Producing biogas and recycling nutrients from pig manure in Poland

The Baltic Sea is one of the most polluted seas in the world. The overload of nutrients results in large algae blooms and vast areas of “dead” sea bottoms. A key point source for the nutrient load is industrial meat production, a growing activity in the Baltic Sea region.

In 2010, BalticSea2020 started a ten-year programme aimed at reducing nutrient leaking from intensive livestock production to the Baltic Sea. Through a series of research studies, the programme has identified a number of manure management technologies, including anaerobic digestion, which can, if used correctly, capture and recirculate nutrients more effectively and thereby reduce leakage to waterways and the sea. The

Project: Pig manure based biogas demonstration plant in Poland
Project owner: BalticSea2020 foundation
Duration: November 2011–December 2012
Year of BSAP funding: 2011
Approximate total budget: EUR 200,000
BSAP funding: EUR 100,000
Contact person: Conrad Stralka, BalticSea2020, conrad.stralka@balticsea2020.org
intention is to launch a full-scale demonstration plant for the production of biogas from pig manure in Poland.

“We started this project with the intention to identify and implement cost-effective measures to reduce the leakage of nitrogen and phosphorus from industrial meat production. Our expectation is now to show, by means of this demonstration plan, the ability to substantially reduce nutrient leakage from industrial pig farms,” says Conrad Stralka, Director at BalticSea2020.

The cooperation with the BSAP Trust Fund will enable a first step towards concrete actions in Poland. An agreement has been signed with Swedish Biogas International (SBI), which will evaluate two development prospects in Poland and their possibility to fulfil both operational and environmental objectives.

The following manure management technologies will be implemented in the demonstration plant project:

- Safe storing of manure—to prevent leakage to air and water
- Anaerobic digestion of manure—to increase the nitrogen plant availability
- Separation of manure/digestate—to facilitate the proper dosage of nutrients
- Timely spreading of manure/digestate—to maximize uptake of nutrients by crops
- Analysis of nutrient content in dry and liquid fraction of digestate
- Spreading of digestate according to fertilising norms for prevailing crop

The facility will be established as a demonstration centre with the capability to host lectures and present the methodology.

The final objective of the project is to produce a white book on how other farmers can adopt the proposed methodology and reduce their environmental impact at the same time as they increase the output of their farm.

Baltic Sea Action Plan Fund

The BSAP Fund is a fund managed by the Nordic Investment Bank (NIB) and the Nordic Environment Finance Corporation (NEFCO). The fund provides grants for technical assistance to projects that support the implementation of the HELCOM Baltic Sea Action Plan (BSAP). The aim of the BSAP is to help restore the ecological status of the Baltic Sea.

Recipients eligible for financing through the BSAP Fund include both public and private entities operating in the agricultural and wastewater treatment sectors, shipping and ports, as well as those working to reduce hazardous waste in the Baltic Sea catchment area. A key purpose of the fund is to facilitate and speed up the preparation of bankable projects. The fund provides grant financing for the following:

- Project preparation and development, including feasibility studies, development of business ideas, and cash-flow models
- Technical assistance for institutional support, that is, training and support needed for project preparation, development and implementation
- Measures that improve efficiency and quality in project implementation (e.g., the acquisition of equipment for demonstration purposes)

Sweden has committed SEK 90 million (EUR 9 million) to the BSAP Fund and Finland EUR 2 million.

Contact:
Anders Alm, Senior Manager, NIB
tel: +358 10 618 0377
e-mail: anders.alm@nib.int
www.nib.int