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**\*\*\*\*\*\*\*\*\* For Immediate Release\*\*\*\*\*\*\*\*\*\***

**Targeted Acoustic Startle Technology (TAST) Nets Responsible Fisheries Innovation Award**

WASHINGTON STATE, USA - GenusWave, a leader in human-wildlife conflict mitigation technology, has been awarded the prestigious Responsible Seafood Innovation Award in the Fisheries category by the Global Seafood Alliance. This accolade recognizes the company's innovative Targeted Acoustic Startle Technology (TAST), originally developed at the University of St. Andrews, which effectively reduces interactions between marine mammals and fishing operations.

GenusWave, while headquartered in Scotland, has been actively engaged in protecting endangered salmon populations from excessive predation by pinnipeds throughout the Pacific Northwest. As the company looks to the future, GenusWave is strengthening its conservation efforts and by seeking out creative solutions to better protect our essential ecosystems while balancing the demands of critical industrial activities.

The [Responsible Seafood Innovation Awards](https://www.globalseafood.org/advocate/the-advocate-reports-from-the-responsible-seafood-summit-in-st-andrews/) were presented at the Responsible Seafood Summit on October 22, 2024. TAST utilizes brief acoustic signals to trigger a startle reflex in specific marine mammal taxon, effectively keeping them away from conflicts with human objectives ([Götz & Janik, 2015](https://doi.org/10.1111/acv.12141); [2016](https://doi.org/10.1111/acv.12248)). The benefits of TAST have been documented over many years of research and [eight key peer-reviewed studies](https://genuswave.com/research-timeline). This technology addresses longstanding challenges in the seafood industry, including:

* **Reduction of bycatch** and marine mammal interactions
* **Increased catch rates** and fishing time
* **Decreased fish mortalities** and predator induced stress in aquaculture operations
* **Significantly decreased noise pollution** compared to traditional acoustic deterrents
* **Taxon-specific targeting**, minimizing impact on non-target marine life

Field tests have demonstrated that TAST can lead to:

* Seal predation reduction of 91-97% on salmon farms in Scotland, without impacting non-target species such as harbor porpoises ([Götz & Janik, 2015](https://doi.org/10.1111/acv.12141)).
* In the UK (bottom set gillnet and hook & line fisheries), a 97% decrease in losses to grey seals during mackerel fishing operations and a 74% increase in catch due to reduced seal disruptions ([MMO, 2020](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873280/MMO1131_Trials_Tech_Report_PubCopy_200203.pdf); [Whyte et al., 2021](https://rifg.scot/storage/article/49/Non-Lethal%20Seal%20Deterrent%20in%20the%20North%20East%20Scotland%20Handline%20Mackerel%20Fishery.pdf)).
* Up to a 94% reduction in predation events by Steller sea lions on a salmon troll fishery in Alaska (Jemison et al., work in progress).
* In Norway, a 92% reduction in orca activity around a herring purse seine fishery ([Langstein, 2023](https://munin.uit.no/bitstream/handle/10037/29479/thesis.pdf?sequence=2)).
* Consistent effectiveness without habituation by target species ([Götz & Janik, 2016](https://doi.org/10.1111/acv.12248)).

Though the company is based in Scotland, GenusWave has been active throughout the PNW in protecting endangered salmon runs from pinniped over-predation. Projects in partnership with local groups such as [Oceans Initiative](https://oceansinitiative.org/) have resulted in significant decreases in predation of salmonids by seals at pinch points to migration (such as dams). In an example of one such project at Whatcom Creek in Bellingham, WA, collaborators have seen inspiring results.

**Brittany Palm-Flawd**, Faculty and Hatchery Manager at [Bellingham Technical College](https://www.btc.edu/Academics/AreasofStudy/FisheriesandAquacultureSciences.html), remarked, “In partnership with the local tribes and state fisheries, the Bellingham Technical College's Fisheries and Aquaculture Sciences training program operates a salmon hatchery that supports local fisheries and helps feed an endangered population of orcas. Students graduating through our college program operate a full-scale stock enhancement hatchery and train on all stages of fish culture from broodstocking to release. One of the challenges our program faces is a growing population of pinnipeds that consume the returning adult salmon in our local creek. Working with our co-managers and other research partners, we were fortunate to operate the TAST at our training hatchery for a pilot project. We saw an immediate reduction in pinniped predation on our returning salmon, allowing the students to harvest the fish and fertilize eggs for continued hatchery operations.

We are now looking to expand our use of the TAST to improve salmon returns and train students on emerging technology for aquaculture. The team at Genuswave have been incredibly supportive of our students and our college's mission to provide workforce development for fisheries and aquaculture industries. We look forward to working more with the TAST and the GenusWave members to continue training students on the latest hatchery technology and culturing salmon to feed our finned and limbed community.“

Just a bit farther North in Alaska, TAST is being used to mitigate interactions between Steller sea lions and salmon fisheries. **Kim Raum-Suryan**, a Marine Mammal Specialist in the Protected Resources Division (Alaska Region) of the [National Marine Fisheries Service](https://www.fisheries.noaa.gov/contact/kim-raum-suryan-ms); and **Lauri Jemison**, a Wildlife Biologist with the Gulf and Bering Marine Mammal Program of the [Alaska Department of Fish and Game](https://www.adfg.alaska.gov/index.cfm?adfg=marinemammalprogram.gulfberingprogram) described their experiences with the technology: “We tested the Targeted Acoustic Startle Technology (TAST) on Steller sea lions in Southeast Alaska as a way to mitigate depredation and harmful interactions with salmon fisheries. Our testing included a new prototype developed by GenusWave designed to be deployed from salmon fishing boats. Our results are preliminary, but so far we’ve found that our tests resulted in a localized movement by Steller sea lions away from our boat during TAST sound exposure. We are very optimistic about the potential for TAST to reduce sea lion – fishery interactions, preserving fishermen’s catch and gear without causing injury to sea lions. The scientists from the University of St. Andrews have been exceptional to work with.”

**Kylie DaCunha,** Director of Special Projects at GenusWave, remarked, "Winning this award underscores our commitment to developing technology that not only enhances operational efficiency but also promotes marine conservation. This recognition is not just a win for our team, but a testament to the hard work and dedication of everyone aligned with our mission to advance sustainable seafood production practices."

The recognition from the Global Seafood Alliance reflects GenusWave's dedication to innovation and sustainability in seafood production. As the company continues to expand its partnerships globally, it will further mitigate harmful marine mammal interactions.

GenusWave's mission is to create practical solutions that balance industry needs with environmental health. "Our technology is scalable and designed to foster healthier ecosystems while improving operational outcomes. We believe that even a small technology company can have a global impact, and we’re helping to build a world where businesses don’t have to choose between profit and purpose," DaCunha added.

For more information about GenusWave and its award-winning technology, visit [genuswave.com](http://genuswave.com) or contact Kylie DaCunha at kdacunha@genuswave.com.

**About:** *GenusWave is a science-based company dedicated to designing and implementing technologies that prevent human-wildlife conflict. Our main focus, Targeted Acoustic Startle Technology (TAST), deters marine mammals from human activities, ensuring their safety and minimizing disruption. TAST operates on the autonomous auditory startle reflex, triggering avoidance responses without causing harm. Our research, documented in peer-reviewed literature, continues to explore future applications to benefit both people and wildlife.*

*TAST was developed at the University of St. Andrews' Scottish Oceans Institute, a globally renowned organization for marine mammal research. Our collaborative efforts aim to address the limitations of conventional Acoustic Deterrent Devices and protect marine life from human activities.*