



2014 Smart Gear Special Prize Winner: Seabird Saver Laser System Device Reduces Bird Bycatch

The SeaBird Saver is an innovative bird deterrent device based on a laser system and optional acoustic stimulus to aggressively deter birds from dangerous fishing areas, ultimately reducing bird bycatch as well as fatalities while optimizing overall catch for fishermen. The two-person team is made up of Ernst Schrijver, marine biologist, and Wouter van Dam, product manager.

The SeaBird Saver is comprised of a mountable, flexible laser source and optional sound system; its deterring effect is made possible by a visual stimulus with a discretionary acoustic stimulus add-on—marketed separately but combined together to increase efficacy. The visual stimulus component is produced by a patented laser beam, emitting a beam that is easily widened for both optimal visibility and the reduction of possible retinal damage caused in birds due to the unlikely event of long-term exposure. The laser beam itself is calibrated with the correct wavelength for bird eye sightability while simultaneously producing the optimal strength to be effective on liquid services. The laser beam and its scattering effect produces a powerful bird deterrent, especially effective during low visibility conditions—dawn, dusk, rain, and fog. Because most marine birds are threatened by the presence of the laser beam dot—understanding it to be an unnatural and unpredictable threat—their intuitive response is to avoid contact and fly away.

The acoustic stimulus element is generated by an innovative, high-energy sound system. It concentrates specifically designed sounds in a tight bundle of 15 degrees, creating a narrow and, as such, aimable sound “beam” designed to deter birds. Ernst Schrijver, marine biologist, was responsible for programming different sound signals in conjunction with other specialized sound engineers. Together they designed a scrambling of natural predator and distress calls, which demonstrated the highest success rate of deterrence among all the trials.



The SeaBird Saver laser system



Seabird Saver laser system mounted on a Norwegian longliner.

Meet the Team



Wouter van Dam, Product Manager

Ten years ago, Wouter started working at SaveWave, while still finishing up his academic studies in Communication Sciences. Intrigued by the nature of SaveWave's work, Wouter dedicated his time to the company and became personally committed to sharing their mission. Now, almost ten years later, he is able to see how products are really starting to make a difference in the world. "It makes me proud when I can honestly say that our products are now saving sea life around the globe with solutions that are economically attractive for the fishermen," Wouter says, "I believe winning the Smart Gear Special Tuna Prize will be a big boost in realizing our goals."



Ernst Schrijver, Marine Biologist

Minimizing negative conflicts between marine life and fisheries has always been Ernst Schrijver's personal motivation. In his current position at SaveWave, Ernst combines his passion for marine life with his eagerness to see the world and meet its people. "At SaveWave, we believe the knife has to cut on both edges," says Ernst, "therefore, working together with fishermen is the best way forward to a more sustainable future." It is his contention that the populations' growing need for protein creates an undeniable sense of urgency to invest in the work ensuring sustainable and productive fisheries.

Demonstration Materials

<https://www.youtube.com/watch?v=YasV-RVpAG4>

<https://www.youtube.com/watch?v=xpUIinhoBmu0>