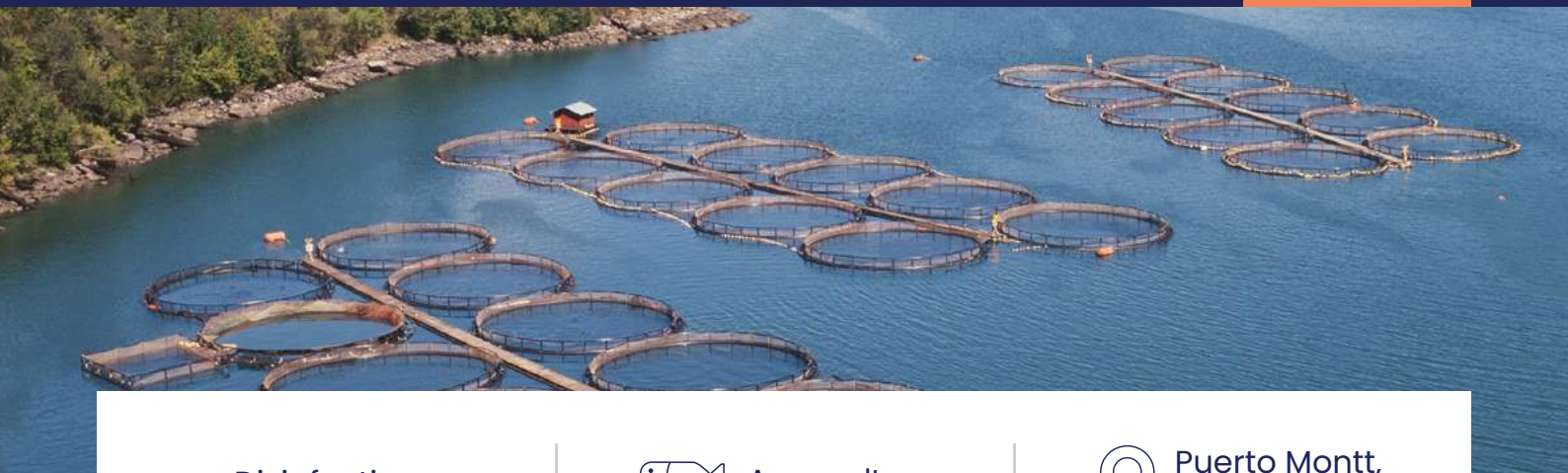




Disinfection



Aquaculture

Puerto Montt,
Chile

Water Biosecurity for Salmones Austral, Chile

Background

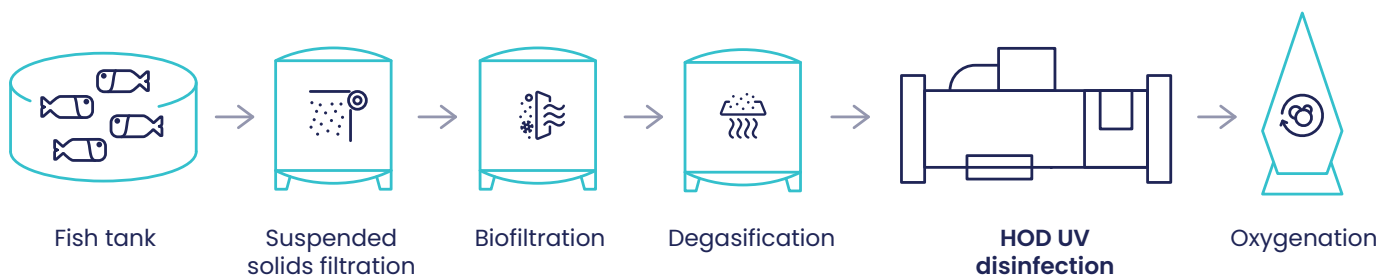
Los Arrayanes fish farm, owned by Salmones Austral, began operations in November 2021 in the Llaguepe sector of Cochamó, Puerto Montt, Chile. It is the country's first facility dedicated to producing Atlantic salmon post-smolts, an innovation that represents a major step forward for Chile's aquaculture sector.

Salmones Austral itself was formed through the merger of three leading aquaculture companies, each with a strong legacy in the industry. Salmones Pacific Star, established in 1985, pioneered offshore farming in challenging climatic conditions. Trusal S.A., founded in 1988 in the Reloncaví Estuary, was recognized for egg self-sufficiency and for supplying early-stage fish to other farms. Comsur Ltda., which joined the group in 2000, expanded operations with advanced processing capabilities in Puerto Montt.

Together, these strengths positioned Salmones Austral as a fully integrated producer committed to innovation, sustainability, and efficiency. Los Arrayanes embodies this vision, combining decades of expertise to deliver healthier, more resilient salmon production in Chile.

The Challenge

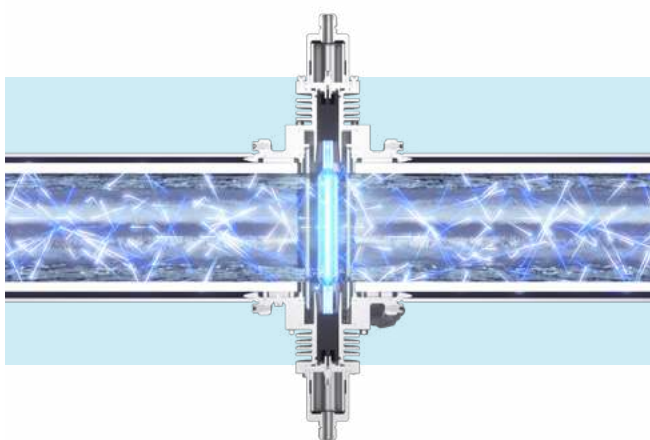
The freshwater aquaculture industry faces recurring health threats from a range of pathogens and bacteria. Among these, *Aeromonas* is one of the most damaging. These outbreaks drive up mortality rates, increase the reliance on antibiotics, and create significant economic losses. In 2023, the impact of *Aeromonas* was especially severe across the sector. For Salmones Austral, continuing to depend on antibiotics was neither sustainable nor aligned with its commitment to responsible, long-term production. To safeguard fish health and strengthen operational resilience, the company sought a comprehensive water biosecurity solution capable of preventing pathogen entry at scale.



The Solution

To strengthen water biosecurity, Salmenes Austral integrated Atlantium's HOD UV systems into its Recirculating Aquaculture System (RAS), positioning the units after the trickling filter to maximize pathogen control.

Atlantium HOD UV systems effectively inactivate pathogens and bacteria by combining ultraviolet water disinfection technology with hydraulic and optic principles. The HOD UV system features unique Total Internal Reflection (TIR) technology that recycles UV light energy, ensures homogenous UV dose distribution, provides superior power (kW) efficiency compared to traditional UV, and achieves exceptional micro-organism inactivation.



Recent scientific research has shown that successful UV treatment is affected by wavelength span. Effective control of complex organisms, EPS, and viruses and prevention of the repair mechanism following treatment rely on a wider UV wavelength span. Atlantium's high-performing, medium-pressure UV lamps emit a wide wavelength spectrum that causes greater damage and yields more effective disinfection than low-pressure UV lamps.

Results

Installing the HOD UV system led to healthier fish with no need for antibiotics and a sharp drop in mortality rates. The enhanced disinfection improved water quality, enabling sustainable, antibiotic-free production.



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About us

For more than two decades, Atlantium Technologies has helped to ensure water safety with its innovative HOD™ (Hydro-Optic Disinfection) UV technology and novel approach to performance, monitoring, and control. Atlantium's superior, environmentally friendly water treatment solutions ensure stable, efficient, and dependable production.

With thousands of full-scale installations for leading brands in various industries globally, we're committed to consistently meeting our customers' water quality needs, ensuring pure results.

