ASL Environmental Sciences Announces Winner of 2025 Early Career Scientist Award

ASL Environmental Sciences Inc. is proud to announce **Dr. Macarena Díaz-Astudillo** as the recipient of the 2025 Early Career Scientist Award. Dr. Díaz-Astudillo's innovative research proposal titled *"Understanding the drivers of zooplankton layers and aggregations over two contrasting submarine canyons"* was selected based on her well-organized research objectives, her previous knowledge and experience of using hydroacoustics and her careful considerations to carry out both the field and analytical elements of this study.

The award grants Dr. Díaz-Astudillo the use of ASL's new Acoustic Zooplankton Fish Profiler **AZFP-nano** for a three-month period, along with full technical and analytical support from ASL's expert team.

Currently based at the **Centro de Investigación Oceanográfica en el Pacífico Sur-Oriental (COPAS COASTAL)** at the Universidad de Concepción, Chile, Dr. Díaz-Astudillo leads a multidisciplinary team investigating the dynamic biological and physical interactions within Chile's submarine canyons. The awarded project will focus on the **Biobío Canyon (central Chile)** and the **Cucao Canyon (southern Chile)**, aiming to understand how canyon topography influences zooplankton layer formation, internal waves, and upwelling-driven productivity.

This research is especially relevant in the **Humboldt Upwelling System**, one of the most productive marine ecosystems in the world. By deploying the AZFP-nano, Dr. Díaz-Astudillo and her team will obtain high-resolution backscatter data essential to characterize zooplankton layers with unprecedented clarity and precision. The study will fill a critical knowledge gap in submesoscale zooplankton dynamics and provide insights that can inform both ecological understanding and resource management.

ASL extends heartfelt congratulations to Dr. Díaz-Astudillo and looks forward to the results of this important and timely project.

Images showing the compact design and the different shallow and deep water pressure case options of ASL's AZFP-nano.

For more information on the AZFP-nano and our early career scientist award program contact Jan Buermans (jbuermans@aslenv.com)