Company Description
Sofrimar was established in 1979 to harness the abundant supply of shellfish and whitefish landed at Kilmore Quay. Located minutes from the harbour, Sofrimar works with the local fishing community to bring Ireland’s premium seafood to markets throughout the world. With unique access to a diverse range of produce, some 80% of the business is in shellfish - whelk, scallops, crab, live lobster, langoustines, shrimp and winkles - with the balance in whitefish, including monkfish and sole.

Project Background
Seafood processing companies consume large quantities of water each year. Water, both hot and cold, is used for a variety of tasks including cooking, cooling, in processing machines and of course daily cleaning procedures. Cleaning in the seafood industry is an important daily task. In the past few years there have been significant improvements in this area that have resulted in reduced cleaning costs while maintaining the highest standards of cleaning. These improvements have seen reductions in the water, chemical and energy used for site wide cleaning at many Irish food businesses.

As part of BIM’s Green Seafood programme, Sofrimar installed an online water monitoring system. This identified that large quantities of water were being used each evening for site cleaning, especially during the 1st rinse phase (highlighted below). On closer examination of the cleaning practices it was noted that high pressures and high water volumes were being used for cleaning. Flow rates through the open hoses used around the site were typically 100L/minute.

Water Consumption (m³) on 10/10/2011

---

Green Seafood Business
Improvement Programme

After the initial site assessment was made, the flow rates and times for cleaning were measured for all areas in Sorfimar. From these an estimate for the water used for cleaning annually, and the associated costs, was made. This provided the information to do a detailed cost benefit for an upgraded centralised cleaning system. The new system, installed by EcoLab, had the following main benefits:

- Water flow rates were reduced from, on average 100L/min, to between 30 and 40L/min. This was achieved using a centralised system with high-pressure low volume hoses with specific cleaning nozzles. These made cleaning, especially for the first rinse step, much easier and quicker than using just high water volumes.
- Centralised chemical dosing for the foaming step which resulted in reduced chemical use.
- The improved water sprays from the nozzles reduced misting throughout the site which improved the efficiency of the final rinse cleaning step.

Initially, due to uncertainty about the cleaning capability of lower flow rates 40L/min nozzles were used. Since then, due to the positive feedback from cleaning staff, these flow rates have been reduced further to between 20 – 30L/min.

The payback on the investment was about 13 months and has resulted in significant annual savings for Sofrimar on their water charges.

In an effort to quantify the savings made relative to the level of production the volume of water used has been compared with production throughput. For the 2 main processes in Sofrimar the savings made have seen a 30% reduction in the volume of water used per tonne of product processed.

While some other changes have been made on site these savings have been mainly due to the new centralised cleaning system and improved cleaning techniques.

**Investment:** €34,000  
**Annual saving:** €20,000  
**Payback:** Under 2 years