



19th Meeting of the Meso America – Caribbean Sea Hydrographic Commission

National Report by
GUATEMALA

LT. Edwynn Alejandro Raxón Herrera
MSC. Maritime Affairs
Hydrographer Cat A



International Hydrographic Organization
Organisation Hydrographique Internationale



Hydrographic Office/Service:

- General Directorate of Maritime Affairs and National Commission of Hydrography and Oceanography (CIIHO), National Commission on Maritime Administration (CONAMAR).



Mission

- The DIGEMAR will be responsible for managing the functions of Flag State, Port State Control and Coastal State, through the planning, organization, coordination, development, implementation, monitoring of regulations, procedures and records related to the maritime safety and the prevention of pollution from ships, with the aim of contributing to national maritime development.



HYDROGRAPHY & OCEANOGRAPHY DEPARTMENT

- Promote the link between hydrographic and oceanographic agencies (National and international).
- Follow up on the commitments made by Guatemala as an active part of the IHO & the MACHC.
- Perform & supervise hydrographic surveys in national waters.
- Coordinate research through the National Commission of Hydrography and oceanography, CIIHO



National Commission of Hydrography and Oceanography (CIIHO)

Created by Government Agreement 254-85

Formed by

- Ministry of National Defense (Chairmanship)
- Ministry of Communications (Ports and Meteorological Institute)
- Ministry of Agriculture (Directorate of Fisheries)
- National Geographic Institute (Land cartography)
- Ministry of Foreign Affairs (Directorship of International Limits and Waters)
- Ministry of Energy and Mines

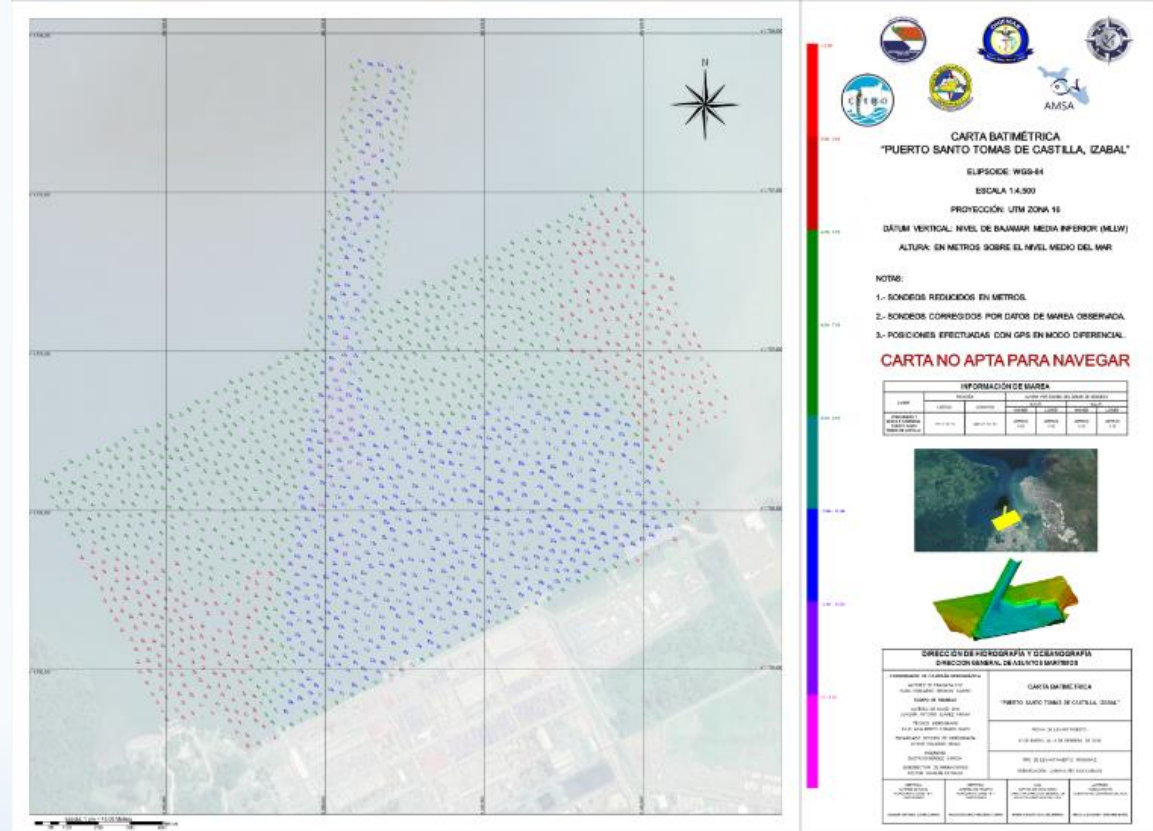
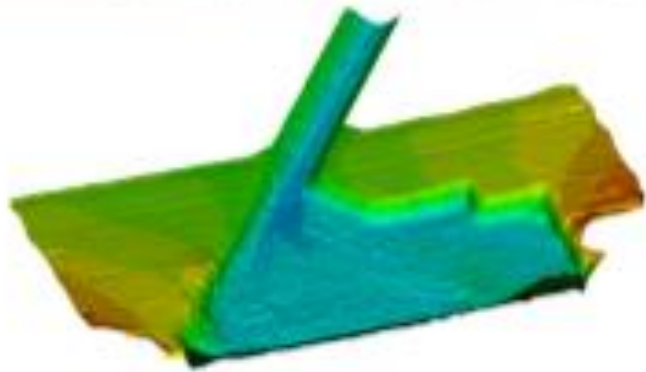


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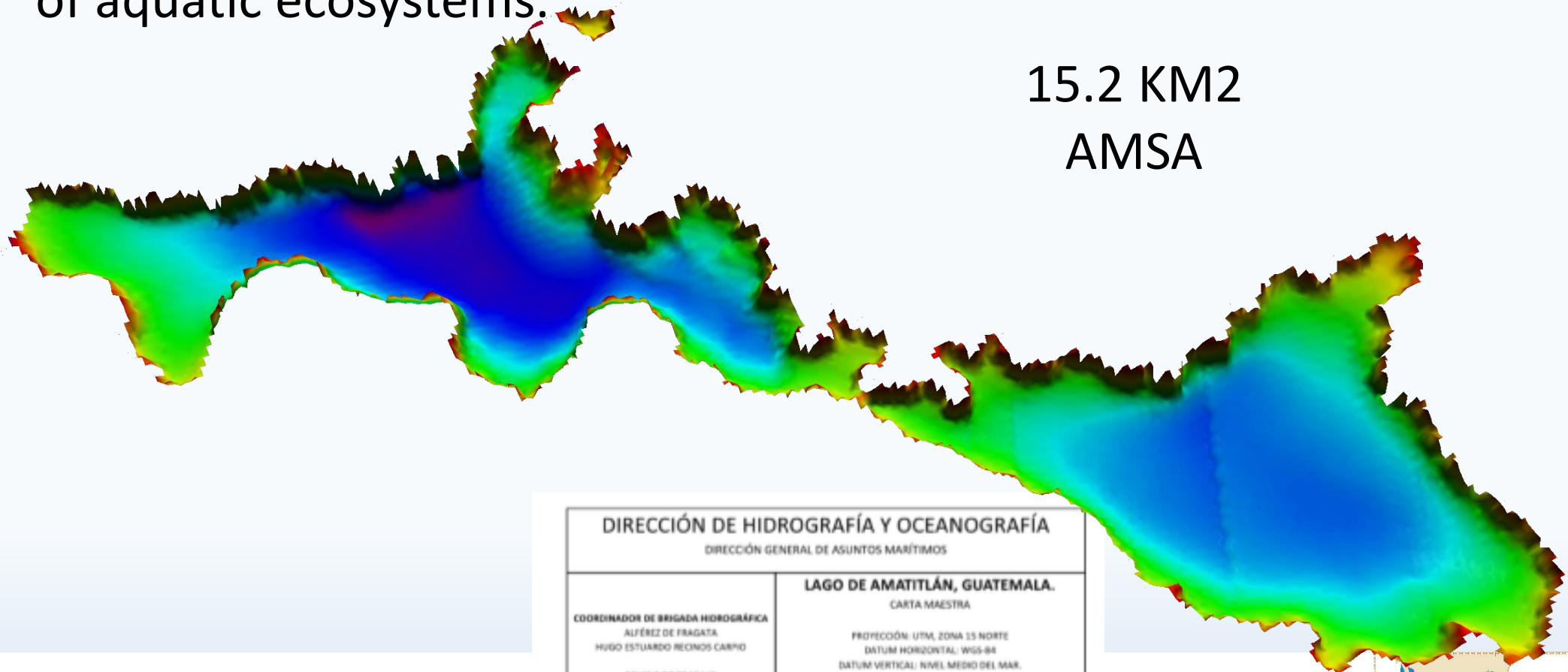
Surveys

- EMPORNAC 60KM2 (Caribbean Sea, January 2018)



Amatitlán Lake

- Amatitlán Lake is an area of interest for tourism and the preservation of aquatic ecosystems.

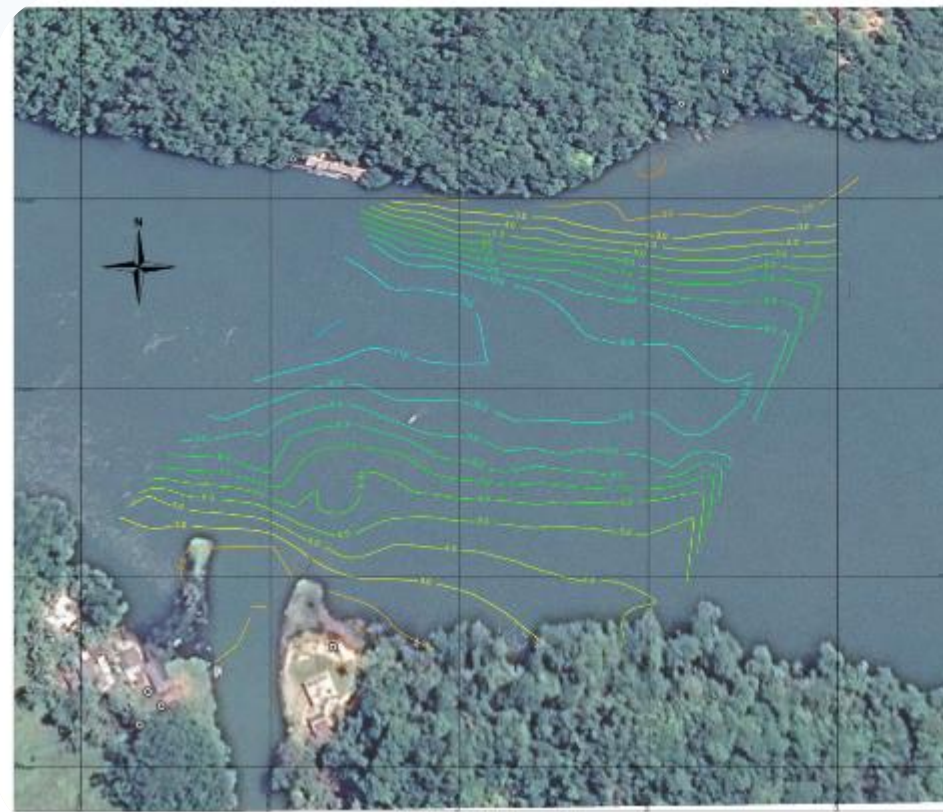
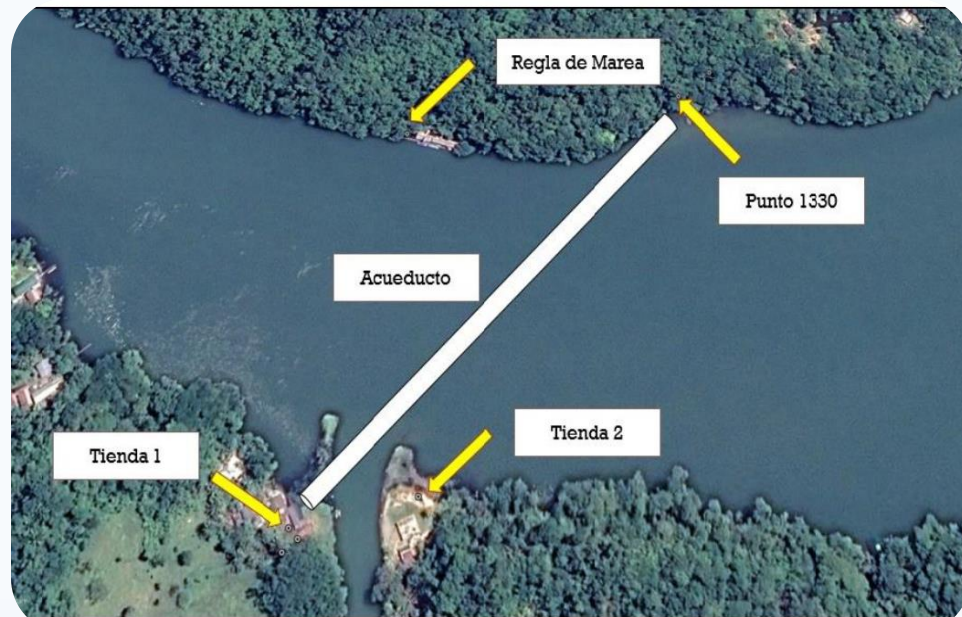


DIRECCIÓN DE HIDROGRAFÍA Y OCEANOGRAFÍA DIRECCIÓN GENERAL DE ASUNTOS MARÍTIMOS	
COORDINADOR DE BRIGADA HIDROGRÁFICA ALFÉREZ DE FRAGATA HUGO ESTUARDO RECINOS CARPIO	LAGO DE AMATITLÁN, GUATEMALA. CARTA MAESTRA
	PROYECCIÓN: UTM, ZONA 15 NORTE DATUM HORIZONTAL: WGS-84 DATUM VERTICAL: NIVEL MEDIO DEL MAR. SONDEOS EN METROS.
EQUIPO DE TRABAJO INGENIERO GUSTAVO MÉNDEZ GARCÍA	FECHA DE LEVANTAMIENTO: 07 DE MAYO AL 30 DE JULIO DE 2018
	TIPO DE LEVANTAMIENTO: MONCHAZ



Livingston Izabal (Caribbean Sea)

- Survey for the installation of a new aqueduct for freshwater between communities “Agua Caliente” 150 m2.



CIBO

CARTA BATIMÉTRICA
"AGUA CALIENTE, RÍO DULCE, IZABAL"

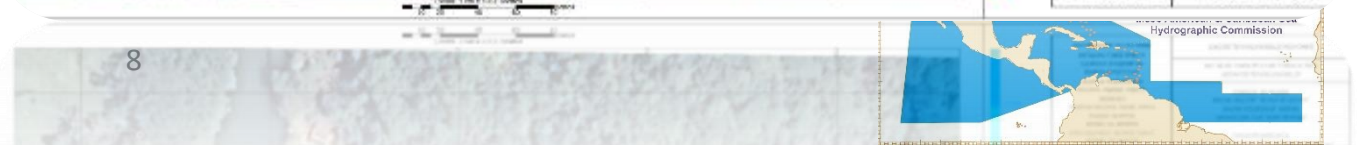
ELEVACION: MGS-84
ESCALA 1:2,500
PROYECCION: UTM ZONA 18 NORTE
DATUM VERTICAL: ELEVACION CALCULADA
ACTUAL: TEMPORAL EN METROS

NOTAS:
1.- SONDEOS REALIZADOS EN METROS.
2.- SONDEOS CORREGIDOS POR DATOS DE CORRIENTE OBSERVADA.
3.- POSICIONES EFECTUADAS CON GPS EN MODO DIFERENCIAL.

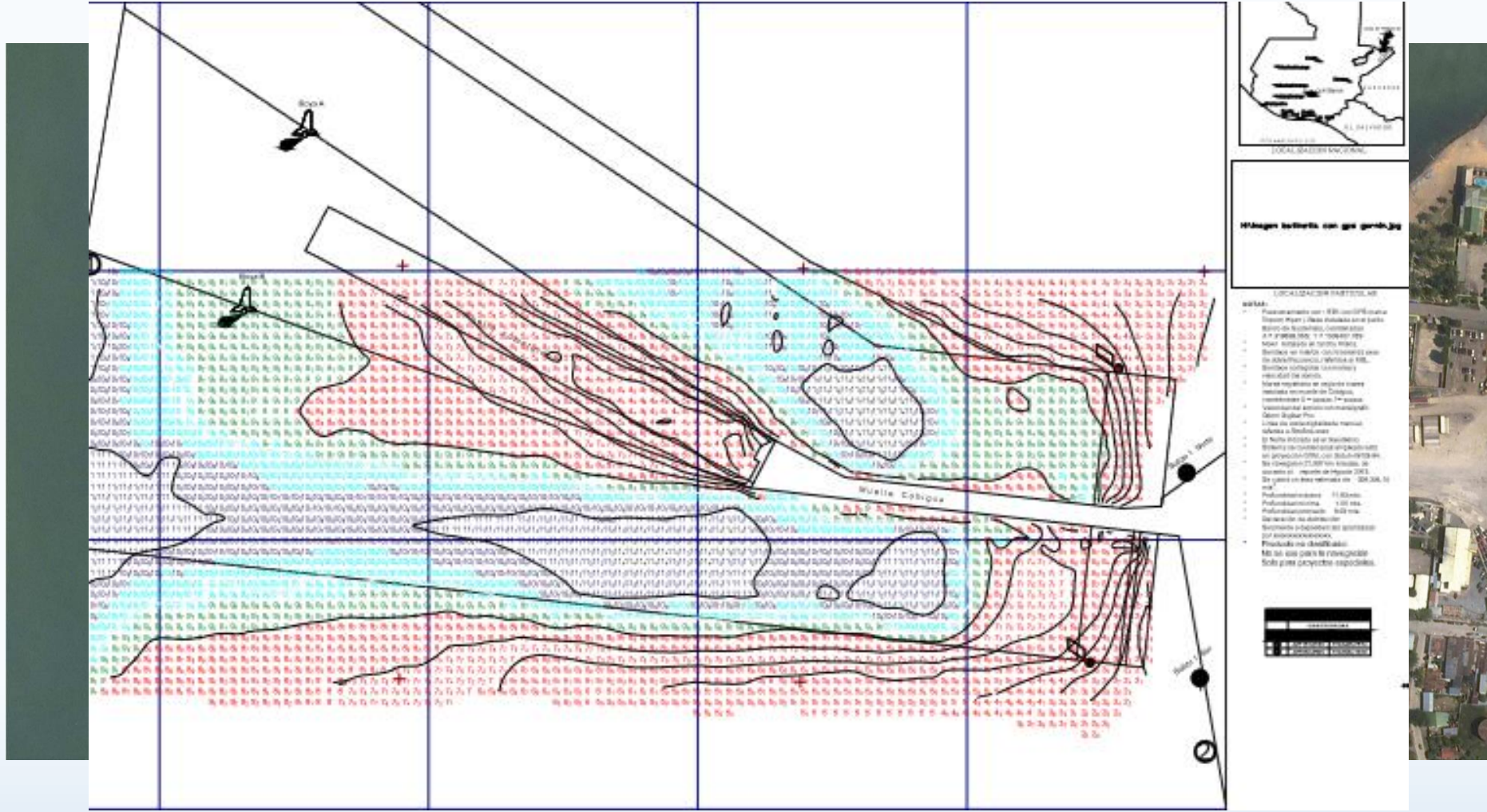
CARTA NO APTA PARA NAVEGAR

DEPARTAMENTO DE HIDROGRAFÍA Y OCEANOGRAFÍA
INSTITUTO VENEZOLANO DE OCEANOGRAFÍA Y HIDROGRAFÍA

COMANDO EN JEFE ALFONSO FERRAZ ALCAIDE DE MARINA ALFONSO FERRAZ COMANDO EN JEFE ALFONSO FERRAZ ALCAIDE DE MARINA ALFONSO FERRAZ	AGUA CALIENTE, RÍO DULCE, IZABAL BATIMETRÍA AGUA CALIENTE, RÍO DULCE, IZABAL BATIMETRÍA AGUA CALIENTE, RÍO DULCE, IZABAL BATIMETRÍA
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Puerto Barrios Port (Caribbean Sea)



262.4 KM2





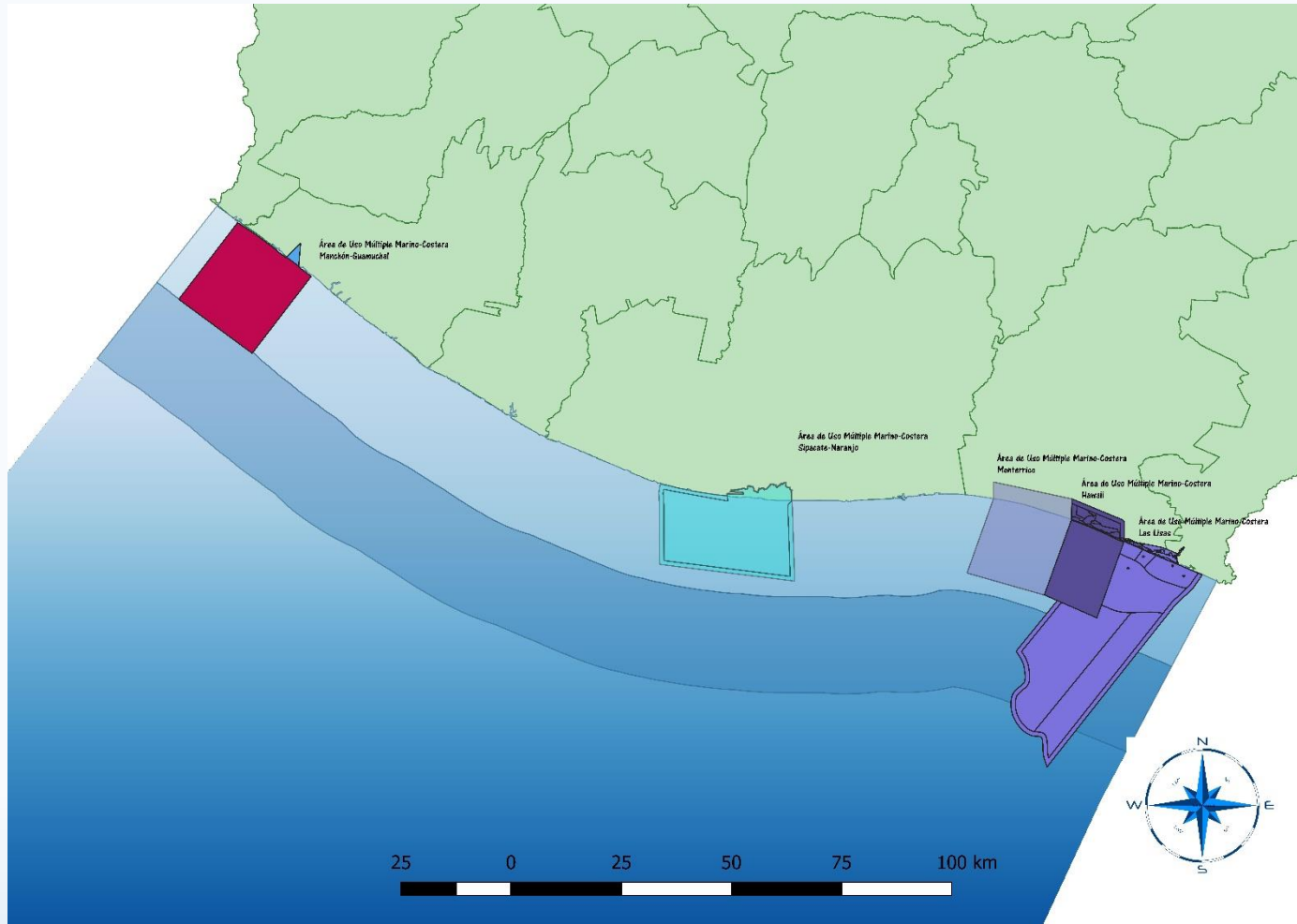
Conservación y Uso Sostenible de la Biodiversidad en Áreas Protegidas Marino-Costas



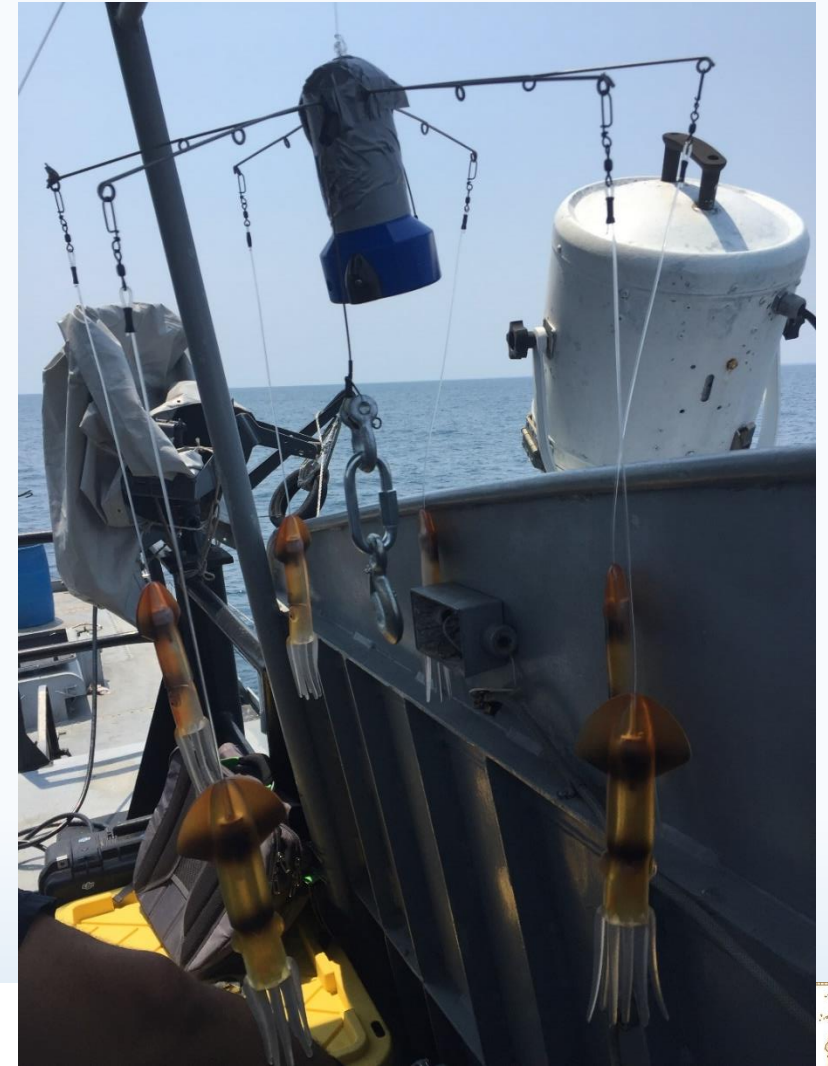
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MPA AICHI targets

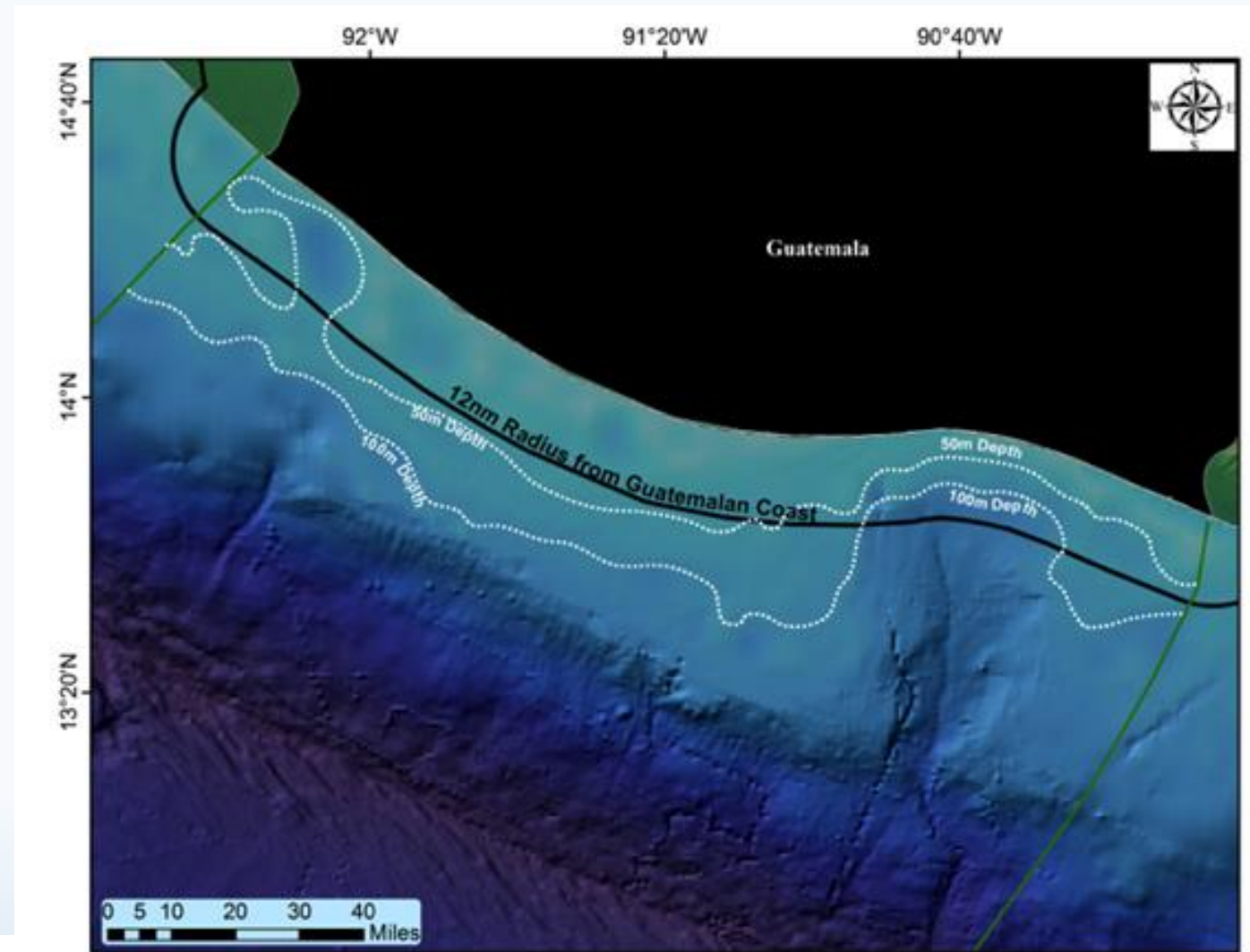


Oceanographic Characterization



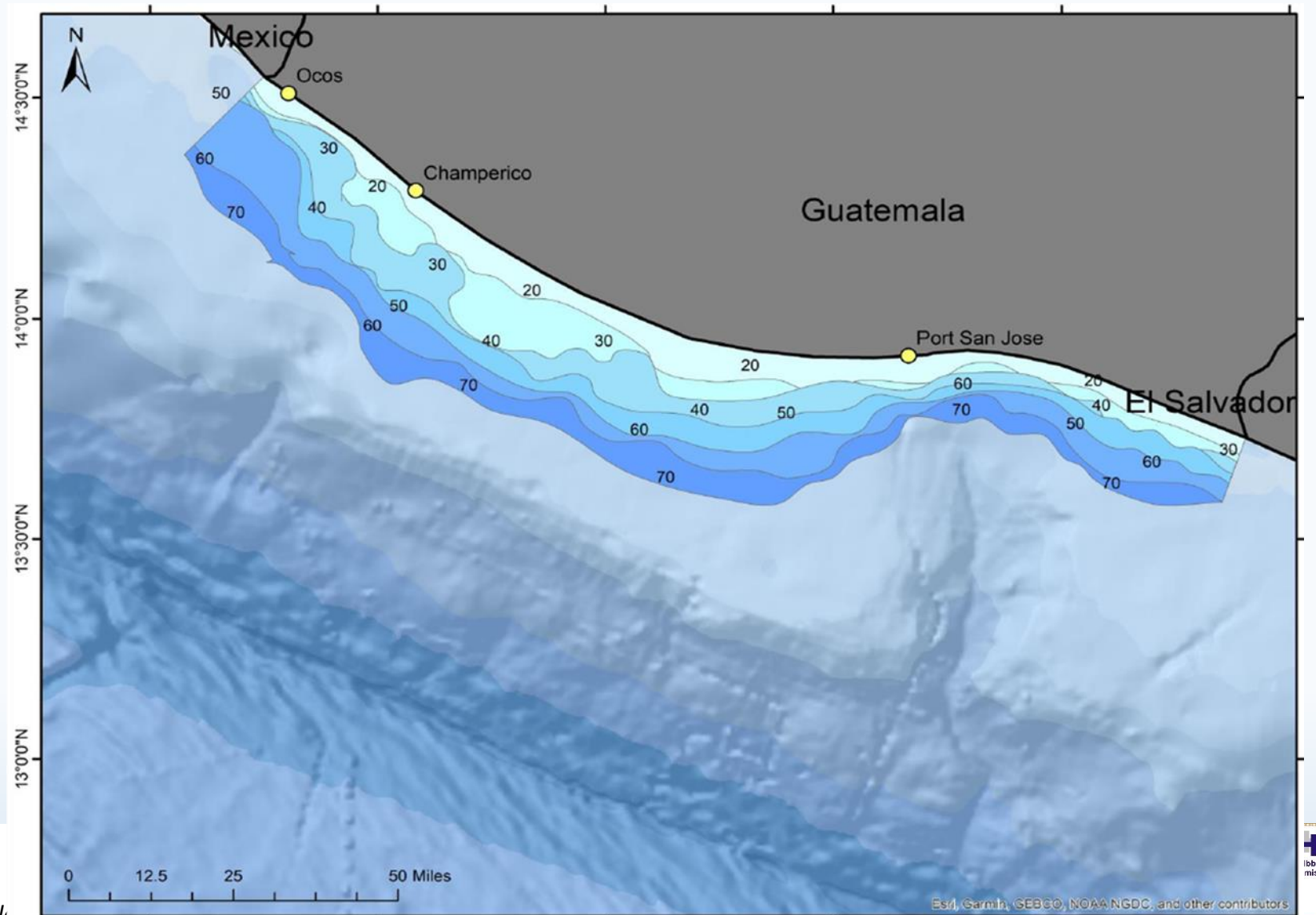
Oceanographic Campaign

- MAGA/DIPESCA
- Miami University
- DIGEMAR
- PNUD



Pacific Ocean

5000 KM2
Post
Processing



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New charts and updates:

- The US promulgated new charts and updates of Guatemalan Waters. However nobody sells the final product; consequently, the Directorship of Maritime Affairs is trying to sign the agreement with the United Kingdom Hydrographic Office (UKHO).



New publications and MSI

New publications

- Not applicable.

MSI:

- NGA (US) is the NAVAREA IV and XII coordinator within the IMO/IHO World-Wide Navigational Warning Service. (Including maritime areas of Guatemala). Consequently, the Directorship of Maritime Affairs has direct communication with this agency to share maritime safety information.
- Guatemala has two officers trained in the MACHC CBP for the generation of MSI.



IHO PUBLICATION C-55

Status of hydrographic survey of all navigable waters, including internal waters, out to the limits of the EEZ: Survey coverage, where:

A = percentage which is adequately surveyed.

B = percentage which requires a re - survey at larger scale or to modern standards.

C = percentage which has never been systematically surveyed.

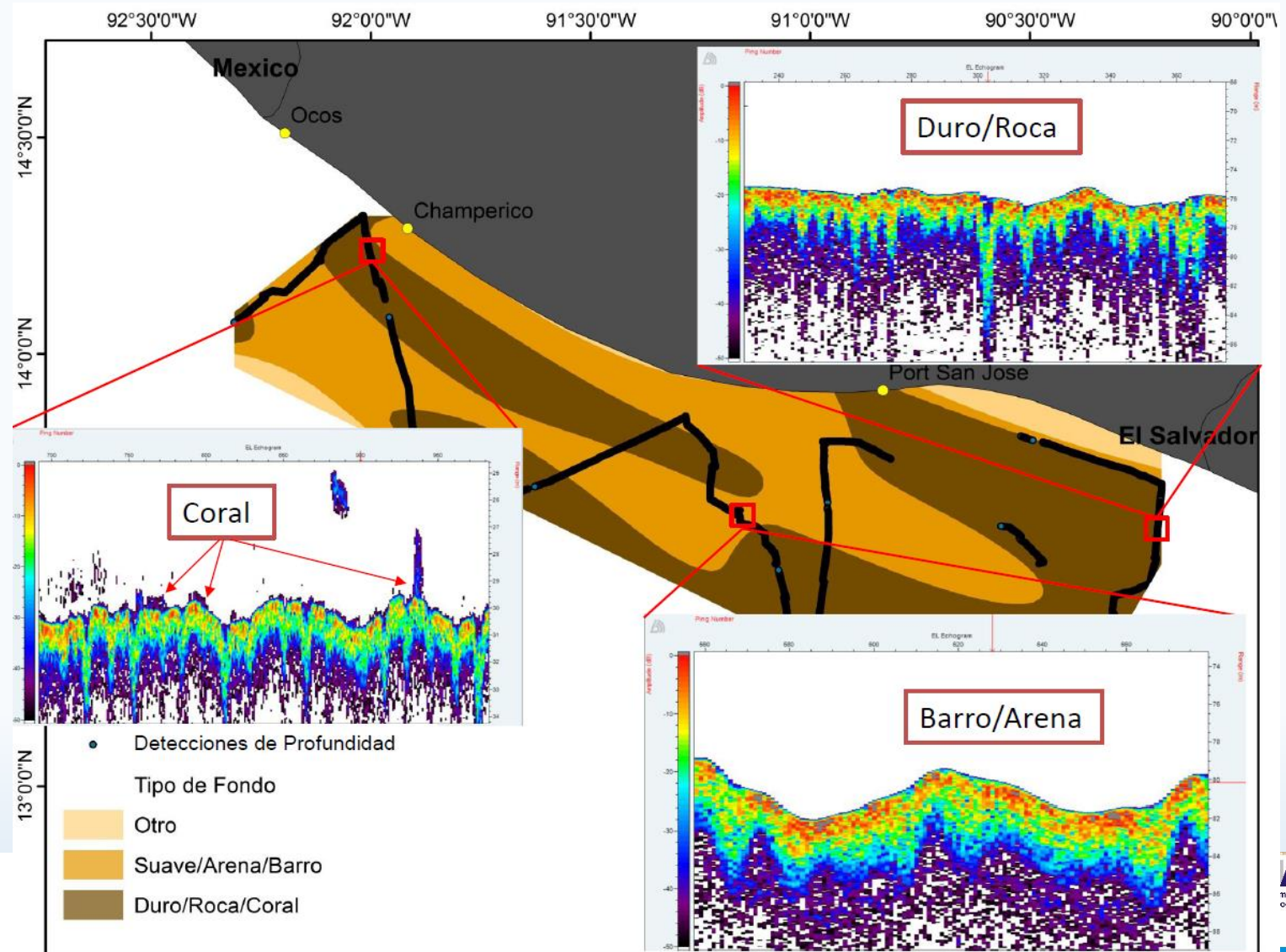
	A	B	C
Depths < 200m	10	60	30
Depths > 200m	0	0	100



Oceanographic Activities

seafloor classification

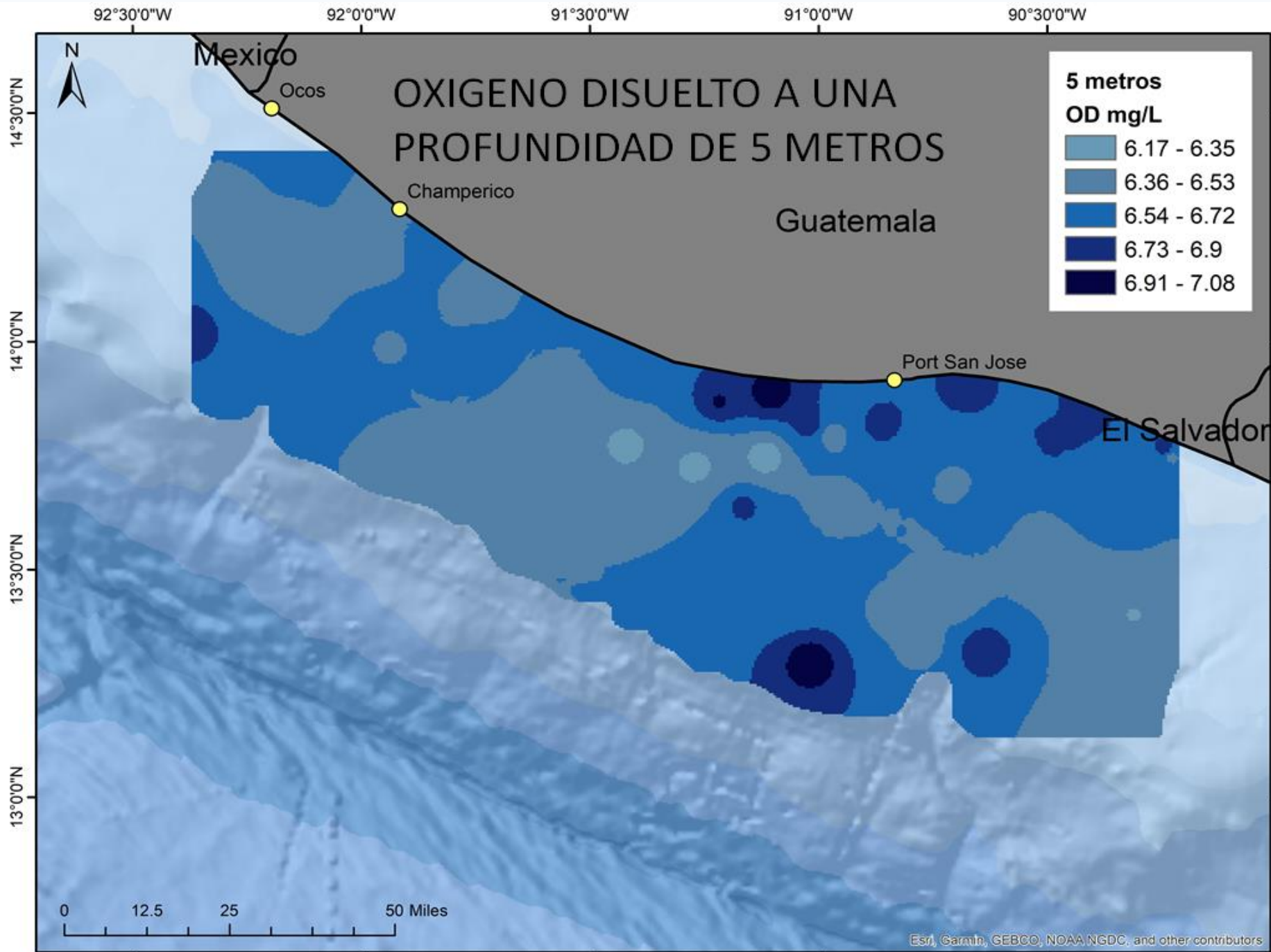
CORAL
ROCK
SAND
MUD



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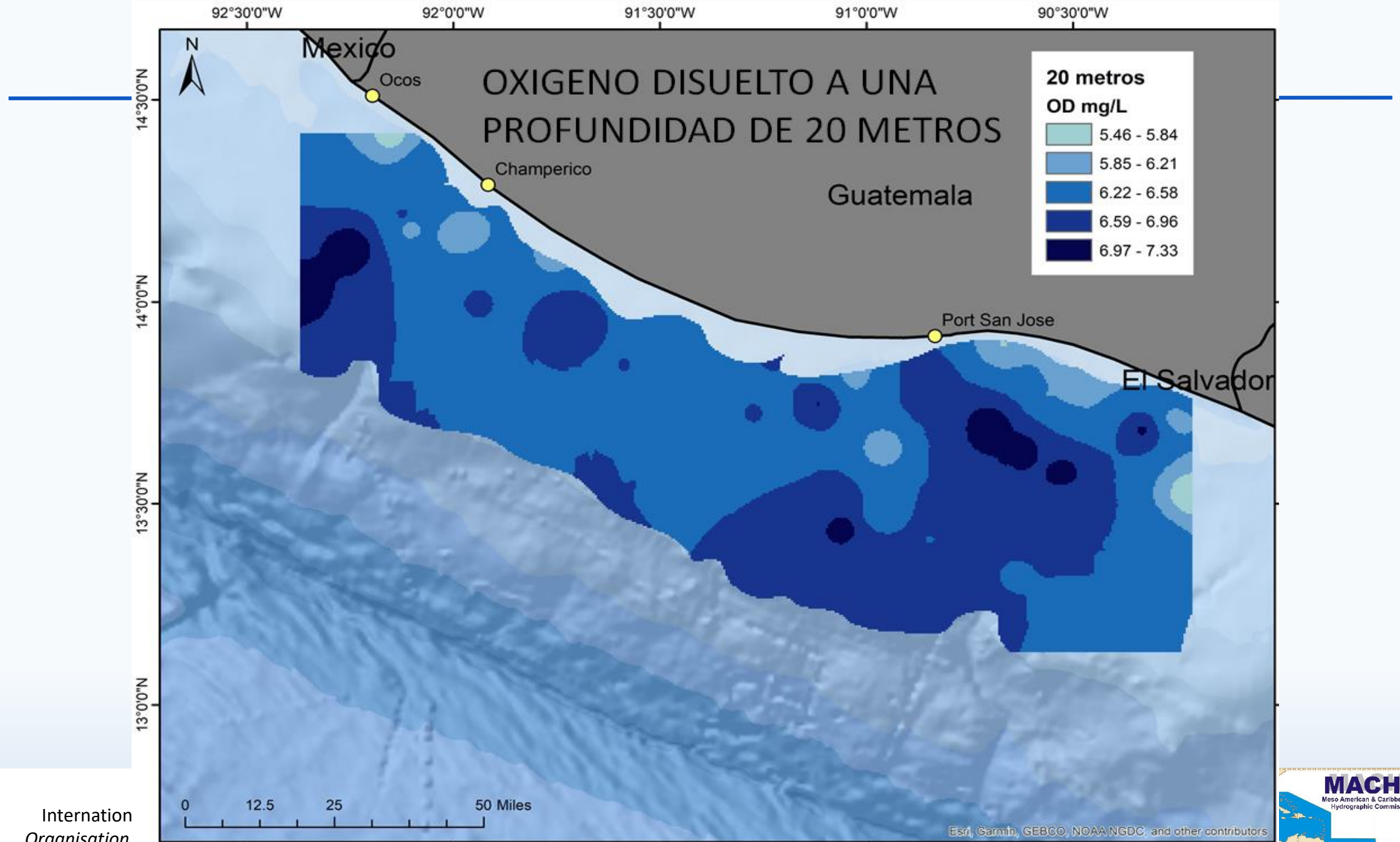


American & Caribbean Seaographic Commission



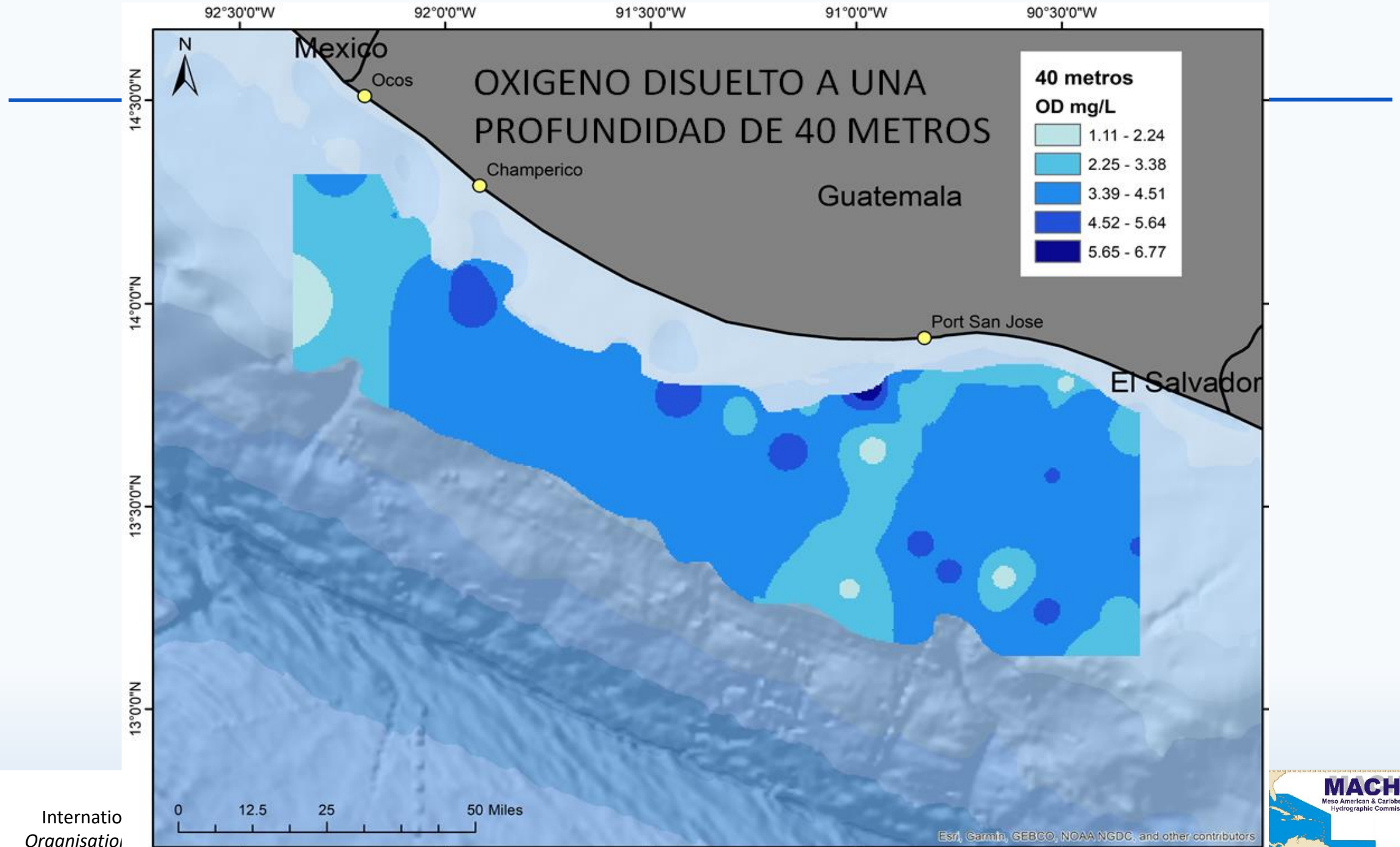
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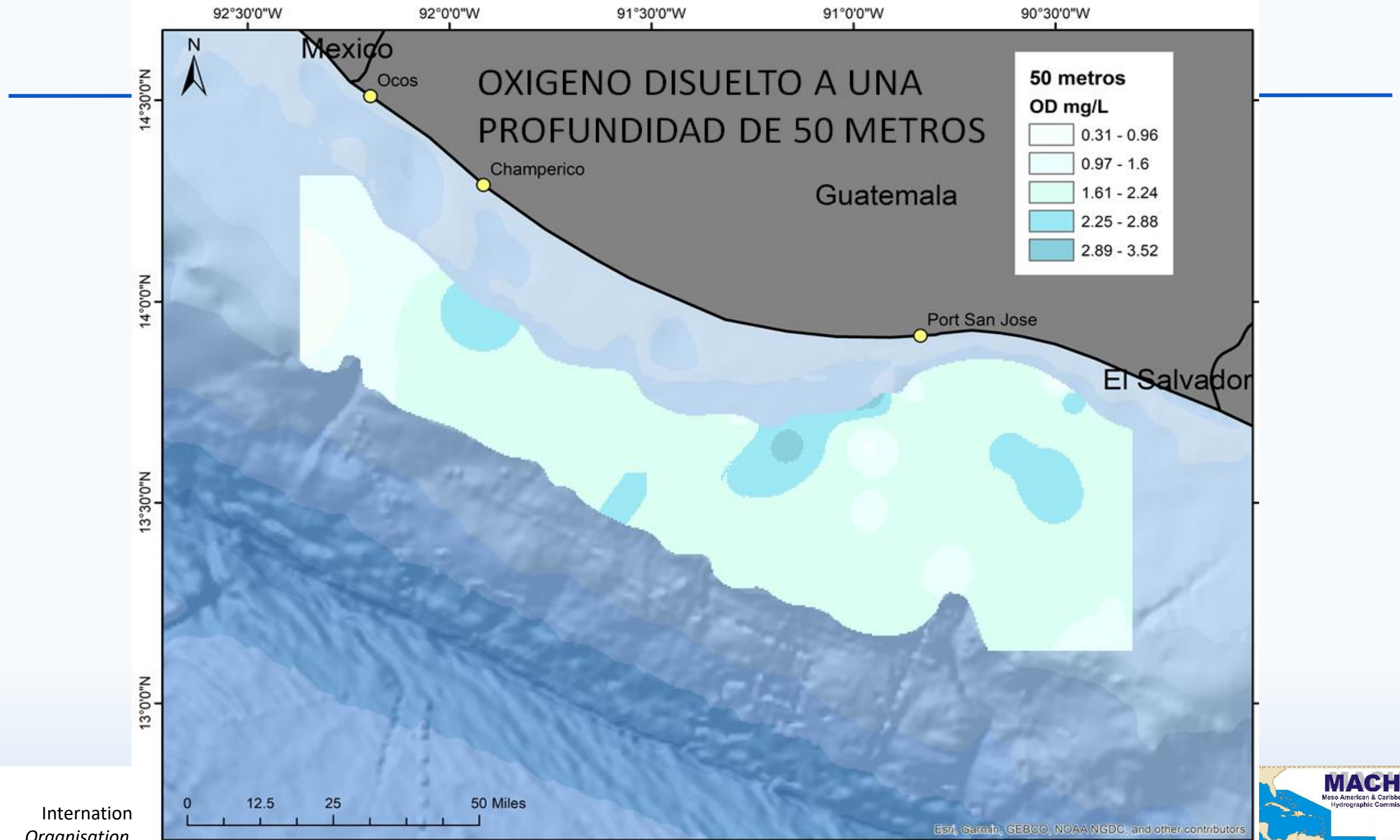
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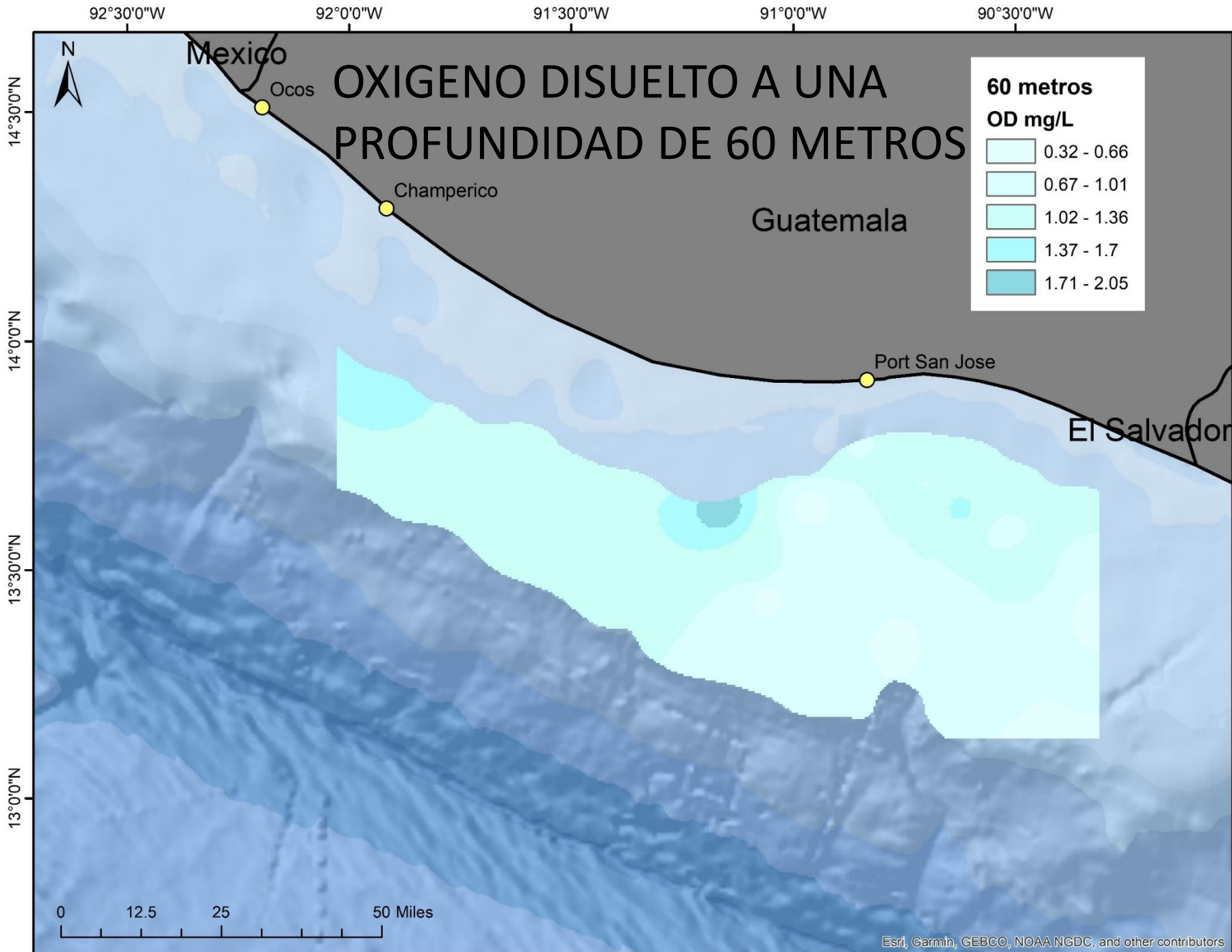
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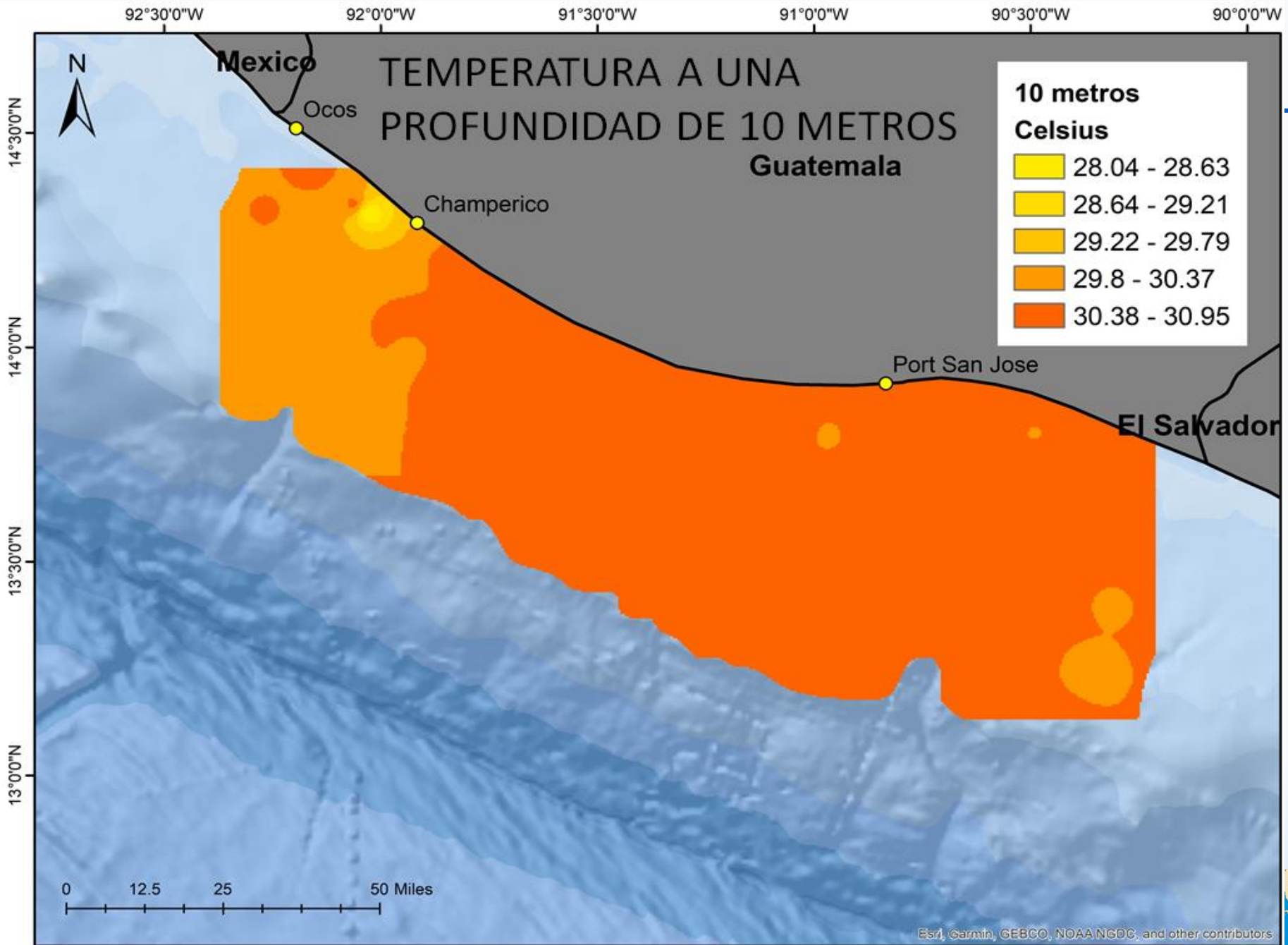
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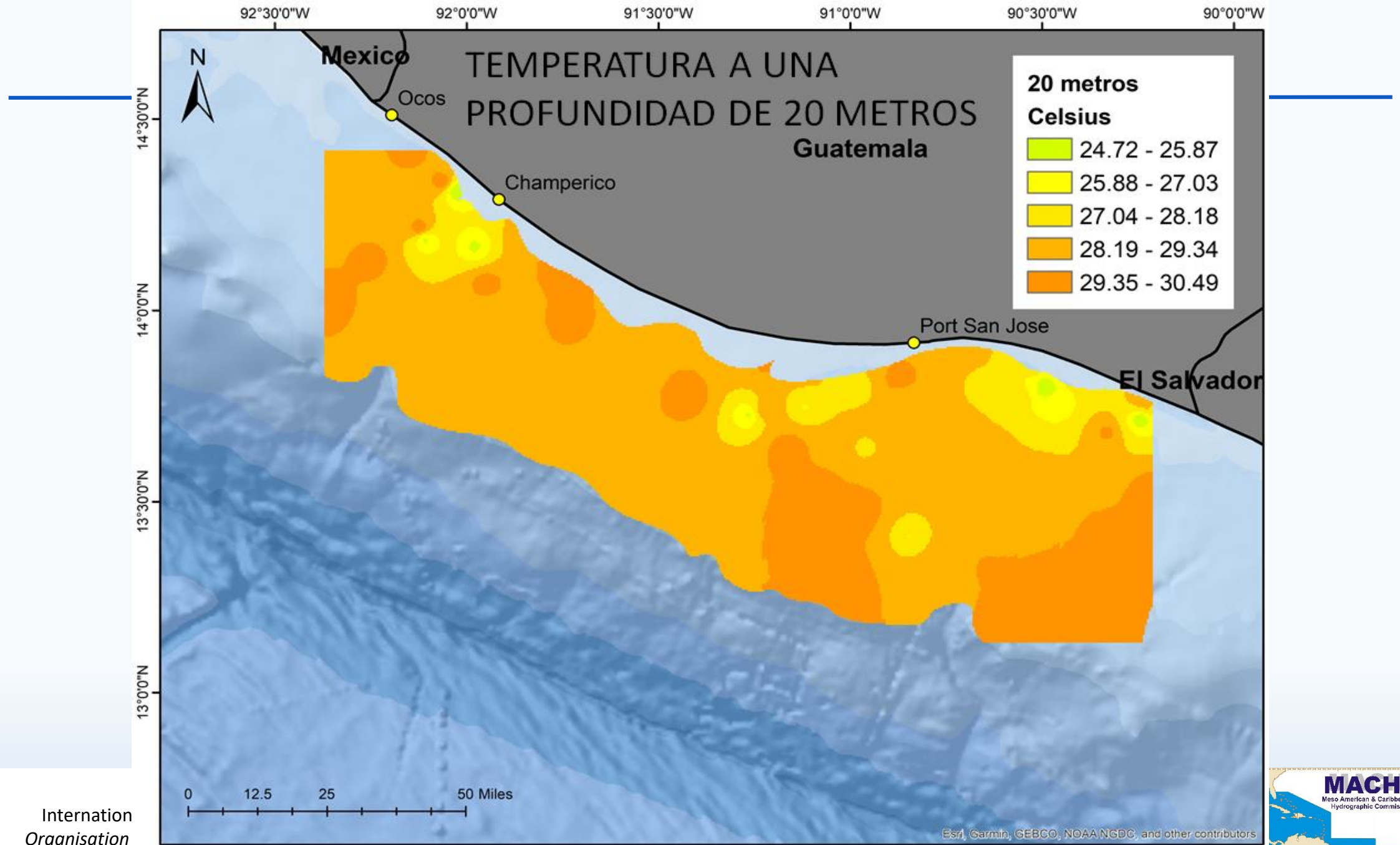
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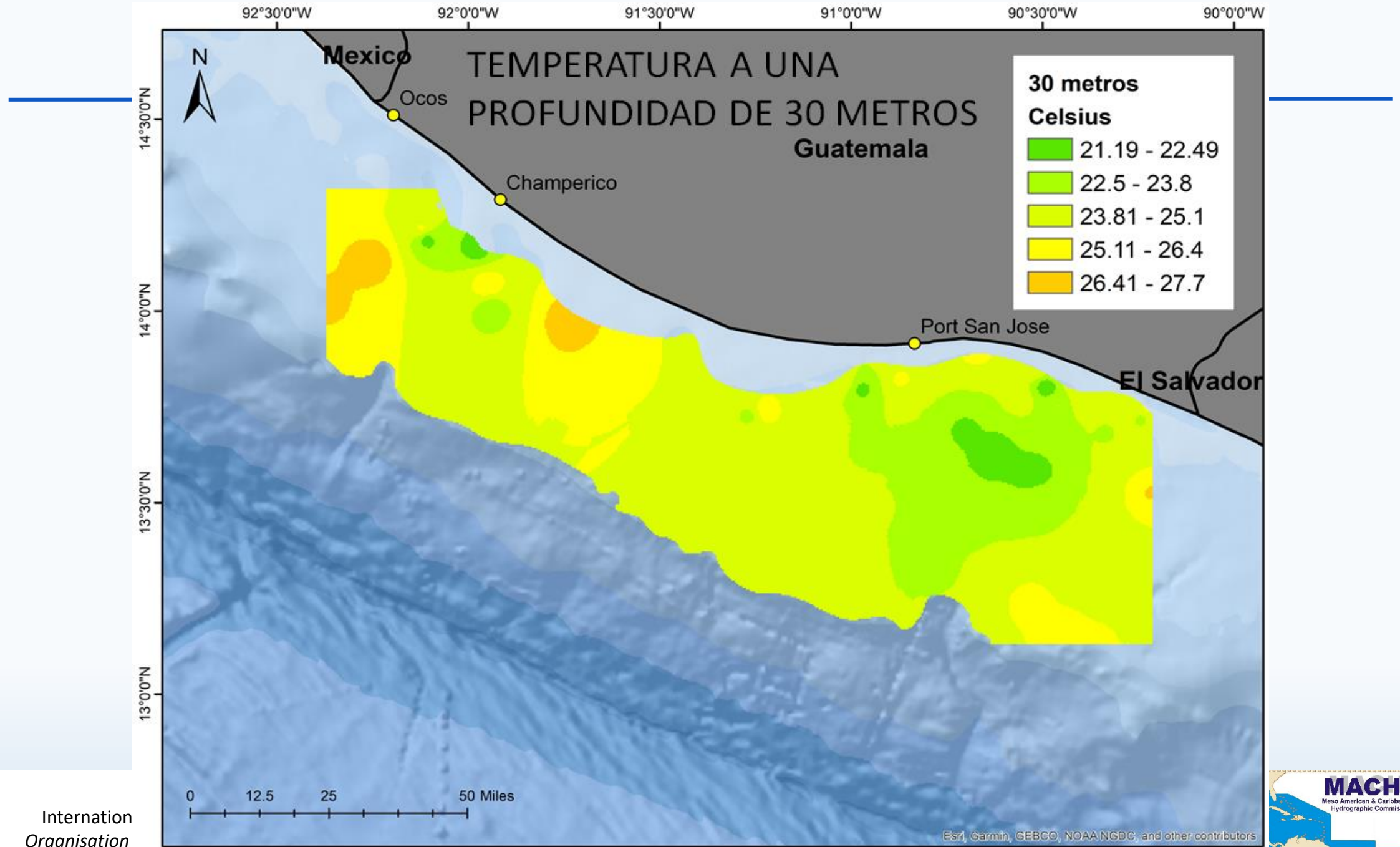
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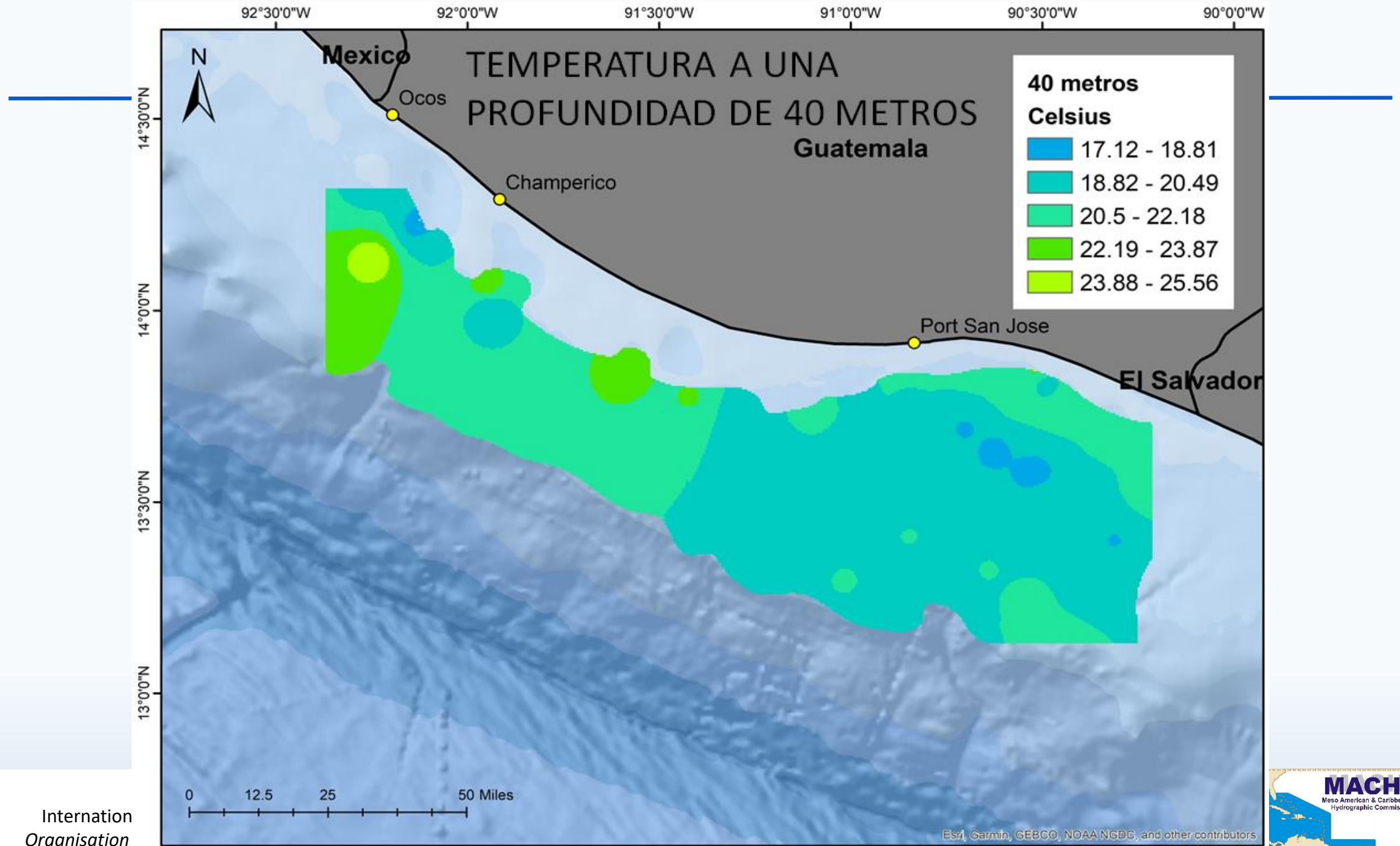
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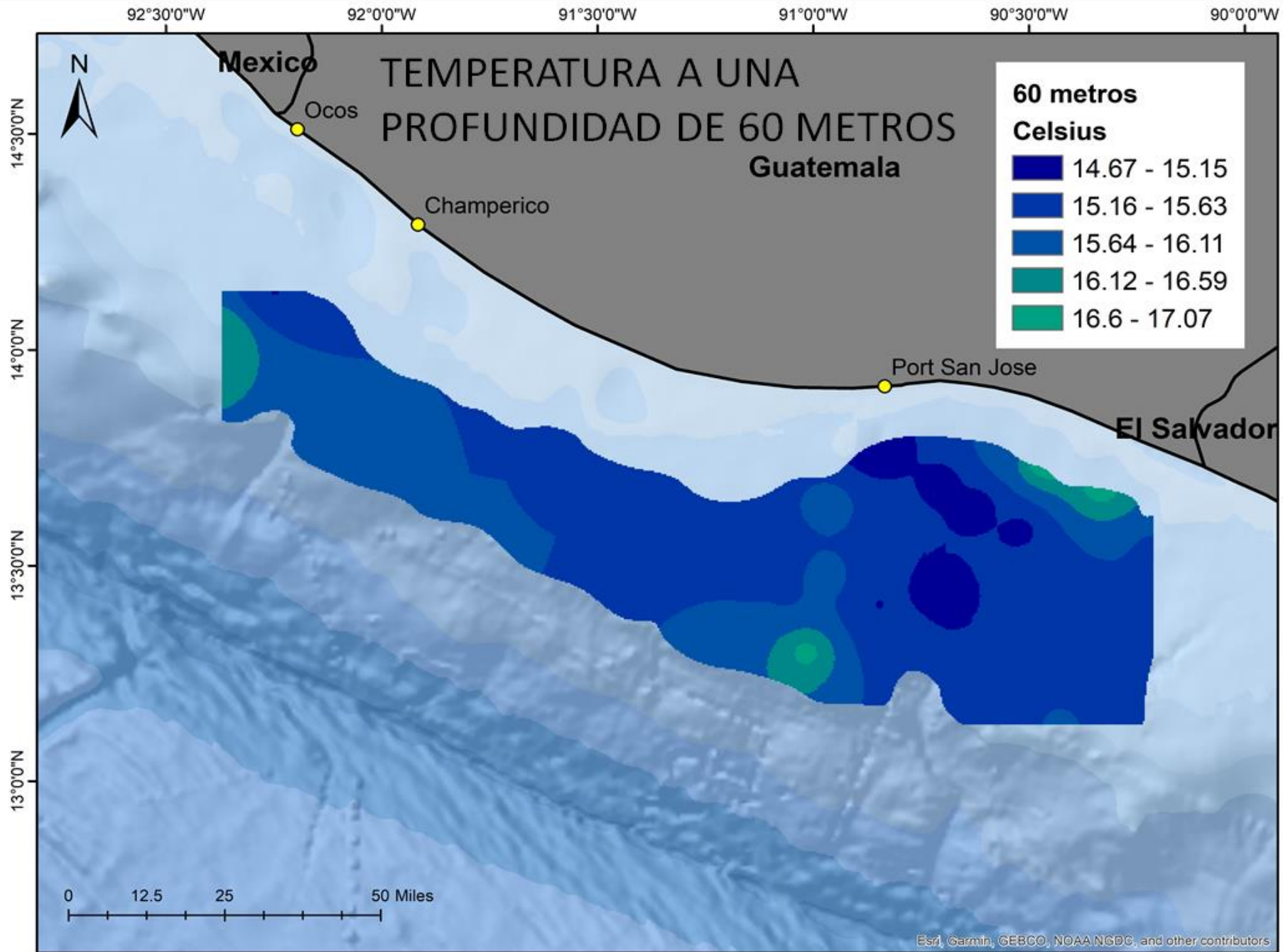
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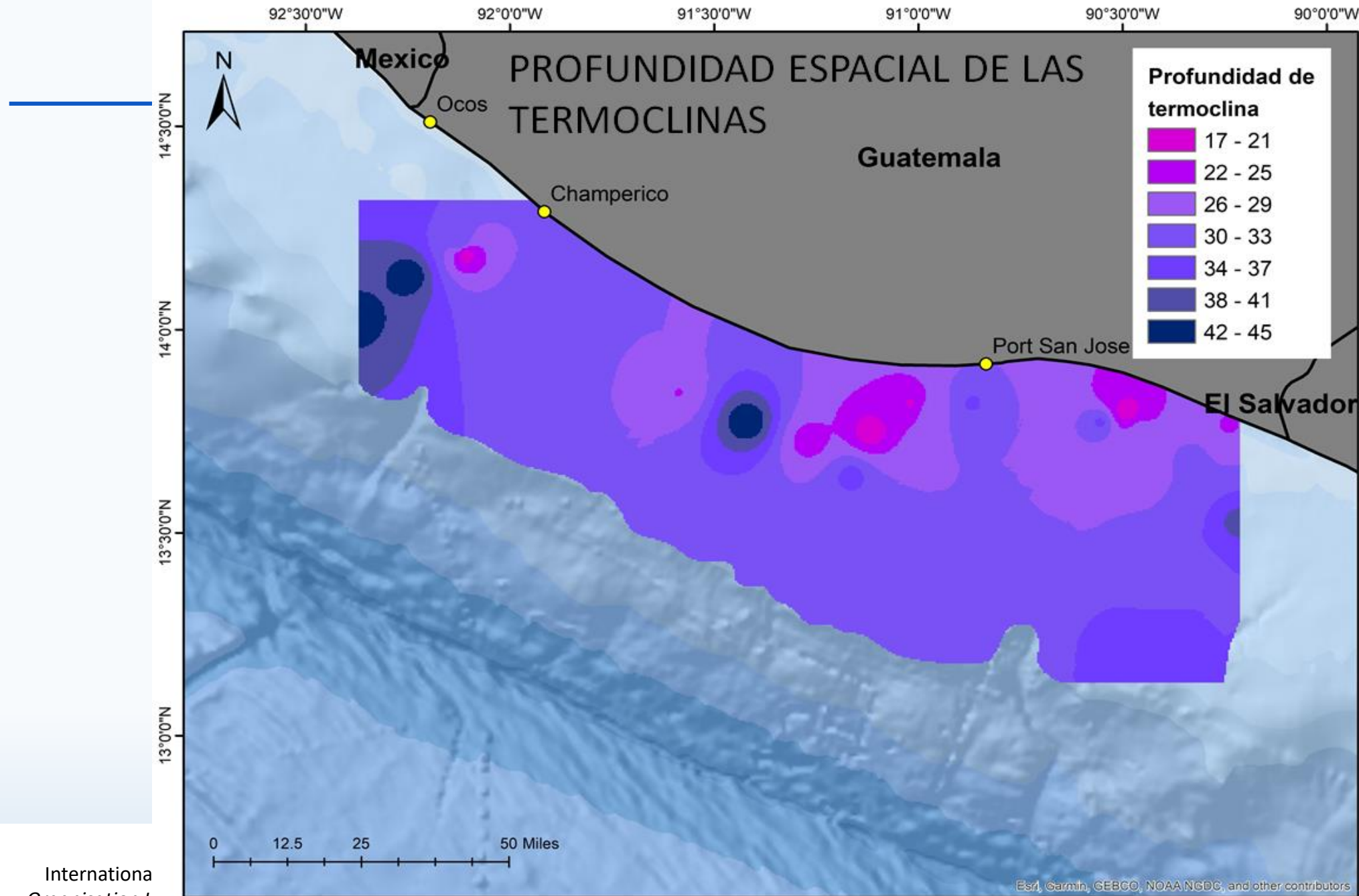
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Sample processing

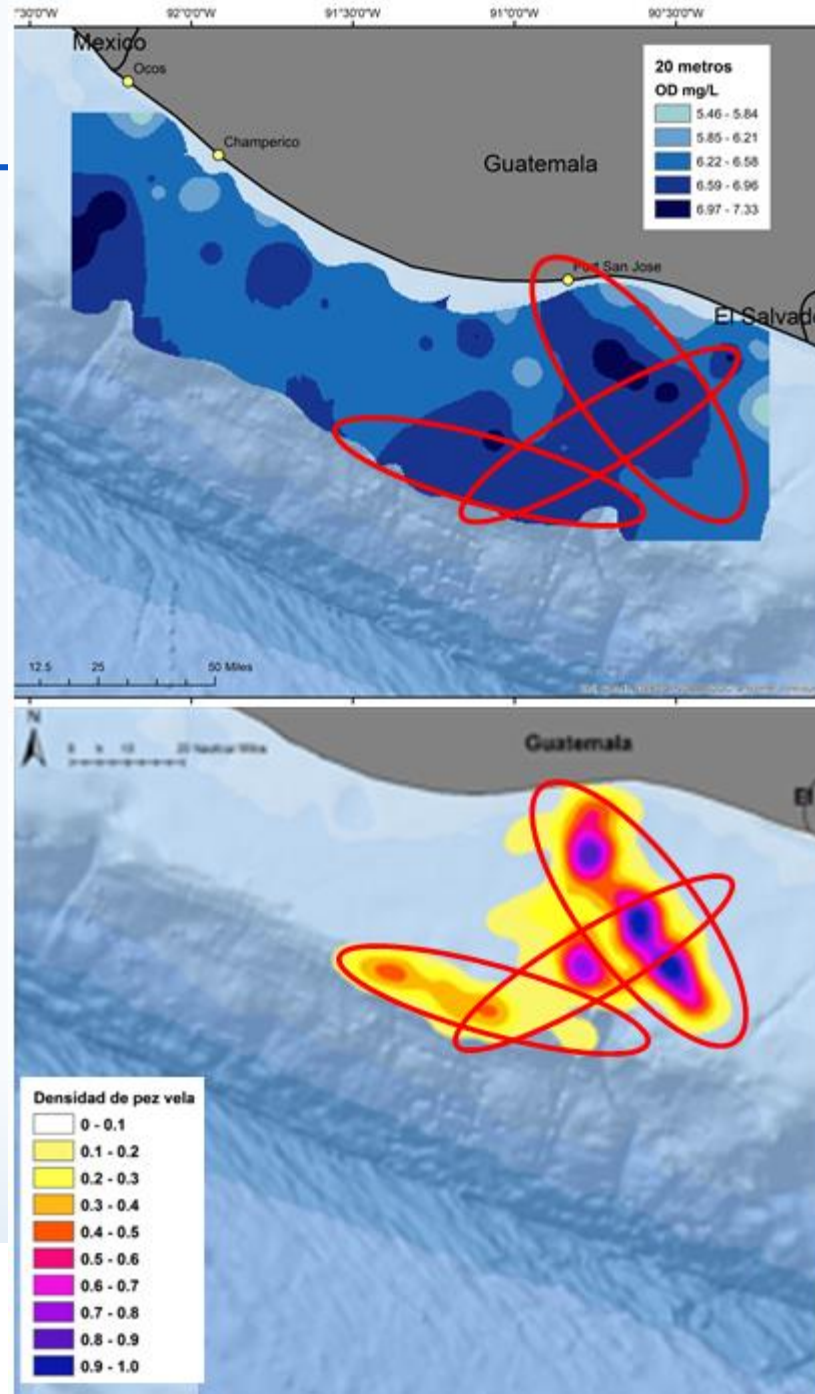
- Especie
- Talla
- Peso
- Sexo
- Estadio gonadal



MAPA DE OXIGENO DISUELTO A 20 METROS DE PROFUNDIDAD

Diversidad Gama		
Riqueza	Shannon	Simpson
8	0.87	0.57

MAPA DE LA DISTRIBUCION ESPACIAL DE LA ABUNDANCIA RELATIVA DE PICUDOS EN LA PESQUERIA DEPORTIVA



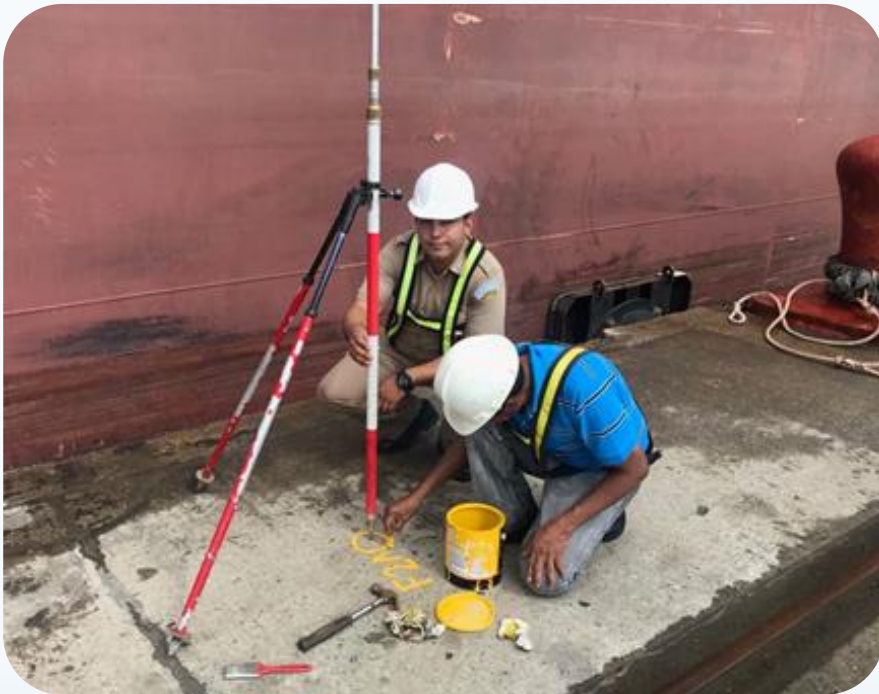
Inspection of ATONS

- Working on the IALA report after technical visit
- Ad hoc group for the creation of regulatory law



Geodesy

- Information of Geodesic points

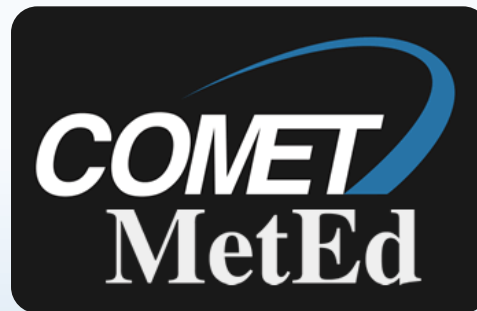


Education and Training

- “Introduction to Hydrography” (Online and practical)
- Navy (30),
- Army (07),
- Empresa Portuaria Quetzal (28),
- Empresa Portuaria Santo Tomás de Castilla (14),
- National Public and Private Institutions (23)
- COCATRAM;

106 in
total

Maritime
Conscious



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Conclusions:

- Guatemala promotes research throughout the National Hydrographic and Oceanographic Commission, **uniting human and material resources** with the purpose of creating spatial data of the country. Moreover, other governmental institutions like universities and research institutions showed their interest in the work of the National Commission.
- Need for **Cartographers**
- A **budget** for research
- Capacity building on **MSDI**.
- Next Step: **Marine Spatial Planning** (old and new data)

