



FINDING OF NO SIGNIFICANT IMPACT

CHAPTER 1 – DESCRIPTION OF THE PROJECT

Introduction

Clean Ocean Initiative Inc. (hereinafter, “Clean Ocean”), is a Corporation under the Laws of the Commonwealth of Puerto Rico pursuing an opportunity to retrieve decommissioned underwater telecommunications cables from the ocean floor (proposed action). In doing so, Clean Ocean is committed to improving and preserving the underwater ecosystem, while creating a positive economic impact in Mayaguez PR. By providing a viable economic solution and , Clean Ocean is estimated to hire over 100 administrative and operational personnel. Our main objective is to reuse the materials for trading on global markets.

These actions of retrieving decommissioned underwater telecommunication cables from the ocean floor raised questions of its impact to the already abused environment. Concerns about the flora and fauna - living and coexisting near the cables, delicate conditions on the ocean floor (bentil) and archeological/cultural heritage shall be addressed in this assessment.

Clean Ocean will comply with all environmental related regulations, including but not limited to Law 416 of 22 of September of 2004, especially Article 4(B) 3, well known as the Puerto Rico’s Public Policy toward the protection of the environment. Law 416 required from us to share an environmental assessment with different government agencies in order to comply with Federal and State environmental laws.

Document Structure

Clean Ocean, in coordination with NOAA and DNRA, has prepared this Environmental Evaluation (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This EA discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts with appendices:

- *Purpose and Need: This section includes information on the history of the project proposal, the purpose of and need for the project, and Clean Ocean proposal for achieving that purpose and need. This section also details the framework that Clean Ocean and the United States Corps of Engineers will use in the decision-making process, how informed the public of the proposal, and how the public responded.*
- *Environmental Consequences: This section describes the environmental effects of implementing the proposed action and the alternatives to prevent the effects if any.*
- *Consultation and Coordination: This section provides a list of preparers and agencies consulted during the development of the EA.*
- *Appendices: The appendices provide more detailed information to support the analyses presented. In addition we are including an economic impact analysis in the area of the proposed action and a list of supporting permits for our operation.*

Proposed Action

Purpose: retrieval and repurpose of underwater telecommunication cables

- Operation Base Mayaguez, P.R.
- Clean Ocean Initiative Inc. lease of GABSO Facility (old Bumble Bee) including its existing pier and docking area.
- Employ approximately 120 people
- Processing of retrieved cable under roof
- Water operations pipelay barge (Chickasaw) with 4500 H.P. Local service for a Tug escort.
- ROV model 2900 18,000' depths
- Search/dive operational team.
- Land operations CAT 970 and a multitask crane for loading and unloading.
- Export of cable 300' freighter monthly primary destination India, United States and China

Clean Ocean (hereinafter, "Clean Ocean") will commence operations on or before March 2016 after receiving necessary permits, endorsements and other necessary approvals to carry out its principal business of retrieving and recycling underwater telecommunication cables.

The land operations:

The land operations will consist of a leased existing operational dock and pier in Mayaguez P.R. The dock would be operated by Clean Ocean Initiative Inc. and GABSO under a long term lease agreement with PRIDCO. Clean Ocean and GABSO meet all security requirements for managing a MARSEC secured facility. The facility will consist of open sides / air storage with roof and an inside warehouse space necessary to prepare and cut the retrieved cables to optimal shipping lengths. Clean Ocean will retrieve abandoned and decommissioned telegraph and coaxial cables. The cables will be off loaded onto large spools and cut on the ground. The spools will be transported under roof. The cables vary in size and age but are primarily composed of copper, steel and polyethylene. Clean Ocean will separate materials to customer specification. The cable after cutting and separation will be cut to customer specified lengths will be placed the copper and plastic will be placed in shipping containers and loaded into a customer provided freighter for delivery. The steel will be loaded directly onto a barge/freighter for export. Clean Ocean's primary customer base for recycling is India, United States, Dominican Republic and China.

Open sea operations:

Clean Ocean's sea operations will consist of 2 separate and distinct operations; The Search Team and the Cable Retrieval Operation.

The Search Team on a well equipped dive/search vessel will survey, prep, and make all necessary safety and logistical preparations in advance of cable retrieval. Clean Ocean's Search Team armed with a Remote Operated Vehicle (ROV), sonar, up to date mapping systems and experienced technical divers will locate all structures and existing cables. The Search Team will prepare by charting and plotting any and all necessary cuts at specific points of "hot" cables, other abandoned cables, cultural and environmental encumbrances as required to insure no damage or disturbance by Clean Ocean's operation to marine life, underwater structures or other cables. Clean Ocean will work closely with all impacted agencies to insure safety of its manpower is to the highest standard and not to disturb any "hot" cables. The Search Team operation and preparation will occur prior to the retrieval operation.

The cable retrieval operation will be completed by the S/Lay reel method. The operation will be carried out by The Chickasaw (or equal) a S-Lay Dynamically Positioned Lay Barge. The Chickasaw will be escorted by a Tug at all times. The Tug will be outsourced to a Puerto Rico based Tug company. All vessels in the operation stage will comply with U.S. Coast Guard and U.S. Customs standards as set forth. The Chickasaw will pull cable onto its reel and on board spools. The average on board cargo will be 3,500 short tons. The Chickasaw is equipped with a 300' stinger for deep operations. The operation will have immediate access to Clean Ocean's ROVs either on board or with Clean Ocean's search team should the sonar and cameras detect an unexpected structure for investigation and or cutting the cables as required.

The Chickasaw dynamic positioning allows for specific location or position of the barge by maintaining the vessels very specialized propulsion and station keeping system by virtue of hull mounted thrusters near the bow, at mid-ship and the stern. When in station keeping mode, these thrusters, which have the capacity to rotate 360o in a horizontal plane, controlled by a vessel board computer system that interfaces with a satellite geographic positioning system. Thus making the Chickasaw a perfect vessel for the the pin point accuracy required for these operations. The dynamic positioning also allows for work in depths of as shallow as 100' feet with no impact to the ocean floor. The vessel will have load capacity and return to Mayaguez 3-4 times per month for unloading and provisioning.

After each cable retrieval operation is completed, a report will be handed to Global Marine Systems with the complete removal layout. Including but not limited to exact coordinates, lengths, tonnage and types of all cables retrieved. Global Marine Systems will then update the registry for the global submarine cable maps. Clean Ocean will upon request supply The USACE of any and all data collected.

Clean Ocean's operation is straightforward and consists of four distinct operations, land ops, search team, cable prep and cable retrieval.

Public Involvement

Clean Ocean's proposed activity will be evaluated by different interested parties to determine it impacts on the environment, the local economy and protected species. The USACE will publicly notify Federal, State and Local Agencies, Public Official and the General Public of Clean Ocean's intent. Clean Ocean is looking for comments that will help improve or modify the proposed operation. Those comments would be use to determine the need of a public hearing.

Clean Ocean will continually educate the surrounding communities, professional interest groups and local governments about its proposed activity. The nearby University of Puerto Rico, Mayaguez Campus offers an ongoing opportunity for employment, internships to constantly monitor both the economic and environmental impact of Clean Ocean's operations.

CHAPTER 2 – ENVIRONMENTAL CONSEQUENCES

Affected Environment

This section summarizes the physical, biological, social, and economic environments of the affected project area and the potential changes to those environments. Resources described in detail are: air quality, water quality, wildlife and fisheries: potential habitat and species impacts, migratory birds, special-status species: threatened and endangered species, vegetation resources and invasive plant species, heritage resources, environmental consequences.

Air Quality

The Clean Air Act identifies two types of National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment: primary and secondary. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. These standards are defined in terms of threshold concentration measured as an average for specified periods of time. Actions that would affect air quality from the Clean Ocean Initiative in the Mayaguez area may be subject to additional examination after operations commence.

Water Quality

No area to NWI wetlands and other freshwater aquatic habitats are affected by Clean Ocean Initiative proposed operations under Section 404 of the Clean Water Act, or other State/Federal Statutes.

In accordance to Section 403 of the Clean Water Act, we ensure that no unreasonable degradation of the marine environment will occur as a result of the discharge on our vessels and to ensure that sensitive ecological communities are protected. Also, under the National Pollutant Discharge Elimination System (NPDES) program, all our discharge achieve compliance with national minimum technology-based treatment requirements and any additional requirements necessary to meet state water quality standards.

Wildlife and Fisheries: Potential habitat and species impacts

The Puerto Rico insular shelf is extensive, complex and highly productive because of the dominance of well-developed coral reefs that grow across a variety of depth profiles. While many areas of shallow (0-35m) present reefs are in decline, reefs in deeper (>35m) depths are expected to remain in healthy conditions. However, very little is known about these deep environments on a broad scale, despite some information that is slowly becoming available as a result of isolated efforts conducted by NOAA and other organizations for certain areas. These studies have focused in species location and identification. Deep water resources, including reef fisheries, are currently the ones suffering greater fishing intensity as shallow environments progressively deteriorate. Fishery managers and scientists find difficult the making of decisions due to the lack of information and knowledge of the ecological process and relationships taking place in deep environments.

The fishery resources of Puerto Rico in the US EEZ are managed by the Caribbean Fisheries Management Council (CFMC) and the Secretary of Commerce. Traditionally the fishery resources are harvested in the shallow shelves of these islands which reach 30-40 m in depth at the shelf edge. There are four Fishery Management Plans administered by the CFMC which regulate some species of reef fish, queen conch, spiny lobster and corals. The Secretary of Commerce administers the Highly Migratory Species Fishery Management Plan such as sharks, billfish and tunas. These species can be found on the islands shelves and deep oceans with depths exceeding hundreds and thousands of meters. Much is known of the shelf benthic habitats which are classified as Essential Fish Habitats (EFH) for the reef fish, coral, lobster and queen conch species managed by the CFMC. Clean Ocean Initiative main operations go beyond the Puerto Rican shelves but during the areas between 0-35m we will not be harming any EFH.

Migratory Birds

Clean Ocean Initiative proposed project will not affect migratory birds that are known or likely to inhabit within the project area. Those birds include:

Audubon's Shearwater (*Puffinus lherminieri*) - seasonal: breeding

Magnificent Frigatebird (*Fregata magnificens*) - seasonal: wintering

Masked Booby (*Sula dactylatra*) - seasonal: wintering

Special Status Species – Threatened and Endangered Species

Special-status species discussed in this section include federally listed species that are protected under the ESA that are known to occur or are likely to occur within the project and/or analysis area. TEP species and their proposed and designated critical habitat are presented. Current TEP lists obtained from the USFWS's IPaC (USFWS 2014b) and NOAA's NMFS are used for this analysis. The following discussions focus on TEP species known to occur in the project area, those that have a high likelihood of occurrence based on proximity to the project area, or those that have suitable habitat present in or adjacent to the project area.

No federally listed plants are known to occur in the project or analysis areas. No designated critical habitat for any TEP plant species occurs within the analysis area. The USFWS's IPaC report did present some TEP species adjacent to our facilities but will not be affected in any way.

The West Indian Manatee (*Trichechus manatus*), Humpback Whale (*Megaptera novaeangliae*) and Sperm Whale (*Physeter macrocephalus*) are the the only federally listed mammals known to occur in the project or analysis areas. There is a final critical habitat designated for the West Indian Manatee but proposed operations will not affect the designated critical habitat or the manatee itself due to the proposed area of operations. To help protect large whales and/or dolphins our vessel, the Chickasaw, will always operate at slower speeds (10 kts or less) which will significantly reduce the risk of mortally wounding a whale if it is struck. Slowing down may also provide the animal with an increased reaction time to move away from the vessel. If

any Areas To Be Avoided (ATBAs) have been established, we will make proper procedures to avoid this area and return when the season has ended to avoid whale populations.

Other federally listed wildlife species that are known to occur in the analysis area include Green Sea Turtle, Hawksbill Sea Turtle, Leatherback Sea Turtle, Mona Boa, Mona Ground Iguana, Monito Gecko, Puerto Rican Boa, Elkhorn Coral and Staghorn Coral. Designated critical habitats for these species have been established and no critical habitat areas will be affected during proposed operations. To help protect sea turtle species our vessel, the Chickasaw, will always operate at slower speeds (10 kts or less) which will significantly reduce the risk of wounding any sea turtle species. Slowing down also provides the animal with an increased reaction time to move away from the vessel.

Listed species:

Mona Boa (Epicrates monensis monensis)

The Mona boa was placed as Threatened, with critical habitat, on 03/06/1978. There is no designated critical habitat for this species within the analysis area.

Puerto Rican Boa (Epicrates inornatus)

The Puerto Rican boa was placed as Endangered, without critical habitat, on 10/13/1970. There is no designated critical habitat for this species within the analysis area.

Mona Ground Iguana (Cyclura stejnegeri)

The Mona ground iguana was placed as Threatened, with critical habitat, on 03/06/1978. There is no designated critical habitat for this species within the analysis area.

Monito Gecko (Sphaerodactylus micropithecus)

The Monito gecko was placed as Endangered, with critical habitat, on 10/13/1970. There is no designated critical habitat for this species within the analysis area.

Green Sea Turtle (Chelonia mydas)

The green sea turtle was placed as Threatened, without critical habitat, on 07/28/1978. There is no designated critical habitat for this species within the analysis area.

Hawksbill Sea Turtle (Eretmochelys imbricata)

The hawksbill sea turtle was placed as Endangered, without critical habitat, on 06/02/1970. There is no designated critical habitat for this species within the analysis area.

Leatherback Sea Turtle (Dermochelys coriacea)

The leatherback sea turtle was placed as Endangered, without critical habitat, on 06/02/1970. There is no designated critical habitat for this species within the analysis area.

West Indian Manatee (*Trichechus manatus*)

The west indian manatee was placed as Endangered, with critical habitat, on 03/11/1967. There is no designated critical habitat for this species within the analysis area.

Humpback Whale (*Megaptera novaeangliae*)

The humpback whale was placed as Endangered, without critical habitat, on 12/02/1970. There is no designated critical habitat for this species within the analysis area.

Sperm Whale (*Physeter macrocephalus*)

The sperm whale was placed as Endangered, without critical habitat, on 12/02/1970. There is no designated critical habitat for this species within the analysis area.

Elkhorn Coral (*Acropora palmata*)

Elkhorn coral was placed as Threatened, with critical habitat, on 06/08/2006. There is a designated critical habitat for this species within the analysis area. Refer to Chapter 5 for Elkhorn and Staghorn Coral Critical Habitat map.

Staghorn Coral (*Acropora cervicornis*)

Staghorn coral was placed as Threatened, with critical habitat, on 06/08/2006. There is a designated critical habitat for this species within the analysis area. Refer to Chapter 5 for Elkhorn and Staghorn Coral Critical Habitat map.

Vegetation Resources and Invasive Plant Species

Small portions of vegetation resources and invasive plant species are known to grow in project's proposed area. All marine plants are photosynthetic, taking energy from sunlight and nutrients from the water or substrate. Because they require sunlight for their vital processes, most grow intertidally to just over 100 feet. Only a few species are expected to be seen at depths exceeding 100 feet, except in places where we can find extremely clear waters. Some of those species are, but do not extend to:

Midrib Seagrass (<i>Halophila baillonis</i>)	Seagrass
Sargassum Algae (<i>Sargassum sp.</i>)	Green Algae
Y Branched Algae (<i>Dictyota sp.</i>)	Green Algae
Leafy Flat-Blade Alga (<i>Styopodium zonale</i>)	Green Algae
Encrusting Fan-Leaf Alga (<i>Lobophora variegata</i>)	Green Algae
Watercress Alga (<i>Halimeda opuntia</i>)	Green Algae
Stalked Lettuce Leaf Alga (<i>Halimeda tuna</i>)	Green Algae
Bulbous Lettuce Leaf Alga (<i>Halimeda lacrimosa</i>)	Green Algae

Small-Leaf Hanging Vine (<i>Halimeda goreau</i>)	Green Algae
Large-Leaf Hanging Vine (<i>Halimeda copiosa</i>)	Green Algae
Sea Pearl (<i>Ventricaria ventricosa</i>)	Green Algae
Saucer Blade Alga (<i>Avrainvillea asarifolia</i>)	Green Algae
Mermaid's Fans (<i>Udotea sp.</i>)	Green Algae
Pinecone Alga (<i>Rhipocephalus phoenix</i>)	Green Algae
Crustose Coralline Algae (Phylum: Rhodophyta)	Red Algae
Burgundy Crust Algae (<i>Peyssonnelia sp.</i>)	Red Algae

During our operations it is unlikely to observe or spread any invasive plant species.

Heritage Resources

Any threat to the underwater cultural heritage of Puerto Rico fall under the *UN Convention of the Law of the Sea* and *UNESCO Convention on the Protection of the Underwater Cultural Heritage*. These two regulations protect the underwater cultural heritage against illegal activities and advise on its management. However, these regulations do not solve the issue of prioritization when a conflict between legal usages arises and on how the law should be interpreted. Consequently, there are several threats to underwater heritage, such as construction, illegal salvage or “treasure-hunters.” Furthermore, as we have seen, human interference not only includes illegal uses but also legal applications, such as the recuperation of submarine cables. These legal activities do not affect shipwrecks unlike treasure hunting activity, where the trend is the plunder of the historic discovery.

Based on our responsibility, our concern is the 12 nautical miles. The definition of underwater cultural heritage, is vague and raises issues of ownership and abandonment. With no protocol established, and issues of ownership always present it is up to the state and the private sector to work on areas of compliance and cultural heritage preservation. There is no reference to the prioritization of the protection of underwater cultural heritage over other legal uses of the seas – including the retrieval of submarine cables.

The first main conclusion is that states are obliged to protect archaeological and historical objects found in the sea. The last matter is that the term *natural resources*, is not meant to include underwater cultural heritage. Consequently, refrains from explicitly extending the sovereign rights that states have over the natural and economic resources in their exclusive economic zone and in the continental shelf as pertaining to underwater archaeological resources.

Due to the lack of specific legislation aimed at the protection of cultural heritage, there are still inadequacies - such as a lack of protocol to follow when an archeological discovery is present - which allow private companies and governments / countries to work together on preservation of the heritage under the seas. In general, the law needs to catch up with new developments. Underwater cultural heritage is a field which has evolved mainly in the last twenty years.

Refer to Chapter 4, - for page 10 of “Threads to underwater cultural heritage: sustainable submarine cables” for Clean Ocean protocol regarding Cultural discoveries.

Environmental Consequences

Units of Measure for Impact Significance (Indicators): Wildlife and Fisheries

- Minimal or no impact to wildlife and fisheries habitat
- Minimal or no impact to wildlife and fisheries species

Research and Conservation Measures

During our proposed operations, **little to no damage** is expected to the local wildlife and ecosystems. Also, there will be no impacts to the Threatened, Endangered and Proposed (TEP) species populations or habitats. Even though no damage is expected to the local wildlife and ecosystems, a plan will still be in effect to preserve and enhance the impacted area’s ecosystem. See “**Clean Ocean Coral Research Farm**” Appendice.

The information gathered from survey and research videos from Ponce, Aguadilla, Desecheo and Mayaguez are available upon request. See “Survey and Research” Appendix.

CHAPTER 3 – CONSULTATION AND COORDINATION

Consultation with Others

Regulatory Compliance (R. Huddleston)
Richard Durand - Marine Operations / Louisiana
Angel Bonilla (GABSO Inc.)

Federal Agencies

USACE - United States Army Corps of Engineers
NOAA - National Marine Fisheries Service - Habitat Conservation Division
NOAA - National Marine Fisheries Service - Coral Reef Conservation Program
US Fish & Wildlife Service - Caribbean Islands Refuges
US Fish & Wildlife Service - Caribbean Islands Ecological Service
EPA - Environmental Protection Agency
United States Coast Guard
Homeland Security
United States Customs

Commonwealth of Puerto Rico Agencies

Junta de Planificación (JP)
Departamento de Recursos Naturales (DRNA)
Oficina de Gerencia de Permisos

Oficina de Preservación Histórica
Junta de Calidad Ambiental (JCA)
Departamento de Hacienda
Autoridad de los Puertos

Municipal Authorities

Planning Office
Municipal Tax Office (IVU)
Municipal Property Tax Office (CRIM)
Comisión del Puerto (Puerto de Mayagüez Sila M. Calderón)

CHAPTER 4 – APPENDICES & FIGURE

- Elkhorn and Staghorn Coral Critical Habitat map.
- Threads to underwater cultural heritage: sustainable submarine cables.
- Economic analysis on the proposed area of operations.
- List of Clean Ocean Initiative supporting documents and permits.
- Clean Ocean Coral Research Farm
- Survey and Research