

# COASTAL

# **Experience Credential**

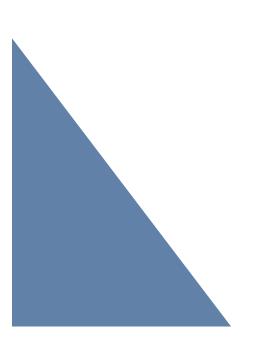


#### Services:

- Integral solutions of marine coastal infrastructure
- Sedimentological studies and dredging projects. Mouth works
- Erosion control works and coastal protection, jetties and breakwaters
- Project and inspection of submarine pipelines laying. Marine works of intake and discharge, emissaries
- Tourist and sport facilities, artificial beaches
- Marine hydraulics studies
- Oil and gas pipeline
- Mathematical modeling of diffusion and thermal recirculation in thermoelectric power plants cooling water systems
- Waves regime studies based on global retrospective models. Oceanweather's GROW model
- Mathematical modeling of wave propagation in coasts and ports. (GHOST and MAP models from TECNOCEAN STWAVE and ADCIRC)
- Optimization of designs with physical hydraulic models at scale

**Coastal Experience** Sedimentation & Dredging

In the **Incostas Nouel Group**, we provide services that allow maintaining and securing maritime, river and estuarine navigation channels. Dredging of lagoons in oil facilities, hydraulic fillings, etc.





## Sedimentation Studies and Dredging Projects



Technical direction, project and inspection of dredging. Assistance and navigation aids in the San Juan river and Maturin bar PDVSA Monagas State, Venezuela

Dredging of the production platforms of Pedernales field and the access channel PERENCO OF VENEZUELA, S.A. Delta Amacuro State, Venezuela





Hydrographic services, technical direction, projects and dredging inspection in the oil terminals of Puerto Miranda and Pequiven PDVSA Zulia State, Venezuela

Dredging technical direction in the Sepetiba channel, Río de Janeiro. CHINA HARBOUR ENGINEERING, Co Sepetiba Bay. Rio de Janeiro. Brazil







<u>Basic engineering to optimize dredging in the navigation access channel of the Escondido River.</u> EMPRESA PORTUARIA NACIONAL EPN 2023 Autonomus Region Southern Caribbean Coast. Nicaragua

Maintenance dredging of the Puerto Corinto access channel and dock. EMPRESA PORTUARIA NACIONAL EPN 2021 Department of Chinandega. Nicaragua

<u>Supervision, monitoring and environmental complement for the dredging of the Puerto Sandino</u> NEW FORTRESS ENERGY 2020 Puerto Sandino. Nicaragua

<u>Wave, sedimentation and geophysical survey study for a natural gas FSU at Sandino Port.</u> SANCHEZ ARGUELLO CIA LTDA 2020 Nicaragua

<u>Study of the dredging needs in the Camuri Grande club.</u> CLUB CAMURI GRANDE A.C. 2019 Venezuela

<u>Consulting services for coastal dynamic study of the San Jorge project</u>. NICARAGUA NATIONAL PORT COMPANY 2016 -2017 Rivas Department. Nicaragua

Simulations analysis of pertinence of change in the travel frequency for the disposal of dredged material to the dumping area of the port of San Antonio. SIGA 2015 San Antonio, Republic of Chile

<u>Professional service to study the sediment accumulation phenomenon in the marine area</u> <u>concessioned to DP World Callao SRL in the port terminal of Callao</u>. NATIONAL PORT AUTHORITY 2015 Lima. Peru



<u>Studies of Basic Engineering and dredging project of the port of Salaverry</u>. PORTS NATIONAL COMPANY (ENAPU) 2015 Trujillo. Peru

Fluff study. Consultancy specializing in hydraulics, hydrology and hydrodynamics sedimentological to develop a methodology for measuring fluid muds in the sector of Boca Grande of the Orinoco river. NATIONAL CHANNELING INSTITUTE (INC) 2013 Boca Grande sector. Orinoco River -Venezuela

<u>Coastline geomorphology study. Litoral transport. Coastline evolution and re-dimensioning. Port of Bilwii.</u> EMBYSA 2010 North Atlantic Autonomous Region. NAAR - Nicaragua

<u>Geomorphology study of the coast in Miramar. Project "Bolivar's Supreme Dream".</u> EMBYSA 2010 Nicaragua.

<u>Study of Local conditions, sedimentation and CWS discharge modeling. Project: New coal</u> <u>thermoelectric power central in Puerto Coronel.</u> COLBUN, S.A. 2006- 2008 Puerto Coronel. III Region. Chile

<u>Study on sedimentary processes and flooding risk by extreme lake levels.</u> PDVSA 2006 - 2009 Tomoporo District. Zulia State, Venezuela

Local conditions study, sedimentation and CWS discharge modeling. Project: New coal thermoelectric power central in Punta Pochoco. COLBUN, S.A. 2005 - 2006 VIII region, Chile



Local conditions study, sedimentation and CWS discharge model. Project: New coal thermoelectric power central in Penco. COLBUN, S.A. 2005 - 2006 VIII Region. Chile

Dredging of the production platforms of Pedernales field and access channel. PERENCO OF VENEZUELA, S.A. 2005 Delta Amacuro State. Venezuela

<u>Technical direction and inspection of the dredging at the petroleum terminals of Puerto Miranda and Pequiven.</u> PDVSA PETROLEUM, S.A. 2003 - 2004 Zulia State. Venezuela

Dredging at the service pier in the Ricardo Zuloaga generator complex. Thermoelectric power plant of Tacoa. C.A. LA ELECTRICIDAD DE CARACAS 2003 Vargas State. Venezuela

Dredging technical direction in the Sepetiba channel, Rio de Janeiro. CHINA HARBOUR ENGINEERING, Co. 2000 - 2001 Río de Janeiro. Brazil

<u>Technical services of dredging, hydrography and navigation for the operations of navigation</u> <u>maintenance in the San Juan river and Maturin bar, terminal of Caripito.</u> PDVSA 1986 – 2000 Monagas State, Venezuela

<u>Studies of estuary hydraulics. Works for sedimentation control. Sinamaica lagoon conservation project.</u> MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES. MARN 2000 Zulia State, Venezuela

#### Experience in...



Inspection of the dredging at the Puerto Cabello bay. NOUEL INGENIEROS, C.A. 1995 -1997 Carabobo State, Venezuela

Inspection of the dredging for the CRAY marine terminal. LAGOVEN, S.A. 1992 Falcon State, Venezuela

<u>Preliminary hydro-sedimentological study of the San Juan river. Mathematical model of the tide propagation.</u> LAGOVEN, S.A. 1986 Monagas State, Venezuela

<u>Technical assistance for the execution of sedimentation studies in the Orinoco river.</u> WATERWAYS.NATIONAL INSTITUTE. INC 1992 Bolivar State, Venezuela

<u>Feasibility study of the dredging at the mouth of the Neveri river.</u> STATE OF ANZOATEGUI GOVERNMENT 1980 Anzoategui State, Venezuela

<u>Project of the rockfill channel of the Cerro Grande river mouth.</u> SINGLE AUTHORITY FOR THE STATE OF VARGAS AREA 2002 Vargas State, Venezuela

<u>Inspection of the dredging, piers of the Amuay refinery.</u> PDVSA PETROLEUM, S.A. 2001 Falcon State, Venezuela

<u>Update and review. Dredging market research in Venezuelan ports and channels.</u> DRAVENSA 2001 Federal Premises, Venezuela



<u>Puerto Azul Club dredging, proposal for the inspection.</u> PUERTO AZUL CLUB 2001 Vargas State, Venezuela

<u>Channeling works at the mouth of Copey creek.</u> MINISTRY OF ENVIRONMENT AND NATURAL RESOURSES. MARN 2001 Miranda State, Venezuela

Evaluation of the effect of the fluvial sediments discharge on the sedimentation of the La Guaira Port. MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES. MARN 2000 Vargas State, Venezuela

Morphologic evolution study of the Motatan river Delta. MOBIL EXPLORATION OF VENEZUELA, S.A. 1998 Trujillo State, Venezuela

Diagnostic of the effects of the construction of a reservoir on the stability of the beach. Puerto Maya . HIDROCAPITAL 1998 Aragua State, Venezuela

Loading pier of the Corpoven's cryogenic in Jose. Diagnostic of the actual sedimentary processes. CORPOVEN, S.A. 1995 Anzoategui State, Venezuela

<u>Bathymetric raising and dredging project of the harbor of the Playa Blanca fishery dock.</u> NOUEL INGENIEROS, C.A. 1995 - 1997 Carabobo State, Venezuela

<u>Recovery of the beach project and sedimentation control at the Puerto Moreno Marina.</u> NOUEL INGENIEROS, C.A. 1995 Nueva Esparta State, Venezuela



<u>Characteristics of the material to be dredged at the miles 14 to 20 section of the navigation channel of the Orinoco river. Boca Grande channel.</u> ROYAL BOSKALIS WESTMINSTER 1995. Bolivar State, Venezuela

<u>Improvement of the mouths of the Marga-Marga, Carampangue, Mataquito and Queule rivers.</u> MINISTRY OF PUBLIC WORKS. PUBLIC WORKS MANAGEMENT 1995 Chile

<u>"Fluff" studies in the estuary of Maracaibo.</u> NATIONAL CHANNELING INSTITUTE. INC 1995 Zulia State, Venezuela

<u>Study and project of the marine works for the integral project of Puerto Brion in Higuerote.</u> STATE OF MIRANDA GOVERNMENT 1994 Miranda State, Venezuela

<u>Study of the sedimentary and morphologic processes of Puerto Moreno marina.</u> NOUEL INGENIEROS, C.A. 1994 Nueva Esparta State, Venezuela.

<u>"Fluff" studies in the outer section of the navigation channel of the Maracaibo lake.</u> NATIONAL CHANNELING INSTITUTE. INC 1993 - 1994 Zulia State, Venezuela

<u>Consultancy for the sedimentological study in physic model and project of the work: "area to reclaim to the sea", port of San Antonio.</u> MINISTRY OF PUBLIC WORKS. PUBLIC WORKS MANAGEMENT 1993 Valparaíso. V Region. Chile

<u>Inspection of the dredging at the port of Zazarida.</u> STATE OF FALCON GOVERNMENT 1993 Falcon State, Venezuela



<u>Sedimentation studies for the location of the Pequiven's pier in Jose port harbor.</u> PEQUIVEN 1992 Anzoategui State, Venezuela

<u>Venezuelan counterpart to the MOPT Dutch mission in the analysis for Navigation channel</u> <u>improvement and reduction of maintenance costs.</u> NATIONAL CHANNELING INSTITUTE 1992 Zulia State, Venezuela.

Analyses of the sedimentary processes and dredging and breakwater project in the port of La Vela. STATE OF FALCON GOVERNMENT 1991 Falcon State, Venezuela

<u>Analyses of the sedimentary processes and dredging and breakwater project in the port of Zazarida.</u> FALCON STATE GOVERNMENT 1991 Falcon State, Venezuela

<u>Analyses of the sedimentary processes and dredging and breakwater project in Puerto Cumarebo.</u> STATE OF FALCON GOVERNMENT 1991 Falcon State, Venezuela

Discharge management of the dredged material at the piers of the Amuay refinery. LAGOVEN, S.A. 1990 Falcon State, Venezuela

<u>Dredging project and feasibility study of the Lagoven's service pier in Amuay.</u> LAGOVEN, S.A. 1990 Falcon State, Venezuela

<u>Project of the Sinamaica lagoon recovery.</u> CORPOZULIA 1990 Zulia State, Venezuela

<u>Preliminary study on the sedimentary processes in the Maracaibo bar and El Tablazo bay, on relation to the navigation channel maintenance dredging.</u>

#### Experience in...



NATIONAL CHANNELING INSTITUTE. INC 1989 Zulia State, Venezuela

Inspection of the dredging for beach sand filling at Ocumare de la Costa. MINISTRY OF URBAN DEVELOPMENT (MINDUR) 1989 Aragua State, Venezuela

<u>Sedimentation and dredging studies at the locations of Santa Cruz de Mara and Pararu.</u> VEPICA BROWN & ROOT 1989 Zulia State, Venezuela

Identification of possible discharge zones with hopper dredge in the area of Boca Grande. NATIONAL CHANNELING INSTITUTE. INC 1989 Delta Amacuro State, Venezuela

<u>Sedimentological study and field measurements in the Patao cove.</u> NOUEL INGENIEROS, C.A. 1988 Sucre State, Venezuela

Dredging and hydraulic filling project for a Bauxiven pier in Caicara del Orinoco. NATIONAL CHANNELING INSTITUTE. INC 1988 Bolivar State, Venezuela

<u>Marketing studies for dredging in Venezuelan ports and channels.</u> TERMINALES MARACAIBO 1986 Zulia State, Venezuela

<u>Dredging study and project at the fishery port of Zazarida.</u> NATIONAL CHANNELING INSTITUTE. INC 1986 Falcon State, Venezuela

<u>Sedimentological measurements in Ciudad Bolívar and Puerto Ayacucho, Sisor project.</u> OFICINA TÉCNICA DEL MONTE 1986 Bolivar and Amazonas State, Venezuela.



<u>Sedimentation rates estimation. Study for the location of a coal port in the Gulf of Venezuela.</u> NOUEL INGENIEROS, C.A. 1986 - 1987 Zulia State, Venezuela

<u>Consultancy</u>, technical supervision and evaluation of the dredging and filling programs in Los Taques. NATIONAL CHANNELING INSTITUTE. INC 1983 - 1984 Falcon State, Venezuela

<u>Diagnostics of the sedimentary dynamics in the Bajo Grande zone.</u> NOUEL INGENIEROS, C.A. 1981 Zulia State, Venezuela

<u>Study of alternatives for the Los Patos lagoon conservation.</u> STATE OF SUCRE GOVERNMENT 1981 Sucre State, Venezuela

Evaluation of the sedimentation problem at the basin and in the access channel of Puerto Miranda. NATIONAL CHANNELING INSTITUTE. INC 1979 Zulia State, Venezuela

Sedimentological diagnostic and forecast for the necessity of maintenance of the access channel and the harbor of the Zulia's future iron and steel complex. NATIONAL CHANNELING INSTITUTE. INC 1978 Zulia State, Venezuela.

<u>Study to determine Puerto Maya's beach stability.</u> OTHEA 1977 Aragua State, Venezuela

<u>Stabilization works in Copey's creek for the marine communication of the Rio Chico navigation</u> <u>channels.</u> TOURISM CORPORATION (CORPOTURISMO) 1976 Miranda State, Venezuela **Coastal** Protecction Works

In the **Incostas Nouel Group**, we design and build solutions to protect settlements near the coast, or to protect the coast itself; such as, defenses to prevent the erosion of the coastline, prevent flooding in coastal areas, caused by overvaluations of the sea level.

Protection against waves at ports or marinas entrances, stabilization of navigation channels in estuarine mouths, protection works for thermoelectric plants, desalination or discharge plants, among others.



#### **Coastal Protection Works**

Basic and Detail Engineering of the Coastal Works of the Thermoelectric Power Plant AES ITABO Dominican Republic





Coastal Road of Antofagasta. MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT II Region. Chile

Improvement and Reinforcement of the South

Improvement Conceptual Study of the Marga-Marga, Mataquito, Carampangue and Queule river mouths. MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT Chile





Basic and Detailed Engineering of the Palma Sola Fishery Port Breakwater.

DITECH

Carabobo State, Venezuela



Redesign for the protection breakwater of the alternate access route to Puerto Corinto. CONSTRUCTORA MECO 2023 Corinto, Nicaragua.

<u>CANTV submarine cable protection breakwater design.</u> CANTV 2022 Carupano, Sucre State. Venezuela

Sand recharge project and structural reinforcement of the boundary of the Bouganvileae residence, Barbados D<sup>´</sup>EMPAIRE REYNA ABOGADOS Barbados 2018

<u>Conceptual engineering design for coastal protection. Puerto Ilo patio.</u> SOUTHERN COPPER Peru 2017

Advice during the execution of the maritime works in Sandy Lane Beach, Barbados D'EMPAIRE REYNA ABOGADOS Barbados 2017

Detailed Engineering for the coastal engineering works for the cove project, located in San Carlos, Panama Republic. EQUINOX 2015 West Panama, Panama Republic of Panama

<u>Protection breakwater construction, required infrastructure for the construction of the baseball</u> <u>stadium located in El Pavero sector, Macuto parish</u>. LOS TIBURONES DE LA GUAIRA STADIUM CONSORTIUM 2015 Vargas State, Venezuela

<u>Modification of the El Pavero breakwater project, Vargas State</u>. PMA GROUP 2015





Vargas State, Venezuela

<u>Marine Works, extensión of the Pequiven's plant in Moron, Carabobo State</u>. ZELDA GROUP 2014 Carabobo State. Venezuela

Basic Engineering of the protection breakwater for the service port of TAECA in the Araya Peninsula, Municipality of Cruz Salmeron Acosta in Sucre State. TAECA 2014 Sucre State. Venezuela

<u>Breakwater repair and protection Works for the Sports Center in Camurí Chico. Vargas State</u>. COLISEO PLAYERO CONSORTIUM 2014 Vargas State. Venezuela

<u>Preliminary feasibility study of coastal works for beaches: Honda, Brava y Ramirez, of Montevideo.</u> MUNICIPALITY OF MONTEVIDEO 2013 Montevideo, Uruguay Republic

<u>Detailed engineering of a breakwater and berth in the expansion area of the El Palito refinery.</u> Y&V INGENIERÍA Y CONSTRUCCIÓN 2013-2014 Carabobo State. Venezuela

<u>Project west breakwater of the marina and breakwater submerged central beach of Playa Azul Club.</u> CLUB PLAYA AZUL 2013 Vargas State. Venezuela

<u>Structural design of seawall for slope protection in urbanization Mata Redonda. Maracay.</u> MINISTRY OF POPULAR POWER FOR THE ENVIRONMENT 2013 Aragua State. Venezuela

<u>Breakwater project marine to protecton perimeter of new stadiun for La Guaira sharks. Macuto, Vargas</u> <u>State.</u> FONDO GLOBAL DE CONSTRUCCIONES, C.A. 2013 Estado Vargas, Venezuela



<u>Basic and Detailed Engineering of the Palma Sola fishery port breakwater.</u> DITECH 2011 Carabobo State, Venezuela

<u>Work for erosion control present at the East coast of Punta Palma.</u> PETROREGIONAL 2008 - 2009 Zulia State, Venezuela

<u>Jetty and breakwater Detail Engineering, Tanaguarenas sector.</u> INFRAVARGAS 2007 -2008 Vargas State, Venezuela

<u>Project of the coastal works for sedimentation control in the Care river and La Alcantarilla brook</u> <u>mouths.</u> MINISTRY OF ENVIRONMENT AND RENEWABLE NATURAL RESOURCES 2006 - 2007 Vargas State, Venezuela

Detail Engineering for the construction and repair of breakwaters in the La Zorra fishery port. CORPOVARGAS 2005 - 2007 Vargas State, Venezuela

Bobures coastal boulevard. Coast protection works, Sucre Municipality. SUCRE MUNICIPALITY TOWN HALL 2005 Zulia State, Venezuela

<u>Preliminary conceptual studies related to the expansion of the breakwater of the port of Carupano.</u> TECHNICAL OFFICE LUCHSINGER & BEYER 2005 Sucre State, Venezuela

<u>"El Playón" breakwater: Evaluation of the hurricane Ivan effects.</u> CORPOVARGAS 2005 Vargas State, Venezuela



<u>Inspection of the construction of the jetty and breakwaters in the Palmar Oeste sector.</u> CORPOVARGAS 2002 - 2003 Vargas State, Venezuela

<u>Coastal works project of the "El Carboncillo" beach resort.</u> MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT 2003 Antofagasta. Chile

<u>Coastal works feasibility study for the sea water caption optimization. Shrimp farms.</u> INTER SEA FARMS INTERNATIONAL OF VENEZUELA, S.A. 2002 Zulia State, Venezuela

<u>Protection project of the North breakwater port of La Guaira.</u> CENTRAL LITORAL PORT 2002 Vargas State, Venezuela

<u>Stabilization works project of the communication channel between the Zazarida lagoon and the sea.</u> STATE OF FALCON GOVERNMENT 2002 Falcon State, Venezuela

Inspection and technical supervision of the discharge jetties in the Curucuti river channeling. CORPOVARGAS 2002 Vargas State, Venezuela

<u>Inspection of the repair of the East Jetty and the discharge channel of the thermoelectric power plant</u> of Tacoa. C.A. LA ELECTRICIDAD DE CARACAS 2001 Vargas State, Venezuela

<u>San Carlos castle protective jetty project. Paez District.</u> CORPOZULIA 2001 Zulia State, Venezuela



Inspection and technical supervision of the construction of the East jetty discharge of the Naiguata river channeling. CORPOVARGAS 2001 Vargas State, Venezuela

<u>Plan for the coast recovery, stabilization and development of the metropolitan litoral.</u> SOLE AREA AUTHORITY OF VARGAS STATE 2000 - 2001 Vargas State, Venezuela

<u>Project of erosion control of the submarine discharge of the Barcelona waste waters treatment plant.</u> MINISTRY OF ENVIRONMENT AND RENEWABLE NATURAL RESOURCES 2001 Anzoategui State, Venezuela

<u>Channeling works project of the mouth and beaches of Palmar West.</u> SOLE AREA AUTHORITY OF VARGAS STATE 2001 Vargas State, Venezuela

Improvement and reinforcement of the South Coastal road. MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT 1999 - 2000 Antofagasta. II Region. Chile

Inspection for the expansion of the San Antonio port. MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT 1997 San Antonio. V Region. Chile

West esplanade protective jetty reconstruction Inspection at the Tacoa thermoelectric power plant. C.A. ELECTRICIDAD DE CARACAS 1996 Vargas State, Venezuela

<u>Marine works project of the sea water intake channel, Aquamarine Shrimp Farm.</u> ACUAMARINA DE LA COSTA 1994 Zulia and Falcon States, Venezuela



<u>Marine works project and complex planning. Public marina of La Sabana.</u> FEDERAL DISTRICT GOVERNMENT 1992 Federal District, Venezuela

<u>Project and inspection of the sea water intake of the Siembramar shrimp farm in Barcelona.</u> SIEMBRAMAR 1991 -1992 Anzoategui State, Venezuela

<u>Fishery harbor marine works project. La Zorra fishery core.</u> FEDERAL DISTRICT GOVERNMENT 1990 Federal District, Venezuela

<u>Discharge works of the Bebedero creek collector and of the "Los Patos" Lagoon channel. Drainage of the west sector.</u> MINISTRY OF ENVIRONMENT AND RENEWABLE NATURAL RESOURCES 1989 Sucre State, Venezuela

Marine works for the Constanza Port Project. PUERTO PRÍNCIPE INVESTMENTS 1989 Nueva Esparta State, Venezuela

Project and inspection of the reinforcement works of the Tacoa thermoelectric power plant jetties. C.A. LA ELECTRICIDAD DE CARACAS 1988 Federal District, Venezuela

<u>Project of marine works reinforcements for the conservation, defense and improvement of the environment for Isla de Aves.</u> MINISTRY OF ENVIRONMENT AND RENEWABLE NATURAL RESOURCES 1988 Federal Premises, Venezuela

Project and inspection of the Zapara seafront. NATIONAL CHANNELING INSTITUTE. INC 1987 -1988 Zulia State, Venezuela





<u>Field studies and breakwaters project. Fishery dock in Saucedo.</u> MINISTRY OF ENVIRONMENT AND RENEWABLE NATURAL RESOURCES 1988 Sucre State, Venezuela

Project and inspection of the marine works for the erosion control and Master Plan for the development of the coastline of Ocumare de la Costa. MINISTRY OF URBAN DEVELOPMENT. MINDUR 1987 Aragua State, Venezuela

<u>Erosion control in the coasts of La Guardia town.</u> MINISTRY OF ENVIRONMENT AND RENEWABLE NATURAL RESOURCES 1986 Nueva Esparta State, Venezuela

<u>Project and inspection of marine works in the El Cuchivano beach resort.</u> TOURISM CORPORATION. CORPOTURISMO 1981 Miranda State, Venezuela

Marine works project for the Copan Marina. MINISTRY OF URBAN DEVELOPMENT. MINDUR 1981 Federal District, Venezuela

Protection of the filling project and currents study. 2<sup>nd</sup> Stage of the Maracaibo Lake Boulevard. MINISTRY OF ENVIRONMENT AND RENEWABLE NATURAL RESOURCES 1981 Zulia State, Venezuela

Inspection, repair and consolidation of the works at the western side of the navigation channel of the Maracaibo lake. NATIONAL CHANNELING INSTITUTE. INC 1981 Zulia State, Venezuela

<u>Project and inspection for the recovery of the beaches and the breakwaters.</u> PLAYA GRANDE CLUB 1980 Federal District, Venezuela.





<u>Project and inspection of the control jetties. Maurica Beach and Lecherias-Guaraguao section.</u> STATE OF ANZOATEGUI GOVERNMENT 1980 Anzoategui State, Venezuela

<u>Project and inspection of the expansion of the Catia La Mar jetties.</u> FEDERAL DISTRICT GOVERNMENT 1980 Federal District, Venezuela

<u>Masterplan project of the 2<sup>nd</sup> Stage of the Maracaibo Lake Boulevard.</u> NATIONAL CHANNELING INSTITUTE. INC 1980 Zulia State, Venezuela

<u>Project of the Montserrat marina. Breakwaters, administrative and social buildings and port facilities.</u> PORTS NATIONAL INSTITUTE 1978 Caribbean Sea, Venezuela

Project and supervision of the construction of the protective jetty and filling of the Cumana's public marina. SOUCY & ASSOCIATED 1976 Sucre State, Venezuela

<u>Project and supervision of the marine works of the Tacoa thermoelectric power plant.</u> INELECTRA 1975 - 1976 Federal District, Venezuela **Coastal Experience** Sport and touristic facilities & Artificial Beaches

In the **Incostas Nouel Group**, we design and develop solutions of the highest quality. From small infrastructures such as piers, access ramp, etc. Even large marine facilities with all the necessary services. We have vast experience in projects for the rehabilitation of new recreational beaches and improvement of existing ones.

Some of our solutions include:

- Pocket or bow beaches
- Protection with submerged breakwater
- Combined solutions
- Submerged dikes
- Artificial sand fillings



## Sport and Touristic Facilities. Artificial Beaches



Project and inspection of the improvements of the beaches at the public beach resort of Naiguata. FEDERAL DISTRICT GOVERNMENT Centre Litoral, Venezuela

Project and inspection of the marina of the Hotel Playa Grande Caribe, Puerto Viejo, and inspection and supervision of the construction of two breakwarters. HOTEL, C.A. Centre Litoral, Venezuela



PUERTO VIEJO Litoral Central - Venezuel



"El Carboncillo" Artificial Beach Project. MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT Antofagasta. Chile

Project for the expansion of Los Angeles Beach. FEDERAL DISTRICT GOVERNMENT Federal District, Venezuela



#### Experience in...



<u>Miramar public artificial beach Project. Nagarote.</u> EMBYSA Miramar, Nagarote. Nicaragua 2019

Project of sand recharge at the Bounganvileae residence beach. D'EMPAIRE REYNA ABOGADOS Barbados 2018

<u>Ingeniería conceptual del proyecto; Marina del Placer. Sector El Pavero. Macuto .</u> INVERSIONES MARINA DEL PLACER, C.A. Estado Vargas. Venezuela 2016

<u>Puerto Playa Marina Project.</u> Wave study, design optimization of the marina and repair of the existing <u>breakwater</u>. PROMOTORA CLUB DE PLAYA, C.A. 2015 Anzoategui State. Venezuela

<u>Inspection of marine works, dredging and breakwater construction Camuri Club Grande.</u> CLUB CAMURI GRANDE, C.A. Vargas State. Venezuela 2011

Improvements project of the beaches and marina expansion in Playa Azul Club. CLUB PLAYA AZUL, C.A. Vargas State. Venezuela

<u>Protective jetty project of the integral diagnostic centre and rehabilitation room located at the Catia</u> <u>La Mar Beach Resort.</u> HOUSING NATIONAL INSTITUTE. INAVI 2006 - 2007 Vargas State, Venezuela

<u>Recovery project of the Tanaguarenas Club beach.</u> TANAGUARENAS CLUB 2006 Vargas State, Venezuela



<u>Feasibility study of recreational beaches in the Gulf of Venezuela.</u> CARBOZULIA 2005 Zulia State, Venezuela

<u>Trocadero Resort project, Antofagasta, II Region.</u> HYDRAULICS NATIONAL INSTITUTE 2003 Antofagasta. Chile

<u>Studies and projects for the recovery of the oceanic beach, sheltered beach nad port harbor.</u> PUERTO AZUL CLUB 2000 Vargas State, Venezuela

<u>Construction and enabling of beaches and artificial pools in the Covadonga Beach Resort, Tocopilla.</u> MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT 2000 Tocopilla. Antofagasta. Chile

<u>Preliminary plan for the marine works for the construction and enabling of beaches and artificial pools.</u> <u>La Chimba.</u> MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT 2000 Antofagasta. Chile

<u>Construction and enabling of beaches and artificial pools. El Carboncillo.</u> HONORABLE MUNICIPALITY OF ANTOFAGASTA 1999 Antofagasta. Chile

<u>Project of protection and improvements in El Salitre of Tocopilla beach.</u> MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT 1997 Tocopilla. Il Region. Chile

<u>Feasibility study, marina of Aprodoral Investment in Lecherías, Puerto la Cruz.</u> INVESTMENTS APRODORAL 1997 Anzoategui State, Venezuela



<u>Preliminary study for improvements in the Caimare Chico Beach.</u> CIDHCA 1995 Zulia State, Venezuela

Recreational works in Playa Medina, Sucre State. Alternatives preliminary plan. CORPOMEDINA 1993 Sucre State, Venezuela

<u>Project and inspection of the construction of two breakwaters. Marina of the hotel Playa Grande</u> <u>Caribe.</u> HOTEL PLAYA GRANDE CARIBE, C.A. 1993 - 1995 Federal District, Venezuela

<u>Marine works project and planning of the La Sabana Public Marina complex.</u> FEDERAL DISTRICT GOVERNMENT 1992 Federal District, Venezuela

<u>Marine works and planning of the complex for the Catia la Mar, El Pavero and Cabo Blanco community</u> <u>marinas.</u> FEDERAL DISTRICT GOVERNMENT 1991 Federal District, Venezuela

<u>Feasibility study of a marina and artificial pools. Chuspa Touristic Recreational Complex.</u> DICHUSPA, S.A. 1990 Miranda State, Venezuela

Marine works project for the marina of the Hotel Puerto Somosagua in El Rincon. Margarita Island. TREBOLCA 1990 Nueva Esparta State, Venezuela

<u>Project of the Hotel Medano Caribe Beach Club marina.</u> J-4 INVESTMENTS 1990 Falcon State, Venezuela





<u>Project for the construction of a breakwater in El Pavero Sport Complex.</u> FEDERAL DISTRICT GOVERNMENT 1986 Federal District, Venezuela

<u>Project of the improvement in the oceanic beach of Puerto Azul.</u> PUERTO AZUL CLUB 1987 Federal District, Venezuela

Expansion project of Los Angeles beach. FEDERAL DISTRICT GOVERNMENT 1982 Federal District, Venezuela

Preliminary scheme and feasibility study of the port works of the Las Mercedes Nautic Club. IMGECIMA 1985 Zulia State, Venezuela

<u>Preliminary project of the Oricao Club beach.</u> ORICAO PROMOTIONS, S.A. 1981 Federal Disctrict, Venezuela

<u>Feasibility preliminary study of touristic use of the national coasts.</u> TOURISM CORPORATION. CORPOTURISMO 1979 Federal District, Venezuela

Improvement project of the touristic beach resort of Macuto. FEDERAL DISTRICT GOVERNMENT 1978 Federal District, Venezuela

Marine works project of the El Palmar Nautical Sports Centre. SIMON BOLIVAR CENTRE 1977 Federal District, Venezuela



<u>Project and counseling to the inspection of the marine works of the Cabo Blanco Recreational</u> <u>Complex.</u> OSCAR CARMONA 1976 - 1977 Federal District, Venezuela

Alternatives selection of sand borrow for the Central Coasts beaches. TOURISM CORPORATION. CORPOTURISMO 1977 Federal District, Venezuela

<u>Central Coasts quarries and beaches capacities studies.</u> CORPOTURISMO 1976 Federal District, Venezuela

<u>Nauguatá public resort beaches improvements project and inspection.</u> FEDERAL DISTRICT GOVERNMENT 1976 Federal District, Venezuela

<u>Camuri Chico resort beaches improvements project.</u> SOUCY & ASOCIADOS 1975 Federal District, Venezuela

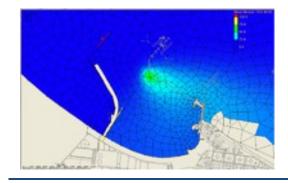
<u>Camuri Chico-Caribito resort project and inspection of beaches filling.</u> SIMON BOLIVAR CENTRE 1975 Federal District, Venezuela **Coastal** Submarine pipeline and Effluents Diffusion

At the **Incostas Nouel Group,** we offer solutions in sanitary engineering, we have extensive experience in the design of underwater outfalls and effluent diffusers, which are adapted to the regulations of each country.

We carry out all the necessary field studies to characterize the existing local conditions; bathymetry, current measurements, geophysical survey, tidal measurements, etc. Fecal coliform dispersion study. For the determination of the position we use mathematical models of diffusion and thermal recirculation. SMS, CORMIX.

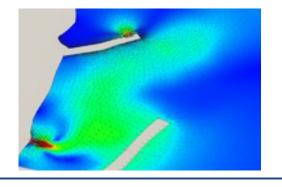


# Submarine pipelines Projects and Studies of Effluents Diffusion



Works of intake and discharge for the thermoelectric power plant associated to the expansion of the El Palito refinery. Y & V - PDVSA Carabobo State. Venezuela 2009 - 2010

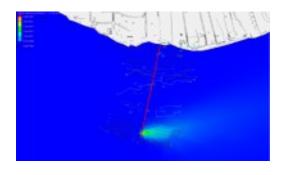
AES ITABO plant modification of discharge to the sea works. Basic and Detail Engineering. ITABO Dominican Republic 2008





Study of local conditions, sedimentation and modeling of the CWS discharge. New Puerto Coronel coal thermoelectric power central. COLBUN, S.A. VIII Region- Chile 2006

Conceptual, Basic and Detailed Engineering of the submarine emissary. Pluvial sanitation of the Guajimia Creek and it's main effluents. DESSAU INC Santo Domingo, Dominican Republic. 2008





<u>Consultancy for the execution of Detailed Engineering studies and designs for the construction of the necessary works for the Santa Marta city aqueduct system supply final solution</u>. INAR ASOCIADOS, S.A. 2016 – 2017 Santa Marta, Colombia.

<u>Conceptual and Basic Engineering of the emissary in Turiamo for the discharge of excess water from</u> <u>the Valencia Lake</u>. HIDROCENTRO 2014 Carabobo State. Venezuela.

<u>Hydro-Thermal Study. Modeling of diffusion and thermal recirculation and sand and</u> CMEC ENGINEERING, C.A. Carabobo State. Venezuela 2012

<u>Feasibility Study of Water System of Adduction and discharge for cooling of Project Combined Cycle</u> <u>Termozulia III.</u> ENELVEN 2010 Zulia State. Venezuela

Bathymetry, marine currents and conceptualization of intake and discharge works study for the Juan Bautista Arismendi thermoelectric power generating plant. El Guamache sector. GTME - CORPOELEC 2010 Nueva Esparta State, Venezuela

Basic and Detail Engineering of the intake and discharge works for the Termozulia II thermoelectric power generating plant.. JANTESA - ENELVEN 2008-2010 Zulia State, Venezuela

<u>Conceptual, Basic and Detailed Engineering of the submarine emissary.</u> <u>Pluvial sanitation of the Guajimia Creek and it's main effluents.</u> DESSAU- INC. 2009 Santo Domingo, Dominican Republic



<u>Modification works project of the cooling water system discharge of the AES ITABO thermoelectric</u> <u>power plant.</u> AES 2008 Dominican Republic

Local conditions, sedimentation and Conceptual Engineering for the discharge of the cooling water system. Project of the new coal thermoelectric power central in Punta Pochoco. AES GENER 2006 VIII Region, Chile

<u>Study of the local conditions, sedimentation and Conceptual Engineering for the discharge of the cooling water system. Project of the new coal thermoelectric power central in Penco.</u> COLBUN, S.A. 2006 VIII Region, Chile

<u>Study of the local conditions, sedimentation and Conceptual Engineering of the cooling water system</u> <u>discharge. Project of the new coal thermoelectric power central in Puerto Coronel.</u> COLBUN, S.A. 2006 VIII Region, Chile

Positioning of the optic fiber cable laying in the Orinoco River between the communities of Los Barrancos and San Felix.. CORPOTELETECNICAL 2006 Monagas and Bolivar States, Venezuela

<u>Studies for the definition and construction of zones for discharge of material coming from the cleaning of the river banks..</u> CORPOVARGAS 2005 - 2007 Vargas State, Venezuela

<u>Study of the submarine discharge of the Puerto Piritu project, conceptualization of the submarine emissary.</u> DESSAU SOPRIN – MARNR 2004 Anzoategui State, Venezuela

#### Experience in...



Extension of the East Coast communities submarine discharge. HIDROCAPLITAL 2001 Vargas State, Venezuela

<u>Project of the to the sea discharge. Puerto La Cruz drainage.</u> OBHIDRA 1977 Anzoategui State, Venezuela **Coastal Experience** Marine Hydraulics

At the **Incostas Nouel Group**, we have extensive experience in marine hydraulics and coastal engineering, which allows us to characterize the physical behavior of the coastal environment.

Studies of coastal dynamics, bottom morphology, diffraction, refraction and reflection of the waves, calculations with the OUTRAY model.



Dynamic coastal study of the San Jorge project. EMPRESA PORTUARIA NACIONAL EPN Nicaragua 2016

<u>Coasts dynamics study of the sector in between Cabo Blanco and Punta Cazonero, Antolin del Campo</u> <u>Minicipality, Playa El Agua, Nueva Esparta State</u>. TRATEVENCA 2014 Nueva Esparta State. Venezuela.

<u>Fluff Study. Specialized consultancy in hydraulics, hydrology and sedimentological hydrodynamics in the Boca Grande of the Orinoco river sector</u>. NATIONAL CHANELLING INSTITUTE (I.N.C.) 2013 Boca Grande sector. Orinoco River - Venezuela

<u>Study of coasts dynamics of the sector between Punta Cabo Blanco y Punta Cazonero, El Agua beach.</u> TOURISM CORPORATION. CORPOTURISMO 2001 Nueva Esparta State, Venezuela

<u>Calculations of marine hydraulics related to the diffuser of the submarine emissary.</u> CONTRINA 2000 Anzoategui State, Venezuela

<u>Studsy of coasts hydrodynamics. North beach of Chichiriviche.</u> TOURISM CORPORATION. CORPOTURISMO 1994 Falcon State, Venezuela

<u>Inspection of the hydraulic model of the service pier of the Numrep</u> project.. CORPOVEN, S.A. 1994 Carabobo State, Venezuela

<u>Marine hydraulics for the project of the new San Antonio port esplanade.</u> MINISTRY OF PUBLIC WORKS. PORT WORKS MANAGEMENT 1994 - 1995 San Antonio, V Region, Chile

#### Experience in...



<u>Study of the hydraulic functioning of the El Morro lagoon of Porlamar.</u> IMPARQUES 1993 Nueva Esparta State, Venezuela **Coastal Experience** Other Studies

At the **Incostas Nouel Group**, we can offer consulting services, studies and projects inherent to the maritime, river and lake environment.

Our projects range from existing infrastructures, with significant limitations, to virgin lands that require large-scale planning.



# Other Studies

<u>Consulting, inspection, evaluation and diognostic services at Morning Glory landfill.</u> Apanas reservoir. CONINCASA CONSTRUCCIONES INGENIERAS DEL CARIBE, S.A. 2019 - 2020 Jinotega Nicaragua

<u>Update of the material extraction sites for the risks management works, Vargas Plan 2005.</u> CORPOVARGAS 2005 - 2006 Vargas State, Venezuela

Additional scopes of the environment impact study of Punta de Aves project, Chichiriviche. VARADERO DEVELOPMENTS 2003 Falcon State, Venezuela

<u>Salinization study of the Maracaibo lake.</u> NATIONAL CHANNELING INSTITUTE. INC. 1996 Zulia State, Venezuela