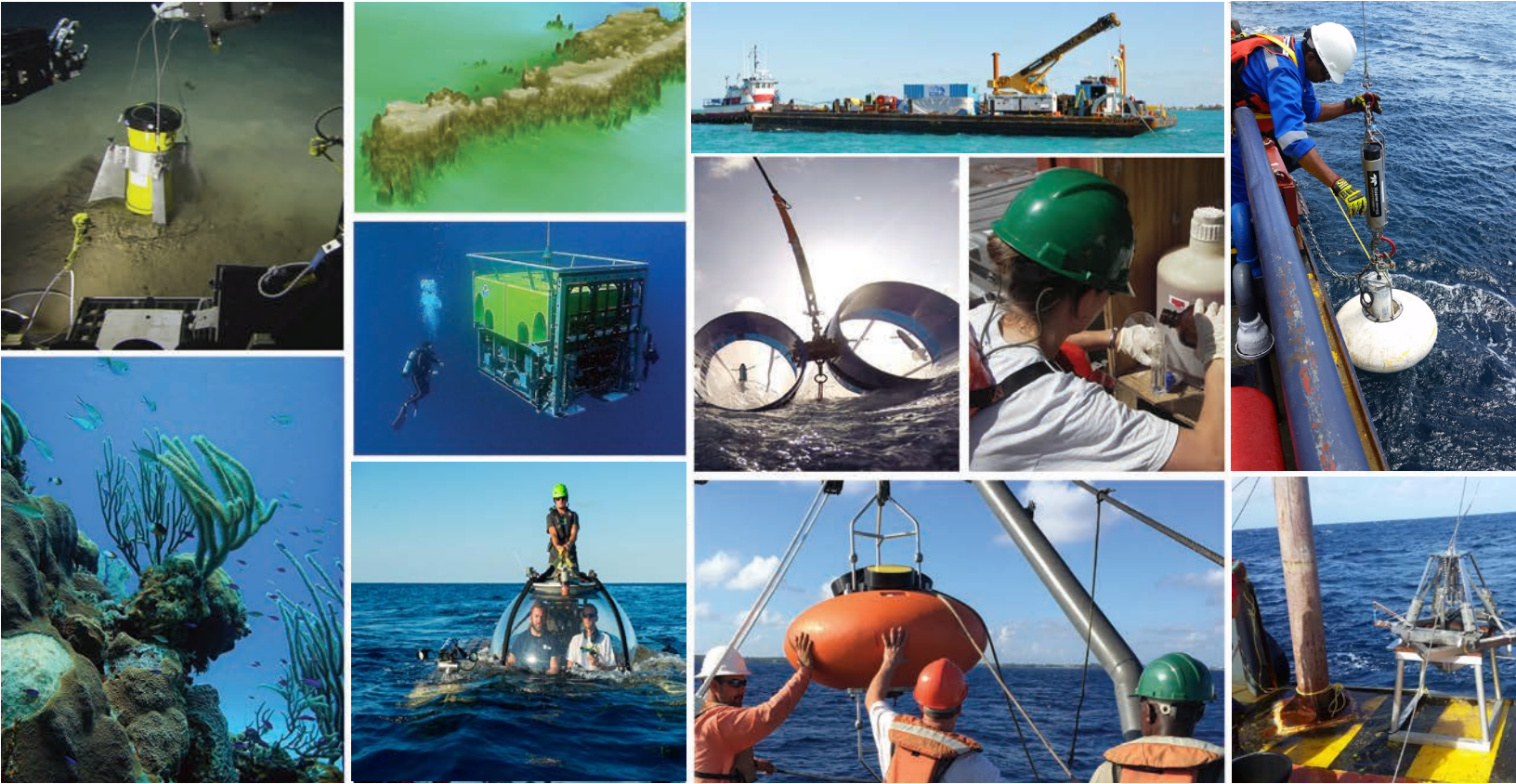


OCEAN SOUND AND MARINE LIFE

Capabilities



BACKGROUND AND HISTORY

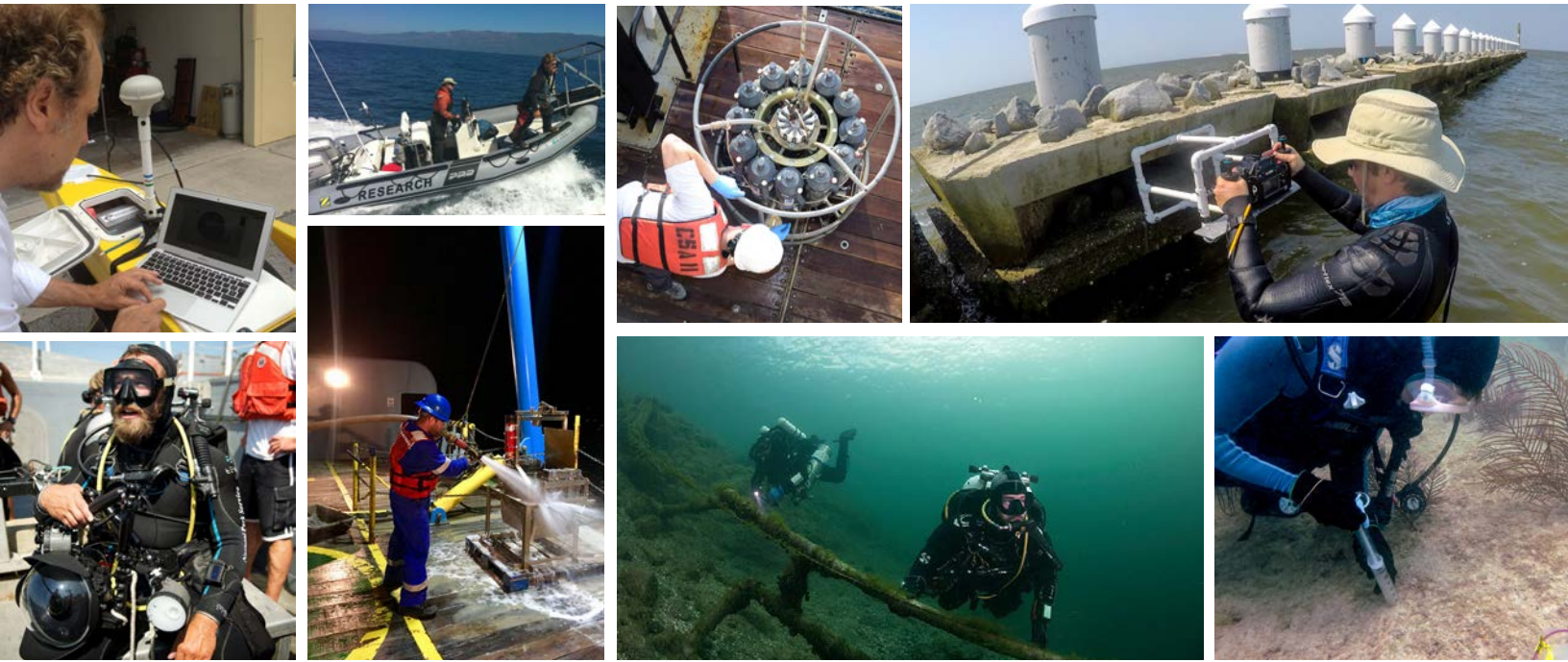


CSA Ocean Sciences Inc. (CSA), founded in 1970 as a marine environmental consulting firm, specializes in multidisciplinary projects to assess potential environmental impacts of activities in coastal and marine ecosystems and offers a range of desktop and field survey services.

CSA has conducted studies for more than 600 clients, including engineering firms; port authorities; dredging companies; oil and gas companies and service providers; utility companies; land developers; law firms; telecommunication companies; and local, state, federal, and international government agencies.

For nearly five decades, CSA has provided reliable technical performance, unbiased analyses, and scientific integrity to our clients worldwide. Applying our knowledge of domestic and international regulations, we design and implement scientifically sound environmental sampling and assessment programs and conduct rigorous data analyses according to strict quality assurance/quality control (QA/QC) requirements. Our extensive industry experience enables CSA to focus on high-quality services and timely execution to meet project objectives.

ENVIRONMENTAL FOCUS CAPABILITIES



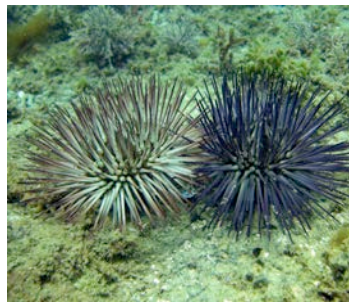
Throughout its 50-year history, CSA has specialized in assessing the risks and potential impacts to marine mammals, sea turtles, and other marine life posed by human activities in the world's oceans and coastal habitats. In addition to conducting baseline studies, data gap analyses, and impact assessments, CSA has designed and implemented mitigation and monitoring procedures to specifically address marine mammal and sea turtle issues, including those related to anthropogenic sound in the marine environment.

As ocean noise increased in magnitude and regulatory frameworks evolved, CSA responded by establishing Ocean Sound and Marine Life (OSML) services to examine the issues and their effects on marine species with an emphasis on marine mammals, sea turtles, and fish, as well as to focus expertise on a suite of soundscape characterization and assessment tools.

CSA's OSML services provide subject matter expertise, planning and surveying capabilities, and analytical capabilities to support industry and government clients by identifying risks and minimizing potential impacts. Our team's diversity and experience enables us to address environmental requirements for resource management, plan for the engineering and logistical constraints of offshore and coastal activities, and leverage tools and techniques for efficient and effective data collection and analysis.

ENVIRONMENTAL FOCUS

BASELINE AND ACOUSTIC ASSESSMENTS



BASELINE STUDIES

Evaluation of baseline conditions includes desktop studies and field surveys that characterize the marine environment, including oceanographic and meteorological processes. Baseline studies involve the gathering and synthesis of relevant information to characterize the existing environment and identify data gaps to guide subsequent field surveys to better understand baseline conditions and provide solutions for project success.

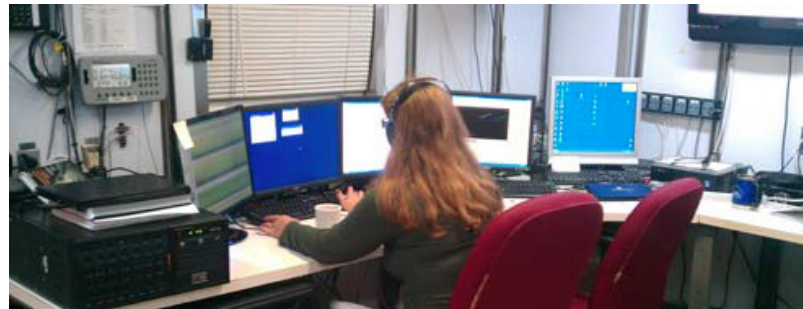
CSA's OSML baseline studies involve identification of habitats, species distributions, and behavioral patterns such as breeding, nesting, feeding, and migration to provide information that is essential for planning projects to minimize potential impacts to marine life. CSA has conducted desktop, shipboard, bioacoustic, and aerial census surveys of marine mammals and sea turtles to determine spatial and temporal components of habitat use within a project area.

ACOUSTIC ASSESSMENTS

CSA's OSML team has specific acoustics expertise in three main components: modeling, bespoke field equipment, and analysis, offering clients fully-scoped acoustic risk assessment and monitoring services.

- Acoustic propagation modeling is conducted at several levels from simple propagation for sound field prediction to exposure modeling of multiple sources and multiple species. Modeling results conform to the most recent acoustic guidance thresholds and feed into impact assessments and permit authorization documents.
- Both active and passive acoustic instruments are available for various types of surveys depending on client or project needs.
- CSA leverages emerging technologies and tools including CSA's Environmental Data and Geospatial Services (EDGS) web-based mapping and data portals, and several autonomous vehicles.
- Systems are configured for both archival measurements and real time monitoring and have been deployed to measure and monitor sources such as pile driving, shipping, drilling, and seismic air guns.
- Measurement and analysis capabilities for ambient and introduced noise provide a full spectrum representation of baseline conditions or animals' acoustic habitat, and detailed characterization of the underwater soundscape.
- CSA has expanded impact assessment capabilities with the use of active acoustic tools including the collection of acoustic data of reef fish communities to assess fish utilization of natural and anthropogenic structures.

ENVIRONMENTAL FOCUS COMPLIANCE AND MITIGATION



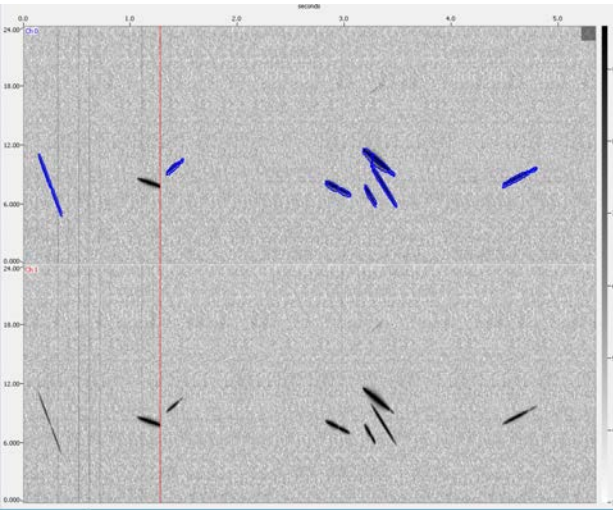
CSA personnel have been an integral part of many types of marine mammal and sea turtle assessment surveys. Impact assessments performed using this survey data early in a project facilitate the prevention, minimization, and mitigation of adverse impacts to marine life. CSA considers both regulatory requirements and corporate environmental policies in these assessments to prioritize impacts for resource mitigation and management.

Using their breadth of environmental and technical knowledge, CSA has prepared multiple Environmental Impact Statements, Incidental Harassment Authorizations and Mitigation Plans for various offshore renewable energy, oil and gas, and seismic survey projects. CSA has assisted with survey designs to ensure compliance with regulatory bodies, works with government agencies to address regulatory concerns and negotiate solutions feasible for both the agency and the client, and provides support during survey operations to maintain regulatory compliance throughout the project.

PROTECTED SPECIES AND ACOUSTICS

- Mitigation specific to marine mammals and sea turtles typically includes acoustic monitoring and direct visual observations to facilitate avoidance of acoustic impacts. CSA has managed offshore marine mammal and sea turtle monitoring programs and has certified Protected Species Observers (PSOs) and observer trainers on staff, as well as an expanded list of accessible subcontractors for scaling up on large projects.
- Visual and acoustic observation data collected by PSOs is part of the regulatory requirements stipulated by governments, ministries, agencies, and operator best practices.
- In addition to conducting mitigation surveys, CSA was contracted by the U.S. Bureau of Ocean Energy Management (BOEM) to compile PSO data collected between 2002 and 2015 conduct detailed analysis of its utility in assessing marine mammal responses to anthropogenic noise and the effectiveness of required mitigation measures. Results have been published as a BOEM environmental studies report and in peer-reviewed journals.
- Our understanding of the field operations, mitigation measures, data analysis, and new technologies makes our capability truly unique in the PSO market.

REPRESENTATIVE PROJECT



INTERNATIONAL ASSOCIATION OF OIL & GAS PRODUCERS SIDE DEVELOPMENT FOR PASSIVE ACOUSTIC MONITORING

CLIENT International Association of Oil & Gas Producers **LOCATION** Desktop Study

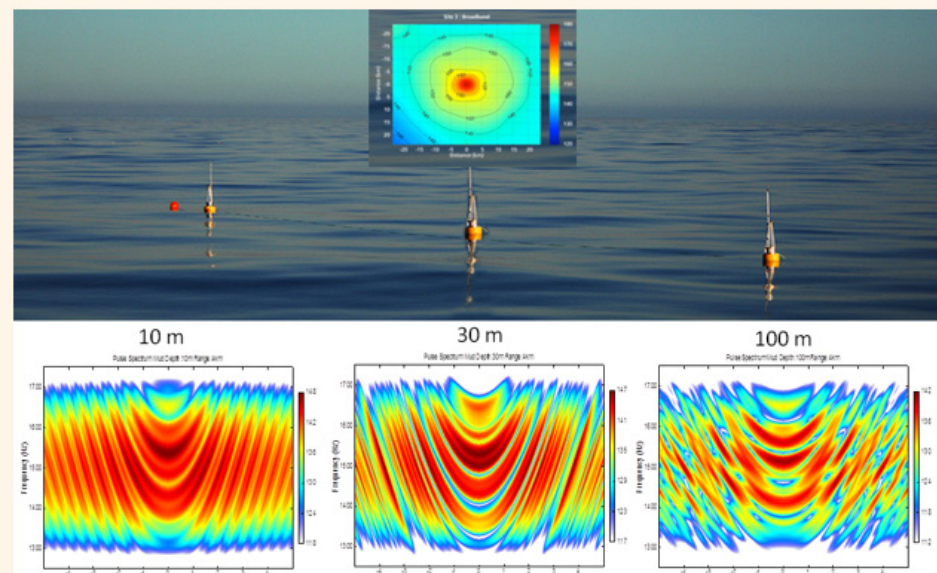
START DATE March 2018 **COMPLETION DATE** Ongoing

CSA was contracted by the International Association of Oil & Gas Producers (IOGP) to test the efficacy of cetacean call detectors and provide a way for Passive Acoustic Monitoring (PAM) operators to evaluate these detectors in real-time during monitoring efforts. This project addresses two prominent issues that arise when implementing PAM systems for mitigation purposes: a lack of quantitative real-time quality control (QC) during real-time monitoring operations, and a lack of standardized evaluation and reporting of PAM efficacy during post processing analyses. This project will create several new software components within a PAMGuard module that will provide consistent measures of operator and detector performance as well as provide automated tools for summarizing both the instantaneous and long-term performance of the overall system.

The proposed Quality Assurance Module (QAM) will consist of four components: two running during real-time operations and two executed at the end of a complete PAM operation. Each component contributes a QC monitoring tool that complete discrete tasks needed for the QAM. The Signal Injector/Detection Evaluator (SIDE) will have two software components: the Signal Injector (SI) component to provide real-time “recall” performance evaluation of both human operators and automated detectors by periodically inserting appropriately scaled simulated signals into a real-time data stream; and a corresponding Detection Evaluator (DE) component which will then determine whether the signal was selected or detected by a human observer and/or an automated detector.

REPRESENTATIVE PROJECT

PROPAGATION CHARACTERISTICS OF HIGH-RESOLUTION GEOPHYSICAL SURVEYS: OPEN WATER TESTING



CLIENT Bureau of Ocean Energy Management **LOCATION** Northeastern United States

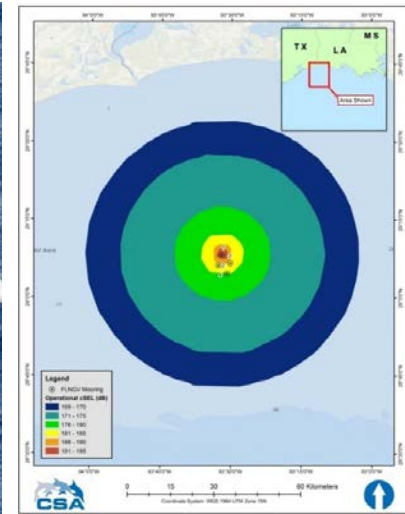
START DATE 2016 **COMPLETION DATE** Field Phase: August 2016; Data Analysis Phase: September 2018

CSA was contracted by BOEM to measure the three-dimensional (3D) sound field produced by 17 commonly used high-resolution geophysical (HRG) sources and to document the sound propagation from each source in shallow water depths ranging from 10 to 100 m. The study objective was to provide appropriately measured sound fields for the HRG sources to allow better assessment of potential acoustic impacts to marine fauna. The Naval Undersea Warfare Center (NUWC) test tank report (Crocker and Fratantonio, 2016) was reviewed and incorporated into the field study design because it provided controlled, experimental measurements of the sources to be measured in the field study.

The in-field acoustic measurements were critical to the analysis and reporting of HRG received sound levels at the various test sites. Furthermore, the data set is necessary to support a future investigation focusing on validating and improving predictive propagation modeling for these HRG sources. The specific objectives of this study were as follows:

- Incorporate the results of the NUWC test tank study (Crocker and Fratantonio, 2016) with the results of the field measurements from this study;
- Prepare a Field Sampling Test Plan (FSTP) utilizing the R/V Hugh R. Sharp and acoustic recording buoys to capture acoustic characteristics of the sound fields generated by HRG sources during representative operations;
- Develop and execute the FSTP to adequately sample the 3D sound field produced by each HRG source in water depths of 10, 30, and 100 m for two substrate types (hard and soft), and to measure the sound field of each source at frequencies <200 kHz;
- Process and analyze acoustic and supporting operational data to describe the sound fields for and propagation characteristics of the measured HRG sources;
- Archive all acoustic, supporting operational, oceanographic, and meteorological data; and
- Prepare a report that describes the testing procedure, quantifies the measurements, analyzes the resulting acoustic data, compares measurements to NUWC test tank results, and discusses the significance of measured data.

REPRESENTATIVE PROJECT



ACOUSTIC MODELING AND IMPACT ANALYSIS FOR CONSTRUCTION AND OPERATION OF THE DELFIN LNG OFFSHORE PORT FACILITY

CLIENT Fairwood Peninsula Energy Corp (Fairwood) & Delfin LNG, LLC **LOCATION** Gulf of Mexico, Louisiana

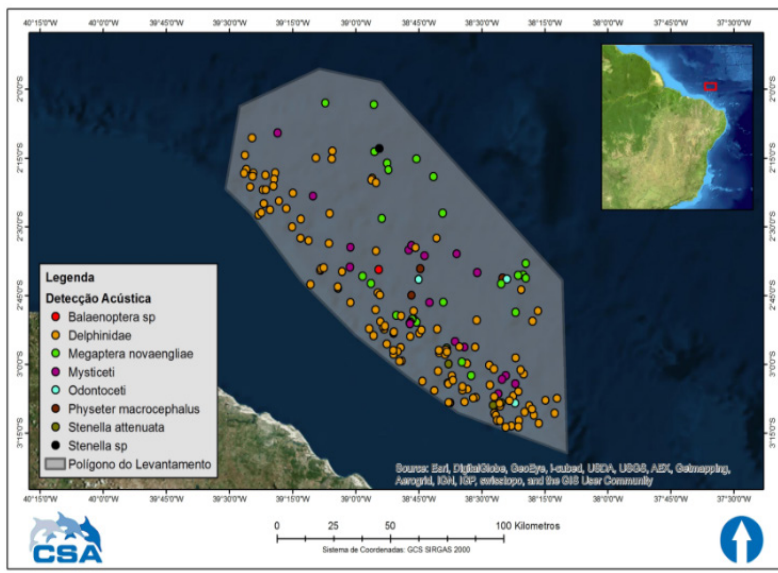
START DATE May 2016 **COMPLETION DATE** October 2016

Fairwood Peninsula Energy Corp. (Fairwood) and Delfin LNG, LLC (Delfin) contracted CSA to conduct acoustic propagation modeling to estimate zones of impact for marine mammals and fish surrounding proposed liquefied natural gas (LNG) moorings offshore Louisiana in the U.S. Gulf of Mexico. Activities associated with construction and operation of the Delfin LNG port facility required pile driving and vessels that used thrusters for dynamic positioning (DP) during station keeping and maneuvering while at the port facility.

As part of their U.S. Maritime Administration (MARAD) Environmental Impact Statement (EIS) permitting, Delfin contracted CSA to conduct acoustic modeling to estimate the zones of impact for marine mammals, sea turtles, and fish surrounding the proposed LNG facility. The acoustic analyses provided affected area radii produced by the modeled activities and calculated threshold distances to accepted acoustic criteria for marine mammals and fish. These radii represent the distance at which the acoustic criteria are predicted to be met or exceeded, resulting in potentially detrimental auditory or effects to species. Acoustic thresholds establish the sound levels at which an animal exposed to acoustic energy would reach the “dosage” necessary to elicit an adverse response or injury.

Acoustic modeling was completed for pile driving scenarios during construction and vessel operation scenarios during both construction and port operations whereby LNG carriers will berth with a floating LNG vessel to take on product. The U.S. National Marine Fisheries (NMFS) acoustic criteria developed in 2016 were used to establish the threshold distances for marine mammals, provided as peak sound pressure levels and cumulative sound exposure levels. For fish, the criteria developed by the U.S. National Oceanic and Atmospheric Administration (NOAA) Greater Atlantic Regional Fisheries Office (GARFO) in 2016 were used to estimate potential injury and behavioral disturbance thresholds for pile driving.

REPRESENTATIVE PROJECT



SEISMIC SURVEY MITIGATION USING VISUAL AND ACOUSTIC MONITORING TECHNIQUES

CLIENT Petroleum Geo-Services (PGS) **LOCATION** Ceará Basin, Offshore Brazil

START DATE 2015 **COMPLETION DATE** 2016

CSA completed marine faunal surveys and mitigation during a three-dimensional seismic survey conducted by Petroleum Geo-Services (PGS) in the Ceará Basin, offshore Brazil. Acoustic monitoring was conducted from aboard the seismic vessel 24 hours a day. Visual monitoring took place during all daylight hours, and acoustic detections were correlated with visual observations. Monitoring was conducted by three qualified Passive Acoustic Monitoring (PAM) operators distributed during 8-hr shifts, and visual monitoring was conducted by three qualified Protected Species Observers (PSOs) distributed during 4-hr shifts. The monitoring procedures followed guidelines within the Monitoring Guide for Marine Biota developed by the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA).

The guidelines contained additional terms of reference CGPEG/DILIC/IBAMA No. 025/14, and the other notes of the CGPEG IBAMA staff. All major taxonomic groups and cetacean species recorded in the study area were expected for the region. The family Delphinidae was the group most commonly detected near or on the continental shelf. Members of this family were often recorded nearest the seismic vessel when compared to other species and taxonomic groups recorded in this study. However, Mysticeti (e.g., *Balaenoptera novaegliae*) and Odontoceti (e.g., *Physeter macrocephalus*) species were recorded mostly between the slope and the deep ocean. PAM has proved to be efficient for the detection of marine mammals and is able to identify the presence of animals within the safety and warning areas, particularly in reduced visibility conditions. An important collection of acoustic records for the region was generated, and this information could be further analyzed to assess the acoustic characteristics of animals present in this region of the Brazilian coast. Detection data were submitted for inclusion in the Sistema de Apoio ao Monitoramento de Mamíferos Marinhos (SIMMAM) national database.

This project also served as a training program to enhance the technical and scientific skills of PSOs and PAM Operators based in Brazil using pre-boarding training.

REPRESENTATIVE PROJECT



WINDFARM PERMITTING AND COMPLIANCE

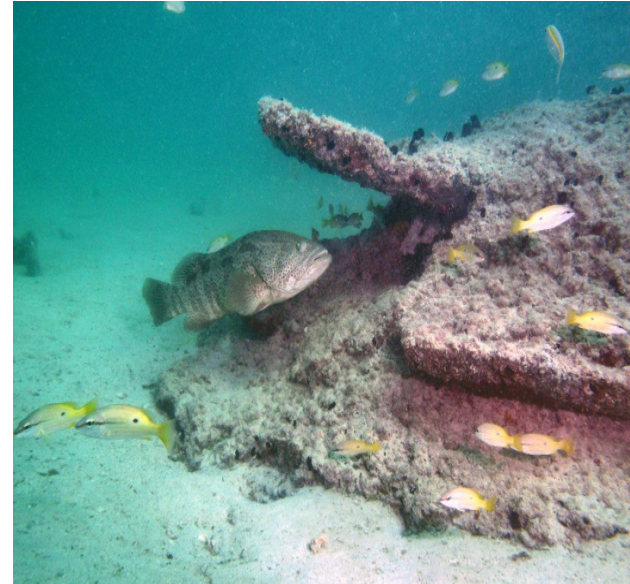
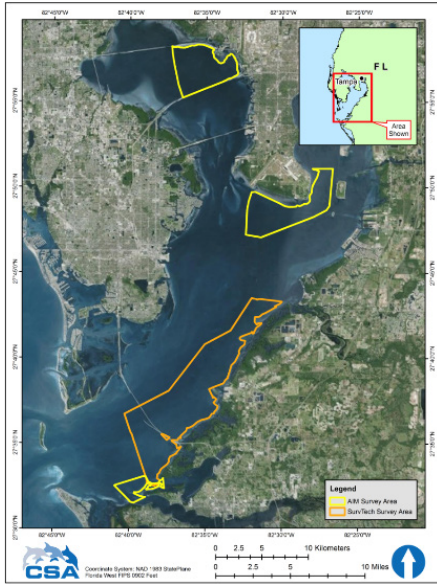
CLIENT Ørsted **LOCATION** Offshore Maryland, Delaware, New York, Rhode Island, and Massachusetts
START DATE 2017 **COMPLETION DATE** Ongoing

CSA is under contract to Ørsted to lead the permit and compliance activities for various stages of development for the South Fork, Skipjack, and Revolution Wind Farms and associated Export Cable Route projects. CSA prepared Permit and Environmental Compliance Plans (PECPs) for the three projects that compiled all approved permits and necessary appendices, including the Survey Construction and Operations Plan (COP) programs, Incidental Harassment Authorizations (IHAs) STET, U.S. Army Corps of Engineers General and Nationwide Permits, Coastal Zone Consistency Review, PSO Training information and Data Analysis, and all applicable regulatory guidelines for the project and a Notice to Mariners.

During the 2018 to 2019 geotechnical and geophysical surveys in the three project areas (South Fork, Skipjack, and Revolution), CSA managed the subcontracted PSOs onboard nine different vessels, ensuring compliance with permit and lease requirements. CSA ensured that all PSOs underwent sufficient training, had the requisite equipment, and properly managed data in daily field reports.

CSA also assisted in writing sections of the COPs for the South Fork Wind Farm (offshore New York, Rhode Island, and Massachusetts) and for the Skipjack Wind Farm (offshore Delaware) that focused on marine mammal, sea turtle, and protected fish species. The COP included a technical appendix assessing the potential acoustic impacts that may occur during installation, operation, and maintenance of these wind farms.

REPRESENTATIVE PROJECT



TAMPA BAY HARD BOTTOM MAPPING PHASE 1 AND 2

CLIENT SurvTech Solutions, Inc. and AIM Engineering & Surveying **LOCATION** Tampa Bay, Florida

START DATE June 2015 **COMPLETION DATE** June 2016

CSA was contracted jointly by both SurvTech Solutions, Inc. (SurvTech) and AIM Engineering & Surveying (AIM) to conduct a study directed by the Southwest Florida Water Management District (SWFWMD) involving the delineation of hard bottom habitats within areas of interest throughout Tampa Bay, Florida. The total survey area was approximately 147 square kilometers (57 square miles) and ranged in depth from approximately 1 to 9.1 m (3 to 30 ft).

As part of the project, CSA supported the geophysical data collection by SurvTech and AIM. Data were acquired and co registered using a pole-mounted Edgetech 6205 dual-frequency bathymetric and side scan sonar system. Bathymetric data were collected at a frequency of 550 kHz, and side scan sonar data were collected at both 550 and 1,600 kHz frequencies. CSA technical staff reviewed and interpreted side-scan sonar data to delineate hard bottom and potential hard bottom areas from regions of unconsolidated bottom (e.g., areas of sand and/or mud) utilizing SonarWiz5 and Esri ArcGIS software. Following digital delineation of hard bottom areas, ground-truthing locations were selected by CSA analysts and approved by SWFWMD. Using a drift video camera system, field teams collected georeferenced ArcGIS Full Motion Video (FMV)-compliant one-minute video recordings at each ground truthing location. Video imagery was analyzed to verify initial habitat delineations and characterizations.

CSA's Environmental Data and Geospatial Services (EDGS) analysts integrated ground truthing observations and bottom type delineations to create a comprehensive thematic map. Hard bottom areas were classified based on the National Oceanic and Atmospheric Administration (NOAA's) Coastal and Marine Ecological Classification Standard (CMECS). CSA analysts compiled all geospatial data into an Esri ArcGIS geodatabase with Federal Geographic Data Committee (FGDC)-compliant metadata. The geodatabase contained post processed files of side-scan sonar data, a mosaicked dataset of the side scan imagery, ground truthing locations, and all hard bottom-delineated polygons (including both pre- and post-ground-truthing). In addition, CSA submitted more than 750 one-minute geo-referenced FMV compliant drift video segments.

REPRESENTATIVE PROJECT



STUDY OF SOUND SOURCE PRESSURE LEVELS

CLIENT Staatsolie **LOCATION** Suriname

START DATE October 2012 **COMPLETION DATE** January 2013

Staatsolie contracted CSA to conduct sound measurements of airgun output as part of its Environmental Management Plan (EMP) for protection of wildlife resources in five rivers in Suriname: the Corantijn, Coppename, Saramacca, Suriname, and Commewijne Rivers. The recordings were collected during a seismic data acquisition survey conducted by Walker Marine under contract to Staatsolie. The two dimensional (2D) survey was conducted using two 20-in.3 airguns towed at 0.67 m below the surface with a target frequency of 120 Hz, a peak intensity of 170 bar, a shot point interval of a single shot every 6.25 m, and a vessel travel speed averaging 3.8 km/hr.

Acoustic recordings were collected at three locations on each river, each representing unique physical and environmental characteristics, selected to represent the overall characteristics of the river area being surveyed. Measurements were made using two calibrated CR-1 hydrophones connected to a ST191 dynamic signal acquisition system deployed from a separate support vessel. During the seismic survey, sound pressure level (SPL) measurements were acquired continuously as the source vessel approached and retreated from the sample location, and the measurements were reported in 500 m increments over a distance of 0 to 2,000 m. The ambient baseline was also established with additional recordings collected at each location prior to seismic survey activity, and oceanographic data such as salinity, temperature and depth were measured concurrently to provide an accurate determination of the sound speed and physical characteristics of the sites. Hydrophones were placed at a depth equal to that of the seismic sound source and at a depth equivalent to two-thirds the remaining water column below the seismic sound source at each sample location.

The results of the analysis showed the sound source produced SPLs less than the critical 180 dB (referenced to 1 μ Pa) at 500 m chosen based on noise impact discussions with U.S. agencies and the scientific community and based on the High Energy Seismic Survey review process that convened a panel of experts to assess noise exposure criteria for marine mammals exposed to seismic pulses. The consensus was that, given the best available data at the time, animals exposed to sound levels above 180 dB (averaged over the pulse duration) was "likely to have the potential to cause serious behavioral, physiological, and hearing effects." Based on these results as well as the Marine Mammal Observer reports during the 2D seismic survey, it appears unlikely any significant impacts occurred in the marine mammal population within the surveyed rivers.

OUR SERVICES



MARINE SCIENCES

CSA's Marine Sciences team provides a wide range of services for federal, state, regional, county, local, and international governments as well as for a variety of commercial and industrial customers, from the intertidal zone and estuarine environments to the open ocean.

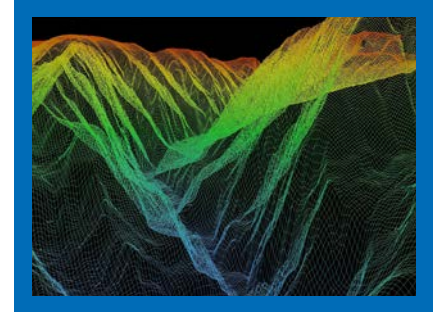
- Permitting
- Environmental Impact Assessments (EIAs)
- Environmental Impact Statements (EISs)
- Environmental Baseline Studies (EBSs)
- Environmental, Social, and Health Impact Assessments (ESHIAAs)
- Natural Resources Assessment, Mitigation, and Restoration
- Marine Environmental Services for Spill Response
- Risk compliance and management
- Ocean sound and marine mammal monitoring, study, and mitigation
- In-house research services



MARINE OPERATIONS

CSA's marine operations staff have extensive operational experience conducting multidisciplinary surveys in support of coastal and marine environmental programs and integrated efforts to collect physical data from the world's aquatic environments.

- Physical sampling
- Sediment profiling
- Water chemistry and analysis
- Biological data collection
- Remote sensing and monitoring
- Geophysical survey
- Visual imaging
- Metocean data collection
- Acoustic data collection



ENVIRONMENTAL DATA & GEOSPATIAL SERVICES

CSA's Environmental Data and Geospatial Services (EDGS) team provides solutions for centralizing, accessing, visualizing, and sharing environmental data and information as consumable web-based map services.

- Geospatial analysis
- Data centralization, integration, and management
- Secure, web-based portals and mapping applications
- Consumable environmental content to for Common Operating Picture applications
- Customized EDGS Media Server capabilities for hosting video and still imagery
- Cloud computing
- Customized cartography
- Environmental Sensitivity Index (ESI) mapping
- Geospatial application development
- Desktop environmental baseline studies
- Esri Business Partner status

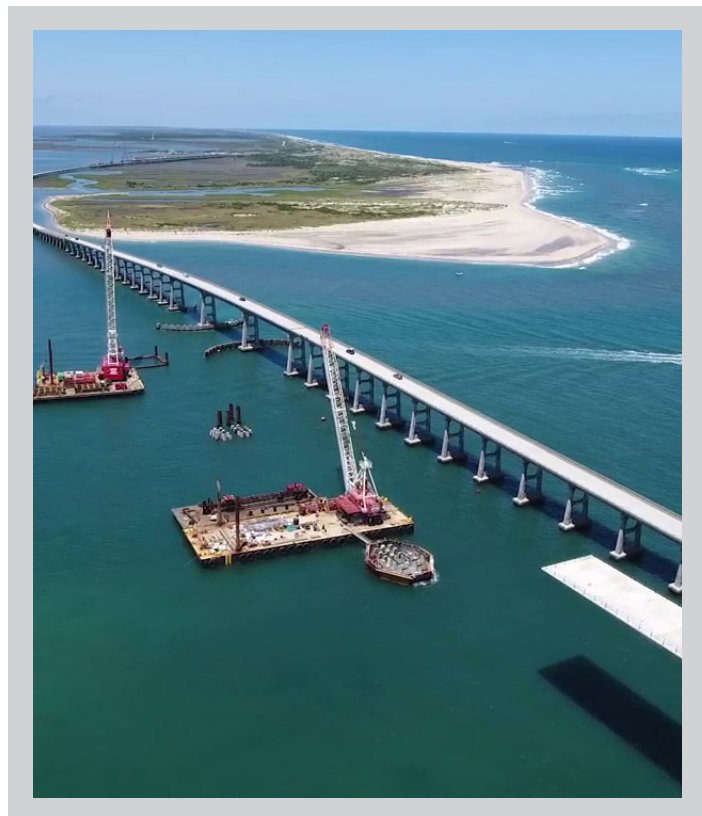
COREMARKETS



ENERGY

CSA provides marine environmental consulting services for oil and gas projects in the United States and internationally. We offer the scientific, operational, and permitting expertise to design and conduct offshore and deepwater projects from exploration to decommissioning, including Environmental Impact Assessments, Environmental Baseline Studies, and Environmental Preparedness and Response activities.

CSA specializes in international environmental compliance for oil and gas, seismic, and engineering clients in a range of regulatory regimes worldwide. Our services for the renewables sector of the Energy Market is described under our Infrastructure Market.



INFRASTRUCTURE

CSA's Infrastructure Market supports clients and projects within the submarine cable (telecommunications and power), subsea pipeline, coastal and offshore liquid natural gas, and most recently the growing offshore renewable energy (wind and marine hydrokinetic) industries. Beginning at project concept, CSA support client with permit feasibility studies; siting, routing, and design studies; conducts baseline and environmental assessments; and prepares plans to mitigate engineering and logistical constraints. Through the project planning and development phase, CSA supports projects with permit acquisition services, environmental impact assessment preparation, and development of impact minimization and mitigation strategies. Once project approvals have been obtained and the project progresses to the construction and operation, CSA provides environmental management services, impact monitoring, mitigation/restoration activities through construction of habitat restoration and enhancement projects, and post-construction monitoring of biologically sensitive resources.

COREMARKETS



PORTS AND COASTAL SCIENCES

CSA provides environmental support services to port authorities, local municipalities, county, state and federal agencies, dredging contractors, cruise ship companies, and private industry clients to address permitting requirements for development, maintenance, and improvement projects. CSA's scientific and technical staff are experienced in preparing environmental assessment documents and mitigation plans, performing marine habitat mapping and data collection surveys, developing and conducting monitoring and mitigation programs, and assessing impacts of marine activities.

CSA's environmental support services for coastal sustainability and port construction projects, include long-term biological monitoring programs associated with beach restoration and nourishment programs, habitat delineation and characterization surveys, seagrass and coral colony relocation from impact footprints to adjacent locations, artificial reef siting and monitoring, and creation of living shorelines.



GOVERNMENT

CSA's Government Market supports federal, state, and local government agencies in the United States as well as internationally throughout the world to provide marine environmental consulting expertise. We specialize in multidisciplinary projects involving the assessment of potential environmental impacts from implementing proposed activities in coastal and marine ecosystems and offer a wide variety of scientific analysis, document preparation, and field survey services to support our government clients worldwide. CSA personnel are formally trained and experienced in the U.S. NEPA process as well as internationally-recognized standards, such as Equator Principles, International Finance Corporation Performance Standards, and World Bank Group Environmental, Health, and Safety guidelines for pollution prevention, control, and monitoring.

HEALTH AND SAFETY



As a leading international marine environmental consulting firm, CSA attaches great importance to its Health, Safety, Security, and Environment (HSSE) program to protect human health, avoid and prevent incidents and injuries, and minimize impact to the environment.

Because we view HSSE as an integral component of our business model and critical to our ability to deliver quality services and products to our clients, CSA emphasizes the importance of HSSE for every activity and provides the resources, knowledge, and training necessary for staff to meet HSSE objectives. We actively manage our business activities to achieve and exceed the highest U.S. and international safety and environmental performance standards, while conducting our operations in strict compliance with applicable U.S. and host country laws, government regulations, contractual agreements, and other HSSE-related requirements.

We constantly monitor and assess our processes to continually improve our HSSE system. We pledge to safeguard the people and environment at every location in which we operate.



SAFETY MANAGEMENT

At CSA we employ many different procedures to ensure safe operations and promote a safety culture throughout our organization. Conducting business around the world requires that we comply with international standards in addition to OSHA and U.S. EPA regulations.

CSA's senior management completely supports the HSSE program and actively participates in safety meetings, training, and program management. This level of attention and dedication to safety makes it possible for CSA personnel to adjust the programs as necessary to meet client requirements in addition to fostering a safety-first mentality by removing the roadblocks to free and open employee participation and ownership of the CSA Safety Culture.

ACHIEVING STANDARDS

- CSA utilizes a Safety and Environmental Management System (SEMS) approach to safety program administration.
- ISO 9001:2015 Certified for quality management standards.
- PEC Safety Authorized Provider for SafeGulf, SafeLandUSA, and H2S Clear.
- ISNetworld Member Contractor for oil and gas environmental consulting.
- Provides trained and professional safety personnel for offshore environmental monitoring and marine activities.
- Extremely low TRIR and EMR Rates.



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