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TOWARDS A SUSTAINABLE AGRICULTURAL AND LIVESTOCK SECTOR

Through the REGENERATE LIMIA LIFE project several solutions will be implemented for demonstration purposes in the region of A Limia, focused directly on the environmental problem of the deterioration of water bodies in the basin of the Limia river as a result of excess nutrients. The Limia region has a strong rural character where the agriculture and husbandry activity weighs heavily in the economy of the area and the configuration of its landscape and space. These primary activities related to agriculture and husbandry have been identified as one of the main factors responsible for changing the status of the water bodies of the Limia basin, based on the studies and monitoring of the evolution of the water body of the basin performed by the Miño-Sil Hydrographic Confederation. The effect is notable on the stretch of As Conchas reservoir (a section of the Limia river downstream of the region) where episodes of intense growth of cyanobacteria and eutrophication occur. These processes arise when the water receives large quantities of nitrogenous and phosphorus compounds predominantly from agricultural and husbandry activity and from urban waste, either through diffuse sources or direct discharge. The causal link between agricultural activities and their impact on the aquatic environment comes as a result of the application of organic and chemical fertilizers that cause diffuse surface and groundwater pollution in the water, as well as a significant reduction or even elimination of the riparian forest, with consequent damage to river ecosystems. The work program includes 26 actions for the preparation and implementation of an innovation as a depuration technique and several demonstrative actions, along with transversal activities for the proper monitoring, management and dissemination during and after the project.

- DEMONSTRATIVE ACTIONS:
- B1. Integrated control system for the management of chemical and organic fertilizers in agricultural soils.
 - B2. Artificial lagoon for slurry treatment.
 - B3. Recovery and rehabilitation of old Limia floodplains.
 - B4. Recovery of two old gravel pits as natural wetlands with islands of macrophytes for reduction of pollutants.

ACTIONS



B1



Control System for the Management of Fertilizers and Manure on Agricultural Soils

- # Technical support to owners of 10 pilot farms to optimize the use and management of fertilizers and manures.
- # Improvement of soil quality, improvements in production and reduction of diffuse contamination.



B3



Recovery and rehabilitation of old Limia floodplains

- # Improvement of the capacity of the natural biological cycle, retention and assimilation
- # Pilot action: connection of the Limia channel with an meander abandoned and its restoration and plant integration.
- # Monitoring of the improvement of the new fluvial ecosystem generated, water quality and biodiversity.

ACTIONS



B2



Artificial lagoon for slurry treatment

- # Installation of a demonstration pilot plant.
- # Intensive artificial wetland of macrophytes for wastewater treatment from porcine slurry



B4



Environmental recovery of lagoons of abandoned sand ponds

- # Pilot action in 2 abandoned sand ponds, connection with the Canal Laguna de Antela.
- # Restoration and plant integration. Installation of macrophyte islands.
- # Control of the evolution of water quality parameters and bioindicators

EXPECTED RESULTS

- Reduction per fertilized parcel of a: 30% average reduction on the use of fertilizers and manures. 50% average reduction on the use of slurry 40% average reduction of greenhouse gases.
- Estimated reduction of the mean concentration of the pollution parameters in the leaving water of the zone in Veiga Ponteliñares SCI in relation to the input values: 15% nitrate, 15% ammonium, 15% overall phosphorus and 30% in BOD5.
- Estimated reduction of the mean concentration of pollution parameters in the leaving water of the sand pond in relation to the input values: 30% nitrate, 30% ammonium, 15% overall phosphorus and 30% in BOD5.



Depurar para recuperar
Hacia un sector agropecuario sostenible