At a Glance

BIM introduced a pilot programme to seven seafood companies across Ireland looking at reducing environmental inputs.

The largest and most costly waste streams of the sector are water and energy consumption through inefficient processes and utilisation.

The pilot programme involved environmental audits, installation of monitoring equipment and building on-site awareness of the opportunities for improvement.

The programme outcomes were achieved through leak detection and efficiencies within process water and cleaning water.

A company can expect to reduce water consumption by between 800m³ and 6,400m³ per year resulting in €1,000 to €14,500 annualised cost savings.

The energy savings are in the thousands of euros in terms of improving energy management e.g. one company saved €1,000 a month simply by replacing a faulty capacitor. Further work on this is on-going.

BIM see a key opportunity for the Irish seafood industry to enhance its credentials of being a Clean Green and Sustainable Seafood Sector.

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The Green Seafood Business Programme

Bord Iascaigh Mhara
BIM, Crofton Road, Dun Laoghaire,
Co. Dublin, Ireland.

www.bim.ie

Bord Iascaigh Mhara (BIM) was established under the Sea Fisheries Act of 1952 and is the state agency with responsibility for the development of the seafood industry, including sea fishing, aquaculture and the seafood processing sector.

The sector comprises 130 seafood processing establishments ranging from small artesian processors to large multi million euro business, with a range of products across pelagics, whitefish, salmon, shellfish and ready-to eat products.

Aims of this project

The main aim of this CGPP project was to reduce water and energy costs within the seafood processing sector.

The aims were to be achieved by:

- better monitoring and management of those utilities,
- building awareness to highlight the benefits of better environmental management and
- developing a green image for the Irish seafood processing sector consistent with the agri-food policy ‘Food Harvest 2020’.

Project Description

The project was implemented through environmental reviews and recommendations for improvements. The surveys identified areas and alternative work practices that could be implemented to reduce the input of water and energy.

Water

To facilitate the programme, on-line Wifi water meters were installed as a management tool. This allowed companies to identify when there was an increase in usage.

A follow-up audit was undertaken to determine the level of change and to give feedback to the companies on outstanding or further development that could be achieved.

Monitored water meters

Energy

Energy efficiency centred on refrigeration and the adoption of new management procedures, to improve efficiencies in chill and cold rooms.
Outcomes

The following is a summary of the environmental and economic benefits from this project:

Basic detection of leaks at incoming stage, including meters is the starting point that yielded improvements for most companies. The leak detection begins at the meter level, as in most cases significant water leaks were detected at this point.

The second stage of detection was within the plant, where significant savings can be achieved, anything up to €5000 worth of water on repairing leaks and zeroing the company's background water use.

The third area for water reduction was the cleaning stage which uses about 38% of overall water usage. The clear outcome is that changes in the cleaning procedures can significantly reduce water utilisation and costs.

The fourth area looked at was water utilisation within the process, especially refrigeration coolant systems that use significant amounts of water.

Gains / Impacts

- The overall savings and reductions in water and energy usage varied between the establishments.

- The average water reduction at the individual processor level varied between 800m³ and 6,400m³ per year.

- The financial cost savings similarly varied from €1,200 and €14,500 per year, based on water charges only.

- The energy savings are in the thousands of euros in terms of improving energy management. One company saved €1,000 a month simply by replacing a fault capacitor. Further work on this is on-going.

Lessons

- Water and energy reductions are possible within any plant based on a number of criteria being in place.
- Company commitment to assign necessary time.
- Installation of monitoring devices essential.
- Training and mentoring of company staff is key to success.
- Developing a small pocket booklet that could be given to key maintenance staff in conjunction with an onsite training day on effective environmental management.
- Communications via mail shots and trade press to the rest of the Seafood processing sector on the merits and cost benefits of management utility costs.

BIM see a key opportunity for the Irish seafood industry to enhance its credentials of being a Clean Green and Sustainable Seafood Sector.

More Information and Contact:

The Green Seafood Business Programme was funded by BIM and the EPA Cleaner Greener Production Programme.

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The Cleaner Greener Production Programme (CGPP) of the EPA is funded under the National Development Plan 2007-2013. The CGPP was launched in 2001 as a grant scheme to fund Irish organisations to implement cleaner greener practices while achieving significant cost savings.

Cleaner Greener Production is the application of integrated preventive environmental strategies to processes, products and services to increase overall efficiency and reduce risks to humans and the environment.

- Production processes: conserving raw materials and energy, eliminating toxic raw materials, and reducing the quantity and toxicity of all emissions and wastes.
- Products: reducing negative impacts along the life cycle of a product, from raw materials extraction to its ultimate disposal.
- Services: incorporating environmental concerns into designing and delivering services.

The programme aims are focussed on avoiding and preventing adverse environmental impact rather than treating or cleaning up afterwards. This approach brings better economic and environmental efficiency.

The CGPP is funded by the EPA STRIVE and NWPP programmes.

Additional case studies from companies that participated in CGPP are available on our website (www.cleanerproduction.ie), including:

- A full technical report for each project
- Programme brochures, summarising all projects funded under CGPP

More information on CGPP is available from the EPA:

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