Caribbean Environment Programme

United Nations Environment Programme

UNEP

Directory of Marine Environmental Research Institutions in the Wider Caribbean Region

CEP Technical Report No. 6

1991

Note:

The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of UNEP concerning the legal status of any State, Territory, city or area, or its authorities, or concerning the delimitation of their frontiers or boundaries.

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Directory of Marine Environmental Research Institutions in the Wider Caribbean Region

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PREFACE

As part of the continuing effort of the Caribbean Environment Programme (CEP) to provide technical information which may contribute to the protection of the marine environment, specialized directories of marine environmental institutions and bibliographies on the marine environment are being systematically prepared.

This publication is a product of the Regional Programme on Information Systems for the Management of Marine and Coastal Resources (CEPNET) and represents an updated and improved version of the Directory of Marine Environmental Centres of the Caribbean, published by FAO and UNEP in 1985. It has been compiled from the databases at the Regional Co-ordinating Unit (RCU) of CEP, with the assistance of UNEP's Library and Documentation Centre. Additionally, the RCU circulated comprehensive technical questionnaires to CEP and collated the replies received into specialized tables on marine pollution categories, in order to assist in the implementation of the Regional Programme on Assessment and Control of Marine Pollution (CEPPOL), jointly implemented by UNESCO's Intergovernmental Oceanographic Commission (IOC) and UNEP. This information is presented in Annexes I to V to this publication.

Each institution in this directory has been assigned an access number. The subject classification list (templates and index) follows the preface. Each subject is followed by the access number of those institutions which have a specialization corresponding to that subject. The access number of an institution may appear in several places in the classified list.

The RCU apologizes in advance for possible errors and omissions in the directory and does not claim that it includes all the relevant marine environmental research centres of the Wider Caribbean region. Thus, in order to make this directory as accurate and useful as possible, we welcome all comments on, and amendments to, the present document, as well as suggestions for its expansion. This information should be addressed to:

CEPNET
UNEP/Caribbean Environment Programme
Regional Co-ordinating Unit (RCU)
14-20 Port Royal Street
Kington
Jamaica

PREFACE

Comme partie de l'effort continue du Programme pour l'Environnement des Caraïbes (PEC) de donner des informations techniques qui peuvent contribuer à la protection du milieu marin, des annuaires spécialisés des institutions et des bibliographies écologiques marines sur le milieu marin sont systématiquement en cours de préparation.

Cette publication est un produit du Programme Régional sur les systèmes d'information pour la gestion des Ressources Marines et Côtières (CEPNET) et représente la version révisée et corrigée de l'annuaire des Centres traitant de l'Environnement Marin des Caraïbes, publiée par la FAO et le PNUE en 1985. Elle a été compilée à partir des bases de données de l'Unité de Coordination Régionale (UCR) du PEC, en coopération avec la bibliotèque et le Centre de Documentation du PNUE. De plus, l'UCR a distribué des questionnaires techniques élaborés à des institutions de recherche sur le milieu marin dans les Etats et Territoires participant au PEC et compiler les réponses reçues en des tableaux spécialisés rangés par catégorie sur la pollution marine, dans le but d'aider à la mise en oeuvre du Programme Régional pour l'évaluation et le contrôle de la pollution marine dans la Région des Caraïbes (CEPPOL), mis en oeuvre par l'UNESCO/la Commission Océanographique Intergouvernementale (COI) en collaboration avec le PNUE. Vous trouverez cette information dans les Annexes I à V de cette publication.

Un numéro d'accès a été attribué à chaque institution dans cet annuaire. La liste de classification du sujet (patron et index) suit le préface. Chaque sujet est suivi d'un numéro d'accès des institutions qui ont une spécialisation correspondant à ce sujet. Le numéro d'accès d'une institution peut être publié dans plusieurs endroits sur la liste d'information.

L'UCR s'excuse d'avance pour les erreurs possible et omissions qui peuvent figurer dans l'annuaire et ne prétend pas non plus que tous les centres de recherche sur l'environnement marin dans la région des Caraïbes sont inclus. Toutefois, dans le but de rendre l'annuaire aussi exact et utile que possible, nous aurions aprécié recevoir tous vos commentaires, et corrections, à apporter à ce document, ainsi que vos suggestions pour son développement. Cette information doit-être envoyée à:

CEPNET
PNUE/Programme pour l'Environnement des Caraïbes
Unité de Coordination régionale (UCR)
14-20 Port Royal Street
Kingston
Jamaïque

PREFACIO

Como parte del continuo esfuerzo del Programa Ambiental del Caribe (PAC) de proporcionar información técnica que pueda contribuir a la protección del medio ambiente marino, se han venido preparando sistemáticamente, directorios especializados sobre instituciones ambientales marinas y bibliográfias sobre el medio ambiente marino.

Esta publicación es producto del Programa Regional sobre Sistemas de Información para el Manejo de Recursos Marinos y Costeros (CEPNET) y representa una versión actualizada y mejorada del Directorio de Centros Marinos Ambientales del Caribe, publicado por la FAO y el PNUMA en 1985. Se ha compilado a partir de las bases de datos de la Unidad de Coordinación Regional (UCR) del PAC, con la ayuda de la Biblioteca y Centro de Documentación del PNUMA. Adicionalmente, la UCR circuló cuestionarios técnicos exhaustivos entre las instituciones de investigación ambiental y marina de los Estados y Territorios que participan en el PAC y categorizo las respuestas recibidas dentro de tablas especializadas sobre contaminación marina, para de está forma asistir con la ejecución del Programa Regional sobre Evaluación y Control de la Contaminación Marina (CEPPOL), el cual implementan de manera conjunta la Comisión Oceanográfica Intergubernamental (COI) de la UNESCO y el PNUMA. Esta información se encuentra en los Anexos I al V de esta publicación.

A cada institución en este Directorio se le ha asignado un número de acceso. La lista de clasificación por temas ("templates e index") se encuentra a continuación del Prefacio. Cada tema está acompañado por el número de acceso de aquellas instituciones que tienen una especialización correspondiente a ese tema. El número de acceso de una institución puede aparecer en varios lugares de la lista de clasificación.

La UCR presenta sus disculpas por los posibles errores u omisiones que se encuentren en el Directorio y no pretende afirmar que este documento incluye todos los centros de investigación marina y ambiental de la región del Gran Caribe. Por lo tanto, invitamos comentarios y cambios, así como sugerencias para su expasión, a fin de hacer este directorio lo más preciso y util posible. Está información debera ser enviada a:

CEPNET
PNUMA/Programa Ambiental del Caribe
Unidad de Coordinación Regional (UCR)
14-20 Port Royal Street
Kingston
Jamaica

TEMPLATES AND INDEX

Research Institution No.

F ENVIRONMENTAL PLANNING AND MANAGEMENT

Research Institution No.

G ENVIRONMENTAL MANAGEMENT TOOLS

3, 6, 12, 14, 15, 16, 21, 41, 43, 45, 64, 69, 75, 76, 88.

G1- Environmental Impact Assessment Methodology *6, 45, 73.*
G2- Cost and Benefits Analysis *75.*
G3- Risk Analysis *75.*

H SOCIETY, POPULATION AND ENVIRONMENT

11, 12, 18, 45, 50, 59, 69, 70.

H1- Attitudes/Values/Beliefs *59.*
H2- History/Anthropology/Ethnology
H3- Human Ecology *45.*
H4- Needs Assessment
H5- Socio-economic Analysis Micro *69, 70.*
H6- Socio-economic Analysis Macro *45, 50.*
H7- Demography
H8- Family Planning
H9- Indigenous Peoples

J COMMUNICATIONS/INFORMATION/PERCEPTION

1, 3, 8, 9, 11, 12, 14, 15, 16, 19, 22, 23, 24, 26, 29, 32, 33, 40, 41, 43, 45, 46, 49, 51, 53, 54, 55, 57, 58, 59, 60, 61, 62, 64, 65, 66, 67, 68, 69, 71, 74, 75, 83, 84, 86, 87, 88, 90, 97, 99, 101.

J1- TV/Films *71.*
J2- Press/Radio
J3- Photo/AV
J4- Education and Awareness *1, 8, 24, 32, 33, 40, 45, 46, 51, 55, 57, 58, 59, 60, 61, 62, 65, 66, 67, 68, 71, 84, 86, 87, 88, 90, 97, 99, 101.*
  J41- Environmental education *45.*
  J42- Campaign planning
  J43- Schools
  J44- Public participation

	Research Institution No.
M1- Physical Sciences	*4, 5, 8, 10, 12, 13, 14, 16, 17, 18, 19, 22, 23, 25, 27, 30, 31, 33, 35, 36, 38, 39, 42, 44, 46, 47, 49, 50, 51, 53, 56, 58, 59, 63, 65, 67, 70, 71, 72, 74, 77, 78, 79, 84, 87, 88, 89, 93, 94, 95, 97, 98.*
M11- Geology	*10, 17, 18, 19, 30, 36, 42, 51, 63, 70, 79, 82, 94.*
M12- Sedimentology	*10, 17, 42, 44, 51, 63, 79.*
M13- Geomorphology	*5, 17, 84.*
M14- Hydrology	*4, 13, 35, 47, 59, 97.*
M15- Meteorology/Climate	*4, 5, 13, 30, 35, 49, 77, 82, 97.*
M16- Oceanography	*5, 10, 13, 17, 22, 25, 27, 31, 46, 50, 56, 58, 63, 65, 67, 70, 71, 72, 79, 82, 93, 95, 98.*
M2- Chemical Sciences	*8, 10, 15, 16, 19, 23, 30, 38, 40, 44, 49, 53, 63, 72, 74, 75, 77, 78, 79, 80, 86, 87, 88, 89, 92.*
M21- Marine	*8, 10, 15, 16, 30, 40, 44, 53, 63, 78, 87.*
M22- Terrestrial	
M23- Biochemistry	*38, 72.*
M3- Ecology/Biology	*1, 2, 7, 8, 9, 10, 12, 14, 15, 16, 18, 19, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 37, 38, 39, 40, 42, 44, 46, 49, 50, 51, 52, 53, 54, 56, 58, 63, 66, 67, 70, 72, 74, 75, 78, 79, 80, 82, 83, 84, 85, 87, 89, 91, 92, 93, 95, 97, 99, 101.*
M31- Animal ecology/taxonomy	*18, 24, 42, 44, 85.*
M32- Plant ecology/taxonomy	*24, 52.*
M33- Invertebrates	*31, 42, 46, 50, 56, 63, 70, 75, 91, 99.*
M34- Fish -	*31, 37, 40, 46, 50, 51, 52, 63, 70, 75, 80, 85.*
M35- Biogeochemical cycles	*52, 79, 80.*
M36- Biomass/productivity	*37, 50.*
M37- Biogeography/genetics	*80, 82.*
M38- Marine Mammals	*73.*
M4- Ecosystems	*7, 8, 9, 12, 14, 19, 21, 23, 24, 25, 26, 27, 29, 32, 33, 38, 39, 40, 42, 44, 45, 46, 49, 51, 52, 54, 55, 56, 58, 63, 64, 67, 68, 69, 70, 71, 73,* 75, 78, 79, 80, 82, 83, 87, *89, 92, 93, 97, 101.*
M41- Mangrove swamps	*7, 8, 9, 32, 33, 44, 49, 51, 52, 55, 56, 58, 67, 80, 82, 93, 101.*
M42- Wetlands	*12, 14, 24, 45, 46, 54, 55, 97.*
M43- Coral reefs and atolls	*7, 8, 19, 24, 25, 26, 42, 46, 51, 54, 55, 63, 68, 70, 75, 80, 82, 93, 97, 101.*
M44- Beaches, dunes and deltas	*26.*
M45- Forest resources	*38.*
M46- Small Islands	

Research Institution No.

N FORESTRY AND AGRICULTURE

1, 2, 3, 7, 8, 9, 12, 14, 15, 18, 21, 22, 24, 27, 28, 30, 31, 32, 33, 37, 38, 39, 40, 41, 43, 44, 45, 46, 47, 50, 51, 52, 53, 56, 57, 58, 61, 65, 66, 68, 69, 70, 71, 72, 76, 80, 81, 84, 85, 91, 95, 97, 101.

N1- Forestry *12, 15, 57, 61.*
- N11- Sylviculture
- N12- Forest management *12, 57.*
- N13- Watershed management
- N14- Soil erosion/erosion control

N2- Agriculture *1, 2, 3, 7, 8, 9, 12, 14, 15, 18, 21, 22, 24, 27, 28, 31, 32, 33, 37, 38, 39, 40, 43, 44, 47, 50, 51, 52, 53, 56, 58, 61, 65, 66, 68, 69, 70, 71, 72, 76, 80, 81, 84, 85, 91, 95, 97, 101.*
- N21- Crops
- N22- Farming/grazing systems
- N23- Pest control *43.*
- N24- Irrigation
- N25- Shifting cultivation
- N26- Aquaculture *1, 2, 3, 7, 8, 9, 12, 14, 15, 18, 21, 22, 24, 27, 28, 31, 32, 33, 37, 38, 39, 40, 43, 44, 46, 47, 50, 51, 52, 53, 56, 58, 65, 66, 68, 69, 70, 71, 72, 73, 76, 80, 81, 84, 85, 91, 95, 97, 101.*

P NATURE CONSERVATION

15, 21, 22, 23, 30, 38, 41, 43, 55, 57, 61.

P1- Genetic Resources/Biological Diversity *30.*
- P11- Species

P2- Wildlife Conservation *43, 55.*

P3- National Parks and Reserves, incl. Marine Parks *57, 61.*

Q INDUSTRY/ENGINEERING

1, 2, 15, 22, 23, 25, 28, 29, 30, 36, 38, 39, 40, 56, 59, 65, 66, 69, 75, 77, 78, 80, 81, 84, 85, 87, 88, 91, 94, 101.

	Research Institution No.
Q1- Agricultural Engineering	
Q2- Chemical Engineering	
Q3- Civil Engineering/Land Reclamation	*59.*
Q4- Marine Engineering/Mineral Extraction (mining)	*2, 77, 84.*
Q5- Water Engineering	*88.*
Q6- Control/Industrial Ecology	
Q7- Siting	
Q8- Pollution/Waste/Recycling	*30, 80.*
Q9- Fishing Technology	*1, 25, 28, 29, 38, 39, 40, 56, 65, 66, 69, 78, 81, 84, 85, 87, 91, 101.*

R ENERGY RESOURCES

4, 13, 35, 41, 45, 74, 76, 81, 87, 88, 90, 94.

R1- Fuelwood & biomass	
R2- Geothermal	
R3- Hydro	*4.*
R4- Nuclear	
R5- Oil/gas/coal	*45, 87, 94.*
R6- Solar/wind/tidal	*4, 35, 74, 76, 81, 90.*

S AIR RESOURCES

10, 14, 27, 28, 32, 35, 38, 49, 51, 78, 101.

S1- Air Pollution

T ENVIRONMENTAL LAW

23, 41, 84, 97.

T1- Bill Drafting
T2- Lobbying
T3- Enforcement
T4- Litigation
T5- Negotation/Conflict
T6- Resource Ownership Rights/Shared Natural Resources
T7- Regulations and Standards
T8- Legislation

	Research Institution No.
T9- Treaties	
U WATER RESOURCES	
	23, 27, 32, 33, 35, 38, 39, 41, 45, 51, 52, 56, 69, 74, 80, 97, 99, 101.
U1- Estuaries, harbours and near-shore	*45, 52, 69, 74, 80, 97.*
U2- Ground water	
U3- Rivers	
U4- Lakes	*38.*
V MARINE POLLUTION	
	3, 8, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 26, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48, 49, 50, 51, 53, 54, 57, 58, 60, 62, 63, 64, 65, 66, 67, 68, 69, 71, 73, 74, 75, 76, 77, 78, 80, 81, 83, 84, 85, 86, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 101.
V1- Land-based Sources	
V11- Industrial	
V12- Domestic	
V13- Agricultural	
V14- Water Quality Criteria	
V2- Pesticides	*3, 8, 10, 15, 19, 23, 30, 47, 53, 67, 97.*
V21- Marine organisms	
V22- Sediments	
V23- Water column	
V3- Sewage	*3, 10, 14, 15, 23, 53, 64, 98.*
V31- Seafood growing waters	
V32- Bathing waters	
V33- Other waters	
V34- Sediments and beach sand	
V4- Trace Metals	*8, 10, 15, 19, 23, 26, 44, 46, 47, 53, 64, 67, 74, 78, 83, 86, 97, 98.*
V41- Marine organisms	
V42- Sediments	
V43- Water column	
V5- Petroleum Hydrocarbons	*10, 14, 15, 19, 20, 23, 26, 43, 44, 46, 47, 53, 58, 64, 83, 86, 97.*
V51- Marine organisms	

	Research Institution No.
V52- Sediments and beach sands (incl. tar)	
V53- Water column	
V6- Marine Debris	*43.*
V61- Water	
V62- Beach	
V7- Solid Waste	*77.*
V8- Radio-active and Hazardous Wastes	
V9- Other Pollutants	

Note: See also Annexes I - V.

TABLE OF CONTENTS

MARINE ENVIRONMENTAL RESEARCH INSTITUTIONS

1. Ministry of Agriculture, Trade and Industry
Department of Fisheries

East Bay Street,
P.O. Box N3028,
Nassau, N.P.,
Bahamas
Telephone: (1- 809) 393-1777 to 9
Cable:
Telex: 20681 MIN ARG BAH
Telefax/facsimile: (1-809) 393-0238
Electr. Mail:
Director: Mr. Ronald W. Thompson
Specializations: F3, Q9, N26, F8, M3, J4
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

Involves marine resource assessment survey using SCUBA techniques. Principally concerned with shallow water resources of commercial importance or potential. Development of aquaculture regulations.

TRAINING PROGRAMME:

- Training courses in outboard engine and small diesel engine maintenance and repairs.
- Training courses in small boat handling, navigation and fishing.

STAFF:

Information not available.

PREMISES/FACILITIES:

Information not available.

INFORMATION FACILITIES:

Monographs and series titles:
(i) Annual Report, 1980, 1981
(ii) Fisheries Newsletter (quarterly)
(iii) Fisheries Bulletin (periodically)

EQUIPMENT:

Diving equipment with compressor, photographic equipment, deep freezer, refrigerator, balances, scales.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name:	**GUANAHANI**
Length:	20 m
Type :	Thompson trawler
Special facilities:	Echosounder, Loran C, hydraulic winch, VHF radio equipment, C.B. radio equipment, various types of fishing gear
Name :	**SAMANA**
Length:	8 m
Type:	Lindsey craft
Special facilities:	VHF radio equipment, hydraulic winch, fishing gear
Name:	**AREITO**
Length:	8 m
Type:	Lindsey craft
Special facilities:	as for SAMANA

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2. **Morton Salt Company**
c/o Morton Bahamas Ltd.,
Matthew Town, Great Inagua,
Bahamas
Telephone: (1-809) 324-4300
Cable: MATTHEW TOWN, INAGUA, BAH
Telex: MORTON
Telefax/facsimile:
Electr. Mail:
Director:
Specializations: M3, N26, Q4
Training: No
Periodicals: No
Institutional Nature: Business
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The Mariculture Project was initiated by Morton Bahamas Ltd. to determine the feasibility of integrating mariculture with an established solar salt operation in the South Bahamas. Research and monitoring activities include pond culture feasibility, maturation and hatchery experimentation with Penaeid species and algal culture.

TRAINING PROGRAMME:
Information not available.

STAFF:
2 Scientific Staff 2 Technical Staff

PREMISES/FACILITIES:
Building area: 622 m^2 Laboratory area: 34 m^2

INFORMATION FACILITIES:
Number of books, journals, manuscripts, etc.: 200
Number of periodical subscriptions: 5
Monographs and series titles:
- The Potential for Penaeid Shrimp Culture in the Bahamas (Nov/82).

EQUIPMENT:
Microscopes, aquariums, balances.

AQUARIUM FACILITIES:
Total area: 30 m^2 Number of tanks: 27

RESEARCH CRAFT:
Information not available.

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3. Bellairs Research Institute (BRI)
McGill University
Holetown,
St. James,
Barbados

Telephone: (1-809) 422-2087
Cable:
Telex:
Telefax/facsimile: (1-809) 429-4854
Electr. Mail:

Director: Dr. Wayne Hunte
Specializations: F1, F3, F5, G, J, M, N26, V3, V2
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The institute maintains an open-door policy to all students and scientists from around the world with research interest in tropical biology and geology.

TRAINING PROGRAMME:

- M.Sc. and Ph.D. programmes in natural sciences
- Undergraduate courses entitled "Applied Tropic Ecology"

STAFF:

4 Scientific Staff 3 Technical Staff 5 Other Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Horrocks, J.	Ph.D.	Chemical Pollution
Hunte, W.	Ph.D.	Ecology
Oxenford, H.	Ph.D.	Pollution
Parker, C.	B.Sc.	Pesticides

PREMISES /FACILITIES:

Facilities for 20 visiting scientists

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.:	9692
Number of periodical subscriptions:	12

EQUIPMENT:

Beckman and Gilford spectrophotometer, Turner fluorometer, flame photometer, bomb calorimeter, Gallenkamp autoclave, salinometer, Zeiss photomicroscope, 2 Zeiss inverted microscopes, 8 Wild M5 microscopes, Mako scuba compressor, slidemicrotome, underwater movie camera with housing, environmental chamber, 5 ovens, 5 Mettler balances, 3 centrifuges.

AQUARIUM FACILITIES:

Available.

RESEARCH CRAFT:

Information not available.

4. Caribbean Meteorologicial Institute (CMI)

P.O. Box 130,
Bridgetown,
Barbados
Telephone: (1-809) 425-1352/1363/1365
Cable: METINST, BARBADOS
Telex:
Telefax/facsimile:
Electr. Mail:
Principal: Mr. Colin A. Depradine
Specializations: M14, M15, R6, R3
Training: Yes
Periodicals: Yes
Institutional Nature: Intergovernmental
Geographic Scope: Primarily Insular Caribbean
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

Information not available.

TRAINING PROGRAMME:

(a) Training programmes at the WMO Class II, III, IV levels in the subjects of meteorology, climatology, and agrometeorology; (b) lower and higher technician level courses in hydrology; (c) B.Sc. degree programme in association with the University of the West Indies. (d) other areas: assistance with maintenance of the AMNET (Meteorological Telecommunications Circuit); and (e) archiving of meteorological and hydrological data for several Caribbean Islands.

STAFF:

10 Scientific Staff 8 Technical Staff 29 Other Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Brathwaite, P.	M.Sc	Hydrology
Burton, H.	M.Sc.	Meteorology
Depradine, C. A.	Ph.D.	Meteorology
Farnum, F. C.	M.Sc.	Hydrometeorology
Jeffers, deCourcey	M.Sc.	Agrometeorology
Lamming, S.	Ph.D.	Meteorology
Pestina Jeffers, M.	M.Sc.	Meteorology
Rocheford, Basil A.	M.Sc.	Climatology, Wind Energy

PREMISES/FACILITIES:

Building area : 6250 m^2 Laboratory area: 750 m^2
Facilities for visiting scientists: 1 Students: 75

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.:	75,000
Number of periodical subscriptions:	35

Monographs and series titles:
- Monthly Weather Summary

EQUIPMENT:

RC32B Mitsubishi 10cm weather radar, photographic equipment, calibration equipment including radiation, minicomputer, printing press, hydrological equipment, microcomputers.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Information not available.

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5. Coastal Conservation Project Unit

Government of Barbados,
Savannah Lodge, The Garrison,
St. Michael,
Barbados
Telephone: (1-809) 429-6933/8638
Cable:
Telex:
Telefax/facsimile: (1-809) 426-8959
Electr. Mail:

Project Manager: Dr. Leonard Nurse
Specializations: M13, M16, M15
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

To control erosion of beaches, create more useable beach space and to manage development in the coastal zone to sustain its economic viability and ecological potential.

Programmes include: (a) routine monitoring of beaches, reefs, tides, waves and water quality; (b) development control in association with Planning Department; and (c) execution of research projects with funding assistance from the Inter-American Development Bank (eg. 1991-94 Coastal Conservation Feasibility Study).

TRAINING PROGRAMME:

On the job training for staff structured as part of Project Implementation Programme.

STAFF:

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Atherley, K.A.N.	M.A.	Coastal Geomorphology Coastal Zone Planning
Bascom, R.L.	B.Sc	Engineering
Brewster, L.F.	M.Sc.	Marine Biology
Nurse, L.A.N.	Ph.D.	Coastal Geomorphology, Climatology, Oceanography

PREMISES/FACILITIES:

Building Area: 2,000 sq. ft.

INFORMATION FACILITIES:

Manuscripts, journals, books: approx. 2,000
Number of periodical subsriptions: 4
Annual Beach Profile Change
Monthly Tidal Summaries.

EQUIPMENT:

Endeco 1029 Tide Gauge, photographic equipment, surveying equipment, computers.

AQUARIUM FACILITIES:

Not applicable.

RESEARCH CRAFT:

Not applicable.

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6. **Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies (UWI)**

Cave Hill Campus, P. O. Box 64,
Bridgetown,
Barbados

Telephone: (1-809) 425-1310
Cable: UNIVADOS BARBADOS
Telex: (392) 2257 WB
Telefax/facsimile: (1-809) 425-1327
Electr. Mail:

Director: Dr. Euna A. Moore
Specializations: F7, G1, J4
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily Wider Caribbean
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

(a) To provide the region with a cadre of professionals trained in the management and protection of Caribbean environmental resources for sustainable development; and (b) to improve public awareness on environmental issues and their importance to the regional development and personal survival.

TRAINING PROGRAMME:

Post Graduate Diploma by course work. M.Phil and Ph.D. by research. Specifically: (a) one-calendar year post-graduate programme; (b) short-term training courses, eg. Environmental Impact Assessment, Coastal Zone Management; (c) teacher training for Environmental Education in primary and secondary schools.

STAFF:

3 Core Staff	3 Adjunct Staff	5 Other Staff

PROFESSIONAL CORE SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Hendry, M.	Ph.D	Coastal Zone Management
Ishmael, L.	Ph.D.	Biogeography/Planning
Oxenford, H.	Ph.D.	Fisheries Resources

Adjunct Staff: 1 Chemist, 1 Ecologist, 1 Lawyer. Additionally, visiting lecturers are involved.

PREMISES/FACILITIES:

Dispersed offices for administration, staff, laboratories, documentation and computers, totalling approx. 3,000 sq. ft. Dedicated building of 7,000 sq. ft. about to be built.

INFORMATION FACILITIES:

Documentation collection - items catalogued on CDS-ISIS system being linked by facsimile and elctronic mail to other institutions.

CERMES produces occasional publications of reports and research.

EQUIPMENT:

12 computers, 4 printers. Various environmental testing equipment - air, water and marine sampling apparatus. Quality analyzing equipment, including Microtox. One Mitsubishi Pajero van.

AQUARIUM FACILITIES:

Adjunct Aquaculture Research Facility of 3,000 sq. ft. with aquaria, troughs, tanks and relevant equipment.

RESEARCH CRAFT:

None owned directly, but access by rental of different types, small boats up to 30 ft in length, capable of winching and dredging.

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7. Bermuda Aquarium Natural History Museum and Zoo (BAMZ)

P.O. Box 145,
Flatts, Smith's 3,
Bermuda
Telephone: (1-809) 293-2727
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director:
Specializations: N26, M43, M3, M41
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily North America
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Most staff effort has been directed towards the maintenance of exhibits but some research on diets and diseases, mainly of fish, has also been performed.

TRAINING PROGRAMME:

(a) Lecture series for training volunteers of the Bermuda Zoological Society (BZS); (b) summer courses for school children; (c) foreign student in-service internship.

STAFF:

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Rand, T.	M.Sc.	Marine Biology, Diseases (fish): helminths/ protozoan/fungi/bacteria
Winchell, R.	M.Sc.	Marine Biology, Anthozoans (Zoantharia)

PREMISES/FACILITIES:

Information not available.

INFORMATION FACILITIES:

Information not available.

EQUIPMENT:

Information not available.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Information not available.

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8. **Bermuda Biological Station for Research Incorporated (BBSR)**

17 Biological Station Lane,
Ferry Reach GE 01,
Hamilton,
Bermuda

Telephone: (1-809) 297-1880
Cable: BIOSTATION, BERMUDA
Telex: BA 3246
Telefax/facsimile: 8092978143
Electr. Mail: Sciencenet/Omnet

Director: Dr. Anthony H. Knap
Specializations: F14, M43, J4, M1, M21, M3, N26, V2, V4, V
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily North America
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The institution provides facilities for marine research and education of the highest quality on an international level. **INSTITUTIONAL STRUCTURE:** (a) Administration/Library; (b) Conklin Laboratory: Marine and Atmospheric Programme (chemical laboratories), visiting scientists, biological laboratories, teaching laboratory, aquaculture laboratory, Wright Hall (accommodation), radiation laboratory.

TRAINING PROGRAMME:

(a) Undergraduate to graduate level courses on marine science (biology, chemistry, geology, pollution analysis) for international student body; (b) training workshops in marine pollution analysis.

STAFF:

7 Scientific Staff 3 Interns 6 Technical Staff 35 Other Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Burns, K.	Ph.D.	Marine Biochemistry
Cook, C.B.	Ph.D.	Marine Biology
Cook, S.B.	Ph.D.	Marine Ecology, Ecotoxicology
Iliffe, T.M.	Ph.D.	Speleology
Kananen, G.	Ph.D.	Chemical Oceanography
Knap, A.H.	Ph.D.	Chemical Oceanography
Simmons, J.A.K.	Ph.D.	Environmental Geochemistry

PREMISES/FACILITIES:

Laboratories: 20 Facilities for visiting scientists: 35

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 18,000
Number of periodical subscriptions : 95
Number of exchange agreements : 300
Monographs and serials titles :

- Contributions from the Bermuda Biological Station for Research (1 volume per year).
- Special publications (usually 1 each year).
- BBS Newsletter (scheduled for 3-4 times each year).

EQUIPMENT:

Liquid scintillation counter (Beckman LSC100), spectrophotometer and chart recorder (Beckman Model 25), ultracentrifuge (Beckman), refrigerated centrifuges (Sorvall RC2 and RC5), freeze dryer (Virtis), oscilloscope, fluorimeter, portable salinometer, atomic absorption spectrophotometer and HGA 400 programmer (Perkin Elmer), gas chromatograph (Hewlett Packard), gas chromatograph with integrator (Hewlett Packard), photometer and power supply (Perkin Elmer), salinometer, gas chromatograph/mass spectrophotometer (Hewlett Packard), liquid chromatograph (Hewlett Packard), UV/Visible spectrophotometer (Shimadzu/Bauschand Lomb), 4 Wild M20 compound microscopes, Wild inverted compound microscope, Zeiss microscope, Olympus dissecting microscope, 15 american Optical student grade dissecting microscopes, 5 american Optical student grade compound microscopes, 5-figure analytical balance (Mettler), 1 Sartorius Digital 3-figure, 1 toploading balances (Mettler), 2 pH meters, 6 IEC clinical centrifuges, sonifier/cell disrupter, Nikon photographic equipment, photomicrographic equipment, freezer chest, 30 dive tanks, scuba compressor, Packard Tri-

Carb 4530 liquid scintillation counter, spectrophotometer (Perkin Elmer Lambda 3B), fluorescence microscope with automatic camera system (Olympus BH5), Technical Autoanalyser, (CEH) CHN Analyzer, Seabird CTD System.

AQUARIUM FACILITIES:

Number of tanks: 5

RESEARCH CRAFT:

Name :	**R/V WEATHERBIRD**
Length :	20 m
Type :	Diesel engine vessel
Special facilities :	Hydrographic capabilities, Seabird CTD, 5,000 m wire 0.64cm single conductor galvanized torque balanced; 0.47cm stainless steel 7,000 metres and 0.47cm galvanized 7,000 metres, crane, Aframe, communication and navigation equipment, Avon support boat.
Wet Laboratory:	2.1m x 3.5m
Dry electronics Lab.:	2.1m x 3.5m
Main deck :	40.9 m^2
Radio call sign :	ZFU 2873
Name :	**BBS II**
Length :	13 m
Type :	Vessel
Special facilities :	Live wells, Loran C, VHF radio, echosounder, capstan winch, Aframe.

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9. Department of Agriculture and Fisheries
Division of Fisheries

P.O. Box 834,
Hamilton,
Bermuda
Telephone: (1-809) 296-4201
Cable:
Telex: BERMUDA 3246
Telefax/facsimile:
Electr. Mail:
Specializations: M3, F3, J52, N26, M41, F8
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily North America
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Concerned with fisheries conservation and the provision the professional and technical services necessary for this purpose.

TRAINING PROGRAMME:

Training has been conducted with the Cayman Islands Government Fisheries Office; Gulf and Caribbean Fisheries Institute and as adjunct professors to two overseas university students.

STAFF:

4 Professional Staff 3 Technical Staff 9 Other Staff

PREMISES/FACILITIES:

Building area : 1000 m^2 Laboratory area: 100 m^2

INFORMATION FACILITIES:

Monograph and series titles:

- Annual Report.
- Monthly Bulletin of Department of Agriculture and Fisheries.

EQUIPMENT:

Field microscope, 2 micro computers (10 megabytes).

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name :	**CALAMUS**
Length :	15 m
Type :	Fibreglass work boat
Special facilities :	Loran, Sonar, 2 depth recorders, VHF, SSB radios, hydraulic winches, power block longline reel, live wells.
Name :	**PROTECTOR**
Length :	8 m
Type :	Fibreglass work boat
Special facilities:	Hydraulic pot hauler, VHF radio, Loran, depth recorder.
Name :	**ARCA**
Length :	5 m
Type :	Fiberglass outboard
Special facilities:	VHF radio

10. Centro de Investigaciones Oceanográficas e Hidrográficas (CIOH)

Escuela Naval de Cadetes Manzanillo,
Casilla Postal 982,
Cartagena de Indias,
Colombia
Telephone: (57-53) 680641 to 3
Cable: CIOH
Telex:
Telefax/facsimile:
Electr. Mail: Telemail: COSTAS
Director: C.F. Sigfredo Velandia
Specializations: F2, M11, M12, M16, M3, S, V2, V3, V4, V5
Training: No
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Hoy depende de la Dirección General Marítima y Portuaria y es el organismo encargado de ejecutar proyectos de investigación oceanográfica e hidrográfica con el propósito de desa-rrollar el conocimiento integral de las áreas marinas nacionales y sus recursos.

PROGRAMA DE CAPACITACION:

Prestar asesoría y apoyo con su infraestructura a la Facultad de Oceanografía Física de la Escuela Naval de Cadetes y a la Escuela de Formación Técnicas de la Armada.

PERSONAL:

15 Profesionales científicos 25 Técnicos 25 Otros

PROFESIONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Arias, F.	B.Sc.	Clorofilas en fitoplancton
Cabrera, E.	B.Sc.	Oceanografía física
Calero , L.	B.Sc.	Zooplancton
Castillo, F.	B.Sc.	Fitoplancton
Chevillot, P.	B.Sc.	Sedimentología
Garay T., Jesus	B.Sc.	Contaminación marina
Gomez, M. A.	B.Sc.	Contaminación marina
Molina, A.	B.Sc.	Sedimentología
Quintero, R.	B.Sc.	Contaminación
Serrano, R.	B.Sc.	Corales

Tejada, C.	B.Sc.	Hidrografía
Toca, C.	B.Sc.	Oceanografía física
Velandia, S.	B.Sc.	Hidrografía

LOCALES/INSTALACIONES:

Superficie del edificio: 1,478m^2 Superficie del laboratorio: 210m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 3000
Número de suscripciones a publicaciones periódicas: 290
Los títulos de las monografías y las series:
- Boletín Científico del CIOH (Vol. 3 1981, Vol.4, 1982).
- Boletín Informativo del CIOH (trimestral, desde el ler. trimestre de 1982).

EQUIPO:

Botellas (Nansen/Niskin/Van Dorn); dragas (Schipeck/Vanbeen); termómetros invertidos; medidores de pH., oxígeno, corrientes, conductividad; espectrofotómetros de absorción atómica, infrarojo, ultravioletavisible; cromatógrafo de gases; espectrofluorómetro; microcomputador; balanzas analíticas; hornos; estufas, microscopios; estereoscopios; ecosondas Raytheon y Decca; calibrador de batitermógrafos; calibrador de termómetros invertidos; neceras; autoclave; correntómetros; equipos de meteorología, Ctdo, sidescan sonar, magnetómetro, termosalinómetro de casco, batitermógrafo desechable, correntometros, solarímetros, redes de plancton (fitozooictioplancton), redes de pesca (bentinica tidemersal y pelágica), sonar de pesca, productividad primaria C14, equipo de buceo autónomo, compresores de aire.

ACUARIOS:

No disponible.

EMBARCACIONES PARA INVESTIGACION :

Nombre : **ARC PROVIDENCIA**
Eslora : 50 m
Espacio para laboratorio: 72 m^2
Equipos y arreglos especiales: Equipos para oceanografía general e investigación geológica (sísmica) y sedimentología.

Nombre : **ARC MALPELO**
Eslora : 50 m
Tipo : Buque pesquero
Espacio para laboratorio: 72 m^2
Equipos y arreglos especiales: Oceanografía general con énfasis en pesca de arrastre (pelágico de fondo) y olsa para jardines, equipos acuáticos para detención pesquera.

Nombre: **ARC QUINDIO**
Eslora : 35 m

Tipo : Buque
Equipos y arreglos especiales: Investigación hidrográfica

Nombre : **ARC GORGONA**
Eslora : 40 m
Tipo : Buque
Equipos y arreglos especiales: Verificación y posicionamiento de ayudas a la navegación.

Nombre: **SIGMA T**
Eslora : 7 m
Tipo : Lancha
Espacio para laboratorio: $4m^2$

Nombre : **BATILANCHA II**
Eslora: 10 m
Tipo: Motonave
Espacio para laboratorio: $7\ m^2$
Equipos y arreglos especiales: Apoyo a investigación cuenta con aparejo para navegación.

Nombre: **NEREIDA**
Eslora: 7 m
Tipo : Taxi

Nombre : **GORGONIA**
Eslora: 7 m
Tipo: Taxi

Nombre: **GALATEA**
Eslora : 7 m
Tipo: Taxi

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11. Comisión Colombiana de Oceanografia (CCO)

Calle 41 # 4620 Piso 4,
Casilla Postal AA 28466,
Bogotá,
Colombia
Telephone: (571) 2220408/2220390/222-0421
Cable:
Telex: (35) 44421 DIMARCO
Telefax/facsimile: (571) 2220416
Electr. Mail: OMNET/R. STEER

Capitan de Fragata: Sr. Rafael Steer-Ruiz
Specializations: F2,F3,F5,F6,J,H,V
Training: No
Periodicals: No
Institutional Nature: Public/Local
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

(a) Coordinar el esfuerzo de la comunidad científica marina nacional, con el fin de integrarlo a los programas de desarrollo del país y a los de cooperación internacional que el gobierno estime adecuados; (b) asesorar al gobierno nacional en la ejecución de las politicas oceanográficas y de formación de recursos humanos en ciencias afines con la actividad del mar a todos los niveles; (c) estudiar y proponer al gobierno nacional planes y programas para el fomento y desarrollo de las ciencias y tecnológicas del mar y evaluar los progresos en la ejecución de los mismos, recomendando las modificaciones y ajustes que se consideren necesarios; (d) Fomentar la adaptación y desarrollo de tecnología marina para asegurar la explotación adecuada de los recursos del mar.

PROGRAMA DE CAPACITACION:

No disponible.

PERSONAL:

10 Profesionales científicos

LOCALES/INSTALACIONES :

Superficie del edificio : 400 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.:	2,000
Número de suscripciones a publicaciones periódicas:	4

Los títulos de las monografías y las series :
- Boletín Informativo de la CCO (gratuito)

EQUIPO:

No disponible.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

12. Fundación Universidad de Bogotá Jorge Tadeo Lozano Facultad de Biología Marina

Calle 23 No. 447,
Bogotá,
Colombia
Telephone: (57-1) 2434933
Cable:
Telex: (35) 45553 SENIN CO
Telefax/facsimile:
Electr. Mail:
Decano: Dr. Manuel García
Specializations: V, M3, N26, M42, F, G, H, J, M1, N12
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Formar profesionales integrales para el desarrollo social, económico y cultural de Colombia.

PROGRAMA DE CAPACITACION:

El personal de la Universidad en su año académico dicta continuamente conferencias sobre temas relacionados con biología básica, ecología, acuacultura, pesca, etc. **CURSOS ESPECIALIZADOS:** (a) desarrollo económico internacional; (b) estudio del efecto ambiental; (c) mercadeo agropecuario y agro-industrial; (d) finanzas y negociaciones económicas internacionales; y (e) planeación del desarrollo.

PERSONAL:

PROFESIONAL CIENTIFICO

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alvarado, E.	No disponible	No disponible
Avila, L.	Docente	Biología Marina
Cortes Lombana, A.	Postgrado	No disponible
Garcia Valderrama, M.	Decano (E)	Biología Marina
Jimenez Espinel, P.L.	Decano (E)	Ing. Alimentos
Lecompte, P.	Docente	Biología Marina
Llina Rivera, R.D.	Prof.	Agrología
Malagón Castro, D.	Decano	Agrología
Obregon Garces, E.	Invest. Científico	No disponible
Pena, E.	Docente	No disponible

Penereiro, L.	Docente	Biología Marina
Pulido Roa, C.E.	Prof.	Agrología
Ramírez Castilla, R.	No disponible	No disponible
Romero Pinto, M.	Docente	No disponible
Solano Oscar, D.	Docente	Biología Marina

LOCALES/INSTALACIONES:

Superficie de edificio : 1,410 m^2
Con instalaciones para científicos visitantes : 15

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.,: 5,000
Número de suscripciones a publicaciones periódicas : 477
Los títulos de las monografías y las series:

- Boletín de la Facultad de Biología Marina (último No. 7)
- Boletín Ecotrópica (anteriormente Boletín Museo del Mar), intercambio y venta
- Informe Museo del Mar

EQUIPO:

44 microscopios, 19 estereoscopios, equipo para laboratorios de física (mecánica; magnetismo; electromagnetismo; dinámica de fluidos; calor óptico), equipos para laboratorio de histología y microbiología, equipos para laboratorio de química, planta de estudios de alimentos, 6 potenciómentros, 2 espectrofotómetros para luz visible, baño serológico, 5 agritadores magnéticos, 2 polarimetros, 3 balanzas analíticas.

ACUARIOS PARA EXPERIMENTOS:

Tanques (No.): 15

BUQUES DE INVESTIGACION:

No disponible.

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13. Instituto de Hidrología, Meteorología y Adecuación de Tierras (HIMAT)

Carrera 10 No. 2019,
Casilla Postal AA 20032,
Bogotá D.E.1,
Colombia
Telephone: (57-1) 2836927/2860266
Cable: HIMAT
Telex: 44345 HIMAT
Telefax/facsimile: 572842402
Electr. Mail:

Director General: Dr. Enrique Sandoval García
Specializations: M14, M15, V, M16, R
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

El instituto desarrolla cursos de capacitación para la información de personal técnico en hidrometeorología a nivel internacional. Cada año hay cursos de aproximadamente dos meses de duración para formación de personal técnico clase III en agrometeorología y en Instrumentos meteorológicos.

PERSONAL:

170 Profesionales científicos 50 Técnicos 1830 Otros

LOCALES/INSTALACIONES

Superficie del laboratorio: 144m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscitos, etc.: 5,000
Número de suscripciones a publicaciones periódicas: 38
Los títulos de las monografía y las series:

- Anuario Hidrológico, intercambio y venta
- Anuario Meteorológico, intercambio y venta
- Calendario Meteorológico, intercambio y venta
- Publicaciones Aperiódicas (Monografías), intercambio y venta
- Boletín Agrometeorlógico Mensual, intercambio y venta
- Publicaciones Técnicas (Monografías), intercambio y venta

EQUIPO:

Espectrofotómetro de absorción atómica (Perkin Elmer) modelo 2380, incubador para coliformes totales y fecales, incubador para D.B.O. unidad de digestión destilación y titulación de 6 tubos, equipo portátil (Millipore) para análisis bacteriológico, medidor de sólidos disueltos/temperatura y conductividad, 3 fotómetros de llama, 3 espectrofotómetros, 2 colorímetros, 6 conductímetros, 5 potenciómetros, 12 balanzas, 8 hornos, 2 tamizadores, 2 desmineralizadores, 12 bombas de vacío, 2 autoclaves, 3 neveras, 3 baños María, microscopio con juego fotográfico, esterioscopio, estufa de secado, campana extractora de gases, 3 destiladores, computador (Texas) DNOS, equipo para la recepcion de fotos de satelites meteorológicos, 5 radiosondas, 4 piranómetros, radiómetro PSP, equipo de dotación para estaciones hidrometeorológicos; anemógrafos, anemómetros, actinógrafos, heliógrafos, termógrafos, termóme-

tros, higrógrafos, pluviómetros, pluviógrafos, evaporímetros, rociógrafos, lisímetros, limnígrafos, barómetros, equipo de facsimilado.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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14. Instituto de Investigaciones Marinas de Punta de Betín (INVEMAR)

Casilla Postal AA 1016,
Cerro Punta de Betín,
Santa Marta, Magdalena,
Colombia
Telephone: (57-1) 35410/30530
Cable: INVEMAR
Telex: 038886 CCSMT CO
Telefax/facsimile:
Electr. Mail:
Director: Dra. Leonor Botero
Specializations: F2, G, J, M1, M3, N26, S, V, M42, V3, V5
Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJETIVOS Y PROGRAMAS:

Realiza investigación básica y aplicada de los recursos marinos y estuarinos de su área de influencia.

PROGRAMA DE CAPACITACION:

Se desarrolló a dos niveles, uno de pregrado y otro de postgrado. El primero comprende cursos de extensión sobre diversas áreas de la biología marina, con una duración de 15 días a un mes, los estudiantes de diversas universidades reciben un certificado de asistencia; los profesores son, por lo general, investigadores del Instituto. El programa regular de postgrado dura dos años y tiene una capacidad máxima de 8 alumnos. El profesorado es en su mayoría nacional y el respaldo académico lo proporciona la Universidad Nacional de Colombia.

PERSONAL:

13 Profesionales científicos 2 Técnicos 15 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Acero Pizarro, A.	M.Sc.	Pesces de arrecifes coralinos
Aguilera Quiñones, A.	Biólogo marino	Cultivo de ostras
Alvarez León, R.	M.Sc.	Ecología de estuarios/lagunas, costeras
Barreto Soulier, J.	Biólogo marino	Administración de recursos marinos
Blanco Racedo, J.	Biólogo	Pesquerías costeras
Garzon Ferreira, J.	Biólogo marino	Pesces de arrecifes coralinos
Galvis Cortes, O.	Biólogo marino	Pesquerias costeras
Muller, klaus	Biotécnico	Ecofisiología
Perez Carmona, L.	Biólogo	Cultivo de ostras/briozoarios
Ramirez Triana,G.	Químico	Oceanografía química
Roa, Gilma	Bibliotecaria	Documentación científica
Velez de Muller,M.M.	Bióloga	Ecofisiología
Zea Sjoberg, Sven	Biólogo marino	Esponjas

LOCALES/INSTALACIONES :

Superficie del edificio : 956 m^2 Superficie del laboratorio: 361 m^2

Con instalaciones para 10 científicos visitantes y 15 estudiantes

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 1670

Número de suscripciones a publicaciones periódicas: 15

Los títulos de las monografías y las series :

- Anuales del INVEMAR (Nos. 11, 12 y 13)
- Publicaciones especiales del INVEMAR para celebrar la II Expedición
- Botánica (1983 a 1986).

EQUIPO:

3 microscopios Ortholux (contraste de fase y flourescencia), con el equipo de microfotografía, 4 microscopios Laborlux, 18 microscopios Wild VB 165, 18 estereolupas Wild 33 D 24, 8 estereolupas Wild MA37, 2 sondas para determinar oxígeno YSI, sonda para determinar salinidad YSI, 3 pH metros, espectrofotómetro, varios termómetros y refractómetros, red de plancton HLN 500 um, red de plancton HEN 250 um, 3 dragas VanVeen, draga Reinecke, 2 botellas Nansen, desionisador, bidestilador, autoclave, centrifuga de refrigeración, muflas, incubadoras, balanza de precisión, compresor de buceo 140/ltr /min 200 bar , compresor de buceo motor de gasolina 140 ltr/min 200 bar, 5 equipos de buceo, tanques de aluminio 200 bar con reguladores.

ACUARIO PARA EXPERIMENTOS:

Disponible.

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**INVEMAR**
Eslora :	14 m
Tipo :	Pesquero Arrastre
Equipos y arreglos especiales:	Ecosonda, radar, guinche oceanográfico, redes de arrastre.
Nombre :	**CIENAGA**
Eslora :	5 m
Tipo :	Taxi 15 fiberglass
Equipos y arreglos especiales:	Motores fuera de borda de 15, 25 y 40 **HP**
Nombre:	**GAYRACA**
Eslora:	5 m
Tipo:	Taxi 15 fiberglass
Equipos y arreglos especiales:	Motores fuera de borda de 15, 25 y 40 **HP**
Nombre :	**CHENGUE**
Eslora :	5 m
Tipo:	Taxi 15 fiberglass
Equipos y arreglos especiales:	Motores fuera de borda de 15, 25 y 40 **HP**
Nombre :	**NENGUANGE**
Eslora :	5 m
Tipo:	Taxi 15 fiberglass
Equipos y arreglos especiales:	Motores fuera de borda de 15, 25 y 40 **HP**

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15. Instituto Nacional de los Recursos Naturales, Renovables y del Ambiente (INDERENA), Ministerio de Agricultura

Apartado Aéreo 13458,
Diagonal 34 No 516,
Bogotá,
Colombia
Telephone: (57-1) 2854417/2870064
Cable:
Telex: (35) 44428 INDE CO
Telefax/facsimile: (57-1) 2859987
Electr. Mail:
Director:
Specializations: F3, M3, N26, V, V2, V3, V4, V5, J6, M21, N1, P, Q, G
Training: No
Periodicals: No
Institutional Nature: Governmental

Geographic Scope: Primarily National
Documentation Centre/Database: Centro de Investigaciones Pesqueras (CIP)

OBJETIVOS Y PROGRAMAS

Las actividades que desarrolla el CIP son las siguientes: estudios de calidad de aguas en la Bahía de Cartagena, oceanografía biológica, acuacultura marina con peneidos y mugilidos, pesquerías artesanales e industriales, manejo y protección de áreas coralinas. Igualmente cuenta con una subgerencia de Medio Ambiente que tiene varias unidades regionales que se encargan de la evaluación y seguimiento ambiental de proyectos, de actividades de ordenación y planificación ambiental y control y seguimiento del deterioro ambiental en el país.

PROGRAMA DE CAPACITACION:

No disponible.

PERSONAL:

264 Profesionales científicos 0 Técnicos 821 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Abondano, M.	B.Sc.	Investigación pesquera
Amaya, R.	M.Sc.	Acualtura
Arboleda,S.	B.Sc.	Acuacultura
Barón Porras, A.	B.Sc.	Química
Borrero M.,I.	B.Sc.	Acuacultura
Botero, J.	M.Sc.	Acuacultura
de Renteria, B.	B.Sc.	Oceanografía
Fernandez, T.	B.Sc.	Calidad de aguas
Fonseca, C.	B.Sc.	Pesca artesanal
Gallo, J.	M.Sc.	Administración/Pesca
Garcia, M.	B.Sc.	Contaminación
Gomez, C.	B.Sc.	Acuacultura
H. Mora, J.	B.Sc.	Ictiología
Lozano, H.	B.Sc.	Tecnología de alimentos
Maldonado H.,J.	B.Sc.	Acuacultura
Martinez, L.	B.Sc.	Pesquerías
Mercado, J.	B.Sc.	Acuacultura
Moncaleano, A.	B.Sc.	Pesca artesanal
Mora Lara, O.	M.Sc.	Pesquerías
Pedraza, R.	B.Sc.	Pesca artesanal
Pion V., A.	B.Sc.	Calidad de aguas
Rodas, E.	B.Sc.	Acuacultura
Torres V., Martha	B.Sc.	Acuacultura

Valderrama B., M.	B.Sc.	Pesquerías
Valencia P., J.E.	M.Sc.	Técnicas pesqueras
Victoria Ramirez, M.	B.Sc.	Pesqueras

LOCALES/INSTALACIONES :

Superficie del edificio: 1178 m^2 Superficie del laboratorio: 432 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 2,300
Los títulos de las monografías y las series:
- Revistas Divulgación Pesquera (1981, 4 volúmenes, 20 números)
- Revistas Divulgación Pesquera (1982, 4 volúmenes, 20 números)
- Revistas Divulgación Pesquera (1983, 1 volúmen, 5 números, por publicar)

EQUIPO:

Microscopios, estereoscopios, espectrofotómetro, potenciómetros, destilador de agua, esterilizador instrumental, cabina esterilizadora, lámpara UV, incubadora, cuenta colonias, microcentrifuga, equipos portátiles de análisis de agua marina, equipos portátiles de análisis de agua dulce, disco Sechi, redes de fito y zooplancton termostatos para acuarios, bombas aireadores, estufa bacteriológica, vidriera general, bateria de acuarios, redes varias.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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16. Ministerio de Defensa Nacional Comando Armada Nacional

Dirección General Marítima y Portuario,
Avenida El Dorado CAN ,
Bogotá D.E.,
Colombia
Telephone: (57-1) 2-222-0301/244-9487
Cable: DIMAR Bogotá, Colombia
Telex: (35) 44421 DIMARCO
Telefax/facsimile: 222636
Electr. Mail:
Vice-Admiral: Dr. Gustavo Angel Mejía
Specializations: F1, F3, F5, F6, G, J6, M1, M21, M3, V
Training: No
Periodicals: No
Institutional Nature: Governmental

Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Los programas en el campo de la investigación están orientados a otras áreas tales como accidentes marítimos causados por la contaminación de los buques, investigaciones de carácter oceanográfico, desarrollo cruceros en el Atlántico y en el Pacífico e investigaciones geológicas en la platforma y litorales colombianos.

PROGRAMA DE CAPACITACION:

En la Facultad de Oceanografía Física en Cartagena se preparan oficiales en ese campo. En la Universidad Tadeo Lozano se preparan personal de la armada en biología marina. En el Centro de Investigaciones Oceanográficas e Hidrográficas en Cartagena se adelantan cursos de postgrado en diferentes ramas de las ciencias del mar.

PERSONAL:

No disponible.

LOCALES/INSTALACIONES:

No disponible.

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc: 4000
Número de suscripciones a publicaciones periódicas: 65
Los títulos de las monografías y las series :

- Informes Oceanográficos (ocho publicaciones)
- Boletín Cientifico del Centro de Investigaciones
- Oceanográficas e Hidrográficas (cinco publicaciones)
- Legislación Marítima Internacional
- Bibliografía de Publicaciones de la Dirección General
- Marítima y Portuaria (dos publicaciones)

EQUIPO:

Espectrofotómetro de absorción atómica, espectrofluorómetro, espectrofotómetro infrarojoultravioleta, cromátografo de gases de capa fina, pH metros, correntómetros, microcopios, balanzas, oxímetros, mareógrafos, botellas Nansen Ninskin Van Dorn, dragas, corazonadores, baños María, redes para plancton.

ACUARIOS:

No disponible.

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**ARC 'MALPELO'**
Eslora:	51 m
Tipo:	Investigación

Espacio para laboratorio:	75 m^2
Equipos y arreglos especiales :	Radar, radiogoniómetro, navegador por satelite con pantalla digital, equipo V.H.F., instrumentos de laboratorio, equipo científico, güinche hidráulico, equipo para pesca exploratoria.
Nombre :	**ARC 'PROVIDENCIA'**
Eslora:	51 m
Tipo:	Investigación
Espacio para laboratorio:	75 m^2
Equipos y arreglos especiales	Equipo simular al relacionado anteriormente para el ARC 'MALPELO' y además equipo para investigación geofísica.
Nombre:	**ARC 'QUINDIO'**
Eslora:	41 m
Tipo:	Buque
Equipos y arreglos especiales :	DECCA; RADISH; RADAR; ecosondas y demas, equipo necesario para este servicio.
Nombre:	**Bote sin nombre**
Eslora:	5 m
Tipo:	Investigación
Nombre:	**Bote sin nombre**
Eslora:	6 m
Tipo:	Investigación

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17. Universidad Nacional, Departamento de Geociencias

Casilla Postal 14490,
Avenida El Dorado,
Bogotá,
Colombia
Telephone: (57-1) 2699111/2691700
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Sr. Jairo Mójica
Specializations: M11, M12, M13, M16
Training: No
Periodicals: No

Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

Cursos dictados en oceanografía y geofísica. Formación: Geológo, Maestría en Geofísica.

PERSONAL:

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Briceño, L.A.	M.Sc.	Geofísica
Lozano, J.A.	Ph.D.	Oceanografía
Solano, A.	M.Sc.	Geofísica

LOCALES INSTALACIONES:

No disponible.

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 400
Número de suscripciones a publicaciones periódicas: 7
Los títulos de las monografías y las series:
- Geología colombiana (revistas en español, un número por año, último número 12)
- Publicaciones internas

EQUIPO:

Gravímetro, magnetómetro, equipo de prospección eléctrica, microscopios petrográficos, molino y támices para análisis sedimentológicos, equipo completo para preparación de secciones delgadas, lupas binoculares.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

18. Universidad Tecnológica del Magdalena (UTM)
Facultad de Ingeniería Pesquera

Avenida del Ferrocarril, Km 3,
Casilla Postal 731,
Santa Marta, Magdalena,
Colombia
Telephone: (57-901) 36150
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Decano: Sr. Gustavo Cortes Bianco
Specializations: H,F3,N26,M3,M11,M31
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Subnational
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:
No disponible.

PROGRAMA DE CAPACITACION:
Cursos pesqueros y de geología marina.

PERSONAL:
24 Profesionales científicos 6 Técnicos 12 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Bula, G.	M.S.	Algas
Cabrales, L.	M.S.	Fitopatología
Camargo, J.	Ph.D.	Metodología (investigación)
Carbono, E.	M.S.	Etnobotánica
Carvajalino, M.	M.S.	Carnes de vacunos
Espeleta, A.	Ing.	Procesamiento/conservación y control de calidad de productos pesqueros
Gadban J.	Ing.	Maquinaría agrícola
Giraldo P. R.	M.S.	Fotointerpretación
Granados, M.	M.S.	Recuperación de suelos
Lacera Rúa, A.	M.S.	Transformación de productos pesqueros
Mendoza, A.	Ing.	Algas como fertilizantes agrícolas

Mendoza, L.	M.S.	Hongos y aflotoxinas
Newball, S.	Biologa	Ostras y manglares
Nowman, B.	M.S.	Fitopatología
Wedler, E.	Ph.D.	Cultivo (pesces/crustáceos y moluscos)

LOCALES/INSTALACIONES:

Superficie del edificio : 8661 m^2
Superficie del laboratorio : 1635 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 7688
Número de suscripciones a publicaciones periódicas : 6
Los títulos de la monografías y las series :

- Revista Ingeniería Pesquera (publicación trimestral)
- Revista Agronómica (publicación semestral
- Manuales Técnicos

EQUIPOS:

Espectrofotómetro de absorción atómica (Perkin Elmer), fotómetro de llama (Perkin Elmer), refractómetro (AB Jena), polarímetro de círculo (32G 580 Carl Zeiss Jena), potenciómetro (E 632 Metrohm), destilador (buchi Fonta Vapor 210), fotómetro (Model MLeitz), estufa con aire por convección, embutidora de carnes, cortadora y homogenizadoro de carnes, microscopios y esterscopios, baños Maria de regulación autómica, autoclaves e incubadoras, sistemas Kjeldahl y Soxhlet, selladora de latas, exhauster, marmita, autoclave horizontal, ahumadero tipo Torry, embarcaciones menores (3).

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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19. Centro de Investigaciones en Ciencias del Mar y Limnología (CIMAR), Universidad de Costa Rica

Ciudad Universitaria "Rodrigo Facio",
San Pedro de Montes de Oca,
San José,
Costa Rica
Telephone: (506) 243710 / 249294
Cable: UNICORI
Telex: (376) 2544 unicori
Telefax/facsimile: (506) 249367
Electr. Mail:

Director: Sr. Manuel M. Murillo Castro
Specializations: M1, M2, M3, V2, V4, V5, M11, M43, J
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

El Centro de Investigación en Ciencias del Mar y Limnología (CIMAR) es una unidad científica de carácter multidisciplinario, adscrita a la Vicerrectoría de Investigación. El CIMAR se dedica al estudio de la estructura, de los procesos y la dinámica de los ecosistemas marinos y de agua dulce con el propósito de aportar conocimiento y coadyuvar en la gestión de medidas de conservación y de recomendaciones para la administración de los recursos acuáticos dentro de un esquema de uso sostenible.

Programas de investigación: (a) Evaluación ecológica del Golfo de Nicoya; (b) ecosistemas costeros e insulares de Costa Rica; (c) investigación en acuacultura; (d) recursos pesqueros; (e) estudios en física, química y contaminación marina; (f) estudios biosistemáticos; (g) estudios limnológicos en Costa Rica; (h) evaluación de recursos marinos multiespecíficos.

PROGRAMA DE CAPACITACION:

Postgrado: Adiestramiento a nivel de M.Sc. en ciencias marinas, dentro del programa de postgrado en biología (Sistemas de Estudios de Postgrado SEP/UCR). Una actividad principal es el apoyo a los programas docentes de la Universidad de Costa Rica, especialmente a nivel de postgrado, asimismo, la mayoría de los investigadores vinculados con el CIMAR participan en la enseñanza de cursos de grado.

PERSONAL:

15 Profesionales científicos 2 Técnicos 1 Otros

LOCALES/INSTALACIONES :

Superficie del edificio: 780 m^2 Superficie del laboratorio : 480 m^2
Con instalaciones para 10 científicos visitantes y 10 estudiantes

SERVICIO DE INFORMACION:

No disponible.

EQUIPO:

Redes para muestreo biológico (arrastre/plancton), dragas y nucleadores para muestreo de fondo, equipo de buceo (SCUBA), lanchas y botes para operar en aguas someras, equipo para registro de 02/salinidad/temperatura y profundidad, laboratorio de apoyo: análisis químico; contaminación; microscopia (luz y electrónica), talleres especializados (electrónica/optica).

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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20. **Centro de Investigaciones en Contaminación Ambiental (CICA), Universidad de Costa Rica**

Ciudad Universitaria "Rodrigo Facio",
Apartado 2060,
San José,
Costa Rica
Telephone: (506) 531363
Cable:
Telex: (376) 2544 UNICORI
Telefax/facsimile:
Electr. Mail:
Director: Lic. Alexis Rodríguez Ulloa
Specializations: V5
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

El CICA es una unidad de investigación científica de carácter multidisciplinario, dedicida al estudio de la contaminación ambiental y sus efectos en el hombre, las plantas, los animales y el entorno físico. Sus objetivos son: (a) determinar el grado de contaminación ambiental antropogénica y natural; (b) realizar investigación básica, relativa a los campos de estudio del Centro; (c) desarrollar metodologías propias y adaptar métodos internacionales para el análisis de contaminantes para adecuarlas a las condiciones propias de la región; (d) propiciar y coordinar por medio de su participación efectiva la investigación científica que en su campo de acción se lleva a cabo en la Universidad; (e) propiciar investigaciones tendientes al mejoramiento o la sustitución de productos químicos de acción ambiental; (f) promover la formación y capacitación de científicos en el área de ciencias ambientales; y (g) ligar la investigación a la acción social.

PERSONAL:

7 Profesionales científicos

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECILIZACION
Acuña, G. J.	M.Sc.	Química, Oceanografía Química y calidad del agua
Barquero G. M.	M.Sc.	Microbiología/Epidemiología
Brenes, L. G.	Ph.D.	Impacto Ambiental Geográfico
Camacho, V. H.	Lic. Biología	Control Integrado de Plagas
Carazo Rojas, E.	Ph.D.	Fitotécnica Residuos de Plaguicidas
Constanla, U. M.	Ph.D.	Química, Residuos de Plaguicidas
García Gonzales, J.	Ph.D.	Ciencias Agrarias Degradación de Plaguicidas
Rodríguez Brenes, O.	Lic. Química	Residuos de Plaguicidas
Rodríguez Ulloa, A.	M.Sc.Química	Residuos de Plaguicidas
Salazar M. A.	M.Sc.	Física nuclear Fluorescencia Rayos X
Silva Trajos, P.	Lic.Química	Residuos de Plaguicidas

LOCALES/INSTALACIONES:

Planta Física :	300 metros cuadrados
Laboratorios :	200 metros cuadrados
Recinto de Instrumental analítico:	50 metros cuadrados
Espacio para oficinas :	50 metros cuadrados

SERVICIO DE INFORMACION:

No disponible.

EQUIPO:

Incubadoras, laboratorios de análisis químico por vía húmeda, cromatógrafos de gases, espectrofotómetro de absorción atómica, muestreadores, medidores de oxígeno, conductividad, salinidad, computadora, fluorescencia de rayos X, etc.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

21. Laboratorio de Investigaciones Marinas de Punta Morales (LIM), CONICIT

Casa Presidencial Zapote
Apartado Postal 10318,
San José,
Costa Rica
Telephone: (506) 612394/244172
Cable: CONICIT
Telex: (376) 3338 CONICR
Telefax/facsimile:
Electr. Mail:
Coordinator: Sr. José María Díaz Andrade
Specializations: F1, F3, G, M, P, V, N26, M4
Training: No
Periodicals: No
Institutional Nature: Public/Local
Geographic Scope: Subnational
Documentation Centre/Database: Yes

OBJETIVOS Y PROGRAMAS:

El laboratorio aunque es utilizado principalmente por investigadores nacionales, tambien puede ser utilizado por científicos extranjeros que esten interesados en ecosistemas costeros. El laboratorio ha sido utilizado para investigación tanto básica como aplicada. También se han realizado estudios de geología estructural, paleontología y estratigrafía.

PROGRAMA DE CAPACITACION:

El LIM no tiene personal permanente, sin embargo, el CONICIT por medio de su Dirección de Formación de Recursos Humanos, brinda capacitación y formación a nivel nacional en el área de ciencias marinas y pesquería.

LOCALES/INSTALACIONES:

Superficie del edificio: 660 m^2 Superficie del laboratorio: 170 m^2
Con instalaciones para científicos visitantes: 20

SERVICIO DE INFORMACION:

Biblioteca con libros, revistas, manuscritos e informes y además en el CONICIT funciona el Sistema de Información en ciencias marinas, recursos pesqueros y acuacultura (SIMPA).

EQUIPO:

El LIM tiene circulación de agua marina en los laboratorios, cristalería (poca). En general, el equipo es suplido por los investigadores que utilizan las instalaciones. A partir de 1989, se dispondrá de algún equipo básico (autoclave, centrifuga, estufa, entre otros).

ACUARIOS:

Hay varios acuarios, filtros y aireadores que se utilizan con especies de algas y larvas mantenidas con fines experimentales.

BUQUES DE INVESTIGACION:

No se cuenta aún, se espera disponer de un embarcación para los años 1989/1990.

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22. Universidad Nacional, Escuela Ciencias Biologías - Facultad Ciencias Exactas y Naturales

Casilla Postal 863000,
Heredia, Heredia,
Costa Rica
Telephone: (506) 376363
Cable:
Telex: (376) 7550 UNABI
Telefax/facsimile:
Electr. Mail:
University Director: Sr. Juán Bartoglia Richards
Specializations: F2,F3,J,M,N26,P,Q,V,M16,
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Estudio de ciclos biológicos de organismos de interés en acuacultura; estudio de ciclos biológicos y cultivos piloto de especies de valor comercial.

PROGRAMA DE CAPACITACION:

(a) Cursos para bachillerato y licenciatura en biología marina con énfasis en acuacultura; (b) programa de capacitación a comunidades pesqueras; (c) convenio Universidad Nacional /Universidad de Wageningen, Piscicultura, Países Bajos.

PERSONAL:

26 Personales Científicos:

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alpirez Q. O.	Maestría	Oceanografía biológica pesquera

Brenes Rodrizuez, C.	Maestría	Oceanografía física
Cabrera Pena, J.	Licenciatura	Acuacultura
Castro Chacon, G.	Maestría	Biología marina
Charpentier E. C.	Maestría	Limnología
Corella Vargas,R.	Ing.Agronomo	Algas marinas
Díaz Andrade, J.M.	Maestría	Oceanografía física
Garita Hernandez, J.	Maestría	Ictiopatología
Gutierrez, E.A.	Doctorado	Oceanografía física
Jiménez, R. J. A.	Maestría	Ecología de manglares
Lahmann Z. E.	Doctorado	Oceanografía biologia
Leon B. C.	Maestría	Algología
Mendeleicz G.,M.	Maestría	Oceanografía física
Mora, J. M.	Licenciatura	Limnología
Pacheco, L. F.	Doctorado	Bioquímica de algas marinas
Palacios, V. J.	Licenciatura	Biología Pesquera
Phillips, S. P.	Maestría	Biología marina
Quiros A. G.	Maestría	Oceanografía física
Rodriguez M, J. A.	Maestría	Ictiología
Suarez, B. E.	Maestría	Biología marina
Takatsuka, M.	Maestría	Genética de pesces
Valdez, G. J.	Maestría	Oceanografía física
Viquez Martinez, R.	Maestría	Algología
Zamora Madriz, E.	Doctorado	Oceanografía biológica, Cultivo de moluscos

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 8,000
Número de suscripciones a publicaciones periódicas: 16

EQUIPO:

Autoclaves, centrifugas, esteroscopios, microscopios, destilador de agua, balanzas analíticas, medidor de oxígeno, medidor de pH, medidor de salindad, redes de fitoplancton, equipo fotográfico, equipo de buceo, botellas Nansen, 2 botes.

ACUARIOS:

20 Acuarios
Superficie total : 25

Acuarios para experimentos:
Tanques (núm): 40

BUQUES DE INVESTIGACION:

No disponible.

23. Centro de Ingeniero y Manejo Ambiental de Bahías y Costas (CIMAB), Instituto de Investigaciones del Transporte (IIT)

Finca Tiscornia, Carr. Asilo, Casablanca,
Apartado 17029, C.P. 11700
La Habana 17,
Cuba
Telephone: (53-7) 62157/58
Cable:
Telex: 0511181/0511430
Telefax/facsimile: (53-7) 703546
Electr. Mail:
Director: Arq. Manuel Alepuz Llansana
Specializations: F, J, M1, M2, M3, M4, P, Q, V4, V5, V2, V3, M4, T, U
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJETIVOS Y PROGRAMAS:

Manejo y planificación ambiental/evaluación de impacto ambiental. Análisis y diagnosis de ecosistemas costeros.

PROGRAMA DE CAPACITACION:

Investigación a nivel de postgrado para maestrías y doctorados. Capacitación y cursos a nivel de pregrado o licenciatura. Proyectos regionales del PNUMA e IOCARIBE.

PERSONAL:

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Ablanedo, N.	Lic. Biología	Fitoplancton y producción primaria
Becerra, M.	Ing. Química	No disponible
Beltrán, J.	Lic. Química	Hidrocarburos
Campos, I.	Lic. Biología	Bentos
Diaz, G.	Ing. Química	No disponible
Diaz, J.	Lic. Biología	Zooplancton
Espinosa, M.	Ing. Química	No disponible
Fernándes, I.	Lic. Biología	Fitoplancton y producción primaria
Garcia, R.	Lic. Geografía	Oceanografía Fisica
González, H.	Lic. Química,	Metales pesados
Guerra, C.	Ing. Química	No disponible
Guturaz, O.	Lic. Química	Hidrocarburos

Jaime, N.	Ing.	Hidráulico
Lezcano, I.	Lic. Microbiología	Microbiología
Mancebo, H.	Lic. Microbiología	Microbiología
Martínez, J.	Lic. Física	Hidrodinámica
Martori, J.	Lic. Geografía	Oceanografía Física
Mederos, R.	Lic. Física, Ph.D.	Contaminación marina
Quintana, R.	Lic. Geografía	Hidrografía
Ruiz, F.	Lic. Química	Pesticidas
Shatalina, L.	Ing. Química	Tratamiento de Residuales, Ph.D.
Tur, A.	Ing. Química	No disponible
Valdes, M.	Ing. Química	No disponible
Villasol, A.	Lic. Geografía	Oceanografía física

LOCALES/INSTALACIONES:

Superficie del edificio: 500 m Laboratorio: 300 m
Con instalaciones para científicos visitantes y estudiantes : 10

SERVICIO DE INFORMACION:

Publicaciones especiales: Revista Científica del Instituto de Investigaciones del Transporte (4 veces por año).

EQUIPO:

Cromatógrafo de gases, espectrofotómetro de absorbción atómica, autoanalizador, espectrofotómetro UV-visible, fluorímetro, espectrofotómetro infrarojo, correntógrafos, botellas Van Dorn, dragas Van Veen, microscopios, estufas, muflas, lanchas con motor fuera de borda.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

Nombre : **NIPE**
Eslora : 8 m

Nombre : **LENINGRADO**
Eslora : 12 m

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24. Centro de Investigaciones Marinas (CIM) Universidad de La Habana

Avenida Primera No. 2808,
Miramar,
La Habana,
Cuba

Telephone: (53-7) 221676
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Srta. María Elena Ibarra Martín
Specializations: F1, M42, M43, M31, M32, N26, V, J4
Training: Yes
Periodicals: Yes
Institutional Nature: Public/Local
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

El CIM con vistas, a garantizar la formación de los biólogos marinos del país, y a realizar investigaciones básicas y de aplicación inmediata en el campo de la biología marina, da prioridad aquellas correspondientes a temáticas de alto interés para el país. **ESTRUCTURA DE LA INSTITUCION:** El centro está dividido en los siguientes laboratorios: (a) cria y cultivo de organismos marinos; (b) ecología marina.

PROGRAMA DE CAPACITACION:

Postgrado: Impartición de cursos de postgrado en Cuba y en Latinoamerica sobre temáticas afines a las especialidades de nuestro personal más especializado. Dirección de aspirantes a candidaturas a Dr. en ciencias biológicas de personal cubano o extranjero que lo solicite según nuestras posibilidades.

PERSONAL:

25 Profesionales científicos 10 Técnicos 11 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Díaz Inglesia, E.	Ph.D.	Fisiología de crustaceos
García Coll, Isabel	Ph.D.	Biología pesquera
García Galano, T.	Ph.D.	Cultivo y biología de peces
Gomez Hernández, O.	Ph.D.	Sistemática y ecología de invertebrados marinos
Gonzalez Sanson, G.	Ph.D.	Ecología de peces
Ibarra Martín, M.E.	Ph.D.	Conservación y protección de la fauna
Lalana Rueda, R.	Ph.D.	Ecología de estuarios
Ortiz Touzet, M.	Ph.D.	Sistemática y ecología de invertebrados bentósicos
Suarez Alfonso, A.M.	Ph.D.	Fitobentos, Ecología

LOCALES/INSTALACIONES:

Superficie del edificio: 1030 m Superficie del laboratorio: 210 m
Con instalaciones para 2 científicos visitantes y 4 estudiantes

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscriots, etc. : 23,000
Los títulos de las monografías y las series : Revistas de Investigaciones Marinas (en español con resúmenes en inglés y español), 3 veces al año, último número publicado, vol.7, No. 3, 1986, intercambio).

EQUIPO:

Equipo Warburg, ultratermostatos, equipo microfográfico, microscopios biológicos, microscopios esteroscopios, espectrofotómetro balanzas analíticas, centrifugas, oxímetro, pH metros, equipos de buceo 'Techisub, sistema de filtro de agua de mar con circulación abierta, aireación.

ACUARIOS:

Superficie total: 290 m^2 Tanques (núm.): 40

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**FELIPE POEY**
Eslora :	18 m
Tipo :	300 HP Volvo Penta
Espacio para lab. :	6 m
Equipos y arreglos especiales:	Ecosonda, fonia, güinche, puente oceanográfico, plata forma de buceo instrumentos oceanográficos, artes de pesca diversos, bote auxiliar con motor fuera de borda.
Nombre :	**HALCON**
Proprietario :	Universidad de La Habana, M.E.S.
Eslora :	5m
Tipo :	Motor fuera de bordo de 48 HP

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25. Centro de Investigaciones Pesqueras (CIP)

Calle 1ra, esq. 26,
Miramar,
La Habana,
Cuba
Telephone: (53-7) 222596/222597/222598
Cable:
Telex:
Telefax/facsimile:

Electr. Mail:
Director: Sr. Raúl Valdes Alonso
Specializations: F3, Q9, M16, M3, M43
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

Curso de actualización para técnicos medios y superiores. Curso de postgrado.

PERSONAL:

75 Profesionales científicos 130 Técnicos 115 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Baisre, J.	Invest.Titular	Biología pesquera
Blanco, W.	Invest. Auxiliar	Biología pesquera
Coyula, R.	Invest. Titular	Dinámica de poblaciones
Cruz, R.	Invest. Auxiliar	Biología pesquera
Font, L.	Invest. Auxiliar	Biología pesquera
García, C.	Invest.Titular	Oceanografía
Guitart, B.	Invest. Auxiliar	Biología pesquera
Jiminez, E.	Invest. Auxiliar	Biología pesquera
Juarez, M.	Invest. Titular	Ictioplancton
Martin, A.	Invest. Agregado	Contaminación
Olaechen, A.	Invest.Titular	Biología pesquera
Valdes, A.	M.Sc.	Computación
Valdes, R.	Invest. Auxiliar	Biología pesquera

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 6,889
Número de suscripciones a publicaciones periódicas: 60
Los títulos de las monografías y las series :

- Revista Cubana de Investigaciones Pesqueras
- Boletín Técnico
- Boletín de Información Pesqueras (mensualmente)

EQUIPO:

Espectrofotómetro de absorción atómica, equipo de cromatografía gaseosa, pH metros, 4 salinómetros, balanza analítica, minicomputador, microscopios, correntógrafos.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

Nombre :	**SESI**
Eslora :	18 m
Tipo :	Ro
Equipos y arreglos especiales:	Ecosonda, fonia y piloto automático.
Nombre :	**MANJUA**
Eslora :	15 m
Tipo :	Omicron
Equipos y arreglos especiales:	Ecosonda, fonia y piloto automático.
Nombre :	**CAYO LARGO**
Eslora :	16 m
Tipo :	Cayo largo
Espacio para lab. :	5 m^2
Equipos y arreglos especiales:	Ecosonda, fonia y piloto automático.
Nombre :	**PELAMIS**
Eslora :	19 m
Tipo :	Bonitero
Equipos y arreglos especiales:	Ecosonda, fonia y piloto automático.

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26. **Instituto de Oceanología (IO)**
Academia de Ciencias de Cuba
Ave.1ra. No.184 y 186 Playa,e #18406,
La Habana,
Cuba
Telephone: (53-7) 210300/210342/210306
Cable:
Telex: 511290
Telefax/facsimile:
Electr. Mail:
Director: Lic. Guillermo García Montero
Specializations: F5, V4, V5, M44, J51, J6, J7, F63, M43
Training: No

Periodicals: No
Institutional Nature: Public/Local
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS

Esta misma problemática a nivel mundial, ha permitido al Instituto de Oceanología identificar una serie de problemas fundamentales relacionados con la conservación y explotación racional de los recursos marinos.

PROGRAMA DE CAPACITACION

Se realizan cursos de técnicos medios en oceanografía, según la necesidad del instituto. Se imparten cursos de postgrado nacionales en las diferentes especialidades de la oceanografía.

PERSONAL:

57 Investigadores científicos 65 Técnicos y Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alcolado, P.	Csc.	Bentos
Areces, A.	Lic. Biología	Ecólogo marino
Bustamante, G.	Csc.	Ictiología
Claro, R.	Csc.	Ictiologo
Foyo, J.	Ing. Geofísico	Geofísico
García, G.	Lic. en Física	Físico
Herrera, A.	Lic. Biología	Bentos
Juanes, J.L.	Lic. Geografía	Geólogo Marino
Lopez Baluja L.	Csc.	Planctonista
Martínez, M.	Lic. Química	Metales Pesados
Ramírez, E.	Lic. Geografía	Geologo Marino
Rodríguez, J.	Lic. Geografía	Hidrología
Valdes, E.	Lic. Biología	Ictiología

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 30, 303
Número de suscripciones a publicaciones periódicas : 34
Los títulos de las monografías y las series :

- Informe Científico Técnico
- Reporte de Investigación
- Tablas de Mareas
- Publicaciones ocasionales

EQUIPO:

Espectrofotómetro de absorción atómica, pH metro, salinómetro, balanzas analíticas, microscopios (diferentes tipos), centrifugas, equipos fotográficos, espectrofluormetros, espectrofotímitro, UVV15 Sismoperfilador, incubadora, refrigerador, anemómetros, correntógrafos, agitadores (diferentes tipos), autoclaves, teodolitos, bombas de vacío, mantas de calentamiento, piranómetros, osciloscopio, etc.

ACUARIOS:

Superficie total : 60 m^2

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**TRITON**
Eslora:	24 m
Tipo:	B/I
Espacio para laboratorio:	20 m
Equipos y arreglos especiales:	El barco por las caracterfiticas del trabajo que en él se realiza, no posee equipos de laboratorio con carácter permanente, los equipos a utilizar con trasladados ocasionalmente en función de la investigación a realizar, ecosonda, guinche eléctrico.
Nombre :	**Caribe**
Eslora :	15 m
Tipo :	Yate adaptado
Equipos y arreglos especiales:	Guinches eléctricos
Nombre :	Volga
Eslora :	11 m
Tipo :	Yate adaptado
Nombre :	**"Rene Suarez"**
Eslora :	14.20 m
Tipo :	Yate adaptado

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27. Centro de Investigaciones de Biologia Marina (CIBIMA)

Presa de Tavera No 302,
Ciudad de los Millones,
Santo Domingo,
Dominican Republic
Telephone: (1-809) 685-6682
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:

Directora: Prof. Idelisa Bonelly de Calventi
Specializations: V,L5,M16,M3,M4,N26,S,U
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

Desarrollo de proyectos de investigación a nivel de tutoría para estudiantes universitarios (tesis universitarias).

PERSONAL:

14 Profesionales científicos 1 Técnico 10 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Acevedo, I.	Lic. (Biología)	Ciencias marinas, Hidrología
Alvarez, V.	Lic. (Biología)	Botánica marina
Bonnelly, De C. I.	M.Sc.(Ciencias)	Biología marina
García, M.	Lic. (Biología)	Crustáceos
Geraldes, F. X.	M.Sc.(Cien.pesq.)	Biología pesquera
Heredia, F.	Lic. (Biología)	Botánica (microbiología)
Lysenko, N.	M.Sc.(Biología)	Hidrobiología (plancton)
Nuñez, N.	Dra. (Farmacia)	Química
Pugibet, E.	Tec. (Biología)	Ecología marina
Ramírez, H.	M.Sc.(Biología)	Hidrobiología (plancton)
Rivas, V.	Lic. (Biología)	Biología pesquera
Terrero, N.	Lic. (Biología)	Ictiología
Vasquez T. M.	M.Sc.(Bioquímica)	Bioquímica
Vasquez, O.	M.Sc.(Biología)	Hidrobiografía (toxicología)

LOCALES/INSTALACIONES:

Superficie del edificio: 300 m^2 Superficie de laboratorio: 150 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 5000
Número de suscripciones a publicaciones periódicas : 40
Los títulos de las monografías y las series : Contribuciones (49 números)

EQUIPO:

Microscopios y lupas, cristalería, centrifugas, hornos, estufas, campanas, incubadoras, destiladores, balanzas, micrótomos, espectrofotómetro, autoclave, equipos de buceo, oxímetros, refractómetro,botellas Nansen, botellas Van Dorn, termometros, dragas, redes de plancton, redes de arrastre, chinchorros, trasmallos, conductivimetros, pH metro, salinómetros.

ACUARIO PARA INVESTIGACION:

Superficie total : 20,030 m^2 Tanques (No.) : 66

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**CIBIMA 1**
Eslora :	8 m
Tipo :	Lancha pesquera
Equipos y arreglos especiales:	Guinches, soportes para equipos hidrobiológicos
Nombre :	Bote sin nombre
Eslora :	4 m
Tipo :	Lancha aluminio
Nombre :	Bote sin nombre
Eslora :	5 m
Tipo :	Lancha aluminio

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28. **Secretaría de Estado de Agricultura,**
Departamento de Recursos Pesqueros (DRP)

Centro de los Heros,
Santo Domingo,
Dominican Republic
Telephone: (1-809) 533-6161
Cable:
Telex: 7607845 via CCI
Telefax/facsimile:
Electr. Mail:
Directora Interina: Sra. Guadalupe Ruiz
Specializations: M3,N26,Q9,S
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS

No disponible.

PROGRAMA DE CAPACITACION:

Capacitación mediante cursos teoricoprácticos a los pescadores tratando de que asimilen nuevas técnicas en el mejoramiento del método de pesca y las artes. Capacitación a los campesinos interesados en la pisicultura buscando la diversificación de sus labores de campo.

PERSONAL:

5 Profesionales científicos 26 Técnicos 150 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Díaz Carela, C.	M.Sc.	Biología marina y Acuacultura
Grullon, G.	B.Sc.	Biología pesquera y Zoología
Hamilton, C.	B.Sc.	Acuacultura (carpas)
Heredia, F.	B.Sc.	Calidad de agua y Ecología
Nuñez, N.	B.Sc.	Calidad de agua y Alimentos

LOCALES/INSTALACIONES:

Superficie del edificio : 8,000 m^2 Superficie de laboratorio : 500 m^2
Con instalaciones para científicos visitantes : 1 Estudiantes : 2

SERVICIO DE INFORMACION:

Número de suscripciones a publicaciones periódicas : 3
Los títulos de las monografías y las series :

- Revista de Indotec (suscripciones)
- Revista de Acuacultura (suscripciones)
- Revista de Pesca (suscripciones)
- Nociones sobre Acuacultura (publicación, canje)

EQUIPO:

Espectrofotómetro, salinómetro, centrifugas, autoclave, oxímetro, congelador, aireadores (varios tipos), termómetros (varios), balanza de precisión, compresores, medidor de pH, disco de Sechi, botellas (varias).

ACUARIA PARA EXPERIMENTOS:

Superficie total: 270,000 m^2 Tanques (No.): 40

EMBARCACIONES PARA INVESTIGACION:

Nombre : Bote sin nombre
Eslora : 3 m
Tipo : Bote inflable

29. Institut Français de la Recherche pour l'Exploitation de la Mer (IFREMER)

Laboratoire Guyane
Villa Plenet,
Route de Bourda,
Cayenne 97300, French Guiana,
France
Telephone: (594) 310214
Cable:
Telex: 910358 G
Telefax/facsimile:
Electr. Mail:
Head of Laboratory: Mr. Christian Dintheer
Specializations: V, F8, J5, M3, M4, Q9
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Subnational
Documentation Centre/Database: No

OBJECTIFS ET PROGRAMMES:

a) Soutien au développement; b) assistance technique à la profession; c) ingenierie aquiculture; d) experimentation en aquiculture a la station de Kourou; e) gestion de l'écloserie industrielle de chevrettes.

L'IFREMER a deux laboratoires en Guyane:
- Laboratoire Ressources Aquicultures
- Laboratoire Ressources Halieutiques

Laboratoire Ressources Aquiculture

LEPA de Suzini
Carrefour de Suzini
97300 Cayene

PERSONNEL:

5 biologistes	1 VAT	5 techniciens	1 administrateur

SERVICES DE L'INFORMATION:

Nombre de livres, revues, manuscrits, etc. : 500
Nombre d'abonnements périodiques : 4

FORMATION/STAGES:

Stagiaires de fin d'études scientifiques

MATERIEL:

Oxymètres, pH mètres de terrain (Tacussel, YSI), trousses TACTH Microscope, binoculaire, balance de précision

AQUARIUM D'EXPERIMENTATION:

Pas disponible.

BATIMENTS DE RECHERCHE:

Pas disponible.

Laboratoire Ressources Halieutiques
8 Lotissement Mortin
Vieux Chemin
97300 MONTJOLY

OBJECTIFS ET PROGRAMMES:

a) Suivi l'exploitation de la crevette et gestion du stock; b) recherche halieutique sur les espèces demersales; c) développement des technologies liées à la pêche: engins de pêche, conservation et valorisation des produits de la mer; d) economie des pêches; e) Programme de coopération avec le Bresil, le Japon, les E.E.U.U.

PERSONNEL:

2 chercheurs	1 VAT	3 techniciens	1 administrateur

LOCAUX/INSTALLATIONS

Superficie des laboratoires: 200 m sq.

SERVICES D'INFORMATION:

Nombre de livres, revues, manuscrits, etc. :	600
Nombre de abonnements périodiques :	4
Les titres des monographies et des séries:	Rapports annuels sur les pêcheries (publication restreinte)

Documentation en consultation sur place.
Accès aux bibliothéques centrales IFREMER (Nantes et Brest)
Possibilités d'interrogation des banques de données IFREMER

MATERIEL:

Thermosalinographe (Beckman), pH mètre (Tacussel), oxymètre (YSI), balance, microscope, binoculaire. Microordinateurs: 1 MBC Alcayne avec imprimante et table traçante (Bausch et Lomb), 1 Bull Micral 30, 1 Goupil G5, 2 imprimantes.

AQUARIUM D'EXPERIMENTATION:

Pas disponible.

BATIMENTS DE RECHERCHE:

Pas disponible.

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30. Institut National de la Recherche Agronomique CRAAG (INRA)

Centre de Recherches Agronomiques Antilles-Guyane.
Domaine Duclos,
BR1232,
Pointe-a-Pitre 97184, Guadeloupe,
France
Telephone: (590) 255999/40/20.
Cable: RECHERCHARGO
Telex: 919867 GL
Telefax/facsimile:
Electr. Mail:
Directeur de Recherche, Pres. de Centre: M.G. Anais
Specializations: F2, L2, M11, M15, M21, M3, N, P1, Q8, V2
Training: Yes
Periodicals: No
Institutional Nature: Intergovernmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIFS ET PROGRAMMES:

Pas disponible.

PROGRAMME DE FORMATION:

L'INRA forme et prépare: des techniciens supérieurs de l'agriculture, des ingénieurs agronomes, des doctorats

SCIENTIFIQUES PROFESSIONNELS:

NOM	DIPLOME UNIVERSITAIRE	DISCIPLINE PRINCIPALE
Barre, N.	Docteur (IEMVT)	Vétérinaire
Bonhomme, R.	Docteur	Bioclimatologie
Cabidoche,Ym.	Docteur	Pédologie
Clarion, N.	Ing.	Biochimiste, Mangrove
Degras, L.	Docteur	Tubercules,Botanique
Fornet, J.	Docteur	Mangroves, Botanique Phytoécologie
Kermauec, A.	Docteur	Zoologie

Matheron, G.	Docteur	Zootechnie, Génétique
Parfait, A.	Docteur	Technol. agroalimentaire
Planquette, P.	Docteur	Hydrobiologie (poissons d'eaux douces)
Zinzou, C.	Docteur	Physiologie Biochmie

PERSONNEL:

40 Personnel scientifique 180 Personnel technique

LOCAUX/INSTALLATIONS:

Superficie construite : 16472m^2 Superficie des laboratoires : 5 586m^2
Installations prevues pour 10 des chercheurs de l'exterieur et 10 des étudiants

SERVICES D'INFORMATION:

Nombre de livres, revues, manuscrits, etc. : 5 000
Nombre d'abonnements périodiques : 300
Les titres des monographies et des séries :

- Nouvelles agronomiques des Antilles et de la Guyane (derniers numéros: 1979)
- Bulletin agronomique (lère parution: 1983)
- Attini (Newsletter)
- Folia discoreae (Newsletter)
- Rapports annuels (français)
- Monographies agricoles diverses (Tomate, Igname, Porc, etc.)

MATERIEL:

Chromatographie CPV/HPLC, ultra centrifugeuse à la centrifugeuse à microhématocrites, lyophilisation, spectrophotomètre UV, microscopie photique, analyses BDO, fermentateurs automatiques, electrophusiologie d'invertébrés (EAG), etc.

AQUARIUM D' EXPERIMENTATION:

Pas disponible.

BATIMENTS DE RECHERCHE:

Pas disponible.

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31. Institut Français de la Recherche pour l'Exploitation de la Mer (IFREMER) - Station du Robert (Martinique)

Pointe Forte,
Le Robert 97321, Martinique,
France
Téléphone: (596) 65 11 54 / 65 11 56
Cable:
Telex: IFREMER 912488 MR

Telefax/facsimile:
Electr. Mail:
Chef de Station: M. Phillipe Ferlin
Specializations: F11,F3,F7,M16,M33,M34,V,N26,M3
Training: No
Periodicals: No
Institutional Nature: Public/Local
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIFS ET PROGRAMMES:

L'institution est un établissement public de l'Etat rattaché administrativement au siege central de l'IFREMER à Paris (Direction des Ressources Vivantes). Les recherches sont appliquées aux pêches et à la mariculture et realisées dans le secteur des Caraïbes, notamment dans les départements français des Antilles.

PERSONNEL:

10 membres du personnel scientifiques , 4 membres du personnel technique ,
1 autre personnel

SCIENTISTE PROFESSIONNEL:

NOM	DIPLOME UNIVERSITAIRE	DISCIPINE PRINCIPALE
Ferlin, P.	Ing. Agronome	Ing. du Génie Rural, des Eaux et Forets
Gallet, D.	Docteur Vétérinaire	Pathologie
Goyard, E.	Ingénieur Agronome	Ressources Aquicoles
Guillou, A.	Docteur d'Univ.	Ressources Halieutiques
Lorance, P.	D.E.A.océanographie	Ressources Halieutiques
Marin, J.	Docteur d'Etat	Ressources Halieutiques
Paulmier, G.	Docteur d'Univ.	Ressources Halieutiques
Saint Felix, C.	D.E.A.océanographie	Ressources Aquicoles
Soletchnik, P.	Docteur en oceanog.	Ressources Aquicoles
Thouard, E.	Ingénieur Docteur	Ressources Aquicoles

LOCAUX/INSTALLATIONS:

Superficie construite: 1 150 m^2 Superficie des laboratoires: 500 m^2
Ecloserie : 300 m Hall de Pathologie

MATERIEL:

Equipement de biologie marine et chimie des eaux, équipement pour études de la pathologie des animaux marins. Laboratoire de bactériologie, microordinateurs barge (4,5 m), Yole (6 m).

AQUARIUM D'EXPERIMENTATION:

Disponible.

BATIMENTS DE RECHERCHE:

Nom : **POLCA**
Longueur : 12 m
Type : Pêche artisanale

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32. Centro de Estudios del Mar y Acuacultura (CEMA), Universidad de San Carlos de Guatemala

Edif.M6 Facultad de Medicina,Veterinaria y
Zootécnica, Cd. Universitaria,
Zona 12, Guatemala,
Guatemala
Telephone: (502) 310904/762206
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Coordinador: Sr. Mamerto Antonio Gomez Cruz
Specializations: V, N26, J4, M3, M41, S, U
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

PROGRAMA DE CAPACITACION:

No existe en el momento, pero contemplado para abrirse pronto. El título que se ofrece es de Técnico Universitario en Acuacultura con duración de 3 años. También se evalúa en este momento la posibilidad de abrir la carrera de licenciatura en acuacultura.

PERSONAL:

2 Profesional científico 3 Técnicos 7 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Arevato, M.	Técnico Acuacultor	Acuacultura
Miguel Ridelman, J.	M.Sc. (Cien. Pesq.)	Acuacultura

LOCALES/INSTALACIONES :

Superficie del edificio :5,000 m^2 Superficie del laboratorio: 300 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 300
Número de suscripciones a publicaciones periódicas : 6
Los títulos de las monografías y las series : Memorias Anuales, 1981, 1982, 1983

EQUIPO:

Salinómetro (Beckman), espectrofotómmetro (B + L), ion metro (Orion Research Inc.), 8 microscopios (diferentes tipos Kiowa), 2 balanzas (Sartorias), equipo fotográfico (Nikon), centrifuga (Clay Adams), correntómetro, 6 botellas Niskin, potenciómetro, 3 compresores (Smith), batidora (Famnic), 4 lanchas y 1 lanchón, equipo de pesca (varios).

ACUARIOS :

Superficie total : 50 m^2 Tanques (No.) 35

BUQUES DE INVESTIGACION:

No disponible.

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33. **Dirección Técnica de Pesca y Acuacultura (DITEPESCA)**
Avenida de Reforma 860, Zona 9,
Edif. Galerias Reforma 3er nivel,
Ciudad de Guatemala,
Guatemala
Telephone: (502) 317070/323122
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director Técnico: Dr. Pablo Roberto Girón Muñoz
Specializations: J4, M1, M3, M41, N26, V, U, F3
Training: No
Periodicals: No
Institutional Nature: Intergovernmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

La capacitación realizada por DITEPESCA está principalmente dirigida a los pequeños agricultores a quienes se les adiestra a estanques piscícolas y manejo de los mismos.

PERSONAL:

5 Profesionales científicos 30 Técnicos 15 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Garcia Mejía, J. A.	Lic. (Economía)	Planificación
Lopez de Vettorazzi, M.	Lic. (Zootecnía)	Zootecnía
Rosales Loessener, F.	Lic. (Biología)	Biología de tortugas marinas
Sanchez Ulloa, Victor	Lic. (Veterinario)	Acuacultura

LOCALES/INSTALACIONES:

No disponible.

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 1,000
Los titulos de las monografías y las series : Documentos de Campo (varios números)

ACUARIO PARA EXPERIMENTOS:

No disponible.

EMBARCACIONES PARA INVESTIGACION:

No disponible.

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34. **Instituto Centroamericano de Investigación y Tecnología Industrial (ICAITI)**
Avenida Reforma 4-47, Zona 10
Casilla Postal 1552
Ciudad de Guatemala
Guatemala
Telephone: (502) 310631-4/317466
Telex: (372) 5312 ICAITI-GU
Cable: ICAITI
Director: Sr. Ludwig Ingram
Specialization: V
Training: No
Periodicals: No

Institutional Nature: Intergovernmental
Geographic Scope: Primarily Central America
Documentation Centre/Database: No

OBJECTIVOS Y PROGRAMAS:

Los objetivos fundamentales del Instituto son:

- asesorar al sector privado en todas las fases de estudios de factibilidad y ejecución de proyectos industriales;
- asesorar a las empresas en la solución de problemas prácticos de producción que puedan originarse en sus fábricas;
- realizar investigaciones tecnológicas para la utilización de materias primas regionales, desarrollo de procesos de fabricación, elaboración de nuevos productos y adopción de técnicas modernas de fabricación;
- promover la aplicación y adaptación de la tecnología y de los métodos modernos de productividad a la industria centroamericana;
- asesorar a las instituciones públicas privadas que se ocupan del fomento industrial y económico o que esten interesados en inversiones industriales.

PERSONAL:

60 Profesional Científicos 36 Técnicos 62 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Aguilar, J. M.	Jefe Div. Admin.	Economista
Alvarez, H.		Economista
Aragon, J.V.	Ingeniero	Mecánico
Arce, L.	Ingeniero	Químico
Archila, L.	Lic. y Prof.	Antropología
Archila, A.	Lic.	Química Farmacéutica
Arriola, M.		Química/Bióloga
Barrientos, V.A.		Públicista y Auditor
Bayer, J.	Ingeniero	Químico/Biólogo
Cabrera, S.		Química Biologa
Calderon, E.	Ingeniero	Química Industrial
Calzada, J. F.	Ingeniero	Químico, Alimentos
Castellanos, M. I.	Lic.	Químico
Cifuentes, L.		Economista
Codoner, L. M.	Lic.	Psicología
Corado, J. C.	Ingeniero	Químico y Tecnología Alimentos
De León, R.	Lic.Maestria	Química/Biólogica
Del Barco, F.	Ingeniero	Técnicas Alimentos
Dengo, G.	Ingeniero	Agrónomo
Díaz, J.F.	Ingeniero	Químico
Duarte, F.	Ingeniero	Químico

Forres, C.	Ingeniero	Químico
García, R.	Ingeniero	Químico
Gil, O.	Ingeniero	Químico
Gonzales, J.	Ingeniero	Bioquímico
Grimaldi, A.	Ingeniero	Químico
Hernández, Y.	Lic. Química	Farmacéutica
Hernández, E.	Químico	Farmacéutico
Ingram, L.	Ingeniero	Químico
López, O.	Ingeniero	Químico
Marban, R.	Lic. Química	Biología
Masaya, H.	Ingeniero	Civil
Mazariegos, F.	Lic.	Química
Mejía, E.	Ingeniero	Químico
Micheo, F.	Química	Farmacéutica
Molina, H.	Economista	No disponible
Moncayo, C.S.	Ing. y Lic.	Químico
Morales, R.	Ingeniero	Civil
	Ph.D.	Química Industrial
Porres, E.	Lic. Tecnología	Alimentos
Posadas, O.	Ingeniero	Químico
Prado, E.	Ingeniero	Mecánico
Prieto, T.	Lic.	Química
Quintana, R.	Lic.	Comercio Internacional
Rodríguez, A.	Ingeniero	Tecnología Alimentos
Rolz, C.	M.Sc. Ingeniero	Químico
Salguerno, R.	Ingeniero	Químico
Sánchez, P.	Ingeniero	Mecánico Industrial
Santizo, M.R.	Ingeniero	Químico
Saravia, S.	Ing.	Química Industrial
Valladares, J.	Ingeniero	Química
Vargas, C.	Ingeniero	Químico
Villalón, R.	Ing.	Agrónomo
Zeissig, J.C.	Química	Analista

LOCALES/INSTALACIONES:

Superficie del edificio : 6845 m^2

SERVICIO DE INFORMACION :

Número de libro, revistas, manuscritos, etc. : 38,000

Los titulos de las monografías y las series : Boletín Informativo ICAITI

EQUIPO:

Espectrofotómetro infrarrojo, espectrofotómetro ultravioleta, espectrofotómetro visible, espectrómetro de masas, espectrómetro de absorción atómica, cromatógrafo de gases, cromatógrafo líquido, planta piloto.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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35. Instituto de Sismología Vulcanología, Meteorología e Hidrología (INSIVUMEH)

7a Avenida 14-57,
Zona 13,
Ciudad de Guatemala,
Guatemala
Telephone: (502) 314967 to 86/319183, 324722 to 41
Cable: INSIVUMEH
Telex:
Telefax/facsimile:
Electr. Mail:
Director General: Sr. Eduardo Velasquez Vasquez
Specializations: M15, M14, M1, R6, S, U
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

(a) Entrenamiento para mantenimiento de instrumental sismológico y procesamiento de datos sismológicos; (b) capacitación técnica a nivel profesional en ingeniería e hidrología de ríos de presas; (c) capacitación técnica en programación de computadora enfocado al manejo de datos hidrometeorológicos.

PERSONAL:

15 Profesionales científicos 350 Técnicos 150 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alvarez, F.	Licenciado	Geología

Aragon, Rolando	Ingeniero	Geofísica
Baldizon, R.	Ingeniero	Hidrología
Cobos Mejia, C.	Ingeniero	Hidrología
Garavito, F.	Ingeniero	Hidrología
Grajeda, A.	Ingeniero	Procesamiento de datos informática
Hardie Sánchez, E.	Ingeniero	Sismología
Hernández, S.	Ingeniero	Hidrología
Martínez, J. R.	Ingeniero	Hidrología
Martínez, C. R.	Ingeniero	Sismología
Porras Dardon, O.	Ingeniero	Sismología
Ramírez, A.	Ingeniero	Meteorología
Sánchez, J.	Ingeniero	Meteorología
Tax, P. A.	Ingeniero	Hidrología
Velasquez Vasquez, E.	Ingeniero	Geofísica

LOCALES/INSTALACIONES :

Superficie del edificio: 3,600 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manusctritos, etc. : 15,000

Los títulos de las monografías y las series:

- Boletin Hidrogeológico (quincenal)
- Boletin Hidrológico (anual)
- Boletin Meteorológico (anual)
- Boletin Sismológico (anual)
- Atlas Climatológico de Guatemala
- Estudios de Agua Subterranea del Valle de la Ciudad de Guatemala
- Tabla de Mareas (anual)

EQUIPO:

Red Nacional de Estaciones Meteorológicas (250 estaciones)
Red Nacional de Estaciones Hidrológicas (90 estaciones)
Red Nacional de Estaciones Hidrometeorlógicas (6 estaciones)
Red Nacional de Estaciones Sismológicas Telemétricas (30 estaciones)

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

36. Instituto Geográfico Militar (IGM)

Avenida Las Americas, 5-76, Zona 13
Ciudad de Guatemala,
Guatemala
Telephone: (502) 362813/31352942
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Sr. Jorge Mario Morales Montiel
Specializations: V, M1, Q, M11
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

Con el Servicio Geodésico Interamericano (Interamerican Geodetic Survey) de los Estados Unidos de América, en Panamá, para geodesia, cartografía fotogrametría, percepción remota computación, y oceanografía. Con la Escuela de Topografía, Catastro y Geodesia en Costa Rica.

PERSONAL:

16 Profesionales científicos 228 Técnicos 122 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alegria,L.	Arquitecto	Geografía urbana/rural Ingenieria civil
Aparicio Z.,M.A.	Ing. Civil	Ingeniería civil
Asturias G. S., M.	Ing. Civil	Administración
Faggiani, J. E.	Ing. Civil	Ingeniería civil
Fernández, J. G.	Ing. Civil	Fotogrametría
Gonzales Carrera, R.	Ing. Civil	Calculo, Fotogrametría
Gonzales, A.	Ing. Agrónomo	Pedología, Edafología y Geodesia
Lemmerhofer, C. P.	Ing. Indust.	Percepción remota, Fotogrametría
López, E.	Ing. Agrónomo	Edafología
Mejía, E.	Ing.Geodesta	Geodesia
Pineda S., M. A.	Ing. Civil	Ingeniería civil
Rabe, B.	Arquitecto	Cartografía

Revolorio, D.I.	Ing. Civil	Ingeniería civil
Reyes, F.	Ing. Geodesta	Geodesía
Salazar, O. D.	Geologo	Geología
Vizcaino, A. M. de	Arquitecto	Planificación urbana/rural

LOCALES/INSTALACIONES:

Superficie del edificio : 3,752 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 780
Número de suscripciones a publicaciones periódicas : 11
Los títulos de las monografías y las series :

- Atlas Nacional de Guatemala
- Diccionario Geográfico de Guatemala
- Estudio morfométrico de cuencas (varios volúmenes)
- Mapas topográficos
- Mapas geológicos
- Mapas hidrológicos
- Mapas temáticos

EQUIPO:

Instrumental electrónico para levantamientos geodésicos de primer orden, avión y cámara para fotografía aérea, instrumentos para fotogrametría y ortofotometría, laboratorio de geología, laboratorios de fotomecánica.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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37. **Ministry of Agriculture, Fisheries Department**
D'Urban Street and Vlissengen Road,
P.O. Box 1001,
Wortmanville, Georgetown,
Guyana
Telephone: (592) 02-64398/61833
Cable: GUYFISH GEORGETOWN GUYANA
Telex: 2286
Telefax/facsimile:
Electr. Mail:

Chief Fisheries Officer: Cde. Reuben Charles
Specializations: F11,F3,F82,M34,M36,N26,V
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The Department is involved in the following: (a) aquatic weed control by biological means in canals and reservoirs; (b) the utilization of slurry/sludge from biogas digester as fertilizers in fish culture; (c) Crawfish culture; and (d) Surveys: marine fisheries, aquaculture and the role of women in fisheries.

TRAINING PROGRAMME:

Extension exercises in artisanal fishing, processing and managing of cooperatives. Extension exercises in aquaculture.

STAFF:

6 Scientific staff 13 Technical staff 10 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Charles, R.	M.Sc.	Fisheries biology
D'Anjou, J.	B.Sc.	Aquaculture biology
Harvey,C.	B.Sc.	Marine biology
Phillip, T.	B.Sc.	Marine biology
Stephen, W.	B.Sc.	Marine biology

PREMISES/FACILITIES:

Building area: 250 m^2

INFORMATION FACILITIES:

Monographs and series titles: Annual Report 1981, Annual Report 1982, Annual Report 1983.

EQUIPMENT:

2 Microscopes, stereoscope, ph meter, glassware.

AQUARIUM FACILITIES:

Available.

RESEARCH CRAFT:

Information not available.

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38. **University of Guyana (U.G.)**
Department of Biology
Turkeyen Campus,
P.O. Box 101110,
Georgetown,
Guyana
Telephone: (592-2) 0254841/54856
Cable: UNIGUY
Telex:
Telefax/facsimile:
Electr. Mail:
Head: Mr. Zinul Bacchus
Specializations: M3, N26, S, M1, Q9, F8, V, P, U4, M23, M45
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Information not available.

TRAINING PROGRAMME:

The University of Guyana has a staff development programme geared at training young and promising academics in various fields. Currently, the Department has three people overseas undergoing such training in marine biology, forestry and biochemistry.

STAFF:

8 Scientific staff 10 Technical staff 1 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Bacchus, Z.	M.Sc.	Limnology
Bishun, N.	Ph.D.	Cytogentics
Indradei	B.Sc.	Plant physiology
Mohameeden, H.	M.Sc.	Marine biology
Ramdass, I.	B.Sc.	Forestry
Ramsammy, J.	Ph.D.	Marine biology

Seeram, L.	M.Sc.	Cytogentics
Singh, T.	Ph.D.	Fishery biology

PREMISES/FACILITIES :

Building area: 2,000 m^2; Laboratory area: 1,000 m^2. With facilities for 5 visiting scientists and 50 students.

INFORMATION FACILITIES:

Library holdings :
Number of books, journals, manuscripts, etc. : 5000
Number of periodical subscriptions : 5
Monographs and series titles: Guyana Journal of Science (last issue in 1979)

EQUIPMENT:

Microscopes, Van Dorn sampler, bathythermograph, thermistor, plankton nets, current meters, Secchi discs, spring loaded grabs, echo sounder, bomb calorimeter, furnaces, winches, general laboratory equipment for teaching biology.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Information not available.

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39. **Ministère de l'Agriculture, des Ressources Naturel et du Développement Rural, Service des Peches et Pisciculture**
Damien,
Port-au-Prince,
Haiti
Téléphone: (509) 22-3599/5672/5202
Cable:
Telex: (203) 0394 DPTAFET
Telefax/facsimile: (509) 23-9407
Electr. Mail:
Directeur: M. Pierre Guy La Fontant
Specializations: V, M1, M3, M4, N26, Q9, U, F3
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIFS ET PROGRAMMES:

Pas disponible.

PROGRAMME DE FORMATION:

Le Programme s'inscrit dans le cadre du programme global du Ministere de l'agriculture a savoir: former des cadres de haut niveau et davantage des cadres intermediaires.

PERSONNEL:

5 membres du personnel scientifique 9 personnel technique 8 Autres membres du personnel

PERSONNEL SCIENTIFIQUE:

NOM	DIPLOME UNIVERSITARIE
Celestin, W.	Dipl. d' agronome
Kavanaught, R.	Dipl. de biologiste
Lafontant, P. G.	Dipl. d' agronome
Péricles, S.	Dipl. d' ingenieur
Roche, J.	Dipl. de biologiste

LOCAUX/INSTALLATIONS:

Superficie constrite : 200 m^2
Superficie des laboratoires: 8 m^2

SERVICES D'INFORMATION:

Pas disponible.

MATERIEL:

Matériel d'analyse de l'eau et d'étude de poissons (Laboratoire fourni par le PNUD (FAO).

AQUARIUM D'EXPERIMENTATION:

Superficie total : 2 m^2

BATIMENTS DE RECHERCHE :

Nom : **PESCADORES 33**
Longueur : 11 m

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40. Ministry of Agriculture, Fisheries Division

Marcus Garvey Drive,
P.O. Box 470,
Kingston,
Jamaica

Telephone: (1-809) 923-8811/3,923-7571/2
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Mr. Roy MooYoung
Specializations: F1, F3, F51, F7, J4, M21, M34, M4, N26, Q9
Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMME:

To promote fisheries development in Jamaica.

TRAINING PROGRAMME:

Training for fishermen in: (a) maintenance of outboard motors; (b) basic navigation; (c) safety measures.

STAFF:

4 Scientific Staff 26 Technical Staff 60 Other Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Moo-Young, R.	M.Sc.	Fisheries Biology
Kong, G. A.	B.Sc.	Fisheries Management, Aquaculture
Nicholson, W.	B.Sc.	Fisheries Biology, Fisheries Statistics /management
Parchment, W.	B.Sc.	Fisheries Assessment

PREMISES/FACILITIES:

Building area : 1,143 m^2 Laboratory area : 2 00 m^2

EQUIPMENT:

Two sets of scuba diving gear, assorted glassware, two microscopes, fishing gear (nets, traps, lines).

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT :

Name :	**M.V. BLACKFIN**
Length :	22 m
Type :	Trawler fishing boat
Special facilities:	Echosounder, hydraulic winch, radar, SSB radio equipment, fishing gear (lines, traps)

Name :	**M.V. DOLPHIN**
Length :	22 m
Type :	Trawler fishing boat
Special facilities :	Echosounder, hydraulic winch, radar, SSB radio equipment, fishing gear (lines, traps)

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41. **Natural Resources Conservation Division (NRCD)**
Ministry of Finance, Development and Planning
53 1/2 Molynes Road,
Kingston 10,
Jamaica
Telephone: (1-809) 923-5155,5070
Cable:
Telex:
Telefax/facsimile: (1-809) 923-5166
Electr. Mail:
Principal Director: Dr. Marcel Anderson
Specializations: F, G, J, M, N, P, R, T, U,V
Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

Management of the country's natural resources (renewable and non-renewable), and to maximize sustainable development.

TRAINING PROGRAMME:

A one-week summer course in ecology (for biology teachers at the high school level). Lectures on the relationship between planning and the environment (for students at the College of Arts, Science and Technology).

STAFF :

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Bennet, C.	B.Sc.	Chemistry
Bucknorm L.	B.Sc.	Biology
Cunningham, C.	B.Sc.	Watershed Management
Dunn, M.	B.Sc.	Ecology
Donaldson, A.	B.Sc.	Marine Science
Ducille, B	B.Sc.	Chemistry
Gardner, L.	B.Sc.	Marine Science
Knight, D.	B.Sc.	Analytical Chemistry
Strong, Y.	B.Sc.	Ecology

PREMISES/FACILITIES:

Building area : 1468 m^2 Laboratory area : 139 m^2

INFORMATION FACILITIES:

Number of books, journals, manuscripts etc. : 5389
Number of periodical subscriptions : 135
Monographs and series titles:

- Final Report of the Environmental Feasibility Study of the Jamaica
- Resources Utilization Project, Vol.I; Executive Summary and Technical
- Report summary, Vol.II; Technical Report and Appendix Volume III.
- Parrot Conservation in Jamaica.
- Inventory of Coastal Wetlands of Jamaica (1981-1982).
- Jamaican Surveys of the Jamaican Manatee, Dolphin, Sea Turtles and
- Booby Terns.

EQUIPMENT:

Infrared analyzer, pH meter (portable), total organic carbon analyzer, low water cutoff for electrically heated stalls, electrically heated stalls, thermolyne electric furnace, oven incubator (Precisions Thelco). Fraes low temperature incubator, turbidity meter, spectrophotometer, centrifuge general purpose, pH meter,flame photometer, fume hoods, portable engine generator, sterilizer autoclave, auto analyser, heating bath,dissolved oxygen meter, biosupport system, aquarium facilities, Aqualung regulators, theodolites and tripods, Boston Whaler, Yamah citation with trailer, microscopes, Evenrude 9.9 HP outboard motor, 15 Yamaha engine, 25 HP Yamaha engine, 85 HP Yamaha engine, Dacor buoyancy compensators, underwater sleds, Apollo system with compass,Aquatic life support system, computer Radio Shack TRS 80 Model 1.

AQUARIUM FACILITIES :

Number of tanks : 1.

RESEARCH CRAFT:

NAME :	**BOSTON WHALER**
LENGTH :	7 m
TYPE :	Small vessel
NAME :	**GRUMMAN CANOE**
LENGTH :	5 m
TYPE :	Small vessel
NAME :	**SKIFF**
LENGTH :	4 m
TYPE :	Small vessel
NAME :	**CRESTLINER ALUMINUM BOAT**
LENGTH :	5 m
TYPE :	Small vessel
NAME :	**YAMAHA CITATION**
LENGTH :	5 m
TYPE :	Small vessel

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42. **University of the West Indies (UWI),**
Discovery Bay Marine Laboratory (DBML)

P.O. Box 35,
Discovery Bay, St. Ann,
Jamaica
Telephone: (1-809) 973-2241
Cable: UNIVERS
Telex: 2123
Telefax/facsimile: (1-809) 973-3091
Electr. Mail:
Head: Dr. Jeremy D. Woodley

Specializations: M3, M12, M4, M43, V, F3, M11, M33, M31
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Its functions are research and teaching, especially in coral reef ecology and physiology. The laboratory is equipped primarily for research on coral reefs but has expanded its activities to fisheries and mariculture.

TRAINING PROGRAMME:

Teaching for the University of the West Indies, Department of Zoology at the undergraduate and graduate (M.Sc., Ph.D.) levels. An international graduate level course each summer on some aspect of marine science.

STAFF:

3 Scientific Staff 2 Technical Staff 9 Other Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Gayle, P.	B.Sc.	Dive Instructor/Paramedics
Miller, M.	B.Sc.	Coral reef ecology/ fisheries
Woodley, J.	Ph.D.	Coral reef ecology/physiology

PREMISES/FACILITIES:

Laboratory area: 300 m^2. With facilities for: Visiting scientists: 20; Students: 30

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 4500

EQUIPMENT:

Beckman DV2 spectrophotometer, Sorvall RCB centrifuge, boats, diving equipment, computers, recompression chamber, tide guage, weather station.

AQUARIUM FACILITIES:

Total area :28 m^2 Number of tanks : 20

RESEARCH CRAFT:

Name : **TOLL**
Length : 7 m
Type : Aquasport
Special facilities : SCUBA equipment

Name : **TROLL**
Length : 7 m
Type : Aquasport

Name : **TODY**
Length : 5 m
Type : Aquasport

Name : **MONTY**
Length : 5 m
Type : Boston Whaler

Name :	**PELICAN**
Length :	5 m
Type :	Boston Whaler
Name :	**BOZO**
Length :	5 m
Type :	Skiff
Name :	**PANTHER**
Length :	5 m
Type :	Avon inflatable
Name :	**PC8B**
Owner :	Research submersibles Ltd.
Length :	7 m
Type :	Perry submersible

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43. University of the West Indies (UWI)
Marine Science Centre

Department of Zoology, Faculty of Natural Sciences
Mona,
Kingston 7,
Jamaica
Telephone: (1-809) 927-1609
Cable: UNIVERS
Telex: 2123 UNIVERS JA
Telefax/facsimile: (1-809) 927-1640
Electr. Mail:
Director: Prof. Ivan Goodbody
Specializations: F1, G, J5, L3, V, V5, V6, M, N23, N26, P2
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily Wider Caribbean
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Research and training in marine sciences, especially coastal environments, fisheries, and physical oceanography. The Centre works with eight associate scientists from other departments of the University of the West Indies, as well as other institutions regionally and globally. The Centre is based at the Department of Zoology, which provides teaching and research at both undergraduate and postgraduate levels in all aspects of zoology, leading to B.Sc., M. Phil and Ph.D. Degrees.

TRAINING PROGRAMME:

At the Department of Zoology, there is a final year course (full major) in marine sciences at the B.Sc. level. This includes coastal management, fisheries, aquaculture and marine ecology. The Department offers postgraduate studies and research leading to the M.Phil and Ph.D. Degrees.

STAFF:

13 Scientific Staff 5 Technical Staff 7 Other Staff

PROFESSIONAL SCIENTIFIC STAFF OF THE MARINE SCIENCE CENTRE:

NAME	DEGREE	SPECIALITY
Chow, B. A.	M. Phil; D.M.A.	Mangrove, Ecology and Information

PROFESSIONAL SCIENTIFIC STAFF OF THE ZOOLOGY DEPARTMENT:

NAME	DEGREE	SPECIALITY
Aiken, K.	M.Sc.	Fisheries
Bacon, P. R.	Ph.D.	Mangrove Ecology
Freeman,B.	Ph.D.	Entomology
Garraway, E.	Ph.D.	Entomology
Goodbody, I. *	Ph.D.	Ascidian Ecophysiology
Greenfield, M.	Ph.D.	Animal Physiology
Haley, M.	Ph.D.	Animal Behaviour
Lindo, M.	M.Phil.	Zooplankton
Mansingh, A.	Ph.D.	Pest Management
Robinson, R. D.	Ph.D.	Parasitology
Steele, R. D.	Ph.D.	Aquaculture
Vogel, P.	Ph.D.	Animal Behaviour/Ecology, Data Management/Biometry

* visiting professor

PREMISES/FACILITIES:

The Marine Science Centre works in collaboration with the two marine laboratories at the University of the West Indies: The Discovery Bay Marine Laboratory and the Port Royal Marine Laboratory **(see citations, this publication).**

INFORMATION FACILITIES:

Computerized, annotated national marine affairs database is maintained (2,000 citations). Substantial holding of Marine Science Journals at the Natural Science Library at the University of the West Indies (Mona Campus). In addition, there is a collection of personal literature by individual members of the faculty. Excellent facilities are also availiable at the University's two marine laboratories; The Discovery Bay Marine Laboratory and The Port Royal Marine Laboratory (see citations).

EQUIPMENT:

STP Probe, nutrient autoanalyzer, theodolites, current meter, salinity-oxygen meters, computers.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT.

Information not available

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44. **University of the West Indies (UWI)**
Port Royal Marine Laboratory

P.O. Box 12,
Marine Science Unit, UWI,
Mona, Kingston,
Jamaica
Telephone: (1-809) 924-8573, 927-6202
Cable: UNIVERS
Telex: 2123 UNIVERS JA
Telefax/facsimile: (1-809) 927-1640
Electr. Mail:
Director: Dr. Dunbar Steele
Specializations: F3, M41, M12, M21, M31, N26, V4, V5
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Engaged in research and training in the marine sciences, especially coastal environments, fisheries, marine ecology and aquaculture, at graduate and undergraduate level. The Port Royal Marine Laboratory has access to a wide variety of marine habitats including mangroves, inshore harbour waters, coral reefs and the deep sea.

STAFF:

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Chin, Tony	B.Sc.	Invertebrates/fisheries

Eight (8) faculty members from the University of the West Indies are currently associated with the Marine Science Unit. The laboratory is supervised by a Scientific Officer with four (4) support staff.

PREMISES / FACILITIES:

Laboratory area: approximately 500 m^2. Limited accommodation available for visiting scientists and simple residential facilities for short-term accommodation.

INFORMATION FACILITIES:

Substantial holding of marine science journals at the Campus Library.

EQUIPMENT:

General laboratory equipment, including microscopes, inverted microscope, balances, BT, Van Dorn Bottles, Turner fluorometer, CTD, Spectrophotometer, Centrifuge etc.

AQUARIUM FACILITIES:

Experimental aquaria, nine (9) outdoor fiberglass tanks; indoor tanks (both sets are equipped with freshwater, seawater and aeration facilities; new hatchery facilities.

RESEARCH CRAFT:

Small craft for inshore work only.

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45. **Centro de Ecodesarrollo (CECODES)**
Calle Altadena No. 8,
Napoles, 03810,
Mexico 12, D.F.,
México
Telephone: (52-5) 523-1802 / 2786
Cable:
Telex: 017 74 521 CONACYT
Telefax/facsimile:
Electr. Mail:
Director: Dr. Iván Restrepo Fernández
Specializations: F, G1, U, H3, H6, J41, N, R5, U5, U1, M42
Training: No
Periodicals: No
Institutional Nature: Public/Local
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:
No disponible.

PERSONAL:
7 Doctorados 10 Maestrías 28 Licenciaturas

LOCALES/INSTALACIONES:
2 Locales

SERVICIO DE INFORMACION:
No disponible.

EQUIPO:
Computo y análisis de muestras

ACUARIOS:
No disponible.

BUQUES DE INVESTIGACION:
En colaboración con la UNAM, PEMEX y CONACYT los buques Puma y Justo Sierra.

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46. **Centro de Investigación y de Estudios Avanzados (CINVESTAV), Instituto Politécnico Nacional (IPN)**
Km 6, Carretera Antigua a Progreso, Mérida,Yucatán
Casilla Postal 73 Cordemex,
Mérida 97310, Yucatán,
México
Telephone: (52-99) 260-545/443/301/434
Cable:
Telex: 0753654 CIEMME
Telefax/facsimile: (52-99)260545
Electr. Mail:
Director: Dr. Fernando Esparza Garcia
Specializations: V, J4, N26, M3, M16, M4, V5, V4, L2, L4, M34, M33, M42, M43.
Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

(a) Cursos de Postgrado en Biología Marina (Maestría en Ciencias); (b) asesoría para el desarrollo de tesis a nivel de Licenciatura en diversas áreas relacionadas con ciencias del mar; (c) cursos de especialización: entrenamiento en Biología Pesquera y Acuacultura.

PERSONAL:

13 Profesionales científicos 6 Técnicos 9 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Aneguin, F.	M.Sc.	Pesquería Dinámica de Población
Capurro, L.	Ph.D.	Oceanografía física
Chavez, C.	Ph.D.	Acuacultura/Nutrición de Peces
Chavez, E.	Ph.D.	Ecología de Peces/Biología
Cruz, G.	M.Sc.	Ecología Marina/Biología
Flores, A.	M.Sc.	Acuacultura/Cultivo
Gold, G.	Ph.D.	Oceanografía química
Herera, J.	M.Sc.	Modelos de Probabilidad
Martínez, C.	Ph.D.	Acuacultura
Olrura, M.	M.Sc.	Acuacultura/Nutrición de Peces
Seijo, J.	Ph.D.	Pesquerías Tropicales, Bioeconomía de pesca artesanal
Valdez, D.	M.Sc.	Oceanografía química/Ciclos biogeoquímicos
Vega, M.	M.Sc.	Ecología de Peces/Relaciones trópicas

LOCALES/INSTALACIONES:

Superficie del edificio : 2572 m^2
Superficie del laboratorio : 234 m^2
Con instalaciones para científicos visitantes: 4 y estudiantes: 30

SERVICIO DE INFORMACION:

Numero de libros, revistas, manuscritos, etc. : 1032
Número de suscripciones a publicaciones periódicas: 46

EQUIPO:

Espectrofotómetro (Pye Unicam), potenciómetro, salinómetros (3), oxímetros (2), balanzas analíticas Sartorius (2), balanza analítica Metler, balanzas granatarias (3), microKjehldal, microprocesador de iones (Orion), Soxhlet microscopios simples (14), microscopios compuestos (3), microcomputadoras (6) (HP sistema 45, HP9845 B, Sinclair 1000, Atari 800, Franklin AC1000), centrifuga, muflas (2), estufas (2), refrigeradores (3), congeladores (3), equipo

fotográfico subacuático (Nikonos 3), bombas de vacío (3), equipos de destilación (3), aparato de electrofóresis LKB2197, equipo de desionización, Fibertec sistema M 1020, Fibertec sistema 1021, Kjeltec 1030 analizador, Cemotec 1090, Digestion sistema 20, baños María (4), graficador de 2 canales.

ACUARIO PARA EXPERIMENTOS:

Superficie total: 750 m^2 Tanques (No.): 40

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**JUSTO SIERRA**
Eslora :	50 m
Tipo :	Barco oceanográfico
Espacion para lab. :	30 m^2
Equipos y arreglos especiales	Navegador por satelite, Omega, girocompas y piloto automático, radares, computadores, 4 ecosondas y 2 sonares, estación meteorológica, compresor para estudios sísmicos CTD, fluorómetro, guinches de diferentes tipos, redes por pesca de diferentes tipos, correntómetros, radioboya, dragas, tren de nasas, fotómetros, entrada de agua para registro continuo.

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47. Secretaría de Agricultura y Recursos Hidraúlicos (SARH) Centro de Estudios de Aguas Litorales (CEAL)

Normal Urbana 1435,
La Paz 23040, Baja Calif. Sur.,
México
Telephone: (52-488) 23193/24993
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Sr. Saul Traconis Ramos
Specializations: V, M14, L2, N26, V2, V4, V5
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

Exclusivamente cursos de capacitación y actualización: (a) análisis de campo y laboratorio en aguas y aguas residuales; (b) análisis de campo y laboratorio en aguas litorales; (c) certificación de aguas para la explotación de moluscos bivalvos; (d) plantas de tratamiento de aguas residuales.

PERSONAL:

10 Profesionales científicos 2 Técnicos 5 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
García Pemanes, J.	Oceanólogo	Oceanografía biológica
Mayoral Vazquez, E.	Biología	Análisis de laboratorio
Nuñez Carcamo, L.	Oceanólogo	Oceanografía física
Rodríguez Pena, G.	Ing. Bioquímico	Productividad primaria
Traconis Ramos, S.	Ing. Civil	Ingeniería sanitaria
Trasvina Castro, A.	Oceanólogo	Biología marina

LOCALES/INSTALACIONES :

Superficie del edificio : 594 m^2
Superficie del laboratorio : 450 m^2

EQUIPO:

Medidores de conductividad, pH metros, salinómetros, espectrofotómetro (ACTACV Beckman; Coleman 21; Spectronic 20), microscopios, balanzas analíticas, centrifuga, batitermógrafo, botellas Nansen y Van Dorn.

ACUARIOS:

No disponible.

EMBARCACIONES PARA INVESTIGACION:

Nombre : **CEAL 2**
Eslora : 4 m
Tipo : Lancha motor 25 HP

Nombre : **CEAL 3**
Eslora : 6 m
Tipo : Lancha motor 48 HP

Nombre : **SARAH 1**
Eslora : 15 m
Tipo : Costero motor 150 HP
Espacio para lab. : 6 m^2

Equipos y arreglos especiales : Ecosonda, guinche electrico, radio.

Nombre : **SARAH 2**
Eslora : 15 m
Espacio para lab. : $6m^2$
Equipos y arreglos especiales : Ecosonda, guinche electrico, radio, radar.

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48. **Secretaría de Desarrollo Urbano y Ecologia (SEDUE)**
Subsecretaría de Ecología
Dirección General de Normatividad y Regulación Ecológica
Avenida Constituyentes 947,
Belen de las Flores,
México D.F. C. P. 01110,
México
Telephone: (52-5) 271-2619/3000/2812
Cable:
Telex: 1771198 SEDUME
Telefax/facsimile: (52-5) 286-6625
Electr. Mail:
Director General:
Specializations: V
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:
No disponible.

PROGRAMA DE CAPACITACION:
No disponbile.

PERSONAL:
No disponible.

LOCALES/INSTALACIONES:
No disponible.

EQUIPO:
No disponible.

ACUARIOS:
No disponible.

BUQUES DE INVESTIGACION:
No disponible.

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49. **Secretaría de Marina**
Dirección General de Oceanografía
Calzada de la Virgen y Eje 2 Oriente,
(La Salud),
México 06700 D.F.,
México
Telephone: (52-5) 684-8188 / 6796411
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director General: Sr. Gilberto López Lira
Specializations: J, M1, M2, M3, M41, S, V, M15
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:
Los objetivos son de realizar la investigación oceanográfica aportando los resultados que faciliten la definición e implantación de una política racional de explotación y adecuada conservación de los recursos marítimos del país.

PROGRAMA DE CAPACITACION:
No disponible.

PERSONAL:
No disponible.

LOCALES/INSTALACIONES:
No disponible.

SERVICIO DE INFORMACION:
No disponible.

EQUIPO:

No disponible.

ACUARIOS:

No disponible.

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**MARIANO MATAMOROS**
Eslora :	67 m
Tipo :	B/O
Nombre :	**DRAGAMINAS 20**
Eslora :	56 m
Tipo :	B/O
Nombre :	**ALTAIR**
Eslora :	63 m
Tipo :	B/O

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50. **Secretaría de Pesca**
Instituto Nacional de la Pesca (INP)
Alvaro Obregon No. 269 Piso 10,
Colonia Roma,
México 06700 D.F.,
México
Telephone: (52-5) 9052080948/1848
Cable: SEPESCA LONDRES 259 COL R
Telex: DEPEME 1777483
Telefax/facsimile:
Electr. Mail:
Directora General: Biol. Alicia Bargena Ibarra
Specializations: V, M16, M33, M34, M36, N26, F8, H6
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

Programa Nacional de Actualización y Superación Académica.

PERSONAL:

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Baqueiro Cardenas, E.	M.Sc	Biología de moluscos
Casales, R.	Ing. Bioquímico	Nuevos productos del Río
Carlos, E.	Bióloga	Evaluación recursos pesqueros
Díaz Lopez, Ma. L.	Ing. Bioquimico	Procesamiento productos pesqueros
Duarte Sanchez, M. P.	Bióloga	Acuacultura
Elizondo Garza, R.	Bióloga	Evaluación recursos pesqueros
Gallarao Navarro, A.	Ing. Bioquímico	Control microbiológico
Gallo Ramírez, J.	Ing. Pesquero	Artes y sistemas de pesca (media agua y de fondo)
Gutiérrez, H. C.	Bióloga	Ictioplancton, Evaluación pesquerías
Munguia Bastidas,V.	Ing. Bioquímico	Procesamiento y control de calidad
Muñoz Cabrera, L.	Q.B.P.	Análasis físico y bacteriológico del agua
Penaloza Millan, A.	I.Q.I.	Análasis fisicoquímico (sedimentos y agua)
Valdez Garcia, C.	Bióloga	Estadística biológica
Vargas Molinar, E.	Ing. Pesquero	Artes y sistemas de pesca
Villanne va Osana, A.	Bióloga	Cultivo tortugas marinas

LOCALES/INSTALACIONES:

No disponible.

SERVICIO DE INFORMACION:

(a) Revista Ciencia Pesquera. (b) Informes Especiales. (c) Memorias.

EQUIPO:

Se cuenta con equipo científico de laboratorio y de campo para ciencias acuáticas, así como con equipo tecnológico de captura y procesamiento de alimentos.

ACUARIOS:

Se cuenta con salas de acuarios para investigación y exhibición en:

La Paz, Baja California
Manzanillo, Colima
Lerma, Campeche
Yucalpeten, Yucatán
Isla Mujeres, Quintana Roo
Puerto Morelos, Quintana Roo

BUQUES DE INVESTIGACION:

El Instituto Nacional de la Pesca cuenta con los siguientes buques:

BUQUES	LOCALIZACION
Antonio Alzate	Mazatlan, Sinaloa
Explorador Sardinero	La Paz, Baja California Sur
Alejandro Humboldt	Mazatlan, Sinaloa
Onjuku	Campeche, Campeche

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51. **Universidad Autónoma Metropolitana (UAM)**
Departamento de Zootécnica (Unidad Iztapalapa)
División Ciencias Biología y de la Salud (UAM1)

Avda. Mich. y Purisma, C.P. 55535,
México 09340 D.F.,
México
Telephone: (52-5) 686-0322
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:

Specializations: V, J4, M1, M3, M41, M43, N26, S, U, M34, M11, M12
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

No disponible.

PERSONAL:

28 Profesionales científicos 1 Técnico 2 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alvarez Silva, C.	Lic. en Biología	Ficología
Ayala Duval, E.	Lic. en Biología	Planctonología

Baez Vega, B.	Lic. en Biología	Ecología
Bravo Nunez, E.	Lic. en Biología	Pesquerías
Comas Rodriguez, O.	Dr. en Ciencias	Sedimentología, Geología
Contreras E., F.	Lic. en Biología	Productividad
De lara Isassi, G.	Maestra en Ciencias	Ficología
De la Rosa Velez, J.	Lic. Químico Biol.	Citoquímica
Díaz Ruiz, S.	Lic. en Biología	Ictiología
Espinosa Aranda,J. L.	Lic. en Biología	Acuacultura
Flores Pedroche, F.	Maestro en Ciencias	Ficología
Galindo Molina, A. M.	Lic. en Biología	Ecología
Gamboa Contreras, A.	Lic. en Biología	Acuacultura
Gutiérrez Medieta, F.	Lic. en Biología	Productividad
Kuri Nivon, E.	Lic. en Biología	Acuacultura
Loo Guevara Elia, E.	Lic. en Biología	Acuacultura
Maldonado M., Ma.	Lic. en Biología	Planctonología
Medina García, M.	Lic. en Biología	Acuacultura
Mejía Pineda, J. R.	Lic. en Biología	Limnología
Millard Colmenero, L.	Lic. en Biología	Contaminación
Miranda Arce, G.	Maestra en Ciencias	Ficología
Quintana y Molina, J.	Maestro en Ciencias	Bentos
SantiagoFandino, V.	Maestro en Ciencias	Bioensayos
Saucedo Ruiz, C.	Lic. en Biología	Hidrología
Sobrino F., A.S.	Lic. en Biología	Ficología
Valdes Lozano, D. S.	Lic. en Química Ind.	Oceanografía
Vargas Maldonado, I.	Lic. en Biología	Ictiología
Yanez Trujillo, L.	Lic. en Biología	Acuacultura

LOCALES/INSTALACIONES:

Superficie del laboratorio: 1,007 m^2

SERVICIO DE INFORMACION:

No disponible.

EQUIPO:

Micriscopios, refrigeradores, muflas, centrifugas, balanzas, bombas de aire y de vacío, redes, separadores, digestadores Kjeldahl, lancha, computadoras vehículos.

ACUARIA PARA EXPERIMENTOS:

Superficie total : 200 m^2 Tanques (No.): 34

BUQUES DE INVESTIGACION:

No disponible.

52. Universidad Nacional Autónoma de Mexico (UNAM)
Instituto de Biología (IB)

Circuito Exterior,
Casilla Postal 70233,
México 04510 D.F.,
México
Telephone: (52-5) 548-8207
Cable:
Telex: 1760155 CICME/1774523 UNAM
Telefax/facsimile:
Electr. Mail:
Director: Dr. Antonio Lot
Specializations: M3, M41, N26, U1, M34, M32, M35.
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

Alrededor del grupo de investigación trabajan más de 20 alumnos de licenciatura y 10 de maestría y doctorado. En el extranjero se preparan a nivel de Doctorado 3 personas.

PERSONAL:

165 Profesionales científicos 0 Técnicos 240 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Arenas F., V.	Ph.D.	Biogeoquímica acuática
Arrendondo F., J. L.	M.Sc.	Limnología/ Acuacultura
Bravo H., M.	Ph.D.	Parásitos de peces
Bueno S., J.	Ph.D.	Insectos acuáuticos
Cabrera J., J. A.	Ph.D.	Camaronicultura/Acuacultura
De la LAnza E., G.	Ph.D.	Biogeoquímica acuática
Drummond D., H.	Ph.D.	Etología de aves
Fuentes, P.	M.Sc.	Ictiología
Garcias C., J. L.	M.Sc.	Piscicultura
Gavino de la T., G.	M.Sc.	Aves marinas
Gomez A., S.	Ph.D.	Plancton
Lot, A.	M.Sc.	Hidrofitas acuáticas
Ortega, M.	Ph.D.	Algología, Recursos pesqueros

Santiago F., S.	Ph.D.	Insectos acuáticos
Villalobos H., J. L.	M.Sc.	Carcinología

LOCALES/INSTALACIONES

Superficie del edificio :5000 m^2 Superficie del laboratorio :2000^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 28000
Número de suscripciones a publicaciones periódicas : 280
Los títulos de las monografías y las series : (a) Anales del Instituto de Biología, Serie Zoología; (b) Anales del Instituto de Biología, Serie Botánica; (c) Anales del Instituto de Biología, Serie Biología Experimental

EQUIPO:

4 Botes ligeros.

ACUARIO PARA EXPERIMENTOS:

Superficie total : 20 m^2

EMBARCACIONES PARA INVESTIGACION:

Nombre: **PUMA**
Eslora : 50 m
Tipo : Oceanográfico
Espacio para lab.: 40 m^2

Nombre : **JUSTO SIERRA**
Eslora : 50 m
Tipo : Oceanográfico
Espacio para lab. : 40 m^2

Nombre : **ALTAIR**
Eslora : 60 m
Tipo : Oceanográfico
Espacio para lab.: 30 m^2

Nombre : **DM. 20**
Eslora : 70 m
Tipo : Dragaminas
Espacio para lab. : 20 m^2

Nombre : **ONJUKU**
Eslora : 40 m
Tipo : Pesca experimental
Espacio para lab. : 15 m^2

53. Universidad Nacional Autónoma de México (UNAM) Instituto de Ciencias del Mar y Limnología (ICMyL)

Apartado Postal 70305,
Cd. Universitaria,
México D.F., CP 04510,
México
Telephone: (52-5) 548-2766/8206
Cable:
Telex: 1760155 CICME/1774523 UNAM
Telefax/facsimile: (95)5482582
Electr. Mail:
Director: Sr. Jorge Carranza
Specializations: V4, V3, N26, F13, F3, J, V5, V2, M1, M3, M21, J5, J6.
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

El Instituto es sede del Proyecto Académico de Especialización, Maestría y Doctorado en Ciencias del Mar y Limnología, de la Unidad Académica de los Ciclos Profesional y de Postgrado del Colegio de Ciencias y Humanidades. El proyecto tiene un enfoque interdisciplinario, con opciones en las diferentes oceanografías: física, química, geología, biología y pesquera; utilizando los recursos tanto de Ciudad Universitaria, como de las estaciones de provincia, así como la participación de los alumnos en curso y proyectos a bordo de los buques oceanográficos. De acuerdo a la filosofía del Colegio de Ciencias y Humanidades, el proyecto tiene como base fundamental la participación directa del alumno en las tareas de investigación, en un sistema tutorial, bajo la supervisión de un comité asesor de 3 investigadores en el nivel de Maestra y 5 en el de Doctorado.

PERSONAL:

57 Investigadores 48 Técnico-Académicos

SERVICIOS DE INFORMACION:

El Instituto cuenta con sus propios órganos de publicación, debidamente arbitradas: "Anales del Instituto de Ciencias del Mar y Limnología", "Cuadernos Técnicos del Instituto de Ciencias del Mar y Limnologia"; de estos, la primera revista es la que presenta carácter periódico.

EQUIPO:

La Institución cuenta con amplio y diverso equipo de alto nivel de precisión, así como de equipo de uso continuo en las diversas instalaciones y buques oceanográficos. Entre el equipamiento relevante se tiene lo siguiente: microscopio electrónico de Barrido, microscopio para cuantificación de Plancton, multianalizadores químicos, espectrofotómetros diversos, fluorómetro, salinómetro, sensores electrónicos (CSTD, oxímetros, Hidrolab), ecosondas, congeladores para conservación de muestras, computadoras y sistemas perifericos.

ACUARIOS:

El la Estación Mazatlán, Sinaloa, se tienen instalaciones adecuadas para el trabajo en acuarios; en menor medida, pero funcionalmente, el Laboratorio de Limnología en Ciudad Universitaria cuenta también con área apropiada para acuario.

EMBARCACIONES PARA INVESTIGACION:

El ICMyL cuenta con dos buques de investigación oceanográfica: el B/O "El Puma" y el B/O "Justo Sierra", además de un considerable número de embarcaciones menores en las diferentes estaciones. La programación y gastos de operación de los buques se enmarcan dentro de un amplio convenio interinstitucional a largo plazo, entre la Universidad Nacional Autónoma de México, el Consejo Nacional de Ciencia y Tecnología y Petróleos Mexicanos, para el programa "Exploración Sistemática de la Zona Económica Exclusiva de México", que pone los buques a disposición de la comunidad científica nacional.

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54. **Stichting Caraibisch Marien Biologisch Instituut (CARMABI) - Foundation CARMABI**

Piscadera baai,
P.O. Box 2090,
Willemstad, Curaçao,
Netherlands Antilles
Telephone: (599-9) 62-4242/62-4705
Cable: CARMABI CURACAO
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Mr. Walter L. Bakhuis
Specializations: M42, M43, J6, M3, V, F7,J5.
Training: No
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The CARMABI Foundation is a government funded research institution and aims to: (1) support and conduct research for natural resource management in the sea as well as on land; and (2) provide advice and general information on issues related to natural resource management. **INSTITUTIONAL STRUCTURE:** There are no subdivisions, but the scientific personnel consists of staff members with their own field of knowledge. Staff members supervise Ph.D. and Master degree students. Programmes last six months to three years.

STAFF:

3 Scientific staff 3 Technical staff 5 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Bakhuis, W.L.	Ph.D.	Conservation, Biology of Iguanas
de Freitas, J. A.	M.Sc.	Terrestrial Conservation
Sybesma, J.	M.Sc.	Marine Conservation

PREMISES /FACILITIES:

Laboratory area: 250 m^2 (dry and wet)
Dormitories for approximately 10 students/visiting scientists.

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.,: 1500
Number of periodical subscriptions: 46
Monographs and series titles:

- CARMABI Collected papers :discontinued after vol. 13 (1979)
- STINAPA Documentation Series: discontinued after no. 12 (1983)
- STINAPA Series: 1 30 (1984)

Database / Documentation centre: Some specific literature (like Iguana, white tail deer, blue crab, turtles, barn owl) is compiled on computer.

EQUIPMENT :

Microscopes, cameras (NikonNikonos Minolta 35mm), black and white dark-room facilities, slide projector, calorimeter, Beckman DU 65 spectrophotometer, kern S 2000 analytical balance, water distillation, underwater scooters, diving equipment, pk meter, 5 microcomputers: Apple MacIntosh and AST, centrifuge, deep freezer.

AQUARIUM:

Running saltwater and air. Few number of tanks for short time experiments.

RESEARCH CRAFT :

Name : **DJINDJA**
Length : 6 m
Type : Boston Whaler 160 hp

Name :	**SHON PIET**
Length :	5 m
Type :	Boston Whaler 80 hp

Name :	**CARMABI**
Length :	3 m
Type :	boat 10 hp

OTHER INFORMATION:

Besides the Institute in Curaçao, there is also a sister institute in Bonaire called Karpata Ecological Centre. This station is fully equipped for marine ecological research. Facilities: dive equipment including a small compressor, docking space, one boat, wet and dry lab dormitories for 4 - 8 students.

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55. **Stichting Nationale Parken Nederlandse Antillen (STINAPA)**

c/o CARMABI, P.O. Box 2090,
Curaçao
Netherlands Antilles
Telephone: (599-9) 62-8161
Cable: CARMABI CURACAO
Telex:
Telefax/facsimile: (599-9) 62-6780
Electr. Mail:
Director: Mr. W. L. Bakhnis
Specializations: F4, F7, M41, M42, M43, J4, P2, F63
Training: No
Periodicals: Yes
Institutional Nature: National Nongovernmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The STINAPA Foundation manages the national parks of the Netherlands Antilles and has the following aims: (1) acquire, administer and preserve terrestrial and marine areas of biological, geological, archaeological and cultural significance; (2) preserve biological communities and protect endangered species from extinction; and (3) convince the public and community leaders that responsible management of our natural resources is crucial to the future of our islands. **INSTITUTIONAL STRUCTURE:** Marine Projects: (a) Bonaire Marine Park: All around the island of Bonaire - Headquarters/Visitor Centre: Karpata Ecological Centre; (b) Curacao Underwater Park: 20km off Southwest coast of Curaçao - Headquarters/Visitors Centre:c/o CARMABI, Piscaderabaai; (c) Saba Marine Park: All around the island of Saba; zonated - Headquarters/Visitors Centre: At the Harbour Office.

TRAINING PROGRAMME:
Information not available.

STAFF:
3 Technical Staff 6 Professional Staff.

PREMISES/ FACILITIES:
STINAPA Headquarters is located at CARMABI, Piscaderabaai.

INFORMATION FACILITIES:
(a) STINAPA Documentation Series: discontinued after no. 12 (1983); (b) STINAPA Series; (c) yearly calendar; (d) specific projects material such as brochures, posters, t-shirts etc, including material for miscellaneous educational and public information activities.

EQUIPMENT:
Every project has its own equipment. All marine parks have diving equipment, a boat, a car and information material.

AQUARIUM FACILITIES:
Information not available.

RESEARCH CRAFT:
Information not available.

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56. **Corporación Nicaragüense de la Pesca (INPESCA)**
Km 6 1/2 Carretera Sur.,
Casilla Postal 2020,
Managua,
Nicaragua
Telephone: (505-2) 52000/61427/61369/60435
Cable: CIPINPESCA
Telex: 1309
Telefax/facsimile:
Electr. Mail:
Presidente: Sr. Francisco Lacayo
Specializations: M16, M3, M41, N26, Q9, U, M33
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Su objetivo fundamental es la identificación, elaboración y ejecución de programas de investigación de los recursos pesqueros. **ESTRUCTURA DE LA INSTITUCION:** El Centro depende del Ministro del Instituto Nicaragüenese de la Pesca (INPESCA). Se ha dividido tentativamente en la siguiente forma: (a) Departamento Investigación de Recursos; (b) Sección de Evaluación; (c) Sección de Técnicas Pesqueras; (d) Sección de Ordenación; (e) Departamento de Acuicultura; (f) Sección Acuacultura; (g) Sección Maricultura; (h) Unidad de Información Técnica.

PROGRAMA DE CAPACITACION:

No disponible.

PERSONAL:

18 Profesionales científicos 20 Técnicos 10 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Arostegui, A.	B.Sc.	Evaluación
Arroliga, R. Ma.	B.Sc.	Nutrición de peces
Carcamo, R. Ma.	B.Sc.	Ictiopatología
del Carmen, Ma. A.	B.Sc.	Piscicultura
Escoto, R.	B.Sc.	Evaluación
Lacayo L., C.	B.Sc.	Piscicultura
Ligthbum, M.	M.Sc.	Biología pesquera
Mendoza, A.	B.Sc.	Tecnología pesquera
Orella, F.	M.Sc.	Biología marina
Saavedra, Ma. A.	B.Sc.	Piscicultura
Saborio, A. (Srita)	M.Sc.	Piscicultura
Sanchez, R.	B.Sc.	Estadística

LOCALES/INSTALACIONES:

Superficie del edificio: 300 m^2 Superficie del laboratorio: 150 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 7,239
Número de suscripciones a publicaciones periódicas: 55
Los títulos de las monografías y las series:

- 16 Monografías publicadas por la Institución
- Boletín Técnico INPESCA (varios numeros)

EQUIPO:

Microscopio esterescopico (Wild MZA) con equipo de microfotografía (MPS11 Mikrophot MPS 05) y tubo de dibujo, 5 balanzas digitales electrónicas (Ohaus), 2 termómetros

digitales (DigiSense), 4 calculadoras programables (Casio FX602), microcomputadora (Monroe OC8820), cámara fotográfica (Canon AE 1Programa con extensor 2A), macrozoom 70210 mm y lente con vista de cerca, 2 redes de fitoplancton, red de zooplancton, 2 balanzas de precisión Pensylvania, guinche oceanográfico manual, rueda métrica oceanográfica, medidores 02, medidores de pH, hidrómetros, botellas Nansen, discos Secchi, dragas tipo Eckman, microscopios monoculares, balanzas de tres brazos, balanza analítica, balanzas digitales, balanzas de peso multiples, equipos de sondeo de pesca y otros de apoyo.

ACUARIO PARA EXPERIMENTOS:

Superficie total : 7,000 m^2 Tanques (No.): 46

BUQUES DE INVESTIGACION:

No disponible.

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57. **Instituto Nicaragüense de Recursos Naturales y del Ambiente (IRENA), Ministerio Desarrollo Agropecuario y Reforma Agrícola**
Apdo. Postal 5123 y 1347,
Km. 12 1/2 Carretera Norte,
Managua,
Nicaragua
Telephone: (505-2) 2311105/31159498
Cable:
Telex: (375) 1328 INFOCASA NK
Telefax/facsimile: (505)231274
Electr. Mail: ECONET & GEONET: CRIES
Director General:
Specializations: P3, V, J4, N12
Training: No
Periodicals: No
Institutional Nature: Governmental
2 Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVOS Y PROGRAMAS:

Se preve que en el futuro se desarrolle una unidad para atender los aspectos marinos ligados a los objetivos de la Institución.

PERSONAL:

1 Profesional científico 306 Técnicos 436 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Incer Barquero, J.	M.Sc. Ecología	Planificación en silvestres

PROGRAMA DE CAPACITACION:

No disponible.

LOCALES/INSTALACIONES:

No disponible.

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 145
Número de suscripciones a publicaciones periódicas : 1509
Los títulos de las monografías y las series:

- 1er. Seminario de Recursos Naturales, 1980.
- 2do. Seminario de Recursos Naturales, 1981
- 3er. Seminario de Recursos Naturales, 1982
- Impacto Ecológico sobre los Recursos Naturales Renovables de Centro América (Caso particular de Nicaragua).
- Forjando una Política Ambiental.

EQUIPO:

No disponible.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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58. **Centro de Ciencias del Mar y Limnología (CCML)**
Universidad de Panamá
Ciudad Universitaria Octavio Mendez Pereira,
Estafeta Universitaria,
Panamá,
Panamá
Telephone: (507) 239985/640582
Cable:
Telex:
Telefax/facsimile:

Electr. Mail:
Director: Sr. Luis D'Croz
Specializations: V, J4, V5, M16, M3, M41, N26
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVAS Y PROGRAMAS:

No disponible. **ESTRUCTURA DE LA INSTITUCION:** Además de laboratorios en el Campus Universitario existe el Laboratorio Marino en Isla Naos.

PROGRAMA DE CAPACITACION:

En la actualidad se ofrecen los cursos de: (a) Biología Marina; (b) Ecología Marina; (c) Oceanografía; (d) Ictiología; (e) Buceo Científico; (f) Principales de Acuacultura; (g) Curso Especial de Postgrado en Ecología Marina Tropical.

PERSONAL:

17 Profesionales científicos 2 Técnicos 0 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Aguila, Y.	Licenciada	Ecología marina (bentos)
Avera, A.	M.Sc.	Biología marina invertebrados marinos)
Arellano, C.	Ph.D.	Zooplancton
Chial, B.	Técnico	Química marina
Briceño, J.	M.Sc.	Ecología trófica en peces
D'Croz, L.	M.Sc.	Ecología marina bentos costera)
Goodyear, R.	Ph.D.	Peces de agua dulce
Gomez, J. A.	Licenciado	Fitoplancton
Goti, I.	Oceanologo	Biología marina
de Ho, M.	M.Sc.	Fitoplancton
Kwiecinski, B.	M.Sc.	Química marina, Contaminación
Martinez, J. A.	Licenciado	Ictiología
Martinez Vega, V.	M.Sc.	Ictiología, Comunidades esturinas
Del Rosario, J. B.	Técnico	Carcinología
Rivera, R.	Técnico	Ictiología
Vasques, R.	Ph.D.	Sucesión de comunidades de coral, Acuicultura, Biología, imnología
Vallalaz, R.	M.Sc.	Biologia de moluscos

LOCALES/INSTALACIONES:

Superficie del laboratorio: 500 m^2
Con instalaciones para estudiantes: 20

SERVICIO DE INFORMACION:

Los títulos de las monografías y las series: Memorias del Centro de Ciencias del Mar y Limnología.

EQUIPO:

No disponible.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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59. Centro de Investigaciones Hidraúlicas e Hidrotécnicas (CIHH), Universidad Tecnológica de Panamá (UTP)

Apartado 62894,
El Dorado,
Panamá,
Panamá
Telephone: (507-66) 8011/8171/8382/8468
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Directora: Sra. Maria C. Donoso
Specializations: H1, M14, Q3, J4
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

El objectivo de Centro de Investigaciones Hidraúlicas e Hidrotécnicas es contribuir a mejorar o incrementar el nivel científico-técnico del país a través de proyectos debidamente iden-tificados, preparados y evaluados mediante la realización de estudios financiados tanto por la Universidad Tecnológica de Panamá como por organismos y/o compañias nacionales e internacionales. Estos estudios son enmarcados en las siguientes categorias: (a) Estudios básicos de carácter nacional y regional, e investigaciones relacionados con las ciencias del agua;

(b) participación en los estudios orientados hacia la investigación sobre procesos tecnológicos específicos o la adaptación de los mismos al país; (c) estudios de prefactibilidad y factibilidad técnica de programas y proyectos específicos; (d) estudios de ingeniería, así como la preparación de planos, especificaciones y diseños finales previo a la etapa de ejecución de proyectos.

PROGRAMA DE CAPACITACION:

(a) Mecánica de Fluidos Avanzada (nivel de postgrado); (b) Mecánica de Fluidos (nivel de postgrado); (c) Hidraúlica (nivel de postgrado); (d) Hidrología (nivel de postgrado); (e) Curso Regional Itinerante en Hidrología y Ciencias del Agua, Itsamo Centroamericano y República Dominicana (Curso a nivel de Postgrado que se dicta cada dos años una duración de 80 horas en áreas de Ciencias de Agua).

PERSONAL:

8 Profesionales científicos

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Acosta, O.	Ing.	Ingeniería Industrial
Alvarado, R.	Ing.	Eletromecánica Ingeniería
Donoso, M.C.	M.S.	Hidráulica
Elsa, L.	Grad. Ing.	Ingeniería Civil
Flores, H.	Grad. Ing.	Ingeniería Civil
Nuñez, T.	Ing.	Químico Agrícola
Martínez, B.	Grad. Adm.	Administración Pública
De Mata, M.	Ing.	Ingeniera Mecánica

LOCALES/INSTALACIONES:

Superficie del laboratorio: 100 m^2

MEDIOS DE INFORMACION:

Los títulos de las monográfias y las series: Boletín Informativo de **CIHH** (en español, 3 veces al año).

EQUIPO:

Microcomputadoras, vehículos, mesa experimental hidráulica, canal experimental.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

60. **Comisión Nacional del Medio Ambiente (CONAMA)**

Edificio 1069 Curundu,
Casilla Postal 10120,
Panamá, Zona 4,
Panamá
Telephone: (507-32) 6055/6125
Cable:
Telex: (377) 2684 UNDEV (viaUNDP)
Telefax/facsimile: (507-27) 4725
Electr. Mail:
Executive Secretary: Lic. Juan Alberto Manelia
Specializations: L2, L4, J4
Training: Yes
Periodicals: No
Institutional Nature: Governmental
2 Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJETIVOS Y PROGRAMAS:

No disponible.

PROGRAMA DE CAPACITACION:

(a) Elaboración de tesis pertinente a estudiantes universitarios de la Escuela de Biología, Agronomía y Geografía; (b) coordinación de publicación de revistas infantiles sobre el medio ambiente; (c) propuesta para la inclusión de la temática ambiental en los planes educativos de las escuelas primarias y secundarias en Panamá.

PERSONAL:

9 Profesional científicos

LOCALES/INSTALACIONES:

No disponible.

SERVICIOS DE INFORMACION:

Numero de libros, revistas, manuscritos, etc.: 1254
Numero de suscripciones a publicaciones periodicas: 284

EQUIPO:

No disponible.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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61. Instituto Nacional de Recursos Naturales Renovables (INRENARE)

Apartado 2016,
Paraiso, Corregimiento de Ancón,
Ciudad de Panamá
Panamá
Telephone: (507-32) 4518/4870
Cable:
Telex:
Telefax/facsimile: (507-32) 4975
Electr. Mail:
Director General: Ing. Luis Fidel Narvaez R.
Specializations: P3, J4, N2, N1
Training: No
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJETIVOS Y PROGRAMAS:

La definición, planificación, organización, coordinación, regulación y fomento de las políticas y acciones de aprovechamiento, conservación y desarrollo de los recursos naturales renovables del país, particularmente lo relativo a las aguas, suelos, flora y fauna silvestres, bosques, parques nacionales, reservas equivalentes y a las cuencas hidrográficas, de conformidad con los planes de desarrollo.

Programas: (a) desarrollo forestal; (b) manejo de parques nacionales y reservas equivalentes; (c) manejo de cuencas hidrográficas.

PROGRAMA DE ENTRENAMIENTO:

No se dispone de un programa de entrenamiento, pero se ha recibido capacitación en formulación y evaluación de proyectos de desarrollo, manejo y conservación de áreas silvestres protegidas, bosques de explotación, cuencas hidrográficas, conservación de aguas y suelos, planificación de áreas silvestres, etc.

PERSONAL:

888 funcionarios:

(1) Parques y Reservas:	36 Ingenieros y Técnicos Forestales
	78 Guardabosques

(2) Programas Forestales: 69 Ingenieros y Técnicos Forestales
197 Viveristas

(3) Dirección de Desarrollo Forestal:
9 Ingenieros y Técnicos Forestales
9 Trabajadores Manuales

LOCALES/INSTALACIONES:

Oficinas de la Antigua Escuela de Paraíso, Ancón:		3000 m^2.
1.	Casas administrativas:	1958.44 m^2
2.	Casas viveros:	1615 m^2
3.	Casas guardaparques (caseta control):	312.75 m^2
4.	Areas de recreación:	423.40 m^2
5.	Depósito de alimentos PMA:	505 m^2
6.	Centro de aprovechamiento de la madera:	90 m^2
7.	Otras construcciones:	784.20 m^2

SERVICIO DE INFORMACION:

Centro de documentación, boletínes, técnicos, Plan de Acción Forestal de Panamá PAN/87/001 y otros.

EQUIPO:

Equipo móvil (vehículos pick-up doble tracción, jeep, carros, motos, etc.); equipo de radio; equipo de oficina; computadoras; proyectores audiovisuales; otros.

ACUARIOS:

No se dispone.

BUQUES DE INVESTIGACION:

No se dispone.

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62. **Ministerio de Comercio e Industrias**
Dirección General de Recursos Marinos (DIGEREMA)
Casilla Postal 3318,
Panamá 4,
Panamá
Telephone: (507-27) 4691/3528/4211
Cable:
Telex: 2256 COMERIN PA
Telefax/facsimile:
Electr. Mail:
Director:
Specializations: V, J4

Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Investigaciones principales en curso y otras actividades: evaluación de la utilidad de registro de bitacora llevado por la flota camaronera. Determinación de la temporada de reproducción de la anchoveta Ctenegraulis mysticetus y relación de los desembarques con factores ambientales. La pesquería de anchovetas y arenques del Golfo de Panamá.

PERSONAL:

15 Profesionales científicos 3 Técnicos 44 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Arosemena, D.	Biol. Marino	Evaluación de recursos (pelágicos)
Díaz, E.	Biol. Zoólogo	Biología de tunidos
Díaz, N.	Biol. Zoólogo	Estadísticas pesqueras
Gonzalez, R.	Biol. Zoólogo	Tecnología de pesca artesanal
Justine, G.	Biol. Zoólogo	Biología de pesca pelágicas
Salazar, R.	Químico	Oceanografía

LOCALES/INSTALACIONES:

Superficie del laboratorio: 300 m^2

SERVICIO DE INFORMACION:

Los títulos de las monografías y las series: Boletín de Pesca (español, trimestral, último Año 2 No.1, Enero-Marzo de 1985).

EQUIPO:

No disponible.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

63. Smithsonian Tropical Research Institute (STRI)

Isla Naos, Edificio # 352,
P.O. Box 2072,
Balboa, Ancón,
Panamá
Telephone: (507) 2490/220211
Cable: STRI
Telex:
Telefax/facsimile: (507-62) 4167
Electr. Mail:
Director: Dr. Ira Rubinoff
Specializations: F9, M43, M11, M12, M16, M21, M33, M34, S4, V
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The STRI is a centre for advanced tropical studies and has a four-fold purpose: (a) research on basic biological processes; (b) support of advanced training; (c) support of research in the tropics by others; (d) work on behalf of conservation in the tropics.

TRAINING PROGRAMME:

The Smithsonian Tropical Research Institute contributes to the training of students in diverse areas of marine biology at the university level through our Fellowship/Assistantship Programmes. Fellowships provide the opportunity to conduct an independent project at one of the Institute's facilities with the supervision of a STRI scientist. Assistantships provide students and recent graduates with the opportunity to gain experience in field research by participating in an on-going project at the Institute. Both of these opportunities are for periods ranging from 3-6 months. Qualified students from Latin America and elsewhere interested in the Institute's activities are eligible to participate.

STAFF:

26 Professional Scientific Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Bermingham, E.	Ph.D.	Evolutionary biology of vertebrates
Christe, J.	Ph.D.	Marine biology, estuarine ecology
Cooke, R.	Ph.D.	Central American archeology
Correa, M.	M.A.	Tropical plant systematics
Eberhard, M. J.	Ph.D.	Insect sociobiology
Eberhard, W.	Ph.D.	Biology

Fisher, E.	Ph.D.	Evolution and ecology of social systems
Foster, R.	Ph.D.	Tropical forest ecology
Jackson, J.	Ph.D.	Ecology and evolution of sessile organisms
Knowlton, N.	Ph.D.	Behaviour ecology, evolution of marine invertebrates
Leigh, E.t J.	Ph.D.	Evolutionary/Ecological theory
Lessios, H.	Ph.D.	Marine biology
Linaras, O. F.	Ph.D.	Human ecology
Moynihan, M. H.	D.Phil.	Animal behaviour/evolution
Ocana, G.	Ph.D.	Phytopathology and recovery of deforested areas
Piperno, D.	Ph.D.	Human paleoecology and paleobotany in tropical regions
Rand, A. S.	Ph.D.	Behavioural ecology
Robertson, D. R.	Ph.D.	Reef fish behavioural ecology
Roubik, D.	Ph.D.	Bee ecology
Rubinoff, I.	Ph.D.	Evolution of marine organisms
Smith, A. P.	Ph.D.	Plant ecology
Smith, N. G.	Ph.D.	Evolutionary biology
Smythe, N. D.E.	Ph.D.	Mammalian social systems
Windsor, D. M.	Ph.D.	Insect behaviour/ecology
Wolda, H.	Ph.D.	Insect ecology
Wright, J.	Ph.D.	Tropical ecology (special reference to birds)

PREMISES/FACILITIES:

Building area: 3,500 m^2 Laboratory area: 3,500 m^2. with facilities for visiting scientists: 200; Conference centre, auditorium capacity for 200 with small conference room.

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 26,000
Number of periodical subscriptions : 1,000

EQUIPMENT:

Research vessel, marine laboratories with running seawater system on Pacific and Atlantic coasts, molecular evolutionary laboratory, animal maintenance facilities, chemical/audiovisual facilities, diving facilities, forest station, forest reserve of 3,800 hectares.

AQUARIUM FACILITIES :

Total area : 475 m^2 Number of tanks: 100
Experimental organisms: available.

RESEARCH CRAFT:

Name : **R.V. BENJAMIN**
Length : 19 m
Type : Motor steel hull

Special facilities : Diving facilities.

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64. Caribbean Environmental Health Institute (CEHI) Caribbean Community (CARICOM)

Morne Fortune,
P.O. Box 1111,
Castries,
St. Lucia
Telephone: (1-809) 452-1412 /2501
Cable: CARENHI ST. LUCIA
Telex: 6248 OECAS for CEHI
Telefax/facsimile: (1-809) 452-5313
Electr. Mail:
Director: Dr. Naresh Singh
Specializations: F1, F2, L2, M4, V5, G, J5, V4, V3.
Training: Yes
Periodicals: Yes
Institutional Nature: Intergovernmental
Geographic Scope: Eastern Caribbean
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The Institute co-ordinates all aspects of environmental health activities in accordance with the desires of member States of the Caribbean Community. Waste management surveys have been conducted and a pollution monitoring facility has been established. Bacterial and chemical pollution and their ecological effects on marine communities in the coastal zone are being studied in CARICOM States.

TRAINING PROGRAMME:

Marine pollution research projects leading to the M.Sc. degree are being undertaken by graduate students under the joint supervision of University Department and CEHI. Training of environmental health workers in accordance with the needs of member States is a priority objective of CEHI. In the area of coastal pollution monitoring, technicians have been trained to operate the national centres being set up within the network scheme.

STAFF:

4 Scientific Staff 2 Technical Staff 5 Other Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Corbin, C.	B.Sc.	Marine Bacteriology

Singh, N. C.	Ph.D.	Chemical Pollution
Shim, D. J.	M.Phil.	Benthic Ecology
Ward, R.	B.Sc.	Chemical Pollution

PREMISES/FACILITIES:

Building area: 265m^2 Laboratory area: 140m^2

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc: 1500.

EQUIPMENT:

Gas chromatograph, atomic absorption and UVVIS spectrophotometer, spectrofluorometer, incubators, ovens, autoclaves, centrifuges, microscopes, temperature meters, dissolved oxygen meters, pH meters. salinity meters, turbidity meters, water samplers, sediment samplers, sewage samplers, scuba equipment, balances.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Information not available.

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65. **Ministry of Agriculture, Lands, Forestry, Fisheries and Co-operatives, Fisheries Management Unit (FMU)**

Manoel Street,
Castries,
St. Lucia

Telephone: (1-809) 452-3987/452-2611
Cable: FISH MANAGEMENT UNIT
Telex:
Telefax/facsimile: (1-809) 453-6314 (through Ministry of Planning)
Electr. Mail:

Chief Fisheries Officer: Mr. Horace D. Walters
Specializations: Q9, N26, F, M16, F8, V, J4.
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Information not available.

TRAINING PROGRAMME:

Training marine mechanics in the repairs and maintenance of in-board and out-board engines with the assistance of the Cooperative Development Fund of Canada.

STAFF:

3 Scientific Staff 9 Technical Staff 2 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Walters, H. D.	B.B.A.	Fisheries development/planning
Nichol, K. E.	B.Sc.	Aquaculture, Mariculture
Murray, P. A.	B.Sc.	Resource assessment

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 102
Number of periodicals subscriptions: 10

AQUARIUM FACILITIES:

Available.

RESEARCH CRAFT:

Name : **SOUVENEIR**
Length : 9 m
Type : Dory outboard
Special facilities : Echosounder

Name: **FISHERIES NO. 1**
Length : 9 m
Type : Pirogue outboard

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66. **Ministry of Agriculture, Husbandry, Fisheries & Forestry, Fisheries Subdepartment**
Cornelis Jongbauwstraat no. 50,
P.O. Box 438,
Paramaribo,
Suriname
Telephone: (597) 76741/72233
Cable: MINAGR SURINAME
Telex: Via min. FF ALBUZASN 132
Telefax/facsimile:
Electr. Mail:

Specializations: M3, N26, V, Q9, J4
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Information not available.

TRAINING PROGRAMME:

Basic training for fishermen on shrimp trawlers, handling of nets and catch, repairing of nets, maintenance of engine and boat.

STAFF:

3 Scientific Staff 4 Technical Staff 2 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Charlier, P.	Licentiaat	Biology
del Prado, F.A.	M.Sc.	Microbiology
Trachet, N.	Licentiaat	Biology, Aquaculture

PREMISES/FACILITIES:

Building area: 300 m^2 Laboratory area: 50 m^2

INFORMATION FACILITIES:

Number of periodical subscriptions: 16.

EQUIPMENT:

pH meter, salinometer, oxygen meter, 2 dissecting microscopes (Reichter and Wild), 2 microscopes (Olympus), deep freezer, analytical balance (Sartorius), centrifuge.

AQUARIUM FACILITIES:

Total area : 60 m^2 Number of tanks: 10
Experimental organisms: available.

RESEARCH CRAFT :

Name :	**SREFIDENSI 1**
Length :	22 m
Type:	Trawler 365 HP
Special facilities :	Additional room for 10 persons (students/scientists), fully equipped for commercial fishing.

Name :	**NO. 1**
Length :	9 m
Type :	Open fishing boat
Name :	**NO. 2**
Length :	4 m
Type :	Aluminum open boat
Name :	**NO. 3**
Type :	Outboard 70 HP
Name :	**NO. 4**
Length :	10 m
Type :	Poly. in-shore boat
Name :	**PAOEMA**
Length :	13 m
Type :	Open Guyana

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67. Ministry of Public Works, Telecommunications and Construction, Hydraulic Research Division

P.O. Box 2110,
Paramaribo,
Suriname
Telephone: (597) 60322
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Mr. Hubertus J. Campfens
Specializations: M3, M16, V, F, M41, J4, V2, V4
Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Data base: No

OBJECTIVES AND PROGRAMMES:

The Institution is involved in hydraulic research, including monitoring of water resources in quantity and quality.

TRAINING PROGRAMME:

Basic training programme for illiterate personnel. Lower technician courses for field personnel. In-service training for middle level personnel.

STAFF:

Information not available.

PREMISES/FACILITIES:

Information not available.

INFORMATION FACILITIES:

Information not available.

EQUIPMENT:

Standard laboratory equipment for water analyses.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Information not available.

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68. **Ministry of Food Production and Marine Exploitation**
Fisheries Division
St. Clair,
Port-of-Spain,
Trinidad and Tobago
Telephone: (1-809) 6225596/21221
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Mr. Mervyn La Croix
Specializations: F, N26, F6, F3, V, M43, J4
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

To undertake fishery management and development programmes in co-operation with other Government institutions and the fishermen's association.

TRAINING PROGRAMME:

Provides onsite beach meetings with fishermen in gear repair/safety at sea. Inhouse lecture/seminars on fisheries biology, navigation. Attendance at foreign and international training workshops.

STAFF:

9 Scientific Staff 7 Technical Staff 60 Other staff

PREMISES/FACILITIES:

Building area : 500 m^2 Laboratory area: 150 m^2

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 500
Number of periodical subscriptions: 10

EQUIPMENT:

3 electronic balances, centrifuge, 5 microscopes, 4 salinity meters, 4 oxygen meters, 4 echosounders, camera.

AQUARIUM FACILITIES:

Total area: 25 m^2

RESEARCH CRAFT :

Name :	**EXPLORER 3**
Length :	9 m
Type :	Open pirogue
Name :	**M/V PROVIDER**
Length :	26 m
Type :	Trawler (doublerig)
Special facilities :	Radar, echosounder, sleeping accommodation for 12 persons and crew.

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69. Institute of Marine Affairs (IMA)

Hilltop Lane,
P.O. Box 3160, Carenage P.O.,
Carenage,
Trinidad and Tobago

Telephone: (1-809) 634-4291 to 4
Cable: MARINAF
Telex:
Telefax/facsimile: (1-809) 634-4433
Electr. Mail: IMA.TRINIDAD.LIBRARY/OMNET
Director: Mr. Lennox Ballah
Specializations: F, G, H5, J, M, M4, N26, Q9, V, U1
Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The objectives of the institution are: to promote and encourage a deeper and broader understanding and appreciation of all aspects of the marine environment. To make available to the Caribbean, knowledge of the various disciplines relevant to marine affairs. To increase the capabilities of Governments in the formulation of consistent and informed policies in marine affairs.

TRAINING PROGRAMME:

Graduate courses in marine biology for national and Caribbean fisheries officers.

STAFF:

30 Scientific Staff 17 Technical Staff 49 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Bachew, S.	B.Sc.	Marine geology
Barclay, P.	B.A.	Publications
Betrand, D.	B.Sc.	Geology
Boodoosingh, M.	B.Sc.	Analytical chemistry
De Souza, G.	B.Sc.	Aquatic zoology
Duncan, A.	M.Ed.	Curriculum/instruction
Gabbadon, P.	B.Sc.	Aquaculture
Gerald, L.	B.A.	Land Use, Photointerpretation
Gobin, J.	B.Sc.	Benthic ecology, axonomy
Goodridge, A.	J.D.	International/Environ. law
Heileman, L.	M.Sc.	Analytical chemistry
Heileman, S.	M.Phil	Fisheries biology
Hoyte, P.	B.Sc.	Physical oceanography
Hubbard, R.	M.Sc.	Marine ecology
Hudson, D.	M.Sc.	Sedimentology
Khan, A.	Ph.D.	Analytical chemistry

Laydoo, R.	B.Sc.	Coral reef ecology
Lee Lum, L.	B.E.S.	Geography
Lewis, N.	B.Sc.	Geology
Manickch &		
Manwaring, G.	B.A.	Economics
Mc Shine, H.	M.Sc.	Marine ecology, Environmental impact assessment
Ottley, T.	M.Sc.	Librarian
Palmer, N.	J.D.	International & Environmental law
Ramcharan, E.	Ph.D.	Wet land ecology
Ramsaroop, D.	h.D.	Coral reef ecology
Romano, H.	B.Sc.	Coastal area planning, management
Rondon Jeffery, C.	B.Sc.	Analytical chemistry
Rousseau, J.	M.A.	Geography
Siung Chan, A.	Ph.D.	Marine/pollution ecology
Sturm, M.	Ph.D.	Fisheries biology

PREMISES/FACILITIES:

Building area: 1,486 m^2 Laboratory area: 605 m^2

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.,:2,800 monographs; 6,950 journal issues.
Number of periodical subscriptions: 716 reports; 1500 microforms
Monographs and series titles:

- Annual Reports, 1978-1986
- Proceedings of Seminar on "The Potential for Aquaculture Industry in
- Trinidad and Tobago"
- Research Reports (115).

EQUIPMENT:

Spectrofluorimeter, spectrophotometer (UV/VISUAL). atomic absorption spectrometer, liquid chromatograph, bathythermograph, Martek multiparameter probe, subbottom profiling system, current meters (various), handcup anemometer, tide gauges, survey fathometer, microscopes (various).

AQUARIUM FACILITIES:

Number of tanks: 9 (8 x 200 m^2; 1 x 300 m^2)
Experimental organisms: available.

RESEARCH CRAFT :

Name :	**R.V. KANAWA**
Length :	13 m
Type :	Aluminum
Laboratory space :	2 m

Name : Un-named Vessel
Length : 9 m
Type : Fibreglass

Name : **MAKO 25**
Length : 8 m
Type : Fibreglass

Name : **MAKO 20**
Length : 6 m
Type : Fibreglass

Name : **FLOTE BOTE**
Length : 6 m
Type : Aluminum

Name : **BOSTON WHALER**
Length : 5 m
Type : Fibreglass
Name : Un-named Vessel
Length : 5 m
Type : Aluminum

Name : Un-named Vessel
Length : 3 m
Type : Aluminum

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70. Caribbean Marine Research Center, Perry Foundation Inc./ Bahamas Undersea Research Foundation

100 East 17th Street,
Riviera Beach, FL 33404,
U.S.A.
Telephone: (1-407) 863-9701
Cable:
Telex:
Telefax/facsimile:
Electr. Mail: Compuserve & Omnet
Director: Robert I. Wickland
Specializations: F15, F3, M43, M34, H5, M11, M16, M33, M34, N26, M3.
Training: Yes
Periodicals: No
D G Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The general goals of the Center are: (a) to provide facilities and support for scientific research on the marine environment; (b) to develop technology for low cost aquatic food production in the Caribbean and similar locations worldwide; (c) to study physical and ecological relationships on deep, shallow-reef and other benthic environments of the Caribbean; (d) to develop the scientific bases for rational habitat utilization through conservation and enhancement; (e) to define ecological requirements of important species residing in the coastal areas of Florida, the Bahamas and other Caribbean nations; (f) to provide a field laboratory for educational programmes in all of the marine sciences geared toward graduate and undergraduate curricular and technical training in aquatic food production.

TRAINING PROGRAMME:

Information not available.

PREMISES/FACILITIES:

Shore Facilities at **LEE STOCKING ISLAND:** Dock space for six boats; Dive locker scuba gear, h.p. compressor, storage bank; Communications: telephone, singlesideband, VHF, UNICOM; Shipyard railway for boats up to 35 feet.

WET LABORATORY: environmentally controlled, salt and freshwater systems, aquaria, air system, emergency generators.

MAIN LABORATORY: 30 x 60 ft, office space, computer room, two dry labs, wet lab, dark room; chemistry laboratory for water quality analysis; seawater research pools (12) 18ft pools, (4) 26 x 36ft ponds; pond 5 acre seawater pond with dam (4ft depth); hatchery six brood tanks, walkin cooler, bench space and eight fryholding tanks, seawater and fresh water systems.

Airstrip 3000 ft x 75 ft. Housing (presently) residents: 18 ; visitors: 1828.

Shore Facilities at **TURKEY POINT, FLORIDA:** Environmentally controlled wet laboratory containing 50 aquaria, heating and cooling systems and photoperiod control. Dry Labs: 3 . Offices: 3.

INFORMATION FACILITIES:

Information not available.

EQUIPMENT:

(a) Power: generators (120kw (2), 12.5kw) wind generator (7.5kw); (b) freshwater: reverse osmosis 5400 gal/day, well, cisterns; (c) machine-shop : drill press, bench saw, band saw, welding machine, cutting torch, complete power and hand tools; (d) farm equipment: 1.4 acre experimental plot, tractor with implements, trickle irrigation system, hydroponic system; (e) construction equipment : tractors (2), backhoe, bobcat, road, roller, truck, crane, tipper truck; (f) transportation: 9 passenger van, 5 passenger van.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name :	**R.V.J.W.POWELL**
Length :	156 ft
Handling equipment :	15 ton crane, Aframe and deep-sea winch
Laboratory space:	Wet and dry lab. approximately 12 x 15 each, deck lab 8 x 20
Electronics :	Radar, Loran SatNav, VHF and single side band radios, auto pilot, depth recorders
Diving equipment:	42 in decompression chamber compressors, dive tanks
Name:	**R.V.UNDERSEA HUNTER**
Length :	85 ft
Navigational equipment:	Loran C, autopilot, SatNav, radar, fathometer
Handling equipment:	15 ton unarticulated crane
Diving equipment:	High pressure compressor, storage bank, scuba tanks, 42 in deck, decompression chamber, low pressure compressor.
Other boats	
Dive boats:	twin diesel 32 ft catamaran, and 23ft utility boat
Launches :	17ft Boston Whaler, w/70 hp OB, 6ft Boston Whaler, w/70hp OB, 16ft Jon Boat, w/14 hp OB, 13ft Boston Whaler, w/35 hp OB, 22ft Ponga, w/70 hp OB (2)
Wet submersible :	16ft, 2 persons, 2kts/6hrs
Undersea manned habitat:	3 persons
Deep diving submersible:	2 persons, 1,000 ft, 2kts/6hrs
* **ROV** :	300 ft depth capacity

* Remote Operated Vehicle

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71. Florida Institute of Oceanography (FIO), Florida State University

830 First Street, South,
St. Petersburg, FL 33701,
U.S.A.
Telephone: (1-813) 893-9100
Cable:
Telex:
Telefax/facsimile: (1-813) 893-9610
Electr. Mail:
Director: Dr. John C. Ogden

Specializations: F1, M16, J1, J4, M6, N26, V, F3
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The major purpose of the institution is the advancement and implementation of educational, scientific, and service-oriented oceanographic programmes and the provision of the facilities and support necessary to enact these programmes. It develops and manages contracts and grants involving studies of marine pollution, fisheries, and physical, biological, chemical and geological oceanography.

TRAINING PROGRAMME:

The FIO conducts educational and training cruises involving scientists and students of the State University system for about 100 ship days each year. Through educational grants the FIO also provides educational programmes and facilities support to undergraduate community college programmes and in-service teacher programmes in marine sciences.

STAFF:

Scientific Staff: 8 Technical Staff: 10 Other staff: 4

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Brown, J. R.	M.S.	Marine Science
Fountain, J. D.	M.S.	Geophysical engineering
Milliken, D. M.	M.A.	Marine science
Mytinger Tyson, L.	M.S.	Botany
Ogden, J. C.	Ph.D.	Tropical Ecology
Rinkel, M. O.	B.Sc.	Meteorology
Vargo, S. L.	Ph.D.	Marine biology

PREMISES/FACILITIES:

The FIO maintains office, warehouse, ship operations, and machine shop facilities at its home base in St. Petersburg, Florida. There is office space available for one visiting scientist with clerical support. Co-operative arrangements for the use of laboratory facilities may be made with faculty members at member organizations such as University of South Florida and Florida Department of Natural Resources. In addition to its home base, the FIO also operates a tropical marine research/education field laboratory centre in the Florida Keys.

INFORMATION FACILITIES:

Marine Science oriented periodicals and books available at University of South Florida Library and Florida Department of Natural Resources 1,000,000 volumes.

EQUIPMENT:

The FIO purchases and maintains the state oceanographic equipment pool of shipboard collection gear. Representative items are plankton nets; otter trawls; CTD's; water bottles; reversing thermometers; oxygen meter; Capetown dredges; rock dredge; various types of bottom grabs; piston, box, and gravity corers; MMOCNESS systems; and XBT systems.

AQUARIUM FACILITIES:

Available at the Florida Keys research/education centre.

RESEARCH CRAFT:

Name :	**R.V. BELLOWS**
Length :	22 m
Laboratory space :	17 m^2
After deck :	27 m^2
Name :	**R.V. SUNCOASTER**
Length :	34 m
Laboratory space :	38 m^2
After deck :	53 m^2

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72. Harbor Branch Oceanographic Institution, Inc.

5600 Old Dixie Highway,
Ft. Pierce, FL 34946,
U.S.A.
Telephone: (1-305) 465-2400; 567-7196
Cable:
Telex: 522886
Telefax/facsimile: (1-305) 465-2446
Electr. Mail:
Director: Mr. Brad Mooney Radm
Specializations: F11, F13, F15, F3, M16, M23, M3, N26.
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The organization is dedicated to research in marine sciences and to the development of tools and systems needed for oceanographic research.

TRAINING PROGRAMME:

Visiting investigators and post-doctoral fellows are invited to conduct research in areas that overlap or complement those of Harbor Branch. In addition, the operating groups are supplemented by university students who work as summer interns, graduate students, and co-op students.

STAFF:

Harbor Branch employs approximately 200 people.

PREMISES/FACILITIES/EQUIPMENT:

At 480 acres, research laboratories are equipped with a variety of scientific instruments such as light microscopes, spectrophotometers, chromatographs, fluorometers, calorimeters, radiation counting machines, still and cine cameras. Special facilities include rooms designed for electron microscopy (scanning and transmission), microtechnique, photography, and culture of marine organisms.

Projects in ocean engineering are conducted in laboratories and shop facilities equipped for work in the areas of mechanical, electrical, optical and chemical engineering. Research efforts in all disciplines are supported by a complete design and production facility capable of producing a wide variety of instrumentation and collection equipment.

Special facilities for fish and invertebrate hatching and larval rearing include: numerous tanks and holding equipment with capacities from 1 - 5,000 gallons: 10,000 gallon raceways (outside and covered): over 60 earthen and PVC lined ponds; recirculating and flow through systems with salinity, temperature and photoperiod control; phytoplankton and macroalgal culture capabilities; nutrition and food preparation roms; toxicological and bioassay equipment; and field stations in the Florida Keys and the Caribbean (Antigua).

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc: 11,200. Approximately 7,200 periodical volumes and 4,000 monographs. Number of periodical subscriptions: 275

A reference museum established on the premises contains over 3,880 species and 23,000 cataloged lots of marine flora and fauna collected from the Indiana River lagoon and nearby coastal waters. Exchange and loan programmes have been established with national and international repositories.

A 9955 II PRIME Computer with 8 Megabytes (Mb) main memory and 1300 Mb disk storage supports up to 80 simultaneous users. Running under PRIMOS, the system supports FORTRAN 77, BASIC, two statistical packages, a relational database and a report generator, a graphic package, a word processor and a topological graphing package.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name :	**R/V SEWARD JOHNSON**
Length :	53.5 m
Laboratory space :	198.1 m^2

Name : **R/V EDWIN LINK**
Length : 51.2 m
Laboratory space : 304.8 m^2

Name: **R/V SEA DIVER**
Length: 30.0 m

ADDITIONAL INFORMATION:

Harbor Branch supports two four-man free swimming, battery powered JOHNSONSEA-LINK submersibles. The submersibles certified by the American Bureau of Shipping to operate at the depths to 2,640 feet, are equipped with suction devices and manipulator arms for sampling, special underwater lights, and still and high resolution video cameras.

A Hysub40 Remotely Operated Vehicle (ROV), is outfitted and installed on the R/V/SEA DIVER. The submersible operates from a tether management system down to depths of 3,000 feet. It is equipped with high resolution video and 35 mm cameras and two manipulator arms.

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73. Mote Marine Laboratory

1600 Thompson Parkway,
Sarasota, FL. 34236
U.S.A.
Telephone: (1-813) 388-4441
Cable:
Telex:
Telefax/facsimile: (1-813) 388-4312
Electr. Mail:
Director: Dr. Kumar Mahadevan, Ph.D.
Specializations: V, N26, L2, M2, M4, G1, M38
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Mote Marine Laboratory (MML) is an independent, non-profit research organization dedicated to excellence in marine and environmental sciences. Since its inception in 1955, the laboratory's primary missions have been the pursuit of excellence in scientific research and the dissemination of information to the scientific community as well as to the general public. Although internationally recognized through the staff scientists' research and publications, much of the laboratory's efforts are directed toward the Southwest Florida coastal region. Through this research, the laboratory provides a centre for the exchange of scientific information, hosting visiting investigators, student interns, seminars and conferences. Public outreach

is accomplished through the Marine Science Aquarium, an educational museum providing marine programmes for all levels, from school children through adult.

The research programmes at the laboratory are:

1. Aquaculture
   - snook, red drum, and red grouper stock enhancement

2. Biomedical
   - cancer research with sharks and skates; skate embryonic development

3. Chemical Fate and Effects
   - chemical pollutants; pesticides; petroleum; sewage
   - marine toxins; red tide; bioassay-toxicology

4. Coastal Resources
   - estuarine ecology; habitat characterization; minimum flow
   - regional research and management of Southwest Florida coastal areas

5. Environmental Assessment and Enhancement
   - water quality; benthic and fisheries ecology; marine habitat enhancement

6. Marine Mammals and Sea Turtles
   - population studies; sea turtle nesting and tagging; stranding response

7. Shark Biology
   - reproduction, vision, growth and aging; physiology of captive maintenance
   - genetic variation; life history; stock management

TRAINING PROGRAMME:

MML is not an academic institution. The laboratory does, however, have co-operative research projects with various universities and maintains an active internship programme through which many colleges provide credit to students, nationally and internationally. MML also offers a Marine Science Summer Programme which gives students, ages 14-18, hands-on experience with the marine sciences. The curriculum is designed to satisfy the Florida Summer School requirements for one-half credit in the Natural Sciences.

STAFF

Scientific Staff: 26 Management Staff: 6

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Buck, J.	Ph.D.	Adjunct Senior Scientist; microbiology
Burns, K.	M.A.	Senior Biologist; fisheries biology
Culter, J.	M.A.	Staff Scientist; benthic ecology, environmental assessment

Dixon, K.	B.S.	Staff Scientist; water quality, environmental chemistry
Edwards, R.	Ph.D.	Staff Scientist; finfish mariculture, fisheries ecology
Estevez, E.	Ph.D.	Senior Scientist; coastal ecology, resource management
Gilbert, P.	Ph.D.	Director Emeritus/Senior Scientist; elasmobranch biology
Gorzelany, J.	M.S.	Senior Biologist; marine mammals, environmental assessment
Hayward, D.	Ph.D.	Staff Scientist; ecological modelling, data management; computer science
Henry, M.	B.S.	Senior Chemist; marine chemistry; toxicology
Hofmann, S.	B.S.	Senior Biologist; water quality, environmental assessment
Heuter, R.	Ph.D.	Staff Scientist; shark biology, sensory physiology
Kirkpatrick, G.	Ph.D.	Staff Scientist; phytoplankton ecology
Leverone, J.	M.S.	Senior Biologist; bethnic ecology
Lowery, S.	B.A.	Senior Chemist; water quality, environmental assessment
Luer, C.	Ph.D.	Senior Scientist; biomedical research, biochemistry, elasmobranch biology
Mahadevan, K.	Ph.D.	Executive Director/Senior Scientist; marine biology, bethnic ecology
Milligan, M.	M.S.	Senior Biologist; bethnic ecology, environmental assessment
Neidig, C.	M.S.	Senior Biologist; finfish mariculture, fisheries biology
Patton, G.	B.S.	Senior Biologist; marine mammal ecology
Phillips, D.	B.S.	Senior Biologist; fisheries biology
Pierce, R.	Ph.D.	Director of Research/Senior Scientist; marine chemistry; toxicology
Sprinkel, J.	B.A.	Senior Biologist; computer programming bioacoustics
Tavolga, W.	Ph.D.	Senior Scientist; computer programming, bioacoustics
Truitt, C.	D.Eng., P.E.	Senior Scientist; physical oceanography, ocean engineering, coastal sediment dynamics
Wells, R.	Ph.D.	Adjunct Senior Scientist; dolphin ecology; marine mammals

PREMISES/FACILITIES:

The laboratory is located on City Island in Sarasota, Florida, on a seven-acre site fronting on both Sarasota Bay and New Pass, with access to the Gulf of Mexico. Three main building of 18,500 square feet houses a library, research laboratories, administrative offices, a drafting room, and a conference/seminar hall. The temperature-controlled trailers and a separate building at the New Pass dock site provide additional research space. Experimental facilities include environmentallly-controlled rooms.

MML serves as the headquarters for the **Southwest Florida Coastal Research Centre**, a programme which promotes the development and use of scientific information for resource management needs along the Southwest Florida coast. The laboratory also hosts the **Sarasota Bay National Estuary Programme**, a federal programme which is preparing a comprehensive management plan to protect Sarasota Bay.

INFORMATION FACILITIES:

The Library has 3,000 volumes and is accessible through computerized reference search.

EQUIPMENT:

Specialized analytical instrumentation includes gas and liquid chromatography, atomic absorption spectrophotometry, nutrient auto analyzer, spectrophotometers, image analysis system with BioScan OPTIMAS software and high resolution CCD video camera and an Olympus BH-2 compound microscope, and a host of field instruments for water quality analysis.

Computer facilities include IBM-compatible, Apple and Epson-portable computers along with two dedicated telephone lines for five modern locations. Printouts are executed on dot matrix and laser printers. WordPerfect, dBase, SuperCalc, Lotus 1-2-3, Sigma Soft's Biostat, Northwest Analytical's NWA Statpak, Ventura Desktop Publishing, Corel Draw, Pagemaker, and Jandel Scientific's Sigma Plot software are used for work, data and graphics production. MML also has access to mainframe computer facilities at the University of South Florida and the University of Florida.

AQUARIUM FACILITIES:

Facilities include a public **Marine Science Aquarium** which features aquaria, housing many species of flora and fauna that inhabit the southwest Florida region, as well as exhibits depicting research at MML and a 135,000 gallon marine research and display aquarium where large sharks and other marine animals are maintained.

RESEARCH CRAFT:

A variety of Research vessels are maintained at the laboratory, ranging in size from 12 to 38 feet.

74. National Oceanographic & Atmospheric Administration (NOAA), Atlantic Oceanographic and Meteorology Laboratory (AOML)

NOAA Physical Oceanographic Division
4301 Rickenbacker Causeway,
Miami, Florida 33149,
U.S.A.
Telephone: (1-305) 361-4300
Cable:
Telex: 510 6003049
Telefax/facsimile: (1-305) 361-4449
Electr. Mail: TELEMAIL AOML.MIAMI/OMNET
Supervisory Oceanographer: Dr. Hugo F. Bezdek
Specializations: F5, V4, J51, M1, M2, M3, R6, U1, S4, V
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The Institution is organized to pursue basic and applied research programmes in oceanography and tropical meteorology. Meteorological research is carried out to improve the description, understanding and prediction of hurricanes and to determine their potential for beneficial modification.

TRAINING PROGRAMME:

Information not available.

STAFF:

47 professional staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Ahrens, M.R.	M.S.	Mathematics, Computer programming
Atwood, D.K.	Ph.D.	Chemical oceanography
Behringer, D.S.	Ph.D.	Physical oceanography
Berbarian, G.A.	M.S.	Chemical oceanography
Bezdek, H.F.	Ph.D.	Physics, Acoustic tomography
Bitterman, D.S.	M.S.	Electrical engineering
Black, P.J.	Ph.D.	Meteorology
Black, R.A.	M.S.	Meteorology
Boran, D.A.	M.S.	Chemical oceanography
Bravo, N.J.	M.S.	Oceanography

Brown, Jr. W.J.	M.S.	Mathematics
Burpee, R.W.	Ph.D.	Meteorology
Chew, F.	Ph.D.	Oceanography
Clarke,T.L.	Ph.D.	Mathematics
Cummings, Jr. S.R.	M.S.	Biological oceanography
Festa, J.F.	M.S.	Physical oceanography
Forde, E.B.	M.S.	Marine geophysics
Friedman, H.A.	M.S.	Meteorology
Goldenberg, S.P.	M.S.	Meteorology
Griffin, J.S.	M.S.	Computer science
Hansen, D.V.	Ph.D.	Oceanography
Harvey, G.R.	Ph.D.	Chemical oceanography
Herman, A.	M.S.	Mathematics
Jones, R.W.	Ph.D.	Meteorology
Jorgensen, D.P.	M.S.	Meteorology
Kofoed, J.W.	M.S.	Marine geology, Sedimentology
Lawson, L.M.	Ph.D.	Mathematics
Leetman, A.	Ph.D.	Physical oceanography
Long, R.B.	Ph.D.	Oceanography
Marks, F.D.	Ph.D.	Meteorology
Maul, G.A.	Ph.D.	Physical oceanography
Mayer, B.A.	M.S.	Physical oceanography
McLeish,W.L.	Ph.D.	Oceanography
Minton, S.M.	M.S.	Computer Science
Molineri, R.L.	Ph.D.	Oceanography
Nelsen,T.A.	Ph.D.	Marine sediments
Ooyama, K.B.	Ph.D.	Science
Ortner, P.B.	Ph.D.	Biological oceanography
Ostapoff, F.	M.S.	Oceanography
Palmer, D.R.	Ph.D.	Mathematics
Piotrowicz, S.R.	Ph.D	Chemical oceanography
Powell, M.	M.S.	Meteorology
Proni, J.R.	Ph.D.	Physics
Rona, P.A.	Ph.D.	Marine geophysics
Rosenthal, S.L.	Ph.D.	Meteorology
Ross, Jr. D.E.	M.S.	Oceanography
Sabina, R.	M.S.	Mathematics
Shapiro, L.J.	Ph.D.	Physics
Thacker, W.C.	Ph.D.	Physics
Trout, J.W.	M.S.	Meteorology
Tsai, J.S.	Ph.D.	Physics
Walter, D.J.	M.S.	Environmental/urban systems
Wigger, V.	M.S.	Meteorology
Willis, P.T.	M.S.	Meteorology
Willoughby, H.E.	Ph.D.	Meteorology
Worthem, S.J.	Ph.D.	Oceanography

Young, M.S.	M.S.	Chemical oceanography

PREMISES/FACILITIES:

Building area : 8,888 m^2 Laboratory area: 2,860 m^2
With facilities for 5 visiting scientists and 5 students

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.,: 21,500
Number of periodical subscriptions : 160
Monographs and series titles :

- Central North Atlantic Ocean Basin Continental Margins (NOAA Atlas 3), 1980
- Trace metals in Sea Water, 1983
- Physical Oceanography of the Tropical Atlantic during GATE, 1980

EQUIPMENT:

VAX 11/780 computer system, HP/A900 computer system, automated data acquisition systems, NB/CSTD sampling system, AMETEX/STRAZA current profiling system, mobile and based radar systems, airborne Laser sidescan radar system, 10 Pegasus current profiling systems, fully-instrumented trace metal and geochemistry laboratories, a number of standard oceanography systems, drifting buoys, current meters, coring devices, automated Mocness sampling nets, laboratory-wide network of minicomputers, experimental acoustic Backscatter equipment (20 KHz 200Khz 3MKHz), experimental acoustic Doppler equipment, Grundy shallow CTD system, Sippican XBT systems.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name :	**DISCOVERER**
Length :	92 m
Type :	Researcher
Laboratory space :	273 m^2
Special facilities :	Deepsea anchoring capability, Underwater observation chambers
Name :	**BALDRIGE**
Length :	85 m
Type :	Research
Laboratory space :	244 m^2
Special facilities :	Lowerable stern ramp, Underwater observation chambers, Seismic reflection profile compressors, Portable helicopter platform
Name :	**MT. MITCHELL**
Length :	70 m

Type : Hydrographic
Laboratory space : 27 m^2

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75. **National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service Southeast Fisheries Center**

3500 Delwood Beach Road,
Panama City, FL 32407,
U.S.A.
Telephone:
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director:

Specializations: M4, F3, F, M2, M3, M33, J, M43, M34, G2, G3, F8, F82, V, Q
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Data base: No

OBJECTIVES AND PROGRAMMES:

The Southeast Fisheries Center (SEFC) is responsible for providing the basic research advise on issues related to fisheries in the purview of the Federal government in the area from North Carolina to Texas, Puerto Rico, and the U.S. Virgin Islands. In addition, it is responsible for the United States' International responsibilities in the entire Caribbean area. It is also responsible for research on large pelagic resources throughout the Atlantic. Many of the fishery resources under investigation at the Southeast Fisheries Center consist of either stocks which move between U.S. and international waters or of different stocks of the same species. The Center's extensive habitat research on coastal areas involves similar ecological areas as those in other countries in the wider Caribbean such as mangroves and seagrasses. The Center has a series of programmes to improve data collection, communication, and management of fisheries stocks in the Caribbean region. Many Caribbean fishery species are likely interconnected through egg and larval dispersal such that fish stocks in one country may depend on upstream recruitment from other areas. Thus, a need exists to better understand the distribution, abundance, biology and exploitation of stocks to better manage Caribbean fishery resources. While some SEFC programmes cover much of the Caribbean, others operate only within U.S. jurisdiction but have application to the greater Caribbean Region,

Major programmes are: (1) Fisheries Statistics; (2) Caribbean Fishery Management Council; (3) Southeast Area Monitoring and Assessment Program (SEAMAP); (4) International Commission for the Conservation of Atlantic Tunas (ICCAT); (5) Co-operative Game-

fish Tagging Program; (6) Reef Resources; (7) Marine Turtles; (8) Sharks; (9) MEXUS-GULF Program; and (10) Republic of Colombia Treaty.

Southeast Fisheries Centre headquarters are in Miami, Florida, and research laboratories are located in: (a) Beaufort, North Carolina; (b) Charleston, South Carolina; (c) Miami, Florida; (d) Panama City, Florida; (e) NSTL and Pascagoula, Mississippi; (f) Galveston, Texas.
INSTITUTIONAL STRUCTURE: Each laboratory is responsible for conducting research in specific subject areas and for providing services to facilitate the work of other Centre units. At sea research is conducted form the 170 foot OREGON 2 and the 127 foot CHAPMAN, berthed at Pascagoula.

TRAINING PROGRAMME:

Information not available.

STAFF:

Scientific Staff: 196 Technical Staff: 62 Other staff: 74

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
CENTER STAFF:		
Bane, N.	M.S.	Fishery Management
Beardsley, G.	Ph.D.	Fishery Biology (research)
Berry, R.	Ph.D.	Fishery Administration
Brown, B.	Ph.D.	Fishery Administration
Mendelssohn, S.	M.S.	Programme Planning
Richards, W.	Ph.D.	Fishery Biology (research)
ECONOMICS & STATISTICS OFFICE:		
Dawley, T.	B.S.	Fishery Administration
Davenport, G.	B.S.	Fishery Biology
Dennis, C.	B.S.	Marine Biology
Dumas, R.	B.S.	Fishery Biology
Jones, A.	Ph.D.	Fishery Administration
Newlin, K.	M.S.	Statistics
Poffenberger, J.	M.S.	Economy
Prytherch, H.	B.S.	Statistics
Snell, E.	B.S.	Statistics
BEAUFORT LABORATORY		
Ahrenholz, D.	Ph.D.	Fishery Ecology
Chester, A.	M.S.	Zooplankton Ecology
Clements, L.	B.S.	Fishery Biology
Colby, D.	Ph.D.	Population Dynamics

Cross, F.	Ph.D.	Fishery Administration
Dixon, R.	B.S.	Fishery Biology
Engel, D.	Ph.D.	Metal/Radiation Effects
Epperly, S	Ph.D.	Fishery Biology
Ferguson, R.	Ph.D.	Marine Bacteria
Floyd, K.	M.S.	Larval Fish Ecology
Fonseca, M.	M.S.	Seagrass Ecology
Govoni, J.	Ph.D.	Larval Fish Ecology
Hanson, P.	Ph.D.	Marine Chemistry
Hoss, D.	Ph.D.	Larval Fish Ecology
Huntsman, G.	Ph.D.	Fishery Ecology
Kenworthy, J.	M.S.	Estuarine Ecology
Krouse, C.	B.S.	Computer Science
Lewis, R.	M.S.	Fishery Biology
Lewis, V.	M.S.	Estuarine Ecology
Marraro, P.	B.S.	Fishery Biology
Merriner, J.	Ph.D.	Fishery Biology
Parker, R.	M.S.	Fishery Ecology
Peters, D.	Ph.D.	Estuarine Ecology
Powell, A.	M.S.	Larval Fish Ecology
Schaaf, W.	Ph.D.	Population Dynamics
Smith, J.	M.S.	Fishery Biology
Stiles, T.	B.S.	Fishery Biology
Sunda, W.	Ph.D.	Population Dynamics
Tester, P.	Ph.D.	Copepods
Thayer, G.	Ph.D.	Seagrass Ecology
Vaughan, D.	Ph.D.	Population Dynamics
Veishlow, A.	B.S.	Fishery Biology
Warlen, S.	Ph.D.	Estaurine Ecology
Waters, J.	Ph.D.	Economics

CHARLESTON LABORATORY

Babinchak, J.	M.S.	Animal Science
Balthrop, J.	Ph.D.	Research Chemist
Bauersfeld, P.	M.S.	Research Animal Science
Bemiss, J.	B.S.	Zoology
Eldridge, P.	Ph.D.	Fishery Biology
Ernst, R.	M.S.	Chemical Engineer
Fair, P.	M.S.	Physiology
Fortner, A.	B.A.	Research Chemist
Galloway, S.	Ph.D.	Research Chemist
Gooch, J.	M.S.	Food Science
Green, A.	B.S.	Biology
Hale, M.	M.S.	Food Technologist
Jahncke, M.	M.S.	Food Technologist

Joseph, J.	B.S.	Research Chemist
Kifer, R.	Ph.D.	Fishery Administrator
Kinerd, C.	M.S.	Statistics
Meaburn, M.	Ph.D.	Research Chemist
Regier, L.	Ph.D.	Agricultural Chemist
Richards, G.	B.S.	Microbiology
Roberts, R.	B.S.	Chemistry
Sample, J.	M.S.	Microbiology
Seaborn, G.	B.A.	Chemistry
Siewicki, T.	M.S.	Animal Science
VanDolah, F.	B.S.	Biology

GALVESTON LABORATORY

Baxter, K.	B.S.	Fishery Biology
Caillouet, C.	Ph.D.	Fishery Biology
Duronslet, M.	B.S.	Fishery Biology
Fontaine, C.	M.S.	Fishery Biology
Gitzchlag, G.	M.S.	Fishery Biology
Klima, E.	Ph.D.	Fishery Administrator
Koi, D.	B.S.	Computer Programmer
Landry, T.	Ph.D.	Fishery Biology
Linton, T.	Ph.D.	Ecology
Matthews, G.	Ph.D.	Oceanographer
Minello, T.	Ph.D.	Ecology
Nance, J.	Ph.D.	Fishery Biology
Patello, F.	B.S.	Fishery Biology
Ray, S.	Ph.D.	Ecology
Renaud, M.	Ph.D.	Ecology
Sheridan, P.	Ph.D.	Ecology
ZeinEldin, Z.	B.S.	Physiology
Zimmerman, R.	Ph.D.	Ecology

MIAMI LABORATORY

Bertalino, A.	B.S.	Fishery Biology
Bohnsack, J.	Ph.D.	Fishery Biology
Browder, J.	Ph.D.	Research Analyst
Brown, A.	B.S.	Research Analyst
Burn, D.	M.S.	Fishery Biology
Davis, K.	B.S.	Fishery Biology
Duffie, E.	B.S.	Fishery Biology
Farber, M.	M.S.	Fishery Biology (analyst)
Goodyear, C.	M.S.	Fishery Biology
Goodyear, P.	Ph.D.	Fishery Biology
Hansen, L.	M.S.	Fishery Biology

Hoey, J.	M.S.	Fishery Biology (analyst)
Hulsbeck, M.	M.S.	Fishery Biology (**NOAA CORP**)
Lamkin, J.	M.S.	Fishery Biology (**NOAA CORP**)
Lee, D.	B.S.	Fishery Biology
Massey, L.	Ph.D.	Fishery Biology
McClellan, D.	B.S.	Fishery Biology
Nelson, W.	Ph.D.	Fishery Administrator
Powers, J.	Ph.D.	Fishery Administrator
Prince, E.	Ph.D.	Fishery Biology
Schroeder, B.	M.S.	Fishery Biology
Scott, E.	B.S.	Fishery Biology
Scott, G.	Ph.D.	Fishery Biology
Sutherland, D.	B.S.	Fishery Biology
Tashiro, J.	B.S.	Fishery Biology
Thompson, N.	Ph.D.	Fishery Biology
Turner, S.	Ph.D.	Fishery Biology (analyst)
Webster, A.	B.S.	Fishery Biology
Witzell, W.	B.S.	Fishery Biology

MISSISSIPPI LABORATORIES

Barbour, J.	B.S.	Fishery Methods/Equipment
Barrett, A.J.	B.S.	Fishery Gear/Development
Benigo, J.	B.S.	Fishery Biology
Brucks. J.	B.S.	Oceanography
Benton, J.	B.S.	Fishery Biology
Drummond, S.	B.S.	Fishery Biology
Ford, R.	B.S.	Fishery Biology
Gandy, W.	B.S.	Oceanography
Gordon, J.	B.S.	Fishery Biologist
Grace, M.	B.S.	Fishery Biology
Gracy, R.	B.S.	Fishery Biology
Gutherz, E.	M.S.	Fishery Biology
Hague, H.	B.S.	Statistics
Hamilton, A.	B.S.	Fishery Biology
Hataway, D.	B.S.	Fishery Biology
Hoggard, W.	B.S.	Fishery Biology
Johl, R.	Ph.D.	Fishery Administrator
Kemmerer, A.	Ph.D.	Fishery Administrator
Leming, T.	M.S.	Oceanography
Lecke, K.	B.S.	Fishery Biology
Lohoefener, R.	B.S.	Ecology
McDuff, M.	B.S.	Computer Programmer
Minkler, F.	B.S.	Computer Programmer
Mitchell, J.	B.S.	Fishery Biology
Mullin, K.	B.S.	Fishery Biology

Mysing, J.	B.S.	Electronic Engineer
Nichols, S.	Ph.D.	Fishery Administrator
Pellegrin, G.	B.S.	Fishery Biology
Reese, G.	B.S.	Fishery Biology
Roden, C.	B.S.	Fishery Biology
Roithmayr, C.	M.S.	Fishery Biology
Russell, M.	B.S.	Fishery Biology
Roden, C.	B.S.	Fishery Biology
Sanders, N.	B.S.	Fishery Biology
Savastano, K.	M.Ed.	Physical Scientist
Sawyer, R.	B.S.	Fishery Methods/Equipment
Seidel, W.	B.S.	Harvesting Systems/Surveys
Serra, A.	B.S.	Survey Statistician
Stuntz, W.	Ph.D.	Fishery Biology
Thompson, P.	B.S.	Fishery Biology
Watson, J.	M.S.	Fishery Biology
Workman, I.	B.S.	Fishery Biology
Vanselous, T.	B.S.	Programme Analyst

PREMISES/FACILITIES:

Information not available.

INFORMATION FACILITIES:

Number of books, journals, manuscripts: 68,824

Number of periodical subscriptions: 1354

Monograph and series titles: No journals are issued by the Centre or the laboratories. The National Marine Fisheries Service publishes NOAA Technical Reports and Special Scientific Reports on occasion. The Centre publishes an Annual Report each year.

EQUIPMENT:

Beaufort Laboratory: analyzer (combustible type) with integrator, dissolved organic carbon analyzer, elctromagnetic current meter, atomic absorption spectrophotometers 2, scanning spectrophotometer, electric balance, ATP analyzer gamma ray spectrophotometer, research grade microscope with epifluorescense, Coulter counter, scintillation counter, TV timelapse camera/recorder/monitor, SCUBA equipment, trawls, linkage to computer mainframe, general laboratory support equipment.

Charleston Laboratory: gas chromatograph/mass spectrometer, several gas chromatographs, spectrophotometers, microscopes, laboratory balances, autoclaves, water baths, colorimeter, linkage to mainframe, HPLCs, ioselectric focusing apparatus, refrigerated centrifuges, various equipment for processing seafood into product forms and general laboratory support equipment.

Galveston Laboratory: 2 centrifuges (Ultra Beckman), gas chromatic condenser (ZEISS), microscope, microtome, 2 spectrophotometers (Beckman), steam sterilizer, electron microscope, simulation counter, Warburg respirator apparatus, digital balance (Sartorius), barge unit, Techtronic 451 graphics computer system, general laboratory support equipment.

Miami Laboratory: research microscopes, trawls SCUBA equipment, general oceanic salinity, temperature and current meter, general laboratory support equipment, personal computers with linkage to mainframe.

Mississippi Laboratory: satellite data analysis system, minicomputer electronics laboratory and equipment, electric pulsar (for electric shrimp trawling), trawls, SCUBA equipment, remote underwater fishery assessment system, linkage to computer mainframe, and general laboratory support equipment.

Panama City Laboratory: personal computers with linkage to computer mainframe and general laboratory support equipment.

AQUARIUM FACILITIES:

Number of tanks: 216.

RESEARCH CRAFT:

Name :	**NOAA ship OREGON 2**
Length:	170 feet
Type :	Steel-side trawler
Scientists:	13
Laboratory space:	23 m^2
Special facilities:	2 trawl winches, combination seinetrawl winch, hydrographic winch

Name :	**NOAA ship CHAPMAN**
Length:	127 feet
Type :	Stern trawler
Laboratory space:	365 ft^2
Special facilities:	2 trawl winches, CDT winch, net sond winch, midwater and high-opening bottom trawl.

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76. Nova University Oceanographic Center

8000 North Ocean Drive,
Dania, FL 33004,
U.S.A.
Telephone: (1-305) 920-1909
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Ms. Julian P. McCreary
Specializations: F1, F3, F5, G, M, N26, R6, V.
Training: Yes
Periodicals: Yes
Institutional Nature: Academic

Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The Oceanografic Center pursues studies and investigations in experimental and theoretical oceanography. Regions of interest not only include Florida's coastal waters and the continental shelf/slope waters of the south-eastern United States, but also the waters of the Caribbean and Gulf of Mexico, as well as the equatorial, Altantic, Pacific and Indian Oceans.

TRAINING PROGRAMME:

The Oceanographic Center directs the Institute of Coastal Studies, which offers the M.Sc. degree in marine biology and coastal zone management. A wide curriculum is offered. The Ph.D. in oceanography is offered; instruction is primarily in the tutorial mode.

STAFF:

9 Scientific Staff 6 Technical Staff 2 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Apter, N (adjunct).	Ph.D.	Molluscan Research
Blackwelder, P.	Ph.D.	Micropaleontology
Burney, C.	Ph.D.	Biochemistry
Dodge, R.	Ph.D.	Marine Geology
Hitchcock, G.	Ph.D.	Marine Biology
Kleppel, G.	Ph.D.	Marine Zoology
Kundu, P.	Ph.D.	Physical Oceanography
McCreary, J.	Ph.D.	Physical Oceanography
Snyder, R.	Ph.D.	Physical Oceanography

PREMISES/FACILITIES:

Building area : 3050m^2 Laboratory area: 760m^2
With facilities for 2 visiting scientists and 40 students

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 3400
Number of periodical subscriptions : 128

EQUIPMENT:

Electron microscope, microscopes, rock saw, x-ray machine, machine shop, carpentry shop, VAX 11/750 computer, scintillation counter, culture chambers, cold room, dark room.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Information not available.

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77. **Underwater Sound Reference Detachment (USRD)**
Naval Research Laboratory,
P.O. Box 8337,
Orlando, FL 32856,
U.S.A.
Telephone: (1-305) 859-5120
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Superintendent: Mr. Joseph E. Blue
Specializations: M1, S52, M2, V, M15, Q4.
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The mission of the USRD is to support the Naval Research Laboratory in its work by providing the Navy and its contractors with standardized techniques and procedures for the measurements and the accurate calibration of standard instruments in areas of special Navy needs. The mission serves both peaceful and defense purposes.

TRAINING PROGRAMME:

Occasionally, there is a co-opted student from one of Florida's universities.

STAFF:

35 Scientific Staff 39 Technical Staff 21 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Blue, J. E.	Ph.D.	Mechanical Engineering, Underwater Acoustics
Boles, L. A.	M.A.	Physics, Underwater Acoustics
Browder, L. P.	B.Sc.	Electrical Engineering, Underwater Acoustics

Brown, C. K.	M.E.	Engineering, Underwater Acoustics
Capps, R. N.	Ph.D.	Underwater Acoustics
Carlson, W. V.	B.S.	Mechanical Engineering
Doubbleday, P. S.	Ph.D.	Underwater Acoustics
George, J. D.	M.S.E.E.	Underwater Acoustics,
Hendriquiz, T. A.	B.Sc.	Physics, Underwater Acoustics
Hugus, G. D.	M.S.	Mechanical Engineering, Underwater Acoustics
Ivey, L. E.	B.S.	Physics, Underwater Acoustics
Jenne, K. E.	B.S.	Engineering, Underwater Acoustics
Lastinger, J. L.	B.Sc.	Physics, Underwater Acoustics
Lucky, R. W.	B.S.	Physics, Underwater Acoustics
Luker, W. V.	M.S.	Physics, Underwater Acoustics
Markowitz, Allan E.	Ph.D.	Underwater Acoustics, Mathematics
Pennington, C. T.	B.S.	Underwater Acoustics
Piquette, J. C.	Ph.D.	Physics, Underwater Acoustics
Poche, L. B.	M.S.	Underwater Acoustics
Rittenmyer, K. M.	Ph.D.	Materials Science
Rudgers, A. J.	M.Sc.	Underwater Acoustics,
Ruggiero, C. M.	M.S.	Mathematics
Scott, R. E.	B.S.	Physics, Underwater Acoustics
Stack, G. M.	Ph.D.	Chemistry
Thompson, C. M.	Ph.D.	Physical Chemistry, Underwater Acoustics
Timme, R. W.	Ph.D.	Physics, Underwater Acoustics
Tims, A. C.	B.S.	Physics, Underwater Acoustics
Ting, R. Y.	Ph.D.	Underwater Acoustics
VanBuren, A. L.	Ph.D.	Physics, Underwater Acoustics
Whalen, T. L.	B.S.	Physics, Underwater Acoustics
Williams, J. G.	B.S.	Electrical Engineering
Young, A. M.	M.Sc.	Engineering/Underwater Acoustics
Zalesak, J.E.	Ph.D.	Underwater Acoustics

PREMISES/FACILITIES:

For 5 visiting scientists and 40 students

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 3,600
Number of periodical subscriptions: 80
Monographs and serials titles:

- Schedule of Scientific and Technical Services (January 1979)
- USRD Transducer Catalog (April 1982)
- Handbook on Pressure-Proof Connector and Cable Harness Design, (NRL Memo Report 4601, December 1981)
- Handbook of Sonar Transducer Passive Materials, (NRL Memo Report 4311, October 1981)

EQUIPMENT:

Lake facility: cw and coherent pulse, sweep frequency acoustic measuring systems; polar directibility patterns. **Anechoic Tank Facility:** cw and coherent pulse, PDP11/45 computer controlled acoustic measurements systems, polar and rectilinear directivity patterns: other types of measurements can also be arranged, such as transient analysis and noise measurement. **Low Frequency Facility:** System J: 1500 Hz; cw, standing wave pointbypoint; 5004000 Hz: waveguide propagation of progressive wave, pointbypoint System K: 0.31000 Hz; cw, standing wave, sweep or pointbypoint; 5002000 Hz; cw, waveguide propagation of progressive wave, pointbypoint. **Leesburg Facility:** cw and coherent pulse, PDP11/45 based calibration system, digitally swept frequency realtime data acquisition and reduction system; analog backup system to reduce facility down time; polar directivity patterns. **Acoustic Impedance Tube Facility:** measurement of pulse sound reflections from a sample of acoustical material placed at the end of a tube. **Water Vapor Transmission Tester:** Water vapor permeability of elastomers is measured with a Honeywell W825 water vapor transmission tester. **Piezoelectric Properties:** Piezoelectric constants of poled ferroelectric ceramics are determined as functions of temperature and pressure by measuring acoustic sensitivity in a high-pressure coupler. **Sound Speed in liquids:** Speed of sound is measured as a function of temperature and pressure in liquids by a time-off-light technique. **Transducer** design and development. Standard Transducers: Standard hydrophones and projectors are issued for the purpose of being used as laboratory standards against which to compare other hydrophones and projectors. There are approximately 30 different types.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name :	**LAKE FACILITY**
Type :	3 pier structure
Special facilities:	Measurement/calibration facility
Name :	**LEESBURG FACILITY**
Type :	Pier structure
Special facilities:	Measurement/calibration facility
Name :	**ANECHOIC TANK FACILITY**
Type :	1 pressure vessel
Special facilities:	Measurement/calibration facility
Name :	**LOW FREQUENCY FACILITY**
Type :	2 pressure vessels
Special facilities:	Measurement/calibration facility

78. University of Miami (UM)
Rosentiel School of Marine and Atmospheric Science

University of Miami,
4600 Rickenbacker Causeway,
Miami, FL 33149-1098,
U.S.A.
Telephone: (1-305) 361-4000/1
Cable: CGBL/U. OF MIAMI
Telex: 317454 U of M RSMAS MIA
Telefax/facsimile: (1-305) 361-4711
Electr. Mail: EASYLINK 62845425
Interm Dean: Dr. Bruce R. Rosendahl
Specializations: M1, Q9, M4, F, M3, S, V, M2, M21, V4.
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The purpose of the Institution is geared towards basic and applied research, graduate education in marine and atmospheric sciences. **INSTITUTION AL STRUCTURE:** The school is a graduate division of the University of Miami; the administrative structure includes six divisions along disciplinary lines. An academic committee sets standards for degree requirements. A dean and associate dean supervise organizational units such as: Facilities and Technical Services; Database and Financial Affairs; Faculty and Staff Affairs. Each division has a chairman who reports to the dean. Divisions are: Biology and Living Resources; Marine and Atmospheric Chemistry; Meteorology and Physical Oceanography; Marine Geology and Geophysics; Ocean Engineering; and Marine Affairs.

TRAINING PROGRAMME:

The Rosentiel School and the U.M. College of Arts and Sciences jointly offer a Bachelor of Arts degree in Marine Science/Biology, Marine Science/Chemistry, Marine Science/Geology, and Marine Science/Physics. The Rosentiel School offers a graduate programme in marine science and applied marine science with majors in biology and living resources, marine and atmospheric chemistry, marine geology and geophysics, meteorology and physical oceanography, ocean engineering or marine affairs.

STAFF:

77 Scientific Staff	25 Technical Staff	177 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Berman, A.	Ph.D.	Underwater Acoustics, Oceanography,

		Signal Processing
Blecker, R.	Ph.D.	Numerical Modeling with isentropic techniques
Bourda, D.	Ph.D.	Numerical Modeling
Brand, L.	Ph.D.	Phytoplankton Ecology
Branscome, L.E.	Ph.D.	Theoretical Dynamical Meteorology
Brass, G.W.	Ph.D.	Isotope Geochemistry
Brown, M.	Ph.D.	Underwater Acoustics
		Geophysical Inverse Theory
Brown, O.B.	Ph.D.	Remote Sensing Applications
		Ocean Optics
Dong, R.C.	Ph.D.	Seismic Stratigraphy
		Carbonate Sedimentology
Compton, K.G.	M.S.	Electrochemistry Corrosion
		Fouling Materials
Cooksey, K.	Ph.D.	Microbial/Algal Biochemistry
Corcoran, E.	Ph.D.	Marine Chemistry
Covey, C.	Ph.D.	Climatology
Cuhel, R.	Ph.D.	Phytoplankton Metabolism
DeFerrari, H.A.D.	Eng.	Underwater Acoustics, Signal Processing
de Sylva, D.P.	Ph.D.	Ichthyology, Marine Ecology
Erhardt, N.	M.S.	Fisheries
Estoque, M.A.	Ph.D.	Dynamic Meteorology, Tropical Circulations
Evans, R.H.	Ph.D.	Systems Design Analysis, Communication
Fell, J.W.	Ph.D.	Physiology (marine fungi)
Fine, R.A.	Ph.D.	Ocean Circulation/Mixing Process
Fisher, D.E.	Ph.D.	Geochemistry, Cosmochemistry
Fox, W.W.	Ph.D.	Fishery Biology
Froclich, A.S.	Ph.D.	Reproductive Physiology, (coral reefs)
Gidel, L.T.	Ph.D.	Dynamic Meteorology
		Atmospheric Techniques
Ginsburg, R.N.	Ph.D.	Sedimentology, Shallow Water Carbonates
		Reefs
Glynn, P.W.	Ph.D.	Coral Reef Biology
Gruber, S.H.	Ph.D.	Sensory Physiology
Hale, K.K.	M.L.S.	
Harrison, C.G.	Ph.D.	Geophysics, Paleomagnetism
Higman, J.	M.S.	Fishery Biology
Honnorez, J.J.	Ph.D.	Mineralogy, Petrology, Submarine Volcanism
Iversen, E.S.	Ph.D.	Fishery Biology, Aquaculture
King, K.	Ph.D.	Zooplankton Ecology
Leaman, K.D.	Ph.D.	Propagation of Internal Waves
		Current Profiling Techniques
Lee, T.N.	Ph.D.	Coastal/Estuarine Processes
		Pollution Control, Spin-off Eddies
LeMehaute, B.	Ing. Doc.	Coastal Engineering, Hydrodynamics
Lhermitte, R.M.	Ph.D.	Radar/Physical Meteorology

Lutz, P.L.	Ph.D.	Marine Physiology
Marszalek, D.	Ph.D.	Electron Microscopy, Micropaleontology
Michel, H.B.	Ph.D.	Marine Plankton
Millero, F.J.	Ph.D.	Physical Chemistry Chemical Oceanography
Mitsui, A.	Ph.D.	Biochemistry
Mooper, K.	Ph.D.	Marine Organic Chemistry
Myrberg, A.A.	Ph.D.	Sensory Physiology Animal Behaviour
Odell, D.K.	Ph.D.	Marine Animals
Olson, D.B.	Ph.D.	Mesoscale Ocean Dynamics
Ostlund, H.G.	Ph.D.	Radioactive Tracers, (oceanography) Radioactive Tracers, (meteorology)
Peterson, L.	Ph.D.	Micropaloentology
Peterson, W.	Ph.D.	Paleoceanography
Pitcher, E.J.	Ph.D.	Climate Predictability, Long Range Forecasting
Prospero, J.M.	Ph.D.	Atmospheric Chemistry, Aerosols
Reeve, M.R.	Ph.D.	Trophodynamics, Nutrition of Zooplankton
Richard, J.D. Jr.	B.S.	Auditory Physiology, (marine animals)
Robins, C.R.	Ph.D.	Ichthyology
Rooth, C.G.H.	Filosofie Lic.	Large Scale Ocean Transport Processes, Climate, Geophysical Fluid Dynamics
Schlager, W.	Ph.D.	Sedimentology
Schott, F.A.	Ph.D.	Application of Models to Data Sets
Smith, F.G.W.	Ph.D.	
Snedaker, S.C.	Ph.D.	Systems (Mangrove) Ecology
Southam, J.R.	Ph.D.	Mathematical Geology Geochemical Cycles
Swart, P.K.	Ph.D.	Geochemistry
Tappert, F.	Ph.D.	Underwater Acoustics
Taylor, B.F.	Ph.D.	Microbial Biochemistry
Top, Z.	Ph.D.	Isotope Geochemistry
Van De Kreeke, J.	Ph.D.	Estuarine/nearshore Hydrodynamics
Van Leer, J.C.	Sc.D.	Instrument Development Ocean Dynamics
Voss, G.L.	Ph.D.	Biological Oceanography
Voss, N.A.	M.S.	Cephalopods
Wang, J.D.	Ph.D.	Coastal Hydrodynamics, Numerical Modeling
Wang, S.	Ph.D.	Naval Architecture, Marine Hydrodynamics Ocean Structures
Wanless, H.	Ph.D.	Nearshore Processes, Carbonate Sedimentation
Williams, F.	D.Sc.	Fishery Biology
Wisby, W.J.	Ph.D.	Animal behaviour

Yamamoto, T.	Ph.D.	Marine Soil Mechanics Gravity/Acoustic/Seismic Waves
Zika, R. G.	Ph.D.	Organic Chemistry, Photochemistry

PREMISES/FACILITIES:

Laboratory area : 170 m^2

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 62,000
Number of periodical subscriptions: 1,000
Monographs and series titles:

- Research Review 1981, 1983
- Bulletin of Marine Science (quarterly)
- Proceedings of the Gulf and Caribbean Fisheries Institute (annual)
- Sediments (serial)
- Geological Milestones (serial)
- Studies in Tropical Oceanography (serial)

EQUIPMENT:

Computer facilities, diving facilities, scientific glass-blowing shop, Phipps and Bird small animal respirator, Clevite Brush Mark 260 six channel recorder, incubators, centrifuges, blood gas analyzers, polygraph, spectrometers, spectrophotometer, chromatographs, Coulter counters, scintillation counter, radiometer, spectrofluorometer, salinometer, microcalorimeters, Tritium laboratory, core and rock collections, field aerosol samplers, mass spectrometer, spinner magnetometer, gravimeter, seismic reflection equipment, towed marine magnetometer, dredges, piston corers, gravity corers, xray diffractometer with graphite monochrometer, scanning electron microscope, satellite imaging laboratory, Vector averaging current meters, acoustic current meter, Aanderaa current meters, acoustic releases, tethered current profilers; deep-sea reversing thermometers, wave simulation facility.

AQUARIUM FACILITIES:

Total areas: 2,400 m^2 Number of tanks: 85

RESEARCH CRAFT:

Name :	**ORV COLUMBUS ISELIN**
Length :	52 m
Type :	Research vessel
Laboratory space :	108 m^2
Special facilities :	Deep-sea winches, satellite communication data telemetry and voice facilities, electronics laboratory
Name :	**ORV CAPE FLORIDA**
Length :	41 m
Type :	Research vessel
Laboratory space :	58 m^2

Special facilities : Satellite communications: data telemetry and voice facilities, electronics laboratory

Name : **ORV CALANUS**
Length : 19 m
Type : Research vessel

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79. University of South Florida (USF)
Department of Marine Sciences

140 Seventh Avenue South,
St. Petersburg FL 33701,
U.S.A.
Telephone: (1-813) 893-9186/9130
Cable:
Telex:
Telefax/facsimile: (1-813) 893-9186.
Electr. Mail:
Director
Specializations: M11, M12, M16, M2, M3, M35, M4, M5.
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Information not available.

TRAINING PROGRAMME:

The department offers M.S. and Ph.D. degrees in marine science with specializations in biological, chemical, geological and physical oceanography. The department's academic and research curricula provide an ideal forum for investigating phenomena that span disciplinary boundaries.

STAFF

120 full-time employees, 23 at doctoral level

PROFESSIONAL SCIENTIFIC STAFF AT THE DOCTORAL LEVEL:

NAME	DEGREE	SPECIALITY
Betzer, P.	Ph.D.	Chemical Oceanography
Blake, N.	Ph.D.	Ecology/Physiology

Briggs, J.	Ph.D.	Marine Zoogeography
Byrne, R.	Ph.D.	Chemical Oceanography
Carder, K.	Ph.D.	Physical Oceanography
Compton, J.	Ph.D.	Paleoceonography/Geochemistry
Doyle, L.	Ph.D.	Marine Geology
Fanning, K.	Ph.D.	Chemical Oceanography
Galperin, B.	Ph.D.	Physical Oceanography
Gust, G. r	Ph.D.	Physical Oceanography
Hallock-Muller, P.	Ph.D.	Micropaleontology
Hine, A.	Ph.D.	Carbonate Sedimentology
Hopkins, T.	Ph.D.	Biological Oceanography
Muller-Karger, F.	Ph.D.	Biological Oceanography
Naar, D.	Ph.D.	Marine Geophysics
Paul, J.	Ph.D.	Marine Microbiology
Sackett, W.	Ph.D.	Marine Geochemistry
Torres, J.	Ph.D.	Biological Oceanography
Van Vleet, E.	Ph.D.	Chemical Oceanography
Vargo, G.	Ph.D.	Biological Oceanography
Walsh, J.	Ph.D.	Continental Shelf Ecosystems
Weisberg, R.	Ph.D.	Physical Oceanography
Wilson, R.	Ph.D.	Ichthyology

PREMISES/FACILITIES:

Specialized laboratories are equipped to do the following: trace metal analysis, physical chemistry, organic and isotope geochemistry, optical oceanography, satellite imagery, radio-isotope geochemistry, sedimentology, micropaleontology, physiology, benthic ecology, water quality, microbiology, ichthyology, planktology and geophysics.

INFORMATION FACILITIES:

Information not available.

EQUIPMENT:

Major items of equipment include an ISI(DS-130) scanning electron microscope, a Finnigan MAT-250 isotope ratio mass spectrometer, high resolution gas chromatograph, a combined GC-mass spectrometer, UV visible spectrophotometers, flame and graphite furnaces, atomic absorption spectrometers, multichannel autoanalyzer systems, X-ray difraction systems, a Mossbauer spectrometer, an ORE geopulse high resolution continuous seismic reflection profiling system and an EG &G side scan sonar system.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name: **BELLOWS**
Length: 24 m

Type:	Research Vessel
Name:	**SUNCOASTER**
Length:	37 m
Type:	Research Vessel

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80. U.S - Environmental Protection Agency (US/EPA) Gulf Breeze, Environmental Research Laboratory

Sabine Island,
Gulf Breeze, FL 32561,
U.S.A.
Telephone: (1-904) 932-5311
Cable:
Telex:
Telefax/facsimile: (1-904) 932-5311
Electr. Mail:
Acting Director: Mr. Raymond G. Wilbour
Specializations: F13, U1, M43, M34, M2, M3, M41, N26, Q8, V, M35, M37.
Training: No
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The purpose of the organization is to pursue studies on research on the impact of hazardous materials on marine and estuarine environments. Laboratory research objectives are to develop and evaluate test systems using the following: (a) environmental toxicology, including toxic chemical exposure and effects on marine organisms and ecosystem processes; (b) mechanisms that affect biodegradation and bioaccumulation in aquatic food webs; (c) fish and invertebrates in carcinogen assays as indicators of environmental and human risks from exposure to chemicals; (d) genetically altered micro-organisms and other products of biotechnology to evaluate potential risks from their release in the environment. Methods are under development to allow extrapolation of laboratory observations to field studies.

STAFF:

15 Scientific Staff	8 Technical Staff	12 Other Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Barkay, T.	Ph.D.	Microbial Genetics

Chapman, P.	Ph.D.	Microbiology
Clark, J.	Ph.D.	Aquatic Ecology
Couch, J.	Ph.D.	Pathobiology
Davis, W.	Ph.D.	Aquatic Ecology
Flemer, D.	Ph.D.	Zoology
Fournie, J.	Ph.D.	Biology
Genthner, F.	Ph.D.	Micro Biology
Mayer, S.	Ph.D.	Aquatic Toxicology
McKenney, C.	Ph.D.	Marine Crustacea
Pritchard, H.	Ph.D.	Microbial Degradation
Schoor, W.	Ph.D.	Biochemistry
Walsh, G.	Ph.D.	Aquatic Ecology
Weber, D.	Ph.D.	Plant Pathology
Wilhour, W.	Ph.D.	Plant Pathology

PREMISES/FACILITIES:

Building area: 12,323 sq. feet. Laboratory area: 19,000 sq. feet

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 30,000

Number of periodical subscriptions : 225

Monographs and series titles: Annual publication - "**Gulf Breeze Laboratory: Titles and Abstracts in Press and in Review**".

EQUIPMENT:

20 gas chromatographs, 7 liquid chromatographs, 2 scintillation counters, ICAP, mass spectrophotometer 2 fluorometers, optical rotation spectrophotometer 2 combustion chambers, electron microscope, fluorescent microscope, DNA sequencer, video densitometer,gel boxes, DC power supply, UV transilluminator, computers and statistical analysis system (SAS) (VAX and PC based), HP 3357 laboratory automated system, pH meters, centrifuges, microscopes are provided in three primary laboratories: marine toxicology chemistry facility; marine environmental assessment facility; biotechnology laboratory.

AQUARIUM FACILITIES:

Number of tanks : 350.

RESEARCH CRAFT :

Name :	**SABINA**
Length :	14 m
Type :	Commercial fishing boat

81. Center for Wetland Resources (CWR) Louisiana State University (LSU)

Wetlands Resources Building,
Baton Rouge, Louisiana 70803,
U.S.A.
Telephone: (1-504) 388-1558
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Dean: Mr. Jack R. Van Lopik
Specializations: F1, F3, F61, J, L5, M, N26, Q9, R6, V.
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

Research, education, and advisory service activities involving study, management and development of floodplains, coastal and marine habitats and resources.

INSTITUTIONAL STRUCTURE:

The Center for Wetlands Resources (CWR) embraces the following units: (1) Department of Oceanography and Coastal Sciences (DOCS); (2) Coastal Ecology Institute; (3) Coastal Fisheries Institute; (4) Laboratory for Wetland Soils and sediments; (5) Office of Sea Grant Development; (6) Ports and Waterways Institute; and (7) Special Projects Office.

TRAINING PROGRAMME:

Graduate assistantships, Postdoctoral fellowships.

STAFF:

35 Scientific Staff	85 Technical Staff	20 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Coleman, J.M.	Ph.D.	Deltaic Sedimentation
Costanza, R.	Ph.D.	Bioeconomics, System Ecology
Day, Jr. J.W	Ph.D.	Estuarine Ecology
Drummond, K.H.	B.Sc.	Oceanography
Gabrell, R.P.	Ph.D.	Environmental Soil Science
Gosselink, J.G.	Ph.D.	Plant nutrition, Marsh Ecology
Hsu, S.A.	Ph.D.	Boundarylayer Meteorology
Mendelssohn,I.A.	Ph.D.	Plant Physiological Ecology

Murray, S.P.	Ph.D.	Estuarine Dynamics, Salt Flux
Myers, S.P.	Ph.D.	Physiological Ecology of Marine Moles
Robertson, H.H.	Ph.D.	Coastal/deltaic Sedimentation
Rouse, Jr. L.J.	Ph.D.	Remote Sensing
Schweitzer, J.P.	Ed.P.	Environmental/Marine Science Education
Turner, E.R.	Ph.D.	Nutrient Cycling
Van Lopik, J.R.	Ph.D.	Coastal Zone Management Remote Sensing
Wang, F.C.	Ph.D.	Resources Planning, Management
Wells, J.T.	Ph.D.	Marine Ecology
Wiseman, Jr. W.J.	Ph.D.	Water Mass Characteristics

PREMISES/FACILITIES:

Laboratories and field support.
Building area : 3530 m^2 Laboratory area: 2232 m^2
With facilities for 3 visiting scientists and 52 students

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.,: 25,000
Number of periodical subscriptions : 20
Monographs and series titles : Technical Report (Series)
Database / Documentation Centre : Searchable databases for maps, unpublished data (digital & analog) and published reports.

EQUIPMENT:

Technical auto analyzer, Waters HPLC, Perkin Elmer 65040 fluorescence spectrophotometer, large IBM compatible terminal cluster, 4 microcomputers, complete storage and access system for microhardware, minicomputer and peripherals linked to IBM, graphicdigitizer, microfilm/fiche production system (printers, cameras, duplicators, jacket loader), 2 gas chromatographs (Perkin Elmer) Model 900 w/PEPI GC data system, atomic absorption spectrophotometer (Perkin Elmer 303), xray diffraction spectrograph (Norelco), x-ray fluorescence spectrograph (Norelco), differentiate thermal analyzer, psychrotherm incubator shaker, Coulter counter Model TA, gasometric carbon determinator semiautomatic (Leco), induction furnace (Leco) Type 521 Model 100, ATP photometer, Kjeldahl digestion block Technician BD40, incubator, nondispersive IR analyzer (Hondiba PIR 2000), mercury analyzer (Perkin Elmer) Coleman 50, miscellaneous analytical balances, 2 total carbon systems (Oceanography International), miscellaneous research microscopes, miscellaneous analog digital recorders, spectrophotometer (Perkin Elmer) Grating IR Model 237B, spectrophotometer UV (Unicam SP 1700), spectrophotometer UV (Bausch and Lomb) spectronic 600, digital logger, spectrophotometer (Bausch and Lomb) Model 21, fume hood, gas chromatograph w/2 electron captureflame ionisation and thermoionic detectors (Perkin Elmer), atomic absorption spectrophotometer equipped for flame automization (Perkin Elmer) Model 360, atomic absorption spectrophotometer equipped w/Model 2100 graphite furnace (Perkin Elmer) Model 360, spectronic 20 spectrophotometer (Bausch and Lomb), IEC centrifuge, Dupont RC5B refrigerated centrifuge, Varian gas chromatograph equipped with

electronic capture and flame ionization detectors, differential anodic stripped volammetry system, GE (Li) gamma spectrometer, conjection block, 40tube temperature programmed digestion block, controlled temperature waterbathshaker combination, 3 balances (2 automatic top loading 1 analytical balance), programmable desk calculators, miscellaneous meteorologic monitoring equipment,cameras (motordrives and control equipment for time lapse photography), wide scan sonar w/sub bottom profiler 300KHZ, miscellaneous precision surveying equipment, Fermentation unit 20 litre temperature controlled, double drum flake dryer, numerous programmable calculators, miscellaneous water quality monitoring equipment , miscellaneous oceanographic sampling equipment, inductively coupled argon plasma emission spectrometer equipped to measure 17 elements simultaneously, liquid scintillation counter for measuring radioactive phosphorus/carbon and hydrogen in radiochemical tracer studies, double beam visible/ultraviolet scanning spectrophotometer (Perkin Elmer) Model Lambda 3, high resolution gamma radiation counting instrument equipped with a lithium drifted germanium detector.

AQUARIUM FACILITIES:

Wetland plant species maintained for experimental purposes.

RESEARCH CRAFT:

Trailerable boats up to 22 feet (6.7 meters).

82.

Coastal Studies Institute (CSI)
Louisiana State University (LSU)
Baton Rouge, LA 70803-7527,
U.S.A.
Telephone: (1-504) 388-2395
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Mr. James M. Coleman
Specializations: M41, M11, M43, M15, M16, M7.
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The Institution's research is interdisciplinary, extending into geology, geophysics, physical oceanography, coastal meteorology, radiative transfer/remote-sensing, submarine canyons, and airsea interactions. Field investigations have been undertaken on all continents except

Antartica. The programme is field oriented and concentrates on the process of formation of relationships in coastal environments. The mission and purpose of the institution is geared toward basic research in coastal and shelf waters.

TRAINING PROGRAMME:

Graduate courses in marine sciences for national and foreign university students. Graduate assistantships leading to M.Sc. and Ph.D. degrees. Visiting students and professors.

STAFF:

11 Scientific Staff 8 Technical Staff 8 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Adams, Jr. C.E.	Ph.D.	Benthic Boundary Layers Shelf Sediment Dynamics Modeling of Multiphase Flow
Chuang, W.S.	Ph.D.	Estuarine Shelf Dynamics Time Series Analysis Modeling of Internal Tides
Coleman, J.M.	Ph.D.	Deltaic Sedimentation, Riverine Processes Structure of Shelf Sediments Muddy Coasts
Hsu, S.A.	Ph.D.	Boundarylayer Meteorology Mesoscale Weather Phenomena Diffusion in Atmosphere, Air Pollution
Huh, O.K.	Ph.D.	Remote Sensing, Shelf Environments
Murray, S.P.	Ph.D.	Coastal Currents, Particulate Transport Coastal Boundary Layer, Salt Flux
Prior, D.B.	Ph.D.	Subaqueous/Coastal Landslides Mass Movements of Sediments
Roberts, H.H.	Ph.D.	Marine Geology, Coastal/Deltaic Sedimentation, Reef Processes
Rouse, Jr. L.J.	Ph.D.	Principles of Remote Sensing Atmospheric Radiation Process Coastal Environment
Wells, J.T.	Ph.D.	Coastal/Estuarine Processes Fluid Mud Dynamics Finegrained Sediments
Wiseman, Jr. W.J.	Ph.D.	Water Mass Characteristics, Shelf Dynamics, Arctic Coastal Processes

PREMISES/FACILITIES:

Building area: 900 m^2 Laboratory area: 326 m^2
With facilities for 1 visiting scientist.

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 25,050
Monographs and series titles : Technical Reports.

EQUIPMENT:

2 side scan sonars (Klein & EG&G), subbottom profiler (Klein), 15 current meters (ENDECO), 2 wave buoys (ENDECO), 2 wave gages (CSI), 5 tide gages (CSI), 5 acoustic releases (EG&G), 2 fathometers (Raytheon), 2 guideline STD, 8 Aanderaa current meters, 3 pressure gages, Decca trisponder system, other miscellaneous meteorological, oceanographic, geological, diving, laboratory, calibration, minicomputer and support equipment.

AQUARIUM FACILIIES:

Information not available.

RESEARCH CRAFT:

Name :	**COASTI1**
Length :	7 m
Type :	Boat (inboard motor)
Laboratory space :	4 m^2
Special facilities:	Fathometer, radar, radiotelephone, miscellaneous deployment hardware.
Name :	**COASTI2**
Length :	4 m
Type :	Rubber boat
Nam:	**COASTI3**
Length :	7 m
Type :	Rubber boat
Special facilities:	Fathometer, radar VHF radiotelephone, miscellaneous deployment hardware.

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83. **Louisiana Universities Marine Consortium**

Star Route,
P.O.Box 541,
Chauvin, Louisiana 70344,
U.S.A.
Telephone: (1-504) 851-2800
Cable:
Telex:
Telefax/facsimile:
Electr. Mail: OMNET: M. DAGG
ExEcutive Director: Dr. Michael Dagg (interim)

Specializations: F, F56, M, M3, M4, V.
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The Louisiana Universities Marine Consortium (LUMCOM) was established to conduct and promote marine research and education in Louisiana. Construction of a new Marine Center, located 80 miles SW of New Orleans, and two new research vessels was completed in 1986. The 105 ft Pelican is used for oceanographic research in continental shelf and open waters. The 57 ft Acadiana is used for coastal and river work.

TRAINING PROGRAMME:

LUMCOM conducts a summer programme of university courses in Marine Sciences. this program draws students primarily from within the state but also some from other parts of the country.

STAFF:

35 Scientific Staff 85 Technical Staff 20 Other staff

PREMISES/FACILITIES:

Information not available.

INFORMATION FACILITIES:

Information not available.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name:	**PELICAN**
Length:	105 ft
Name:	**ACADIANA**
Length:	57 ft

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84. Mississippi/Alabama Sea Grant Consortium (MASGC)

Caylor Building,
Ocean Spring, MS 39564,
U.S.A.

Telephone: (1-601) 875-9341
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Mr. James I. Jones
Specializations: M3, Q9, J5, J4, N26, V, Q4, F3, T, F14, M13, F8, J.
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

(a) Marine and education training: secondary school minority, underprivileged and handicapped student exposure to marine education. (b) Man and the Gulf of Mexico, an experimental programme to intensify marine science at Jackson State University. (c) Applied environmental marine science in a secondary school. (d) Marine education course.

TRAINING PROGRAMME:

Each of the nine member institutions have their individual courses of study.

STAFF:

6 Scientific Staff 0 Technical Staff 4 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Flandorfer, M.	B.Sc.	Chemical Oceanography Marine Geology
Hecker, S.	Ph.D.	Adult Education
Jones, J. I.	Ph.D.	Marine Geology
Jones, D.		Fiscal Administration
Skupien, L.	B.Sc.	Journalism
Walker, S. H.	M.Sc.	Marine Science

INFORMATION FACILITIES:

Monographs and series titles:
Sea Grant Publications 1971-1982
MississippiAlabama Sea Grant Consortium (December 1982).
NOTE: Each institution maintains its own library

EQUIPMENT:

Information not available.

AQUARIUM FACILIITES:

Information not avaible.

RESEARCH CRAFT :

Name :	Un-named vessel
Length:	3 m
Type:	Rubber boat

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85. **Laboratory of Fishery Research (LFR)**

P.O. Box 3665, Maina Station,
Mayaguez, P.R. 00709,
U.S.A.
Telephone: (1-809) 833-2025/2410/2118
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Dr. Yvonne Sadovy

Specializations: F1, F3, M31, M34, N26, Q9, V
Training: No
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The Fisheries Research Laboratory began operations in 1969, with the purpose of monitoring, characterizing and developing Puerto Rico's commercial fishing industry, under the Commercial Fisheries Research and Development Act of 1964, PL88-309, under the co-sponsorship of the U.S. Department of the Interior and the Department of Agriculture of the Commonwealth of Puerto Rico. In 1979, in an attempt to integrate a number of fishery programmes that were at that time disperses throughout various government agencies, the laboratory came to form part of the newly created public corporation, CODREMAR (spanish acronym for corporation for the development and administration of marine, lacustrine and fluvial resources of Puerto Rico), ascribed to the Department of Natural Resources, through Law 82 of 7th June, 1979. On august 23, 1990, Law 61 eliminated CODREMAR and the Laboratory was incorporated into the Department of Natural Resources proper. The laboratory is funded from both Federal (Interjurisdictional Fisheries Program, State-Federal Cooperative Statistics Program, Dingell-Johnson) and Commonwealth sources.

TRAINING PROGRAMME:

Information not available.

STAFF:

7 Scientific Staff 22 Technical Staff 5 Other

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Aida, R.	B.Sc.	Biology
Calderon, J. R.	B.Sc.	Phycology
Cardosa, J.	B.S.	Aquaculture
Collazo Battistini, J.	M.Sc.	Fisheries, Biology, Aquaculture
Graciela, G. M.	M.Sc.	Biology
Kimmel, J.J.	Ph.D.	Ichthyology
Sadovy, Y.	Ph.D.	Biology

PREMISES /FACILITIES:

Building area: 1,022 m^2, workshop, boat docks, laboratories.

INFORMATION FACILITIES:

Collection of books, journals manuscripts
A three monthly bulletin is produced "Actualidades Pesqueras".

EQUIPMENT:

Dissolved oxygen meters, pH meters, balances, microscopes, microphotography equipment, Apple 2 and IBM computer systems, darkroom, photographic equipment, diving (SCUBA) equipment, Buehler Isomet lowspeed saw, histology equipment.

AQUARIUM FACILITIES:

Aquaria and saltwater pump Area: 110 m^2

RESEARCH CRAFT:

Name :	**R/V GUAYANILLA**
Length :	14 m
Type :	New England Lobster Boat
Special facilities :	Echosounder, radar, hydraulic winch, VHF radio, various fishing gear (manual and electric)
Name :	**VENDABAL**
Length :	4 m
Type :	McKee

86. **Universidad de Puerto Rico (UPR)**
Departamento de Ciencias Marinas (DCM)
Recinto Universitario de Mayagüez,
P.O. Box 5000,
Mayagüez, P.R. 00709500,
U.S.A.
Telephone: (1-809) 834-4040;899-2564/3838
Cable:
Telex: 345 2024 UPR MAY
Telefax/facsimile: (1-809) 265-2280
Electr. Mail: OMNETM. HERNANDEZ AVILA
Director: Dr. M.L. Hernandez Avila
Specializations: V, V51, M2, V5, V4, V52.
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Programa de capacitación: Se ofrecen los grados académicos M.Sc. y Ph.D. en las siguientes disciplinas: oceanografía, biológica, física, química, geología, acuacultura.

PERSONAL:

24 Profesionales científicos 5 Técnicos 5 Otros

PROFESIONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alexander, E.	M.S.	Oceanografía biológica
Almodovar, L. R.	Ph.D.	Botánica marina
Alston, D. E.	Ph.D.	Acuacultura de invertebrados
Appeldoorn, R. S.	Ph.D.	Biología pesquera
Ballantine, D. L.	Ph.D.	Botánica marina
Cameron, R. A.	Ph.D.	Biología de invertebrados
CerameVivas, M. J.	Ph.D.	Ecología marina
Cortes, R. C.	M.S.	Acuacultura
Corredor, J. E.	Ph.D.	Química marina
Cutress, B. D.	M.S.	Zoología marina
Cutress, Charles E.	M.S.	Zoología marina
Gonzales, J. G.	Ph.D.	Plancton
Hensley, Danny E.	Ph.D.	Ictiología
Hernandez Avila, M. L.	Ph.D.	Oceanografía física
Kubaryk, J.	Ph.D.	Tecnología de alimentos

McGinty, A. S.	Ph.D.	Genética de peces
Mercado, A.	M.S.	Oceanografía física
Mitcheson, G. R.	M.S.	Buceo
Morell, J.	M.S.	Química marina
Morelock, J.	Ph.D.	Oceanografía
Shapiro, D. Y.	Ph.D.	Comportamiento animal
Tosteson, T. R.	Ph.D.	Fisiología
Williams, Ernest H.	Ph.D.	Pesquería
Yoshioka, P.	Ph.D.	Ecología marina
Zaidi, B. R.	Ph.D.	Fisiología marina

LOCALES/INSTALACIONES:

Superficie del edificio: 3420 m^2. Superficie del laboratorio: 716 m^2
Con instalaciones para 2 científicos visitantes

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. :	25,407
Número de suscripciones a publicaciones periódicas:	160

EQUIPO:

Espectrofotómetros, computadoras de escritorio, autoclaves, microscopios, binoculares de disección, equipo de rastreo con videocine, cámaras fotograficas, equipo oceanográfico, (EX BT, botellas Niskin, dragas, redes de plancton, correntómetros, fotómetros submarinos), equipo para estudios fisiológicos de invertebrados y planctonicos.

ACUARIA PARA EXPERIMENTOS:

Superficie total: 25 m^2. Tanques (Núm.): 12

EMBARCACIONES PARA INVESTIGACION:

Nombre :	**PEZMAR**
Eslora :	16 m
Equipos y arreglos especiales:	Radar, ecosonda con registro, güinche hidráulico, radar VHF, motor 280 caballos de fuerza.

Nombre :	**LA GAVIOTA**
Eslora :	10 m
Equipos y arreglos especiales:	Radio, ecosonda digital, motor de 130 caballos de fuerza.

87. **Universidad de Puerto Rico (UPR), Departamento de Recursos Naturales (DRN), Seccion de Recursos Marinos**

Apdo. Postal 5887,
Puerta de Tierra, PR 00906,
U.S.A.
Telephone: (1-809) 724-0960/721-8774/722-5938
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Chief Director: Mr. Gilberto Cintron Molero
Specializations: M3, F3, Q9, R5, M4, J4, J5, M1, M21
Training: Yes
Periodicals: Yes
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The objective of the institution is to protect, improve and manage the marine resources of Puerto Rico.

TRAINING PROGRAMME:

Several talks are provided during the year on the existing and future programmes of the Institution.

STAFF:

7 Scientific Staff 11 Technical Staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Berrios, J.	B.S.	Fishery Biology
Cintron, G.	M.S.	Mangrove Ecology
Corujo, I.	M.S.	Fishery Biology
Ferrer, H.	B.S.	Marine Biology
Martinez, R.	M.S.	Marine Biology
Medina, E.	M.S.	Marine Biology
Velazquez, A.	M.S.	Marine Biology

PREMISES/FACILITIES:

Information not available.

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.,: 3,000

Number of periodicals subscriptions: 147
Monographs and series titles:
- Introduction To The Ecology Of Mangrove
- Environmental Impact Of Sand Extraction Activities On The Insular Shelf
- Impact Of Oil In The Tropical Marine Environment
- Mangrove Forest: Ecology and Response To Natural And Man-induced Stressors
- Mangrove Ecosystems Under Stress
- Dune Restoration In Puerto Rico (A Manual For Environmental Managers).
- Coastal Dunes for Protection And Sand Resources
- Laguanas Costeras De Puerto Rico
- Ecology Of Estuary In Puerto Rico
- Mangroves In Puerto Rico: A Structural Inventory
- Effects Of the M. V. "A. Regina " Grounding Mona Island, P.R.

EQUIPMENT:

Portable meteorological station, pH meters (different types), salinometer, (different types), dissolved oxygen meters, balances (various types), 4 microscopes (different types), Apple 2 Plus microcomputer system, photographic equipment, including underwater photographic equipment, Klovan Core, Nansen bottles, current meters, Clarke Bumpus plankton equipment, Piston core, grab sampler, biological dredges, Vibracore, diving gear, sextants, Peterson grab sampler, Shipek.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name :	**R/V JEANA**
Length :	20 m
Type :	Displacement
Laboratory space :	12 m^2
Special facilities:	Echosounder, radar, satellite navigation equipment, hydraulic winch, VHF radios, air compressor, refrigeration, different fishing gear, sextants.
Name :	Unnamed Vessel I
Length :	6 m
Type :	Boston Whaler
Name :	Unnamed Vessel II
Length :	4 m
Type :	Boston Whaler

Name : Unnamed Vessel III
Length : 7 m
Type : Boston Whaler

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88. **Institute for Geophysics (UTIG), University of Texas (UT)**

8701 Mopac Boulevard,
Austin, TX 787598345,
U.S.A.
Telephone: (1-512) 471-6156
Cable:
Telex: 9108741380 UTIGAUS
Telefax/facsimile:
Electr. Mail: UTIG.AUSTIN/OMNET
Director: Dr. Arthur E. Maxwell
Specializations: G, J4, M1, M2, Q5, R, V, F55, F58
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJECTIVES AND PROGRAMMES:

The Institute conducts geophysical investigations of the history, structure, and dynamics of the earth's crust and mantle, especially the ocean basins and margins, and earthquake phenomena. The research programmes of the Institute provide information fundamental to a better understanding of the physical evolution of the earth and the processes that shape it. This information is of paramount importance on the following: (a) geologic exploration for natural resources; (b) environmental problems associated with resource extraction; (c) problems of earthquake prediction and characteristics of strong earthquake motion; (d) the phenomena of acoustic transmission in the ocean and through the sea floor.

TRAINING PROGRAMME:

While all of the work of the Institute is directed towards research, graduate student training is an important component of these activities. The Institute does not itself award degrees or offer formal classes for academic credit, rather the Institute maintains a close relationship with the Department of Geological Sciences and it is through this academic department that teaching is conducted and advanced degrees awarded. Approximately one third of the research staff hold joint appointments in the Institute and the Department of Geological Sciences. There are at present more than 25 graduate students associated with the Institute.

STAFF:

30 Scientific Staff 25 Technical Staff 21 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Austin, J. A. Jr.	Ph.D.	Marine Geology
Bacchus, M. M.	Ph.D.	Seismic Exploration
Behrens, E.W.	Ph.D.	Marine Geology
Buffler, R.T.	Ph.D.	Marine Geology/ Geophysics
Buskirk, R	Ph.D.	Geophysics, Biology
Cloos, M.	Ph.D.	Geology, Petrology
Dalziel, I.W.D.	Ph.D.	Tectonics
Davies, T. A.	Ph.D.	Information not available
Denham, C. R.	Ph.D.	Geophysical Time Series Analysis
Frohlich, C.	Ph.D.	Solid Earth Geophysics
Garmany, J. D.	Ph.D.	Solid Earth Geophysics
Lagoe, M.P.	Ph.D.	Paleobiology, Paleoceanography, Paleoclimates
Lawver, L. A.	Ph.D.	Marine Geophysics
Mann, P.	Ph.D.	Caribbean Regional Geology, Tectonics
Matsumoto, T.	Ph.D.	Earthquake Seismology
Maxwell, A. E.	Ph.D.	Marine Geophysics
McKenzie, K.	Ph.D.	Marine Geophysics
Nakamura, Y.	Ph.D.	Geophysics
Phillips, J. D.	Ph.D.	Marine Seismology, Geomagnetism
Riedesel, M.A.	Ph.D.	Marine Geophysics
Rosencrantz, E.	Ph.D.	Tectonics
Salvador, A.	Ph.D.	Regional Studies
Sawyer, D. S.	Ph.D.	Marine Geophysics
Sclater, J.G.	Ph.D.	Marine Geophysics
Sclater, T. G.	Ph.D.	Deep Ocean Sediments
Shipley, T. H.	Ph.D.	Marine Geology
Stoffa, P. L.	Ph.D.	Marine Seismology
Tajima, F.	Ph.D.	Earthquake Seismology
Taylor, F.	Ph.D.	Neotectonics, Vulcanology
Wilson, C. R.	Ph.D.	Geophysics

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 9,551
Number of periodical subscriptions : 112
Monographs and series titles: Institute for Geophysics (Brochure, 1983)

EQUIPMENT:

Information not available.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Name :	**R.V. FRED H. MOORE**
Length :	50 m
Type :	Seismic vessel 765 hp
Special facilities :	Compressor system, generators (2), 2 single sideband radio (11 channels 225 watts and 40 channels 150/1000 watts), VHF radio (55 channels 25 watts) ATS satellite transceiver, 48 and 6 trace steamer reel (hydraulic), magnetometer cable reels, hydraulic (2), Decca 914 radar (2), Sperry universal autopilot, Benmar DR28 fathometer, Sperry Mark227 gyrocompass, Northstar 6000 LORAN C (2), Magnavox 1107 dual channel satellite receiver, multichannel seismic data acquisition (sound source, receiving system, echosounding and magnetics, data logging). Global positioning system, FURNO DS70 speed log, FURNO FUR1411 radar.

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89. **University of Texas at Austin (UT)**
Marine Science Institute
P.O. Box 1267
Port Aransas, Texas 78373,
U.S.A.
Telephone: (1-512) 749-6730/6711
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Dr. Robert S. Jones
Specializations: M1, M2, M3, M4, F, V
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The institute is dedicated to the three primary functions of a major university (education, research, and service) as they apply to the Texas coastal zone. It is an organized research unit of The University of Texas at Austin and emphasizes both basic and applied research aimed at understanding the biological, chemical and physical processes governing the coastal zone

ecosystem. General research programmes in several marine science disciplines include: physiology, biochemistry and ecology of marine plants and animals; biological, chemical and physical oceanography; geochemistry; mariculture; biochemical toxicology; and environmental monitoring. Current programmes include: (a) multidisciplinary research on marine ecosystems involving impact of freshwater inflow on estuarine systems, nutrient cycling, and mechanisms coupling estuaries and lagoons with the inshore continental shelf; (b) nutrient uptake dynamics and primary production in phytoplankton; (c) trophic dynamics in benthic organisms including bacteria, meiofauna and macrofauna; (d) microbial degradation of organic matter and recycling of nutrients in marine food webs; (e) studies in physiology and environmental toxicology, encompassing factors that control molting in invertebrate organisms and the reproductive biology of marine finfish; (f) investigations on recruitment and predator/prey dynamics of marine zooplankton and larval fishes using video/computer image analysis equipment; (g) ecology and adaptive value of bioluminescense in marine organisms; (h) evaluation of nutrition in natural and mariculture systems using stable isotope tracer methods; (i) mariculture research involving chemical and temperature/photoperiod spawning of finfishes, development of intensive raceway culture for year-round production of shrimp and fish, and the establishment of physico-chemical limits in larval fish growth and survival.

TRAINING PROGRAMME:

The Department of Marine Studies is the academic counterpart to the Marine Science Institute and has faculty members located in Austin and Port Aransas. It offers a formal teaching programme at the Institute in the summer, providing courses in marine science at the graduate and upper-division undergraduate levels. The Department has M.A. and Ph.D. degree programmes in Marine Science. Students are expected to have completed the baccalaureate degree in one of the natural sciences. Graduate students normally spend an academic year on the Austin campus. Thereafter, they take specialized marine courses and conduct thesis and dissertation research at the Marine Science Institute.

PREMISES/FACILITIES

The Institute's 83,000 sq. ft. headquarters on 72 acres of beachfront land consists of a series of interconnected buildings containing laboratories, offices, library, museum exhibit halls, classrooms, a visitors centre, auditorium, seminar rooms and workshops. A 10,000 sq. ft. wet laboratory is supplied with filtered, running sea water. There is an additional 7,000 sq. ft. of dormitories (70 beds), a cafeteria, physical plant complex, garages, greenhouses, walk-in freezers, and outdoor pool/habitat tanks. A pier laboratory affords direct access to measure fluxes in the Aransas Pass ship channel connecting the Gulf with the bays.

STAFF:

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Amos, A.F.	n/a	Physical Oceanography Instrumentation
Arnold, C.R.	Ph.D.	Mariculture, Marine Fisheries
Benner, R.	Ph.D.	Marine Microbiology

Buskey, E.J.	Ph.D.	Zooplankton Biology
Cameron, J.N.	Ph.D.	Comparative Physiology
Dunton, K.H.	Ph.D.	Marine Botany
Fuiman, L.A.	Ph.D.	Fisheries, Larval Fish Dynamics
Holt, G.J.	Ph.D.	Larval Life History of Marine Fishes Mariculture
Montagna, P.A.	Ph.D.	Marine Benthic Ecology and Energy Flow
Parker, P.L.	Ph.D.	Organic and Isotope Geochemistry
Scalan, R.S.	Ph.D.	Organic and Isotope Geochemistry
Suttle, C.A.	Ph.D.	Phytoplankton Physiological Ecology
Thomas, P.	Ph.D.	Reproductive Physiology, Environmental Toxicology
Whitledge, T.E.	Ph.D.	Marine Chemistry, Nutrients Dynamics

INFORMATION FACILITIES:

Library holdings include over 8,000 books and 37,000 bound volumes of journals. Remote-job-entry terminals in the Institute's computer laboratory provide direct access to the UT-Austin Computation Center's CDC, IBM and DEC mainframe computers. The Institute publishes its own journal, "Contributions in Marine Science."

EQUIPMENT:

Information not available.

AQUARIUM FACILITIES:

A mile west of the main building complex, the Fisheries and Mariculture Laboratory occupies 26,000 sq. ft. of buildings adjacent to the ship channel. The facility contains extensive wet laboratories for spawning, larval development, and grow-out studies in fishes.

RESEARCH CRAFT:

The R/V LONGHORN was modified in a major refit in 1986 to give her an overall length of 105 ft. The vessel is equipped with a trawl, hydrographic and conducting winches and modern electronic navigation and communication equipment. The KATY, a 57-ft fiber-glass trawler, is used in bay programmes. Marine operations are augmented by a fleet of swift small boats.

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90. **Texas A & M University**
Department of Oceanography
College Station, Texas 77843,
U.S.A.
Telephone: (1-409) 845-7211
Cable:

Telex:
Telefax/facsimile:
Electr. Mail:
Director Sea Grant Programme: Dr. Tom Bright
Specializations: J4, M, R6, V
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The main aim is to conduct research in all major disciplines of oceanography. The main thrust of research activities has been to understand the ocean environment. The integration of basic science and technology has provided an excellent tool for graduate student training in resource exploration and utilization.

TRAINING PROGRAMME:

Undergraduate and graduate courses in all major aspects of physical, biological, geological and chemical oceanography.

STAFF:

54 Scientific Staff 12 Technical Staff 164 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Anderson, A.L.	Ph.D.	Ocean Acoustics
Atlas, E.	Ph.D.	Airsea Exchange Process
Baldauf, J.G.	Ph.D.	Micropaleontology
Berner, L. Jr.	Ph.D.	Marine Zooplankton
Bidigare, R.R.	Ph.D.	Metabolism (Plankton), Nutrient Recycling Enzyme Kinetics
Biggs, D.C.	Ph.D.	Physiology/Ecology, (Marine Zooplankton)
Boothe, P.	Ph.D.	Geochemistry
Bright, T.J.	Ph.D.	Bathypelagic Fishes
Brooks, J.	Ph.D.	Marine Geochemistry
Brooks, D.A.	Ph.D.	Waves/Tides
Bryant, W.R.	Ph.D.	Marine Sediment
Cifuentas, L.A.	Ph.D.	Natural Abundance of Stable Isotopes in Marine Systems
Cochrane, J.D.	M.Sc.	General Ocean Circulation
Darnell, R.M.	Ph.D.	Ecosystem Ecology
ElSayed, S.Z.	Ph.D.	Marine Phytoplankton
Fahlquist, D.A.	Ph.D.	Seismic Wave (Propagation)

Fay, R.R.	Ph.D.	Marine Ecosystems, (Environmental Impact)
Fryxell, G.A.	Ph.D.	Evolutionary Patterns in Marine Phytoplankton
Gardner, W.D.	Ph.D.	Dynamics of Marine Sediments
Garrison, L.E.	Ph.D.	Deltas, Deepsea Fans
Gartner, S.	Ph.D.	Paleogeography, (Calcareous Nannofossils)
Guinasso, N.	Ph.D.	Ocean Chemistry system, (Mathematical Model)
Hacker, P.	Ph.D.	Satellite Sensors for Remote Sensing
Hofmann, E.E.	Ph.D.	Interactions in Marine Ecosystems (biol./phys.)
Ichiye, T.	Ph.D.	Ocean Circulation Dynamics
Jeffrey, L.M.	Ph.D.	Organic Geochemistry
Kennicutt, M.C.	Ph.D.	Chemical Oceanography
Klinck, J.M.	Ph.D.	Modeling, (Phys./Biol. Ocean Processes)
Mc Eachran, J.D.	Ph.D.	Systematics, Zoogeography
Merrel, W.J.	Ph.D.	Physical Oceanography, (descriptive)
Morse, J.W.	Ph.D.	Chemical Kinetics, Natural Waters/Sediments)
Nowlin, W.D.	Ph.D.	Theoretical Studies, Numerical Modeling Oil Pollution
Powell, E.N.	Ph.D.	Physiology/Ecology (Marine Meiofauna)
Presley, B.J.	Ph.D.	Chemistry (Interstitial Waters of Marine Sediments)
Rabinowitz, P.D.	Ph.D.	Marine Geophysical Data
Reid, R.O.	M.Sc.	Theoretical Studies (Waves/Circulation)
Rezak, R.	Ph.D.	Calcareous Algae, (Ecology/Systematics)
Sager, W.W.	Ph.D.	Paleomagnetism
Santschi, P.H.	Ph.D.	Radioisotopes as Tracers of Sediments
Schink, D.R.	Ph.D.	Marine Geochemistry
Schwarz, J.R.	Ph.D.	Marine Microbiology
Scott, M.	Ph.D.	Manganese Nodules, Trophodynamics (Pelagic)
Vastano, A.C.	Ph.D.	Numerical Modeling
Wade, T.	Ph.D.	Environmental Chemistry
Watkins, J.S.	Ph.D.	Seismic Stratigraphy
Whitworth, T.	Ph.D.	Physical Oceanography, (Southern Ocean)
Wiesenburg, D.A.	Ph.D.	Marine Geochemistry
Wormuth, J.H.	Ph.D.	Marine Zooplankton

PREMISES /FACILITIES:

Building area: 11,400 m^2. Laboratory area: 2,550 m^2
With facilities for 160 students

INFORMATION FACILITIES:

Number of books, journals manuscripts, etc.:30,000
Monographs and series titles: Contributions in Oceanography (Red book series).

EQUIPMENT:

Radioisotope counters (gas flow and liquid scintillation), physiological bomb calorimeters, several gas chromatographs, atomics absorption spectrophotometers, alpha spectroscopy system, isotope radio mass spectrometer, complete xray diffraction lab., non dispersive infrared analyser, rotating tables for simulating ocean circulation and wave phenomenon, deep sea camera systems, towed pumping system for seawater sampling and analysis, 2 HP 9830 calculator/computer systems, HP 2100 ship computer system, HP 1000 computer system, HP 600 A computer system, VAX 11/750.

AQUARIUM FACILITIES:

Number of tanks : 15

RESEARCH CRAFT :

Name :	**RV GYRE**
Length :	56 m
Type :	Steel hull 850 HP
Special facilities :	Crane, 2 Aframes, 3 winches, capstan, VAC power, salinograph, thermograph, expendable bathy-thermograph, log for wind and skip velocity, S/T/D, Niskin rosette sampler, magnetometer, 4 salinometers, dissolved oxygen meter, autoanalyser thermometers, HP 2100 data logging computer
Name :	**ROV** (Remotely Operated Vehicle)
Features :	Black and white video system; 35 mm camera system; 35 pound science payload; 3 function manipulator arm.

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91. Texas Parks and Wildlife Department
Coastal Fisheries Branch

4200 Smith School Road,
Austin, TX 78744,
U.S.A.
Telephone: (1-512) 479-4863
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director: Mr. Robert J. Kemp
Specializations: M3, F, Q9, N26, M33, V.

Training: Yes
Periodicals: Yes
Institutional Nature: Public/Local
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The mission and purpose of the Texas Parks and Wildlife Department is to conserve and manage marine biological resources in Texas coastal waters.

TRAINING PROGRAMME:

Courses are offered to staff on applied statistics, technical writing, personnel management, interviewing and selection.

STAFF:

30 Scientific Staff 13 Technical Staff 33 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Benefield, R.	B.Sc.	Bay Shrimp Prog. (Leader)
Brian, C. E.	M.Sc.	Shellfish Prog. (Dir.)
Cody, T. J.	B.Sc.	Gulf Shrimp Programme
Green, A.	M.Sc.	Research Specialist
Hammerschmidt, P.	M.Sc.	Crab Programme (Leader)
Heffernan, T.L.	B.Sc.	Field Operations (Dir.)
Hegen, E.	B.Sc.	Reg. Dir. (Rockport)
Hofstetter, R.	B.Sc.	Oyster Programme (Leader)
Johnson, R.	B.Sc.	Reg. Dir. (La Porte)
Maciorowski, A.	Ph.D.	Culture Res. (Dir.)
Matlock, G.	Ph.D.	Coastal Fisheries
Mc Eachron, L.W.	M.Sc.	Finfish Prog. (Leader)
Osbern, H.	M.Sc.	Creel Prog. (Leader)
Saul, G.	Ph.D.	Finfish Prog. (Dir.)

PREMISES/FACILITIES:

Building area: 4,500 m^2. Laboratory area: 600 m^2.

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 7,000
Monographs and series titles:
- Coastal Fisheries Project Reports
- Texas Parks and Wildlife Magazine
- Texas Parks and Wildlife Technical Series
- Coastal Fisheries Management Data Series

Nets (trammel/gill), several dissecting microscopes, fish scale ageing equipment, fish magnetic nose taggers and detectors, 15 outboard powered skiffs and four 45 foot vessels.

AQUARIUM FACILITIES:

Total Area: 5 m^2. Number of tanks: 8.

RESEARCH CRAFT:

Information not available.

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92. **University of the Virgin Islands (UVI)**
Marine Science Center

Charlotte Armalie,
St. Thomas, U.S.V.I. 00802,
U.S.A.
Telephone: (1-809) 776-9200 ext 1360
Cable:
Telex: (208) 3470102 UVI
Telefax/facsimile: (1-809) 776-2399
Electr. Mail:
Director

Specializations: M2, M3, M4, V
Training: Yes
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

Training undergraduates, support faculty and student research projects. provide the opportunity for faculty and visiting scientists to conduct limited research in V.I. waters.

TRAINING PROGRAMME:

B.Sc. and B.A. in marine biology including SCUBA training. Research opportunities.

STAFF:

3 Faculty Researchers (part-time); 1 Dive/Field Supervisor; 1 Part-time Student Assistant.

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Battery, J.	Ph.D.	Coral Reef Biology
Ragster, L.	Ph.D.	Macroalgal Ecology/Resource Management

Ragster, L.	Ph.D.	Macroalgal Ecology/Resource Management
Muhlstein, L.	Ph.D.	Seagrass Ecology
Turner, T.	Ph.D.	Ecology/Marine Production

INFORMATION FACILITIES:

MacIntosh computers, Dialog and other library data bases.

EQUIPMENT:

Two motor boats: 9m and 5m. SCUBA equipment and compressor. Laboratory and field equipment for sampling and analysis of sea water, plants and animals.

AQUARIUM FACILITIES:

Information not available.

RESEARCH CRAFT:

Information not available.

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93. **Fairleigh Dickinson University**
West Indies Laboratory (WIL)
Teague Bay, Christiansted,
St. Croix, U.S.V.I. 00820,
U.S.A.
Telephone: (1-809) 773-3339
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director:
Specializations: M3, M16, V, M41, M43
Training: Yes
Periodicals: Yes
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVES AND PROGRAMMES:

The laboratory conducts training in primarily undergraduate courses in marine science: performs research; advances knowledge of the West Indian marine environments in the Caribbean as a whole, and maintains a service relationship with local schools and Government Institutions.

A full semester programme consisting of marine biology, marine ecology and marine geology plus independent study, is offered each autumn. Spring semester programme is entitled 'Environmental Science: Theory and Application' for undergraduates. In addition, specialized course programmes for graduate and undergraduate students are offered during January and summer of each year. Details of teaching programme are available by writing to the Director, or the Overseas Programme Office, Fairleigh Dickinson University, Rutherford, N.J. 07070, U.S.A.

STAFF:

5 Scientific Staff 4 Technical Staff 16 Other staff

PROFESSIONAL SCIENTIFIC STAFF:

NAME	DEGREE	SPECIALITY
Gladfelter, E. H.	Ph.D.	Coral Biology
Gladfelter, W. B.	Ph.D.	Invertebrate Biology
Hubbard, D. K.	Ph.D.	Geology, Sedimentology
Ogden, J. C.	Ph.D.	Ecology
Williams, S. L.	Ph.D.	Nutrient Dynamics

PREMISES/FACILITIES:

Building area : 600 m^2 Laboratory area: 300 m^2
With facilities for: 4 visiting scientists and 40 students

INFORMATION FACILITIES:

Number of books, journals, manuscripts, etc.: 1,500
Number of periodical subscriptions : 30

EQUIPMENT:

Salinometers, analytical balances, stereo microscopes, binocular compound microscopes, full scuba compressor air bank and 60 scuba tanks, underwater cameras, drying ovens, centrifuges, well equipped geology laboratory consisting of thin sectioning equipment, x-ray and associated capabilities, computers, refrigerator/freezer, various types of water, biological and geological sampling equipment, PerkinElmer spectrometer, etc.

AQUARIUM FACILITIES:

Total area: 150 m^2 Number of tanks: 40

RESEARCH CRAFT:

Name : **SARIMA**
Length : 12 m
Type : Diesel

94. Centro de Investigación y Desarrollo Filial de Petróleos de Venezuela (INTEVEP S.A.)

Urbanización, Santa Rosa, Antigua Villa, Pignatelli
Casilla Postal 1201,
Los Teques, Miranda,
Venezuela
Telephone:
Cable:
Telex: (31) 21672 INTVPVC/28830 INT
Telefax/facsimile:
Electr. Mail:
Presidente: Sr. Gustavo Inciarte
Specializations: V, M11, Q, R5
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVOS Y PROGRAMAS:

Presta asesoría al Gobierno Nacional, empresas del Estado y otros organismos públicos y privados sobre aspectos científicos y tecnológicos en las áreas de su competencia. En el área de ciencias acuáticas los estudios más relevantes actualmente en curso son: investigación de las condiciones oceanográficas y meteorológicas de la plataforma continental de Venezuela; caracterización hidroquímica del río Orinoco y de los ríos de los llanos occidentales venezolanos; estudio y adaptación de procesos de tratamiento de aguas residuales en la industria petrolera, y simulación matemática de la trayectoria de derrames de crudo y descargas de contaminantes en cuerpos de aguas superficiales.

PROGRAMA DE CAPACITACION:

INTEVEP, S.A. define anualmente un programa de entrenamiento para su personal profesional y técnico, en las áreas de investigación programadas. El programa incluye asistencia a curso, congresos y conferencias en universidades, centros de investigación y empresas nacionales o en el exterior.

PERSONAL:

14 Profesionales científicos 8 Técnico 2 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Anselmi, A.	Ing. Química	Tratamiento de aguas
Avila, R.	M.S.	Estadística y probabilidades
Camacho, F.	M.S.	Tratamiento de aguas

Febres, G.	M.S.	Oceanografía fisicameteorología
Herrera, L. E.	Ph.D.	Oceanografía fisicameteorología
Liendo, F.	Lic. en Química	Química analítica
Masciangioli, P.	Lic. en fisica	Oceanografa física
Nunez, I.	M.S.	Química ambiental
Pelegri, J. L.	M.S.	Circulación oceánica
Pena, R.	Quimica Ind.	Caracterización de cuerpos de agua
Ponte, R.	M.S.	Ing. hidrologicameterología
Sanchez, J. C.	Dr. Ing.	Ing. ambiental tratamiento de aguas
Villoria, C.	M.S.	Ing. de costas y olas

LOCALES /INSTALACIONES :

Superficie del edificio : 150 m^2 Superficie del laboratorio : 660 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 20,000
Número de suscripciones a publicaciones periodicas: 1,000
Los títulos de las monografías y las series :
- Informes Técnicos (circulación restringida)
- Revista Técnica INTEVEP

EQUIPO:

Cromatógrafos de gases, espectrofotómetros UV visible, analizadores de carbono, espectrofotómetro de absorción atómica, equipo Kjendhal, analizadores de oxígeno, conductímetros, potenciómetros, microscopio, incubadoras, equipo de jar test, analizador IR, pH metros, turbidímetros, boyas para medición de oleaje, correntímetros, boyas Selco, estaciones meteorologicas, radiogoniómetros, equipo de recepción y grabación de datos oceanográficos y meteorológicos, microcomputadora.

ACUARIOS:

No disponible.

EMBARCACIONES PARA INVESTIGACION:

No disponible.

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95. **Fundación la Salle de Ciencias Naturales.**
Estacion de Investigaciones Marinas de Margarita
Campus de Margarita, Final Calle de Colon,
Pta. de Piedras, Apdo 144, Porlamar
Nueva Esparta,
Venezuela
Telephone: (58-95) 98236/89051

Cable:
Telex: 21553
Telefax/facsimile:
Electr. Mail:
Director: Sr. Joaquín Buitrago Borras
Specializations: V, M3, M16, N26, F3
Training: No
Periodicals: No
Institutional Nature: Local Nongovernmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Información no disponible.

PROGRAMA DE CAPACITACION:

Ciclo profesional de las menciones del Instituto Universitario de Tecnología del Mar (Acuacultura y Oceanografía y Tecnología de Alimentos).

Cursos de postgrado de la Universidad de Oriente.

PERSONAL:

34 Profesionales científicos 9 Técnicos 3 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Abreu, E.	No disponible	Cultivo de camarones
Alvarez, R.	"	Geología Sedimentología, Geomorfología
Astor, Y.	"	Oceanografía, Hidrografía
Buitrago, J.	"	Ecología, Impactos ambientales
Carvajal, F.	"	Cultivo de algas, Impactos ambientales
Castellanos, S.	"	Tecnología de alimentos
	"	Manejo de productos pesqueros
Carrasquero, G	"	Control de calidad
Castro, R.	"	Microbiológico de alimentos
Essig, K.	"	Cúltivo de camarones
Fernández, S.	"	Cúltivo de artemias
Florez, H.	(Jefe de Area)	Procesos industriales
- - - - -	No disponible	Control de calidad
Freon, P.	"	Biología pesquera
	"	Dinámica de poblaciones
Gerlotto, F.	"	Biología pesquera
	"	Hidroacuática, Ecointegración
Gonzalez, A.	Doc.	Biología pesquera

Gonzalez, J.	No disponible	Biología pesquera
Gonzalez, L.	(Subdirector)	Zooplancton
Hernandez, A.	No disponible	Control de calidad
Iriarte, M.	"	Microbiología de alimentos, Control de
	"	calidad
Manzo, M.	"	Tecnología de alimentos, Control de calidad
Mazeika, P.	"	Oceanografía física
Mendoza, J.	(Jefe de Dpto.)	Biología pesquera
Palma, H.	(Jefe Dpto.)	Control de calidad, Bioquímica
Pantchenko,G.	(Jefe Dpto. y Area)	Acuacultura
Poza, J. V.	No disponible	Cultivo de moluscos
Princz, D.	"	Ecología, Malacología
Rangel, J. G.	"	Biología pesquera
Robleto, F.	"	Ecología, Biología marina
Rodriguez, A.	"	Biología pesquera
Rodriguez, C.	Doc.	Oceanografía biológica, Plancton
Rodriguez, D.	Doc.	Química, Oceanografía química
Varela, R.	(Jefe de Dpto.)	Cultivo de algas, Análisis de clorofila
Velasquez, O.	No disponible	Tecnología de alimentos
Zabala, R.	(Jefe de Mencion)	Oceanología, acuicultura

LOCALES/INSTALACIONES:

Superficie del edificio: 3,000 m^2 Superficie del laboratorio: 1300 m^2

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 9,000
Número de suscripciones a publicaciones periódicas: 1,200
Los títulos de las monografías y las series:

- Contribuciones de la Estación de Investigaciones Marinas de Isla Margarita (se publican en los órganos de difusión de la Fundación La Salle).
- Memorias de la Sociedad La Salle de Ciencias Naturales
- Cuadernos técnicos de EDIMAR
- Documentos de trabajo interno

EQUIPO:

Todos los laboratorios se encuentran altamente equipados como: espectrofotómetro de absorción atómica, cromatógrafo de gases,. analizador de carbono, computadoras HP 9845, HP 86 y Sinclair, cintegradores Agenor y Simrad, varias embarcaciones entre 3 y 7 metros.

ACUARIO PARA EXPERIMENTOS:

Superficie total: 15,000 m^2 Tanques (No.): 80

EMBARCACIONES PARA INVESTIGACION:

Nombre : **DOÑA TERESA**
Eslora : 14 m

Nombre :	**DOÑA MARIA JESUS**
Eslora :	16 m
Tipo :	Costeros
Nombre :	**B/O LA SALLE**
Eslora :	40 m
Tipo :	Buque oceanográfico
Espacio para lab. :	48 m^2

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96. **Instituto Control y la Conservación del Lago de Maracaibo (ICLAM)**

Avenida 9 Calle GH No. GH 12 Urb. Irama,
Casilla Postal 302,
Maracaibo, Zulia,
Venezuela
Telephone: (58-61) 423677/423690/02087
Cable:
Telex: 62545 LIBE VC
Telefax/facsimile:
Electr. Mail:
Presidente: Ing. Neiro Adrianza Rosalez
Specializations: V, L2, L4
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: Yes

OBJETIVOS Y POGRAMAS:

(a) Programa de capacitación: Formación de una consciencia ambiental en al ciudadanía; (b) entrenamiento (mejoramiento) profesional y técnico del personal del Instituto; (c) actividades similares en organismos públicos y privados.

PROGRAMA DE CAPACITACION:

Vease arriba.

PERSONAL:

14 Profesionales científicos 6 Técnicos 22 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Aquilar de Rivera, E.	Ing. Químico	Microbiología
Albornoz de Socorro, A.	Ing. Químico	Contaminación ambiental
Avendano, J.		Oceanografía limnología
Briceño, L.	Ing. Agrónomo	Contaminación ambiental
		Química orgánica
Carvajal, N.	M.Sc.	Química
F. de Gutierrez, A. M.	Ing. Químico	Contaminación ambiental
Labarca Nava, R. A.	M.Sc.	Química
Mendez, E.	B.Sc.	Limnología
Piro C., C. L.	B.A.	Limnología
Salas D., E. A.	Ing. Químico	Contaminación de aguas
Soto de Leon, A.	Bioanalista	Ecosistemas acuáticos
Alvarez, P.	Ph.D.	Calidad de aguas
Ríos, B.	M.Sc.	Tratamiento de efluentes

LOCALES/INSTALACIONES:

No disponible.

SERVICIO DE INFORMACION:

Los títulos de las monografías y las series:

- Curso de Capacitación Ambiental
- La Contaminación, el Ambiente y la Cuenca del Lago de Maracaibo

EQUIPO:

Calculadora (HP), microscopio invertido (Zeiss), microscopio binocular, colorímetros (Spectronic 20 & 21), esteroscopio (Bausch and Lomb), autoanalizador (Tecnicon 2), auto bureta (Radiometer), balanzas analíticas, baños Maria, horno, autoclaves, estufas, fluorometros, analizador de mercurio (Coleman), potenciómetros, centrifugas, medidores de conductividad, medidores de pH, profundidad, temperatura, conductividad, oxígeno disuelto, iones, Hydrolab, equipo de filtración (Millipore), captador automático (ISCO), computador (HP 9815), pisocómetros, balanzas electrónicas.

ACUARIOS:

No disponible.

EMBARCACIONES PARA INVESTIGACION:

Nombre : **DORA**
Eslora : 14 m
Tipo : Lancha

97. Instituto de Tecnología y Ciencias Marinas (INTECMAR), Universidad Simón Bolivar.

Sartenejas, Baruta.
Apartado Postal 89000,
Caracas 1080,
Venezuela
Telephone: (58-2) 962-1215/937244
Cable: UNI BOLIVAR
Telex: (31) 21910 USB VC
Telefax/facsimile: (58) 29621175
Electr. Mail:
Director: Prof. Ricardo Molinet
Specializations: F3, F5, M42, M43, M3, N26, U1, M3, V, V4, V5, T
Training: Yes
Periodicals: Yes
Institutional Nature: Intergovernmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJECTIVOS Y PROGRAMAS:

El objetivo fundamental de servir a la investigación multidisciplinaria del ambiente marino, costero y oceánico en la zona centro-occidental del país.

PROGRAMA DE CAPACITACION:

Apoyo y de investigación: el INTECMAR brinda apoyo docente de diferentes maneras, especialmente a través del Centro de Estudios Oceanológico de Quizandal, a diferentes actividades de la Licenciatura y del Postgrado en el área de Biología de Sistemas y Organismos Acuáticos, como por ejemplo los cursos Biología Marina, Comunidades Marinas, Ecofisiología de Organismos Marinos, Contaminación Acuática, Pesquería, Acuacultura, Taller de Impacto Ambiental, Taxonomía de Invertebrados Marinos, Reproducción de Invertebrados Marinos, Biología Reproductiva de Crustáceos. Asimismo auspicia trabajos de grado y tesis de postgrado en temas marinos.

El INTECMAR apoya a estudiantes de pre y postgrado de otras universidades venezolanas y de otros países, especialmente de América Latina y recibe investigadores de instituciones nacionales o extranjeras, por períodos sabáticos o para desarrollo de actividades de investigación específicas.

PERSONAL:

11 Profesionales científicos 4 Técnicos 3 Otros

PROFESIONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Alvarado, J.	Ph.D.	Química ambiental

Carillo, R. de J.	Ph.D.	Contaminación por pesticidas
de Costa, D.	M.S.	Botánica marina, Contaminación por metales pesados
Gamba, A.L.	M.S.	Biología de camarones Carcinología
Jaffe, R.	Ph.D.	Geología Marina
Losada, F.	Ph.D.	Ecología marina
de Mahieu, G.	M.S.	Contaminación marina Ecofisiología de invertebrados
Molinet, R.	Lic.	Biología pesquera e ictiología
Nweihed, K.G.	Ph.D.	Derecho del mar
Penchaszadeh, P.E.	Ph.D.	Biología marina, Impacto ecología Malacología
Perez Nieto, H.	Ph.D.	Geología marina, Manejo costero
Salaya, J.J.	M.S.	Biología pesquera, Acuacultura

LOCALES/INSTALACIONES:

No disponible.

EQUIPO:

De Ecología, Ecofisiología Contaminación, de Química, de Geología, sala de acuarios con agua circulante.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

2 lanchas de pequeña calidad de investigación costera.

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98. **Instituto Oceanográfico (IO), Universidad de Oriente (UDO),**
Cumana, Venezuela
Apartado Postal 245,
Cerro Colorado,
Cumana, Sucre,
Venezuela
Telephone: (58-2) 653606
Cable: UNIVORIENTE
Telex: 93152 UDONS VE
Telefax/facsimile: (58-93) 662785
Electr. Mail:
Director: Julio Perez Ramírez
Specializations: V, V4, V3, M16
Training: No

Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Programa de Capacitación: Postgrado en Ciencias Marinas. **ESTRUCTURA DE LA INSTITUCION:** El Instituto tiene cuatro departamentos: Oceanografía Física y Geología, Oceanografía Química, Biología Pesquera y Biología Marina, Coordinación de Postgrado y Area Administrativa.

PERSONAL:

28 Profesionales científicos 0 Técnico 85 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Acuna, A.	Lic.	Recursos pesqueros
Aparicio, R.	M.A.	Oceanografía física
Bashirullah, A. K. M.	Ph.D.	Parasitología
Benitez Alvarez, J.	M.Sc.	Oceanografía química
Bonilla Ruíz, J.	M.Sc.	Oceanografiia química
Caraballo, L. F.	Dr.	Ciencias Geología
Carpio Castillo, L.	Farmaceuta	Bromatología
Carvajal R., J.	Lic.	Ictiología
Cedeno Fermin, G.	M.Sc.	Oceanografía química
Chung, K. S.	Ph.D.	Ecofisiología
De Arrendondo, I. R.	M.Sc.	Biología pesquera
De Reyes, E. F.	M.Sc.	Fitoplancton
Fernández, E.	M.Sc.	Bacteriología marina
Flores, C.	M.Sc.	Malacología
Galan, A.	Ph.D.	Ecología
Gamboa, B. R.	Lic.	Oceanografía química
Ganesan, E. K.	Ph.D.	Ficología
García, A. J.	M.Sc.	Oceanografía química
Huq, Molla F.	Ph.D.	Limnología
Lares Medina, L.	M.Sc.	Carcinología
Lemus, A. J.	M.Sc.	Ficología
Linero, M.	M.Sc.	Ecología bentónica
Martínez, A.	Lic.	Equinordermo
Parra, Berta J.	Lic.	Biología pesquera
Perez R., J. E.	Ph.D.	Genética de organismos marinos
Reyes V., G.	Ph.D.	Fitoplancton
Taizo, O.	Dr. Agron.	Oceanografía química
Urose, L. J.	M.Sc.	Zooplancton

Velez, A.	M.Sc.	Cultivo de moluscos
Zurburg, W.	Ph.D.	Bioquímica marina

LOCALES/INSTALACIONES:

Superficie del edificio: 4250 m^2 Superficie del laboratorio: 2,000 m^2
Con instalaciones para: Científicos visitantes : 32 Estudiantes: 2.

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 7,168
Número de suscripciones a publicaciones periódicas: 242
Los títulos de las monografías y las series :

- Boletín Instituto Oceanográfico
- Revista Lagena
- Cuadernos Oceanográficos
- Boletín Bibliográfico

EQUIPO:

Cromatógrafo de gas (Varian modelo 3700, Hewlett Packard, modelo 7600A), integrador de áreas (Hewlett Packard, modelo 3390A), registrador (Varian, 9176), espectrofotómetro infrarrojo (Sidmazu, IR400), espectrofotómetro (UVVIS, Varian, 634) espectrofotómetro (UVVIS Perkin Elmer, modelo 139), espectrofotómetro absorción atómica (Perkin Elmer, modelo 403), separador magnético isodinámico completo (Mod. LISG), correntómetro (Mod. DROM2), microcompresador (MOd. CMDT1), balanza (Sartorius 5281124), controlador electrónico de temperatura(VersaTherm, Mod. 21492), analizador de iones (Mod. 109), camera de siembra (Mod. Thomas, 19809375 H10 y Ace Scientific, 1980223538), calculador (Hewlett Packard, 9810A) con Ploteador (986A), cámera submarina, pH metros, micromotos, microcentrifugos de poder, deionizador, salinómetros.

ACUARIO PARA EXPERIMENTOS:

Disponible.

EMBARCACIONES PARA INVESTIGACION:

Nombre : **GUAIQUERI 2**
Eslora : 28 m
Tipo : Yate
Espacio par laboratorio : 45 m^2
Equipos y arreglos especiales: Ecosonda, radar, radiogoniomtero, loran omega y guinche oceanografico

Nombre : **YAZMAR**
Eslora : 12 m
Tipo : Lancha
Equipos y arreglos especiales: Guinche

99. Instituto Venezolano de Investigaciones Cientificas (IVIC) Centro de Ecología

Casilla Postal 21827,
Caracas 1020A,
Venezuela
Telephone: (58-2) 691-949/69195159
Cable: INVICSAS CARACAS
Telex: (31) 21338 INVICSAS VE
Telefax/facsimile:
Electr. Mail:
Director
Specializations: V, J4, M3, U, M33
Training: No
Periodicals: No
Institutional Nature: Academic
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

El objeto es de estudiar procesos estuarinos. Durante muchos años se dedicó a los problemas de conservación del lago Maracaibo, pero actualmente se concentra con preferencia en diversos aspectos de la biología de crustáceos. Nuestras lineas de investigación principales comprenden sistemática y evolución de decápodos, historia de vida, respuestas biológicas a diferentes parámetros ambientales.

PERSONAL:

2 Profesionales científicos 3 Técnicos 1 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Díaz, H.	Ph.D.	Biología marina
Esteves, A. E.	Técnico químico	Química de agua
Ormeno, E.	Técnico pesquero	Biología marina
Rodrigues, G.	Ph.D.	Biología marina
Shubert, C.	Ph.D.	Geología marina

LOCALES/INSTALACIONES:

Superficie del edificio: 3000m^2 Superficie del laboratorio:160m^2
Con instalaciones para 2 cientificos visitantes y 5 estudiantes

SERVICIO DE INFORMACION:

Número de suscripciones a publicaciones periódicas: 3,000
Los títulos de las monografías y las series :

- Rodríguez, G. 1980, Crustáceos decápodos de Venezuela, 494 pp., Caracas
- Rodríguez, G. 1981, Les Crabes d'eau douce d'Amérique (Serie Faune Tropical, No. 23, 224 pp. Orstom, Paris)

AQUARIO PARA EXPERIMENTOS:

Superficie total: 50 m^2. Tanques (No.): 10

BUQUES DE INVESTIGACION:

No disponible.

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100. Ministerio del Ambiente y de los Recursos Naturales y Renovables (MARNR). Dirección de Investigación del Ambiente (DIA)

Km. 6 Carretera via La Union,
El Hatillo, Edo Miranda,
Caracas 1010,
Venezuela
Telephone: (58-2) 9611004/249637064
Cable:
Telex: (31) 24305 MARNR VC
Telefax/facsimile: (58-2) 4831090
Electr. Mail:
Director: Lic. Filiberto Ramirez Olivares
Specializations: V, J4, V5, V5, V2, M14, M15, F5, F55, F58
Training: No
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS:

Programa de capacitación: (a) Cursos para observadores hidrometeorológicos; (b) Cursos para instrumentistas; (c) Cooperación en cursos de postgrado y a nivel técnico dictados en centros de formación (nacionales e internacionales).

PERSONAL:

42 Profesionales Científicos 16 Técnicos 492 Otros

LOCALES/INSTALACIONES :

Superficie del edificio: 2000 m^2 Superficie del laboratorio: 156 m^2
Con instalaciones para 2 científicos visitantes y 8 estudiantes.

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc. : 67
Número de suscripciones a publicaciones periódicas: 5
Los títulos de las monografías y las series:
- Informes
- Análisis
- Estudios

EQUIPO:

No disponible.

ACUARIOS:

No disponible.

BUQUES DE INVESTIGACION:

No disponible.

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101. **Universidad de Zulia (LUZ), Centro de Investigaciones (CIB) Facultad de Humanidad y de Educación**

Casilla Postal 526,
Maracaibo, Zulia,
Venezuela
Telephone: (58-61) 814959
Cable:
Telex:
Telefax/facsimile:
Electr. Mail:
Director Encargado: Sr. Hender E. Urdaneta Chourio
Specializations: V, J4, M3, M41, M43, N26, Q9, S, U
Training: Yes
Periodicals: No
Institutional Nature: Governmental
Geographic Scope: Primarily National
Documentation Centre/Database: No

OBJETIVOS Y PROGRAMAS

(a) Programa de capacitación: Entrenamiento a estudiantes de biología en técnicas de campo e investigación; (b) Curso a nivel de pregrado: Pisicultura, Ictiopatología, Ficología, Ornitología, Biología de Invertebrados, Ictiobiología, Dibujo Biológico; (c) Asesoramiento de tesis para pregrado en biología; (d) Cursos de extensión para graduados en pisicultura, ficología, y metodología de la investigación.

PERSONAL:

9 Profesionales científicos 2 Técnicos 3 Otros

PERSONAL CIENTIFICO:

NOMBRE	TITULO ACADEMICO	ESPECIALIZACION
Albornoz, O.	Lic.	Ficología
Bravo, C. R.	Lic.	Ficología
Casler, C.	M.Sc.	Ecología animal (Aves)
Garcia Pinto, L.	M.Sc.	Acuacultura, Biología marina
Gonzalez, E.	Lic.	Ictiobiología
Olivares Soto, R.	Lic.	Ictiobiología
Taissoun, E.	Lic.	Ecología marina
Urdaneta, H.	Lic.	Ictiobiología
Yacubson, S.	Ph.D.	Ficología

LOCALES/INSTALACIONES :

Superficie del edificio: 80 m^2 Superficie del laboratorio: 60 m^2.

SERVICIO DE INFORMACION:

Número de libros, revistas, manuscritos, etc.: 8,740
Número de suscripciones a publicaciones periódicas: 168.

EQUIPO:

Refrigerador Frigilux, refrigerador Articold, dibujoscopio Gestener, microscopio monocular BreckKanssel, microscopio, esteroscopio Wild M7A, 2 microscopios binocular Olympus, 2 salinómetros Y.S.I., sensor para mediciones electrónicas Wild, calibrador de fotografía Wild, balanza analítica Mettler, balanza semianalítica Mettler, 2 máquinas calculadoras Monroe y Olympia, medidor de pH Corning, microscopios: Wild M40, M20, M5, Wild 11, Carl Zeiss, microscopio estereoscopio Nilon, microfoto automática Wild, bomba de vacío y compresor de aire Medipump, 2 bombas de agua Jabsco y CONDE.

ACUARIO PARA EXPERIMENTOS:

Superficie total: 16 m^2 Tanques (No.): 6.

EMBARCACIONES PARA INVESTIGACION:

Nombre : **ZOEA**
Eslora : 7 m
Tipo : Lancha

Nombre :	Bote sin nombre
Eslora :	4 m
Tipo :	Bote

ANNEXES

ANNEX I

INSTITUTIONS INVOLVED IN STUDIES OF PETROLEUM HYDROCARBONS

Country	Institution No.	Activity A	B	C	D	Measurements E	F	G	H	Matrix I	J	K	L	Parameters M	N	O	P	Q	R	Methods S	T	U	V	W	X	Y	Z
Barbados	3	-	-	-	-	-	-	-	-	x	-	-	-	x	-	-	-	-	-	-	x	-	-	-	-	-	-
Colombia	10	x	x	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x	x	x	x	-	-
Colombia	15	x	x	-	x	-	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	x	-	-
Costa Rica	19	-	x	-	-	-	-	-	-	-	x	-	-	-	x	x	x	-	-	-	-	x	x	-	-	-	-
Cuba	23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	x	-	x	-	x	x	-
Cuba	26	-	x	-	-	-	-	-	-	-	x	-	-	x	-	-	x	-	-	-	x	x	-	-	-	-	-
Dominica	28	x	-	-	-	-	-	-	-	x	-	-	-	x	-	-	-	-	-	-	x	-	-	-	-	-	-
Jamaica	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jamaica	43	-	x	-	-	-	-	x	x	x	x	x	x	x	x	x	x	-	-	x	x	x	-	-	x	-	-
Mexico	46	x	x	x	-	x	x	x	x	x	x	x	x	-	x	x	x	x	-	-	-	-	-	x	-	-	-
Mexico	53	-	x	x	x	-	-	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x	-	x	x	x
Panama	58	x	-	-	-	-	-	-	-	-	x	x	x	-	-	-	-	x	-	-	-	-	x	-	-	-	-
Panama	63	x	x	x	-	x	x	x	x	-	-	x	x	-	x	x	x	x	x	x	-	x	-	-	x	x	-
St. Lucia	64	x	x	x	-	x	x	-	-	x	x	x	x	x	x	-	x	x	-	-	x	x	-	-	x	-	-
Trinidad & Tobago	69	x	x	-	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x	-	x	-	-
U.S.A.	86	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	x	x	-	-	x	x	-
U.S.A.	83	-	x	-	-	-	-	x	x	-	x	x	-	-	x	x	x	-	-	-	-	-	-	-	-	x	x
U.S.A.	74	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	100	-	x	-	x	-	-	x	x	-	x	x	x	-	x	x	x	-	-	-	-	x	x	-	x	-	-
Venezuela	98	-	x	-	-	-	-	-	-	-	x	x	x	x	x	x	-	-	-	-	-	-	x	-	-	-	-
Venezuela	97	-	x	x	-	x	-	x	-	-	x	x	x	-	-	x	x	-	-	-	-	x	-	-	x	x	-

KEY TO ANNEX I:

Activity

- A: Monitoring
- B: Research
- C: Training
- D: Control criteria

Measurements

- E: Pilot surveys
- F: Routine surveys
- G: Env. chemistry
- H: Biological effects

Matrix

- I: Beach surveys
- J: DPPH
- K: Sediments
- L: Organisms

Parameters:

- M: Tar balls
- N: Total hydroelectricity
- O: Alopathic hydro-electricity
- P: Aromatic hydro-electricity
- Q: Sub-lethal effects
- R: Lethal effects

Methods

- S: Visual surveys
- T: Gravimetry
- U: Spectrofluorometry
- V: Packed column - GCFID
- W: Megabore GCFID
- X: Capillary GCFID
- Y: GC - Mass Spec
- Z: Other

Footnote:
GC = Gas chromatograph
FID = Flame Ionisation Detector

ANNEX II

INSTITUTIONS INVOLVED IN STUDIES OF PESTICIDES AND PCBs

Country	Institution No.	Activity A	B	C	Measurements D	E	F	G	H	Matrix I	J	K	Parameters L	M	N	O	P	Q	Methods R	S	T	U	V	W	X
Barbados	3	-	x	-	x	-	x	-	-	x	x	x	x	-	-	-	-	-	-	-	-	x	-	-	-
Colombia	10	x	x	-	x	-	x	-	-	x	x	x	x	x	-	x[1/]	-	x	x	-	-	x	x	-	-
Colombia	15	-	x	-	-	-	x	-	-	x	x	x	x	x	x	-	-	-	x	-	-	-	-	-	-
Costa Rica	19	-	-	-	-	-	-	-	-	x	x	x	x	x	x	-	-	-	-	-	-	-	-	-	-
Cuba	23	x	x	x	x	-	x	-	x	x	-	x	x	x	-	-	x	x	x	-	-	x	-	x	-
Cuba	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dominica	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jamaica	40	x	x	x	x	-	x	x	x	x	x	x	x	x	-	x	-	x	x	x	x	x	-	x	x
Jamaica	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	53	-	-	x	-	-	x	x	x	x	x	x	x	x	x	x	-	x	x	x	x	x	x	x	x
Panama	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Panama	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Panama	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St. Lucia	64	x	x	x	x	x	x	-	-	x	x	x	x	x	x	-	x	x	-	-	-	x	-	-	-
U.S.A.	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

KEY TO ANNEX II:

Activity

- A: Monitoring
- B: Research
- C: Training

Measurements

- D: Pilot surveys
- E: Routine surveys
- F: Env. chemistry
- G: Food chain transfer
- H: Biological effects

Matrix

- I: Dissolved
- J: Sediments
- K: Organisms

Parameters:

- L: Organochloride pesticide
- M: Organophosphate pesticide
- N: PCBs
- O: Other compounds
- P: Sub-lethal effects
- Q: Lethal effects

[1/] Detergents

Methods

- R: GC - Electron Capture detector
- S: GC - Flame Photometric detector
- T: GC - Nitrogen Phosphorous detectors
- U: Packed columns
- V: Megabore columns
- W: Capillary columns
- X: GC Mass spectrometry

Footnote:
PCB = Polychlorinated biphenyl
GC = Gas chromatograph

ANNEX III

INSTITUTIONS INVOLVED IN STUDIES OF TRACE METALS OR ORGANOMETAL COMPOUNDS

Country	Institution No.	Activity A	B	C	Measurements D	E	F	G	Matrix H	I	J	K	Parameters L	M	N	O	P	Methods Q	R	S	T	U	V	W
Barbados	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colombia	10	x	x	-	x	x	x	x	x	x	-	x	-	x	x	-	-	-	x	-	-	-	-	-
Colombia	15	x	x	-	-	x	x	x	x	x	-	x	-	x	x	-	x	-	x	-	-	-	-	-
Costa Rica	19	-	x	-	-	-	-	-	x	x	-	x	-	x	-	-	-	-	x	-	-	-	-	-
Cuba	23	x	x	x	x	x	x	x	-	x	x	x	-	x	x	-	x	x	x	-	-	-	-	-
Cuba	26	x	x	x	-	-	-	-	-	x	x	-	-	x	-	-	-	-	x	-	-	-	-	-
Dominica	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jamaica	40	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-
Jamaica	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	46	x	x	x	x	x	x	x	-	x	-	x	-	-	-	-	-	-	x	x	-	x	-	-
Mexico	53	-	x	-	-	-	x	x	x	x	x	x	-	x	x	x	x	x	x	x	x	x	-	x
Panama	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Panama	59	x	x	-	x	x	x	-	x	x	-	-	-	x	x	-	-	x	x	-	-	-	-	-
Panama	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St. Lucia	64	x	x	-	x	x	x	-	x	x	x	x	-	x	x	-	-	x	x	-	-	-	-	-
U.S.A.	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	83	-	x	-	-	x	x	x	x	-	x	-	x	x	-	-	-	x	x	-	-	-	-	-
U.S.A.	74	x	-	x	-	x	-	x	x	x	x	x	-	-	x	x	x	x	-	x	-	-	-	-
U.S.A.	78	x	x	x	-	-	x	x	x	x	x	x	-	x	-	-	-	-	x	-	-	-	-	-
Venezuela	100	-	x	-	-	-	x	x	x	x	-	x	-	x	x	-	-	x	x	-	-	-	-	-
Venezuela	98	-	x	-	-	-	-	-	x	x	-	x	-	x	-	-	-	-	x	-	-	-	-	-
Venezuela	97	-	x	x	-	x	-	x	-	-	x	x	x	-	-	x	x	-	-	-	-	x	-	-

KEY TO ANNEX III:

Activity

- A: Monitoring
- B: Research
- C: Training

Measurements

- D: Pilot surveys
- E: Routine surveys
- F: Env. chemistry
- G: Biological effects

Matrix

- H: Dissolved
- I: Sediments
- J: Suspended solids
- K: Organisms

Parameters:

- L: Trace metal
- M: Mercury
- N: Organotin
- O: Organomercury
- P: Other

Methods

- Q: Colorimetry
- R: Atomic Absorption Spectrophotometry
- S: X-ray Fluorescense
- T: Neutron activator
- U: Electrochemistry
- V: Gas chromatograph
- W: Other

ANNEX IV

INSTITUTIONS INVOLVED IN STUDIES OF FAECAL CONTAMINANTS

Country	Institution No.	Activity A	B	C	Measurements D	E	F	G	Matrix H	I	J	K	Parameters L	M	N	O	P	Q	Methods R	S	T
Barbados	3	x	-	x	x	x	x	-	x	-	-	-	x[1/]	x	x	x	-	-	x	-	-
Colombia	10	x	x	-	x	x	-	-	x	-	-	-	-	x	-	x	-	-	x	x	-
Colombia	15	x	x	-	-	x	x	-	x	x	-	x	-	x	x	x	-	-	-	x	-
Costa Rica	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cuba	23	x	x	x	x	x	x	x	x	x	-	x	x[2/]	x	x	x	-	-	x	x	x
Cuba	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-
Dominica	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jamaica	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jamaica	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-
Mexico	53	-	x	-	x	-	x	-	x	-	x	x	x[3/]	x	x	x	x	-	-	x	-
Panama	58	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	x	-	-
Panama	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St. Lucia	64	x	-	x	x	x	-	-	x	-	x	-	-	x	x	-	-	-	x	x	-
Trinidad and Tobago	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	100	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-	-	x	x	-
Venezuela	98	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	x	-

KEY TO ANNEX IV:

Activity

- A: Monitoring
- B: Research
- C: Training

Measurements

- D: Pilot surveys
- E: Routine surveys
- F: Env. behaviour
- G: Development of methodology

Matrix

- H: Sea water
- I: Fresh water/ outfalls
- J: Sea food
- K: Sediments/ sand beach

Parameters:

- L: Faecal coliforms
- M: Streptococci
- N: Bacterial pathogens
- O: Microbial parasites
- P: Virus
- Q: Other

Methods

- R: Membrane filter
- S: MPN dilution
- T: Other

Footnote:
MPN = Most probable number

[1/] Salmonella, Pseudomonas
[2/] Salmonella, Pseudomonas
[3/] Vibrio, Salmonella

ANNEX V

INSTITUTIONS INVESTIGATING DAMAGED ECOSYSTEMS

Country	Institution No.	Type of ecosystem A	B	C	D	Source of damage E	F	G	H	I	J	K
Barbados	3	x	x	-	x 1/	x	x	x	x	x	x	-
Colombia	10	-	-	-	-	-	-	-	-	-	-	-
Colombia	15	x	x	x	x 1/	x	x	x	x	x	x	-
Costa Rica	19	x	-	-	-	-	x	-	-	-	x	-
Cuba	23	x	x	x	-	x	x	x	x	x	x	-
Cuba	26	-	-	-	-	-	-	-	-	-	-	-
Dominica	28	-	-	-	-	-	-	-	-	-	-	-
Jamaica	40	-	-	-	-	-	-	-	-	-	-	-
Jamaica	43	x	x	-	-	-	-	-	-	x	x	-
Mexico	46	x	x	x	x 2/	x	x	x	x	x	-	-
Mexico	53	x	x	x	x 1/	x	x	x	x	x	x	-
Panama	58	-	-	-	-	-	-	-	-	-	-	-
Panama	59	-	-	-	-	-	-	-	-	-	-	-
Panama	63	-	-	-	-	-	-	-	-	-	-	-
St. Lucia	64	x	x	x	x 1/	x	x	-	x	x	x	-
Trinidad and Tobago	69	x	-	x	-	x	x	x	x	x	x	-
U.S.A.	86	x	x	x	x 2/	x	x	-	-	x	x	-
U.S.A.	83	-	-	x	x 1/ 2/	-	-	-	x	x	-	-
U.S.A.	74	-	-	-	-	-	-	-	-	-	-	-
U.S.A.	78	x	x	-	-	-	-	-	x	x	x	-
U.S.A.	92	x	-	x	-	-	-	-	-	x	x	-
Venezuela	100	-	-	-	-	-	-	-	-	-	-	-
Venezuela	98	x	x	x	x 1/	x	x	x	x	x	x	-

KEY TO ANNEX V:

Type of ecosystem

A: Coral reefs
B: Mangroves
C: Coastal lagoons
D: Other
1/ Seagrass
2/ Benthos

Source of damage

E: Sewage
F: Increased sediment
G: Industrial waste
H: Agricultural waste
I: Eutrophication
J: Direct physical damage (dredging, land clearing, construction, etc.)
K: Other

CEP Technical Reports

1. *1989.* The Action Plan for the Caribbean Environment Programme: Evaluation of its Development and Achievements (1976-1987).

2. *1989.* Regional Overview of Environmental Problems and Priorities Affecting the Coastal and Marine Resources of the Wider Caribbean.

3. *1989.* Implications of Climatic Changes in the Wider Caribbean Region - Preliminary Conclusions of the Task Team of Experts.

4. *1989.* Assessment of the Economic Impacts of Hurricane Gilbert on Coastal and Marine Resources in Jamaica.

5. *1990.* The Strategy for the Development of the Caribbean Environment Programme.

6. *1991.* Directory of Marine Environmental Research Institutions in the Wider Caribbean Region.

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The series of CEP Technical Reports contains selected information resulting from the various activities performed within the framework of the UNEP Caribbean Environment Programme (CEP). CEP was initiated in 1976 by UNEP with the assistance of ECLAC, at the request of the Governments of the region. A framework for regional projects and activities was first formulated in Montego Bay in 1981, when the Action Plan for the Caribbean Environment Programme was adopted by the First Intergovernmental Meeting.

The major legal instrument of CEP was adopted at the Second Intergovernmental Meeting, convened at Cartagena de Indias, in 1983: the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region. The Cartagena Convention provides a framework for the development of specific protocols.

The implementation of CEP is supported mainly by the Caribbean Trust Fund, established by the participating States and Territories. Their active participation is ensured through regular Intergovernmental and Contracting Parties Meetings, a rotating Monitoring Committee formed by representatives from nine States and Territories and through the National Focal Points. The principal focal point in each State or Territory is the ministry or department responsible for external relations or foreign affairs. Additionally, the agency responsible for the management of marine and coastal resources is the focal point for technical purposes.

Currently the Action Plan of CEP concentrates in six major areas for the management of marine and coastal resources: Overall Co-ordination, Specially Protected Areas and Wildlife (SPAW), Assessment and Control of Marine Pollution (CEPPOL), Integrated Planning and Institutional Development (IPID), Information Systems (CEPNET), and Education, Training and Awareness (ETA).

*

The Regional Programme on Information Systems for the Management of Marine and Coastal Resources in the Wider Caribbean (CEPNET) is a Decision Support Network to strengthen effective national and regional capabilities for information management and exchange systems. CEPNET aims at facilitating access to available sources of information and data. CEPNET also assists focal points and regional institutions with strengthening networking mechanisms and systems for the collection, compilation, analysis and dissemination of descriptive, numeric, bibliographic and spatial data relevant to CEP projects and activities, in particular those related to the CEPPOL and SPAW Programmes. As a result, CEPNET provides the region's institutions and experts with source materials on regional marine and coastal expertise (databases, directories, technical reports, fact sheets, CEP's newsletter "CEPNEWS", etc.)