# Turning waste from agriculture and aquaculture into renewable energy

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Credit: AI-generated image (disclaimer)

An innovative new three-year research project will see the aquaculture, agriculture and biogas sectors working together to develop renewable energy. The initiative demonstrates how improving sustainability, reducing waste and achieving operational efficiencies can be achieved simultaneously.

Indeed, the EU project, known as BIFFiO, will play an important role in contributing towards the EU goal of sourcing 20% of Europe's energy demands from renewable energy systems by the year 2020.

The agriculture and aquaculture sectors are under tremendous pressure to improve sustainability and reduce their environmental impact. Both sectors produce a great deal of waste, which is often untreated and unused. The BIFFiO project aims to tackle this issue by developing an economic and resource efficient system for handling mixed waste agriculture and turning into usable energy.

Indeed, the main concept of the project is to mix waste that is readily available from fish farms and manure waste from the agriculture industry in a reactor for production of biogas, which in turn can be used to fill the need for renewable energy in the aquaculture industry and supply fertilizer products to the agriculture industry.

The project, which was launched in November 2013, will first of all investigate how waste can best be used to create renewable energy, and examine what nutrients can be recovered for other uses. The next objective will be to shrink current state-of-the-art technologies used in large scale waste treatment to farm-scale, so that efficient and economical biogas energy can be produced locally on or near a farm site.

Over the next three years, the project team will also address the challenges currently faced by industry, and look at new ways of meeting regulatory requirements. A best practice guide for handling mixed waste from aquaculture and agriculture for the production of energy, and further use of digested waste, will be developed.

Finally, the project aims to have a positive impact on local social and economic conditions. This will be achieved through improved hygienic and environmental standards in closed fish farming, and by reduced

greenhouse gas emissions and other pollution burdens from the agriculture sector.

Provided by CORDIS

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