

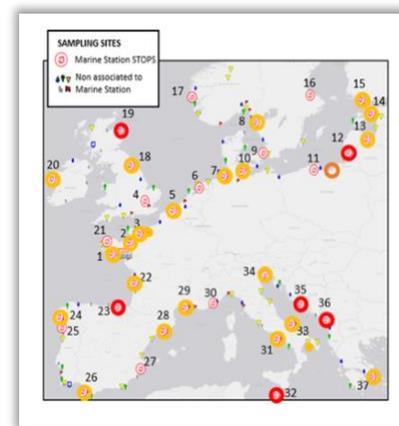
CASE STUDY

MARKEN COLLABORATES WITH EU BIOLOGY LAB ON GROUNDBREAKING EXPEDITION TO ADVANCE OCEAN DISCOVERIES

DELIVERING PRECISION LOGISTICS TO SUPPORT ENVIRONMENTAL MISSION ACROSS 30K MILES OF EU COASTLINES

In December 2021, the European Molecular Biology Laboratory (EMBL) approached Marken to be the exclusive logistics partner, sponsoring the groundbreaking Traversing European Coastlines (TREC) mission. This ambitious environmental study spanned 27 EU member states, collecting and analyzing samples from diverse coastal ecosystems from the Baltic Sea to the Mediterranean to assess biodiversity, environmental challenges, and better understand the impacts of climate change.

After almost 1.5 years of preparation, including a pilot project in Iceland, Marken and EMBL finalized their partnership, and the first shipment launched in April 2023 in Lorient, France. The expedition spanned coastlines across Germany, Belgium, the Netherlands, Scandinavia and Baltic EU states before crossing to the UK, then returning to France, Spain, Portugal and into the Mediterranean Sea, covering coastlines of Italy, Croatia, Montenegro and Greece. The TREC mission concluded in Athens in July 2024, marking an incredible milestone in environmental research.



TREC mission spanned 30K miles of European coastline across 27 EU member states

OBJECTIVE

Implement specialized logistics strategy to drive the success of the EMBL's pioneering TREC mission. Ensure secure and sustainable transport of over 30K sensitive environmental samples across Europe's diverse coastal regions to EMBL's central lab in Heidelberg, Germany and other European research centers, setting a new standard in scientific logistics for global research initiatives.

CHALLENGE

The TREC expedition's scale and scientific complexity demanded meticulous logistical planning. Managing the sheer volume and diversity of samples extracted across thousands of miles of European coastlines - including seawater, soil, sediments and aerosols - presented a unique set of complexities.

- **Time & Temperature Control:** Samples required precise temp-controlled conditions ranging from -180°C to +25°C
- **Strict Compliance Standards:** Logistics infrastructure must strictly adhere to Good Distribution Practices (GDP) to meet rigorous scientific quality and safety standards as well as shipping regulation requirements
- **Geographical Reach:** Collect samples directly from scientists at 150 remote sites, including shorelines, remote inland areas, shallow waters and the deck of the ocean research vessel, TARA, operated by the TARA Oceans Foundation

SOLUTION



RV TARA on return from the TREC expedition to homeport in Lorient, France

Marken's role in the TREC mission extended far beyond logistics. With a commitment to sustainability and passion for propelling scientific innovation, Marken's close collaboration with EMBL's scientific team ensured sample safety and efficacy. Our Advanced Therapy Division (ATD), an expert team with extensive experience in handling ultra-sensitive materials, meticulously designed a customized cold chain solution to navigate the study's logistical complexities. Throughout the mission, over 95 alignment meetings with stakeholders were facilitated to ensure seamless handoffs, compliance adherence and contingency plans for emerging logistical needs.

The International Research Vessel, TARA, owned by a non-governmental organization (NGO), was instrumental in supporting the expedition on the ocean. By leveraging our unlimited packaging-agnostic fleet, Marken provided EMBL with a strategic combination of dry shippers and thermally regulated container systems at no cost, along with complimentary packing materials, filling and configuration services - demonstrating our dedication to sustainable

practices. Our GDP-certified network was vital in meeting rigorous scientific standards, enabling accelerated pathways for samples from across Europe's coastlines to research facilities - on time and in pristine condition. The success of this study was truly a combined effort by multiple organizations and collaborative solutions, driven by passionate experts dedicated to predicting, anticipating and better understanding climate risks to protect ocean biodiversity.

OUTCOME

Marken supported the safe transport of approximately 30K sensitive samples at precise temperatures (+2° to +8°C, -25° to -15°C, and -180°C) across 230 shipments, playing a vital role in the success of this landmark environmental study.

Throughout the mission, Marken maintained a flawless record of timely pickups of every shipment without deviation, preserving sample integrity for scientific analysis, and was described by EMBL as the "gold standard of specialty logistics." Marken's streamlined coordination set a new benchmark in scientific logistics, underscoring their unique position to support complex research initiatives.

Concluding in Athens in summer 2024, the TREC mission marked a pivotal milestone in environmental research, spanning across the European coastline. Scientists, researchers and other stakeholders gained critical information, insights and data to better understand the type and extent of pollution across Europe's coastlines, and its current impact on biodiversity.



Marken's lead Logistics Managers of expedition (left to right): Sascha Rother, Transport & Operations Manager and Rainer Friedrich, CGT Operational Excellence Manager