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ECOAMONIACARE

Biological nitrogen fixation for the manufacture of ammonia and the formulation of self-consumption biofertilisers.



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Nafarroako Gobernua



Europar Batasuna Unión Europea





"Hybrid nitrogen generation system"



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DEcoamoniacare was created with the aim of providing a **response to the new mandatory measures** that Europe is beginning to establish to minimise the use of agrochemicals in agriculture.

In this scenario and with the constraints of these new environmental regulations, **Ecoamoniacare seeks to fixate biological nitrogen to synthesise ammonia, the source of nitrogen in current fertilisers**. The project promotes the reduction of gases emitted into the atmosphere and adapts the use of fertilisers to the new requirements in the conservation of agricultural soils.

Ecoamoniacare is researching the necessary conditions and requirements to **design a hybrid nitrogen generation system that integrates an electrolytic and a biological part under suitable conditions** to synthesise fertiliser for their on-site use in agricultural operations. This approach fully respects the principles of sustainability and aligns with the circular economy. Project development

- A device will be designed to solve the particular requirements, synthesising an ammonia-based biofertiliser as the main source of nitrogen in combination with additional elements of biological origin for the development of an autonomously dispensed fertiliser formula.
- Hydrogen will be sourced from natural and renewable resources, such as rainwater and nitrogen from the atmosphere.

The incorporation of different microorganisms capable of fixing biological nitrogen will be studied. This will significantly increase the added value of the formula, resulting in a hybrid system that combines biological nitrogen fixation (from air) and its conversion to ammonia, with microorganisms capable of enhancing the nitrogen content of the designed system.