

Environmental and Social Impact Assessment

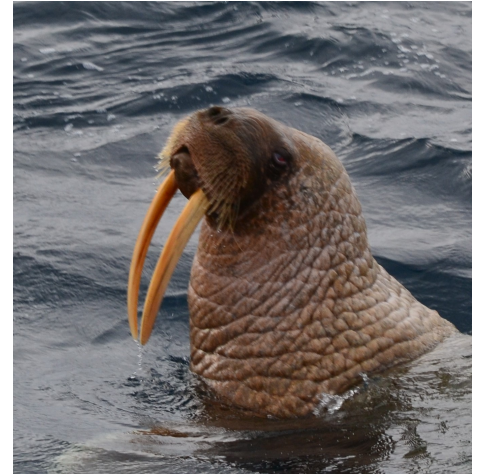


Diverse Teams Collaborate to Deliver Results

JASCO's fully integrated international staff of scientists, engineers, technicians, and project managers support a broad range of research and industry activities. We build our project teams from the bottom-up, combining highly qualified global in-house expertise with our extensive network of collaborators to meet your requirements. Our teams understand that Environmental and Social Impact Assessment should not only meet regulatory requirements, but be useful in informing our client's critical business decisions and characterizing operational risk.

The professional staff at JASCO have diverse backgrounds and education that are applied to a variety of challenging projects. Our recent impact assessment assignments reflect the depth and diversity of our teams:

- Development of a regional cumulative level soundscape model using empirical data collected on a marine observatory near Port Metro Vancouver
- Acoustic characterization of geophysical alternatives to airgun seismic sound sources
- Collection and analysis of acoustic data to determine the movement of endangered North Atlantic right whales
- Measurement and monitoring of underwater noise from offshore wind turbine installations
- Assessment of acoustic effects of a marine tidal turbine in the Atlantic Ocean
- Assessment of ecosystem dynamics using a deep water marine observation network
- Environmental Impact Assessment of seismic survey activities in the Gulf of Mexico
- Assessment of the effectiveness of acoustic deterrents in reducing fisheries bycatch in Australia



JASCO studied Alaskan walrus to better understand potential impacts of oil and gas development on the species

**RESULTS THROUGHOUT THE PROJECT LIFECYCLE:
FROM BASELINE DATA COLLECTION AND PERMIT
AUTHORIZATION TO MONITORING AND REPORTING**



Incorporating Traditional and Local Knowledge

Projects are built in environments supporting communities. A quality Environmental Impact Assessment incorporates the knowledge of the people who know the local environment best. Traditional knowledge is globally recognized as an essential component of natural resource management and as crucial complementary information to scientific data. JASCO's senior personnel have many years' experience working cooperatively with indigenous peoples and local communities. We believe in:

- Being locally attuned and responsive to community concerns
- Cultivating cooperative relationships with stakeholder groups and regulatory agencies
- Finding value through win-win interactions
- Combining our understanding of global standards with local regulations and cultural sensitivities



Photo: Colin Frazier

Academic Partnerships

JASCO maintains longstanding academic collaborations in many countries around the globe. These partnerships enable training and support of local students and help fulfill institutional missions and vision while delivering timely, cutting-edge results to our clients.



ISO 9001 Certified



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Environmental Baseline Data Collection

Quality environmental and social impact assessments start with quality data. JASCO's engineers and biologists design and build customized equipment to collect baseline data in any environment. Our scientists analyze and interpret the data to accurately inform our clients' assessments and operational decisions.



Photo: Ocean Networks Canada

Acoustic and oceanographic sensors for the VENUS ocean observatory in British Columbia, Canada: Two JASCO Observers with tetrahedral hydrophone arrays

Environmental Monitoring & Mitigation

Impact assessments often require real-time monitoring and mitigation to reduce or eliminate environmental impacts. JASCO provides acoustic and visual field observers to monitor for species of concern and implements mitigation during operations to help our clients meet permit requirements.

Our monitoring and mitigation services include:

- Autonomous and real-time passive acoustic monitoring (PAM) for marine mammals
- Physical and chemical oceanographic measurements
- Mitigation using active acoustic deterrents



With JASCO's versatile fleet of acoustic monitoring systems, we provide real-time monitoring from various platforms, including:

- Vessel tow
- Seabed and mid-water column moorings
- Over-the-side cabled hydrophones
- Floating telemetry buoys
- Autonomous underwater and surface vehicles