**Project Information Sheet**

**CO2 capture and nutrients recycling using a patented algae system for bio-fertilizer production (COFERT)**

**Programme area:** Water, Greening businesses, Recycling

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**Benefits (max. 150 characters incl. space):** The achievement of a global algae based process able to capture, sequester and recycle CO2 from biogas plants and produce a high-quality bio-fertilizer

**Keywords:** CO2-capture, algae, bio-fertilizer

**Sector:** Recycling

**Type of solution:** Process

**Duration:** 01/10/2013 – 30/09/2016

**Budget:** 756,926 € (EU contribution: 50 %)

**Contract number:** ECO12/333032/SI2.658721

**Summary**

**COFERT project targets** on the implementation of global algae based process able to capture, sequester and recycle the CO2 from biogas plants and demonstrate that this technology is ready for the market.

The process is based on the ability of microalgae to capture CO2 via photosynthesis in the presence of sunlight in symbiosis with a bacterial consortium capable of oxidizing H2S (biogas contaminant) using the photosynthetically produced O2 (BFC patent). The CO2 absorbed is then converted into biomass in a High Rate Algae Pond, using the digestate produced as nutrients source (N, K, P). A dried algae biomass is obtained ready to extract the high added value products out with the use of a green solvent. A plant hormone and a bio-fertilizer or bio-stimulator from the algae biomass is produced.

**The work programme** extends over 3 years, in 3 main stages of interconnected actions such as management, technical activities and dissemination activities.
**Expected and/or achieved results**

- A low-cost alternative for biogas-conditioning process which allows using it in new applications
- A recycling CO₂ process in biogas plants for growing algae biomass in a zero emission process with no by-products generation.
- An Energy efficient and easily up-scalable technology
- Maximum utilization of the algae biomass as source of high value products and suitable recycling of resources (nutrients -N,P,K- and water)
- The production of a plant hormone and a bio-fertilizer from the algae biomass

The information sheet will be published in the [Eco-Innovation website](#). The EACI reserves the right to edit the information sheet for content and length.