum moss plugs designed for optimal establishment and growth on degraded peatland sites. Tiny initial Sphagnum samples are collected from various regions or sites and then bulked up through micropropagation. A targeted range of species is grown together in each BeadaHumok® plug, enabling the replanting of locally sourced material onto damaged peatlands. This approach facilitates the appropriate species colonisation, tailored to the specific micro-topography of each site.

Key benefits include:

- → 100% Peat-Free production
- → No donor site damage from wild harvesting
- → Multiple Sphagnum species for targeted restoration
- → Resilient and rapid establishment and growth
- → Easy to transport and plant
- → Sustainable production methods

BeadaHumok® has demonstrated significantly accelerated rates of volume accumulation compared to wild-harvested and translocated material. In upland trials conducted by Moors-for-the-Future Partnership, BeadaHumok® showed a 1265x volume increase over 9 years, compared to just 37x for translocated material.

After just 9 years, densely planted BeadaHumok® can absorb up to 120mm (5 inches) of rainfall—equivalent to over 1200m³ per hectare.

Revegetating with BeadaHumok® also offers significant carbon sequestration potential beyond the avoided emissions of hydrological restoration alone. On average, 108 tCO_2e/ha could be sequestered over 9 years, based on the volume increase (assuming the bulk density of 30g/l and Sphagnum retains 20 times its weight in water).

Product Differentiation:

The only alternative to our product is to harvest from the wild, which is hugely damaging to the peat bog where harvesting occurs and can result in damaging organisms being transferred with the Sphagnum to a new site. Such translocated material has a much lower survival and growth potential than BeadaHumok®: BeadaHumok® 1265x volume increase (Translocated only 37x) over 9 years shown in upland trials by Moors-for-the-Future Partnership.

Our Sphagnum as BeadaHumok® is grown 100% Peat Free with no donor site damage through wild harvesting. BeadaHumok® contains multiple and defined Sphagnum species for targeted restoration and are resilient and rapidly established and growing. They are easy to transport and plant and are grown using sustainable production methods.

Place, client, and respective year the product was implemented and tested successfully:

Moors For the Future Partnership, Edale, UK. Trial: Kinder Scout, Peak District: planted 2015. Many other trials by organisations around the UK, Ireland, and Germany.

https://beadamoss.com/ **England, UK**

Product Name:

ReedWood

ReedBirds

Company Description:

ReedBirds technology results from extensive research into biodegradable materials sourced from reeds naturally found in wetlands. Our goal was to develop a scalable, stable, and suitable material for global production. By exploring plant-based raw materials and waste streams, we identified products derived from paludiculture—a form of wetland agriculture—as the ideal solution. This innovative approach supports ecosystem restoration, enhances water purification, and delivers sustainable product solutions.

Product Description:

Our goals are to naturally clean water, protect wildlife, promote environmental sustainability, reduce temperature rise in the area by up to 1°C, and combat deforestation. We have developed a product that serves as an alternative to wood, using reeds harvested once per year from wetlands. Reeds are highly available worldwide, and thanks to our short supply chain, the product reduces CO_2 emissions, has a low carbon footprint, and complies with the latest EU regulations and COP guidelines.

Product Differentiation:

- ReedWood is designed as a sustainable solution. The raw material, harvested from wetlands, supports an environmentally effective value chain with a positive impact on ecosystems.
- ReedWood addresses global climate challenges by contributing to water purification, carbon sequestration, deforestation reduction, and local ecosystem temperature regulation.
- The product aligns with the principles of the circular economy. It matches wood standards in terms of quality, strength, and design.
- We use ecological binders that replace toxic formaldehyde-based glues in the final products.
- The technology allows for global production, ensuring consistent quality and scalability.
- Our initial focus is on the furniture industry, particularly in the segments of flooring, panels, and solid boards.

Place, client, and respective year the product was implemented and tested successfully:

The product is currently being prepared for market implementation. We are finalising the process line and plant construction conditions, with a signed letter of intent with the local government of Elbląg for the production site. Product testing continues with furniture industry partners, and while full market rollout is pending, we have already secured nearly 5,000 hectares of wetlands to ensure a stable production base.

MERLIN INNOVATION AWARDS 2025

PRODUCT OF THE YEAR 2025
Finalist #4

Product Name:

Wasser 3.0 PE-X®

Company Description:

Wasser 3.0 gGmbH. As a non-profit GreenTech company, we are positioned at the interface between science, business, politics, and society. Here, we are breaking new ground to promote responsible research and green innovations for water without microplastics and micropollutants. The SDGs are the overall guiding principle of our actions.

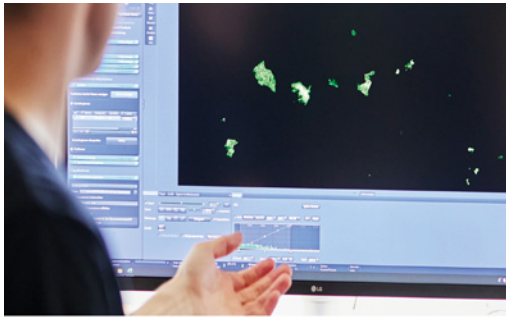
Wasser 3.0 develops and scales technologies for water without microplastics and micropollutants. With a focus on data-driven technology development, education, and innovation transfer, Wasser 3.0 is where green tech innovation meets social business.

Product Description:

Wasser 3.0 PE-X® is a modular process for the removal of microplastics from water. A mixture of organosilanes (silicone-based chemical mixture with various reactive groups) is dosed into a mixing tank. The organic groups become attached to the surface of microplastic particles present in the water. Through mixing, microplastic particles and their attached organosilanes collect in agglomerates. Subsequently, the water-induced sol-gel process starts fixing the microplastic particles. In <5 minutes, larger agglomerates (medium scale: 1-3 cm) form and float to the water's surface, where they are removed with a sieve or skimmer. The agglomerated material can be reused as a filler in house buildings or as road construction materials. The mixing tank of the rental model has a capacity of 250 L. We use a 1000 L reactor (side-stream) and a flow of < 30 L/min for continuous operations at a wastewater treatment plant. The process is containerised and automated and can be run in batch or continuous mode. The dose rate depends on the concentration of microplastics, which is determined using a proprietary method based on fluorescent dyes. Wasser 3.0 gGmbH is developing a sensor for continuous detection of microplastics in wastewater streams and for industrial process control.

Product Differentiation:

Unique Selling Point: Standard particle elimination technologies such as membrane filtration, hydrocyclone, or sand traps can be applied for microplastic removal. However, these approaches are costly, energy-intensive, and demanding to maintain, and they do not tackle the complexity or build a sustainable process surrounding them. Additionally, microplastic pollution comprises a range of polymers with different properties and surface chemistries, making selecting suitable flocculants challenging. Wasser 3.0 PE-X® is a novel approach based on physical agglomeration and water-induced chemical fixation. It provides fast and strong particle growth and forms stable agglomerates. As organosilane mixtures work with any type of polymer, the process removes up to 95% of the microplastic load at a relatively low cost. A full Life Cycle Assessment for industrial process water treatment is available.



Place, client, and respective year the product was implemented and tested successfully:

Manufacturing Industry, Germany, 2023-2024

https://wasserdreinull.de/ **Germany**

MERLIN INNOVATION AWARDS 2025

PRODUCT OF THE YEAR 2025
Finalist #5

Product Name:

Waterly. Innovative water quality monitoring system

waterly

Company Description:

Waterly is a pioneering technology startup revolutionising water quality monitoring through autonomous IoT-enabled buoys, cloud-based analytics, and AI-driven insights, that provide real-time data on key parameters such as temperature, pH, dissolved oxygen, and conductivity.

Waterly's mission is to make water quality data universally accessible, supporting environmental protection and sustainable resource management. Our vision is to lead global water stewardship by building the world's most extensive water quality data repository and tackling challenges like microplastic pollution and climate change. Already deployed across Poland, we are expanding globally to safeguard ecosystems and promote sustainable water use.

Product Description:

Waterly's autonomous monitoring system provides real-time water quality data for surface and industrial applications. IoT-enabled modular buoys, equipped with advanced sensors, measure parameters such as temperature, pH, dissolved oxygen, conductivity, and salinity. Data is transmitted to a cloud-based platform for analysis and visualisation, offering actionable insights.

Our fully autonomous solution requires no wiring, external power, or infrastructure modifications—simply deploy the buoy, and it operates year-round with only annual maintenance, minimising costs. The modular design allows for custom sensor configurations, adapting to lakes, rivers, retention basins, and industrial processes.

Built to withstand extreme weather, it integrates seamlessly with SCADA and other systems via API. AI-driven analytics predict potential issues like algal blooms and oxygen depletion, enabling proactive management.

Our product empowers municipalities, environmental agencies, fisheries, and industries to ensure sustainable water management while promoting ecological stewardship and long-term resource protection.

Product Differentiation:

Full Autonomy: operates independently with solar power and long-lasting batteries, ensuring uninterrupted year-round monitoring.

Non-Invasive Deployment: No infrastructure modifications required; simple "drop and go" installation.

Comprehensive Modularity: customisable sensors allow expanded monitoring, including microplastics and specific chemicals.

Year-Round Functionality: withstands extreme conditions, providing reliable data even under ice cover.

Minimal Maintenance: only requires servicing once a year, reducing costs and effort.

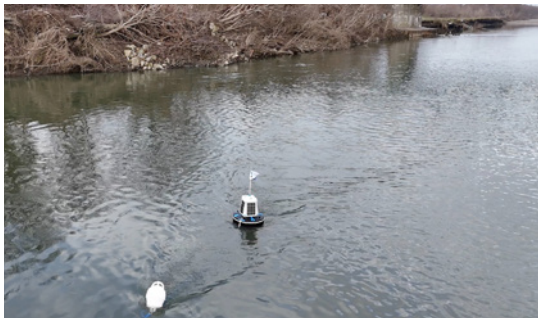
AI-Powered Insights: predicts risks like algal blooms and oxygen depletion for proactive management.

Seamless Integration: connects easily with SCADA and other platforms via API.

These advantages make Waterly a cost-effective, innovative, and environmentally sustainable choice for water quality monitoring.

Place, client, and respective year the product was implemented and tested successfully:

Wigry National Park, Lake Dzierżno Duże, Odra River, Fish Farm near Warsaw, In 2025: Augustów City, Suwałki City, Lithuania, Łomżyński Landscape Park, Fish Farms



https://www.waterly.com/ **Poland**

Service Name:

Clean River Model

Company Description:

River Cleanup is a Belgium nonprofit organisation founded in 2019. The idea was born in 2017 when Thomas de Groote was challenged to do a 10-minute cleanup, which changed his life. Our vision: plastic-free rivers. Plastics can be useful, but they do not belong in (y)our food, water, air, and body.

River Cleanup is a global network-driven organisation on a mission to clean rivers by empowering people, preventing pollution, and accelerating change. We are a network organisation because we believe in active cooperation. That's why we are building a global network of action-oriented people working together towards plastic-free rivers.

In 2022, we went back to the drawing board with our field experience, the latest scientific insights, and one single question in mind: how do we make rivers plastic-free most effectively and cost-efficiently? The answer is our Clean River Model. It's more than a list of ingredients; it's a recipe for plastic-free rivers.

Key achievements in our first five years (2019-2024):

- → 6,000+ events in 100 countries along 450+ rivers,
- → 285,000 people mobilized for a cleanup,
- → 3.5 mln. kg river waste removed from the environment and
- → Innovative holistic Theory of Change developed (Clean River Model).

Service Description

The Clean River Model is an open-source Theory of Change for plastic-free rivers. Its logic follows a simple yet effective strategy: early intervention. We first aim to achieve maximum reduction and substitution of single-use plastics. Plastics that are not produced never become plastic waste. Collecting post-consumer plastic waste is the next best step and prevents leakage and pollution of the environment. Cleaning up plastic leakage on land prevents plastic pollution of rivers and increases the options to reuse these plastics in closed-loop circular economy solutions. Finally, cleaning up plastic pollution from rivers is the only solution to prevent it from further polluting nature and the ocean. That's how we, step by step, turn off the tap on new plastic pollution and clean up existing plastic pollution most effectively and cost-efficiently.

Service Differentiation:

Competitors often focus on a single intervention type (e.g., only cleanup events), are tech-only or are less open to sharing/cooperation at a time when we need more co-creation and cooperation. Here are five factors that, combined, make the Clean River Model unique:

1. Designed for maximum impact & scalability: it's holistic with strategic early interventions in the plastic lifecycle. We prevent new waste and clean up legacy plastic pollution.

2. Built on science, including Breaking the Plastic Wave, combined with the field experience of removing 3,5 million kg of river (-bound) waste from nature.

3. River-focused: plastics in the environment often end up in rivers. The Clean River Model is fully aimed at preventing plastic from ending up in rivers by reducing plastic use and pollution on land. Cleaning up plastic pollution in rivers is a crucial last step.

4. Practical & concrete: the integrated workflow makes it a hands-on Theory of Change. There is no time to waste.

5. Open-source: by making the Clean River Model and tools publicly available, we aim to empower individuals and organizations globally to have faster impact.

Place, client, and respective year the service was implemented and tested successfully:

We are currently developing, implementing, and validating the Clean River Model in three action zones: Indonesia, Belgium, and Cameroon.

Service Name:

Gdańsk Water manages the stormwater management system based on Nature-based Solutions (NbS)

Gdańskie Wody

Company Description:

Gdańsk Water is a Polish company that manages the city's stormwater system through Nature-Based Solutions (NbS). Our work includes maintaining retention reservoirs, monitoring rainfall and water levels, constructing rain gardens, and adapting Gdańsk to climate change by developing guidelines for both public and private investors. These initiatives aim to enhance water management and climate resilience in the city.

Service Description:

The service connects natural processes with modern technologies to enhance rainwater management. As a result, it improves environmental quality, ensures cleaner rainwater, boosts biodiversity and helps mitigate the urban heat island effect. Additionally, it reduces the risk of flooding and minimises the consumption of raw materials, contributing to a more sustainable and resilient urban environment.

Service Differentiation:

Gdańsk Water's approach to stormwater management stands out for its multi-functionality, resilience, reduced use of raw materials, durability, and compliance with EU policies. Two primary methods of managing rainwater are green retention and drainage into the sewage system. Green retention relies on natural solutions that allow rainwater to be retained, absorbed, and purified by plants, soil, and specially designed reservoirs. Examples include rain gardens and retention reservoirs, which help minimise flood risk, improve groundwater quality, and reduce the urban heat island effect, ultimately enhancing the urban microclimate. Additionally, green retention supports biodiversity and improves the aesthetics of urban spaces, making cities more sustainable and visually appealing. In contrast, draining rainwater into the sewage system involves quickly directing water through a network of pipes to treatment plants or retention reservoirs. While effective for rapid water removal, this method does not contribute to environmental quality or biodiversity. Moreover, the system can become overloaded during heavy rainfall, increasing the risk of flooding.

For these reasons, green retention presents a more sustainable and ecological alternative, aligning with modern environmental priorities and ensuring long-term resilience in urban water management.

Place, client, and respective year the service was implemented and tested successfully:

Gdańsk city hall, 2018 Gdańsk University of Technology, 2023,

MERLIN INNOVATION AWARDS 2025

SERVICE OF THE YEAR 2025
Finalist #3

Service Name:

Lake Guard View

BlueGreen WATER TECHNOLOGIES

Company Description:

BlueGreen Water Technologies is a pioneering environmental company dedicated to combating harmful algal blooms (HABs) in freshwater and marine ecosystems worldwide. Founded in Israel, the company offers innovative, science-driven solutions to restore water quality, protect aquatic life, and safeguard communities from the toxic effects of cyanobacteria (blue-green algae).

Its flagship products, Lake Guard™ Blue and Lake Guard™ Oxy, are fast-acting, scalable, and eco-friendly algaecides requiring minimal infrastructure. They selectively eliminate harmful cyanobacteria while preserving beneficial microorganisms, improving biodiversity and reducing greenhouse gas emissions.

BlueGreen partners with governments, municipalities, and environmental agencies to safeguard water bodies, ensuring clean, safe water for future generations.

Service Description:

Lake Guard™ VIEW is an advanced remote monitoring and control platform developed by BlueGreen Water Technologies that enhances the effectiveness of Lake Guard™ treatments through real-time data and predictive analytics.

Key Features of Lake Guard™ VIEW:

Real-Time Monitoring: Tracks temperature, pH, oxygen, and algae concentrations.

Early HAB Detection: AI predicts and alerts users to potential algal blooms.

Remote Treatment Control: Enables precise, on-demand activation of algaecides.

Data Insights: Visual reports help optimise interventions and measure impact.

Lake Guard™ VIEW enables proactive HAB management, optimising resources and reducing costs while enhancing environmental protection. By providing real-time insights and remote control capabilities, it empowers water managers to maintain healthier and safer freshwater ecosystems with greater efficiency and precision.

Service Differentiation:

Lake Guard™ VIEW (LGV) by BlueGreen Water Technologies stands out from competitors in several key ways, offering a comprehensive, data-driven approach to harmful algal bloom (HAB) management that prioritizes efficiency, sustainability, and ease of use.

1. Integrated Solution with Active Control: Combines data tracking with active treatment that allows users not only to detect harmful algal blooms early but also to initiate and optimize treatment remotely

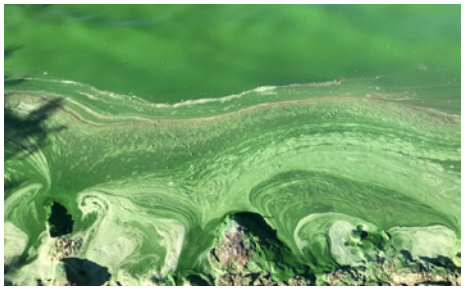
2. Predictive Analytics and Early Intervention: Utilises advanced algorithms and machine learning to predict algal bloom outbreaks before they become a threat, enabling proactive interventions, minimising environmental damage, and reducing long-term costs.

3. Minimal Infrastructure and Easy Deployment: LGV is a cloud-based platform designed for easy deployment and remote access.

4. Environmental Sustainability: Targets only harmful algae, preserving beneficial aquatic organisms and supporting long-term ecosystem health.

5. Cost-Effective and Scalable: Designed to be scalable, making it cost-effective for water bodies of various sizes, from small reservoirs to large lakes.

Place, client, and respective year the service was implemented and tested successfully 2024



Service Name:

Nature-based Solutions and water access projects.

Agua Segura

Company Description:

Agua Segura is an Argentinian company that addresses the most urgent global challenge: the water crisis. In an era of increasing water stress, we seek to develop local and sustainable solutions, working with different actors and responding to the essential needs of human well-being, economic stability, and environmental resilience.

We are a triple-impact company specialising in nature-based solutions and water access projects. We support companies in their water strategies, designing customised projects that impact their watersheds.

We develop projects that benefit both people and nature, building trust-based local relationships. Our partnerships with local implementers leverage their technical knowledge and community networks. By adapting our initiatives to the local context, we maximise impact on watershed health and community livelihoods in the long term.

Service Description:

Agua Segura stands out from competitors through its commitment to holistic, community-centered, and sustainable water solutions. Unlike many water service providers, Agua Segura combines nature-based infrastructure with educational initiatives that empower communities to manage and maintain these systems over the long term. This dual approach ensures not only immediate access to clean water but also fosters a lasting cultural shift toward water stewardship.

Another differentiator is Agua Segura's focus on data-driven impact. This level of transparency and accountability enhances trust with communities and partners, setting Agua Segura apart in the water services field. Agua Segura's collaborative model also distinguishes it from competitors. By partnering with local governments, NGOs, and businesses, the company leverages diverse resources and expertise, creating tailored solutions that address the specific water challenges of each community. This multi-stakeholder approach ensures that Agua Segura's impact is sustainable, scalable, and aligned with global water security goals.

Service Differentiation:

Agua Segura's services deliver both ecological and financial benefits for freshwater ecosystems by promoting sustainable water management and reducing environmental strain. By implementing Nature-based Solutions, the organisation minimises dependency on groundwater and surface water sources, which helps reduce ecosystem degradation and protects natural water reserves. This conservation effort lowers the risk of over-extraction, a key driver of habitat loss and biodiversity decline in freshwater ecosystems.

Financially, Agua Segura's approach reduces long-term costs for communities by promoting self-sufficient water management and ensuring consistent water quality, which decreases expenses related to water treatment, health impacts, and emergency supply interventions.

Place, client, and respective year the service was implemented and tested successfully:

Arroyo Grande Watershed, Balcarce, Buenos Aires Province. Argentina - 2021

MERLIN INNOVATION AWARDS 2025

SERVICE OF THE YEAR 2025
Finalist #5

Service Name:

River margin anti-erosion protection and stabilisation

MUSHMORE

Company Description:

Mushmore Coop CRL is a non-profit environmental Co-op dedicated to environmental restoration, offering a wide range of services regarding the development of ecological restoration protocols founded on Natural-Based Solutions, that any stakeholder agent can easily replicate with minimal tools and investment.

Service Description:

This service offers a permanent solution for the damage inflicted by flash and long duration floods, by stabilising with both dead and living biomass, reinforced by a permanent herbaceous mycorrhizal root math, offering a solution that supplies margin stability on levels way above any rockfill or human engineering work known to humankind.

This solution provides a growing strength to the stability of the margin, as the root math provided by the herbaceous forage, strengthened by mycorrhizal fungi, has shown way greater efficacy than local rockfills in the Sorraia Living Lab.

Furthermore, the building of stabilising structures, fixated by a new system that we (ISA) called TF3S (Total Force Salix Safety System), will enhance not only the resistance to flooding as also provide more habitat and carbon fixation by reusing all the prunings, cuttings, and biomass leftovers to build stabilizing structures, with literally tons of wood for the buggies, a hideout for the mammals and shelter for the predators.

Service Differentiation:

We do it on a minimal budget, with no trucks, no diggers, no rocks being moved from rock mines to the river margins, no motorised emissions, and only plain Natura-based Solutions.

Place, client, and respective year the service was implemented and tested successfully:

2023 Merlin Sorraia Living Lab

https://mushmore.org/quem-somos/ Portugal

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Good Luck!

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