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APPLICATION FOR RESEARCH DECLARATION for scientific research work in Iceland

APPLICANT/SCIENTIST IN CHARGE

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ADDRESS during stay in Iceland:

M/Y Scintilla Maris (<https://scintillamaris.com/>), Reykjavik

COOPERATING ICELANDIC SCIENTISTS OR CONTACT PERSONS:

Dagny Ívarsdóttir, Expedition Specialist, EYOS Expeditions (eyos.com)

TITLE OF RESEARCH PROJECT:

Polar BLAST: Benthic Life Assessment using Subsea Technology

RESEARCH PERIOD IN ICELAND:

Approximately 10 days maximum between the 25th of July and the 4th of August 2025.

RESEARCH AREAS IN ICELAND:

Polar BLAST, led by Dr. Maroni, in partnership with Yachts for Science, an EYOS supported initiative, for the 2025 Arctic summer season, will use non-invasive marine sampling tools like ROVs to document marine species and pollution impacts throughout the Arctic. By filling critical knowledge gaps in biodiversity and ecosystem health, this initiative combines science and creativity to inspire action, protect marine life, and tackle ocean pollution collaboratively.

Three critical realities drive the urgency of this research: i. the existing data on both the pelagic and benthic environments surrounding the Arctic, the sub-Antarctic islands, and Antarctica, including known species distributions, is incomplete and underrepresented in current scientific literature (Cresswell et al., 2023), ii. polar regions are experiencing impacts from climate change at magnitudes and rates that are among the highest in the world (Constable, 2022), and iii. these regions are increasingly exposed to fishing (commercial and illegal). This critical knowledge gap hinders effective conservation planning, as comprehensive information on species distributions, habitat conditions, and ecosystem health is essential for making informed conservation decisions. Additionally, marine protected areas are increasingly being established in these regions and the outcomes of these management initiatives require assessment.

Also, the [30x30](#) initiative, the most ambitious conservation target the world has ever undertaken has committed to protecting and effectively managing 30% of the world's land, inland waters, and ocean areas by 2030. This goal is not just about drawing lines on maps—it demands evidence-based, ecologically meaningful protection.

In the case of Iceland, the country's Exclusive Economic Zone (EEZ) spans over [758,000 km²](#), covering vast and ecologically rich marine habitats. However, only a small fraction of this marine area is currently designated as [protected](#), and even fewer areas have robust, science-based management or enforcement mechanisms in place. This gap highlights a crucial opportunity for Iceland to scale its contribution toward 30x30.

One of the most under sampled yet ecologically vital components of Iceland's marine realm is its benthic zone, the seafloor habitats where deep-water corals, sponges, and invertebrate communities thrive, many of which are poorly documented or entirely unknown. These benthic ecosystems play key roles in nutrient cycling, carbon storage, and as habitat for commercial and non-commercial species.

To meet the 30x30 targets effectively, the global community, needs baseline data to identify areas of ecological significance and vulnerability. This is where Remotely Operated Vehicles (ROVs) become a powerful tool. By using ROVs, we aim to:

- Explore and document benthic biodiversity in Iceland's deep and shallow marine environments,
- Identify potential Vulnerable Marine Ecosystems (VMEs) or areas of particular importance for biodiversity,
- Gather data to inform Marine Protected Area (MPA) planning and adaptive management, and
- Support transparent, science-based conservation decisions that align with international obligations under 30x30.

Our ROV-based approach not only fills critical data gaps but also creates an opportunity to involve local communities, scientists, and policymakers in the discovery and protection of Iceland's marine heritage. By contributing high-resolution visual and biological data, we can help build the case for new protected areas, monitor ecosystem health, and support Iceland's leadership in marine conservation under the 30x30 framework.

As mentioned, this project is endorsed by Yachts for Science, a global initiative that brings together yacht owners and crew with marine scientists, researchers and content creators and provides them with access to the global oceans. The team will be working from M/Y Scintilla Maris (<https://scintillamaris.com/>) and its tenders. This project is strictly observational and will focus on marine areas—reaching depths of up to 100 meters—that are not currently designated as protected by the Environmental Agency of Iceland. No physical or destructive sampling will be conducted.

NUMBER OF PARTICIPANTS:

2 marine researchers will be operating from M/Y Scintilla Maris.

Instructions: This form must be sent to Rannís (rannis@rannis.is), preferably at least three months ahead of the planned research period.
