

**20TH MEETING OF THE MESO AMERICAN – CARIBBEAN SEA
HYDROGRAPHIC COMMISSION (MACHC20)
Santo Domingo, Dominican Republic – 3-6 December 20189**

NATIONAL REPORTS FROM EL SALVADOR TO THE MACHC20

References:

- A. IHO Resolution 2/1997 as amended (see doc. C3-04.2A, [Appendix to Annex A](#))
- B. IHO Circular Letter 20/2019, The IHO online form system for responses to Circular Letters and input to IHO Publications (P-5 and C-55): [link](#)
Online system for P-5 (Yearbook): [link](#)
Online system for C-55 (Status of Surveys and Charting Worldwide): [link](#)

Executive summary

1. Hydrographic Office / Service:
 - a) Name of the institution: ***Instituto Geográfico y del Catastro Nacional - Centro Nacional de Registros***
 - b) Description: Entidad oficial encargada de realizar investigaciones y estudios geográficos siendo la responsable de mantener actualizada la información Geográfica, Cartográfica, Catastral, Fotogramétrica, Geodésica e hidrográfica, así como brindar apoyo técnico para la delimitación municipal y de Fronteras.
 - c) Submitted by: *Rafael Antonio De León Granados*; rdeleon@cnr.gob.sv; rafadele@gmail.com

Detailed information to update IHO Publication P-5 (*Yearbook*) is submitted in Annex A (alternatively, use the online system, reference B). Please indicate "no change" in Annex A if this is the case.

2. Surveys:

N/A

 - a) Coverage of new surveys:
 - b) New technologies and /or equipment
 - c) New ships
 - d) Crowdsourced and satellite-derived bathymetry - national policy
 - e) Challenges and achievements

Detailed information about surveys to update IHO Publications P-5 (*Yearbook*) and C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is submitted in Annexes A and B, respectively (alternatively, use the online system, reference B). Please indicate "no change" in Annexes A and B if this is the case.

3. New charts & updates:

Actualización de SAL CH-7, renombrada como: SV007.015C, según propuesta de Esquema Nacional de Cartas Náuticas.
Upgrade one Chart in Acajutla Port, paper format: SV007.015C (Previously named SAL CH-7)

 - a) ENC coverage, gaps and overlaps

- b) ENC distribution method
- c) RNCs
- d) INT charts
- e) **National paper charts**
- f) Other charts, e.g. for pleasure craft
- g) Challenges and achievements

Detailed information about charting to update IHO Publications P-5 (*Yearbook*) and C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is submitted in Annexes A and B, respectively (alternatively, use the online system, reference B). Please indicate "no change" in Annexes A and B if this is the case.

4. New publications & updates:

Almanaque de Mareas 2020.

Tidal Almanac 2020

- a) New Publications
- b) Updated publications
- c) Means of delivery, e.g. paper, digital
- d) Challenges and achievements

Detailed information to update IHO Publication P-5 (*Yearbook*) is submitted in Annex A (alternatively, use the online system, reference B). Please indicate "no change" in Annex A if this is the case.

5. MSI

[Describe the status of Maritime Safety Information (MSI) related to the items below]

- a) Existing infrastructure for MSI dissemination
- b) Statistics on work of the National Coordinator
- c) New infrastructure in accordance with GMDSS Master Plan
- d) Challenges and achievements

Detailed information about MSI to update IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is submitted in Annex B (alternatively, use the online system, reference B). The national self-assessment of MSI is submitted in Annex C. Please indicate "no change" in Annexes B and C if this is the case.

6. C-55

The table with the latest information to update IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is provided in Annex B (alternatively, use the online system, reference B). Please indicate "no change" in Annex B if this is the case.

7. Capacity Building

*Capacitación interna por adquisición de Software CARIS Paper Chart Composer;
Con el beneficio de:*

Capacitaciones necesarias:

- *Cartografo Nautico categoria B*
- *Capacitación en Cartas Nauticas*
- *Capacitacion en levantamientos hidrograficos*

Internal training about CARIS Paper Chart Composer

With the benefit of:

Required trainings:

- *Nautical Cartographer category B*

- *Training in Nautical Charts*

- *Training in hydrographic surveys*

a) Offer of and/or demand for Capacity Building

b) Training received, needed, offered

c) Status of national, bilateral, multilateral or regional development projects with a hydrographic component. (In progress, planned, under evaluation or study)

Acuerdos vigentes con NGA y UKHO

Agreements in force with NGA and UKHO

d) Description of proposals and requests to the IHO/CBSC

8. Oceanographic activities

Se mantienen en operación tres (3) mareógrafos con información disponible en la web. Se vuelve necesario el reemplazo del mareógrafo en la Base Naval de La Unión, por ambigüedad en el manejo de sus datos.

There are three tide gauge network in operation, but one in the Navy Force Base need to be change, because the dowlow data is not functional at network.

a) General

b) GEBCO/IBC's activities, GEBCO Seabed 2030 activities

c) Tide gauge network

d) New equipment

e) Challenges and achievements

9. Spatial data infrastructures

a) Status of MSDI

b) Relationship with the NSDI

c) Involvement in regional or global MSDI efforts

d) National implementation of the Shared Data Principles – including any national data policy and impact on marine data.

e) MSDI national portal

f) Best practices and lessons learned

g) Challenges and achievements

10. Innovation

a) Use of new technologies

b) Risk assessment

c) Policy matters

11. Other activities

[Describe any other significant developments of interest to the MACHC since the last meeting related to the items below]

a) Participation in IHO meetings

b) Meteorological data collection

c) Geospatial studies

d) Preparation for responses to disasters

e) Environmental protection

f) Engagement with the Maritime Administration

g) Aids to Navigation matters

- h) Magnetic and gravity surveys
- i) International engagements
- j) Others

12. Conclusions

Tener una activa participación en las conferencias de la Comisión Hidrográfica de Mesoamérica y Mar Caribe representa un apoyo fundamental para la conformación de nuestros planes y el apoyo para ellos, así como para la ejecución de los levantamientos hidrográficos, tener personal capacitado y certificado, a fin de que estos transmitan los conocimientos adquiridos mediante la realización de proyectos hidrográficos, efectos multiplicadores y talleres. También nos acerca a la recuperación de la capacidad de hacer hidrografía y actualizar nuestras propias cartas náuticas, con el apoyo de formación y realización de proyectos en conjunto. La contribución de la OHI, MACHC, FOCAHIMECA y COCATRAM pueden hacer capaz a nuestro personal en actividades hidrográficas, lo que es indispensable para nuestro desarrollo institucional en el tema. Se necesita la actualización de toda la cartografía náutica de las Costas y Puertos del país.

Having an active participation in the conferences of the Hydrographic Commission of Mesoamerica and the Caribbean Sea represents a fundamental support for the conformation of our plans and the support for them, as well as for the execution of hydrographic surveys, to have trained and certified personnel, in order to that these transmit the knowledge acquired through the realization of hydrographic projects, multiplier effects and workshops. It also brings us closer to recovering the ability to do hydrography and update our own nautical charts, with the support of training and realization of joint projects. The contribution of the IHO, MACHC, FOCAHIMECA and COCATRAM can make our staff capable of hydrographic activities, which is essential for our institutional development in this area.

The update of all the nautical cartography of the Coasts and Ports of the country is needed.

Input to the IHO Publication P-5 2019

Country: *El Salvador*Organization: *Instituto Geográfico y del Catastro Nacional – Centro Nacional de Registros*

(Please provide the information in English)

Contact information/ Informations de contact / Información de contacto	
-National Hydrographer or equivalent -Directeur du service hydrographique ou équivalent -Director del Servicio Hidrográfico o equivalente	Post: IGCN Director Name: Carlos Enrique Figueroa Postal address: 1° Calle Poniente y 43 Avenida Norte #2310, Colonia Flor Blanca, San Salvador. Tel: +503 2593-5467; +503 7071-6146 Fax: +503 2593-5087 Email: cfigueroa@cnr.gob.sv
-Head of the Hydrographic Office (if different from the person indicated above) -Directeur du Service Hydrographique (si différent de la personne indiquée ci-dessus) -Director del Servicio Hidrográfico (si diferente de la persona indicada anteriormente)	Post: IGCN Director Name: Carlos Enrique Figueroa Postal address: 1° Calle Poniente y 43 Avenida Norte #2310, Colonia Flor Blanca, San Salvador. Tel: +503 2593-5467; +503 7071-6146 Fax: +503 2593-5087 Email: cfigueroa@cnr.gob.sv
-Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	Post: Hydrographer Name: Rafael Antonio De León Granados Postal address: 1° Calle Poniente y 43 Avenida Norte #2310, Colonia Flor Blanca, San Salvador. Tel: +503 2593-5157; +503 7950-7050 Fax: +503 2593-5087 Email: rdeleon@cnr.gob.sv ; rafadele@gmail.com
-Web site -site web -sitio web	https://www.cnr.gob.sv/
Country information / Informations sur le pays/ Información sobre el país	
-Declared National Tonnage -Tonnage national déclaré -Tonelaje Nacional Declarado	Tonnage: Date:
-National day -Fête nationale -Fiesta nacional	1th – 6th August
-Date of establishment and Relevant National Legislation -Date de mise en place et	Constitution of the Republic of 1983

<p>législation nationale pertinente</p> <p>-Fecha de constitución y legislación nacional pertinente</p>	
<p>-Date first joined IHO</p> <p>-Date d'adhésion à l'OHI</p> <p>-Fecha de adhesión a la OHI</p>	N/A
<p>-Date ratification Convention</p> <p>-Date de ratification de la Convention</p> <p>-Fecha de ratificación de la Convención</p>	N/A
<p>-Remarks on membership</p> <p>-Remarques sur l'adhésion</p> <p>-Comentarios sobre la adhesión</p>	N/A
Agency information/ Information sur l'agence/ Información sobre la agencia	
<p>-Top level parent organisation</p> <p>-Organisme mère</p> <p>-Organización asociada de nivel superior</p>	Centro Nacional de Registros
<p>-Principal functions of the organisation or the department</p> <p>-Attribution principales de l'organisme ou du département</p> <p>-Principales funciones de la Organización o departamento</p>	<p>Maintenance and updating of Geodesy; Gravimetry projects, Hydrography, through surveys and related projects, Tide Prediction and annual publication of the Tide Almanac; Responsible for National Cartography; Photogrammetry support for different activities; Guarantor of the National Cadastre.</p> <p>Mantenimiento y actualización de la Geodesia ; Proyectos de Gravimetria ; Hidrografia, mediante levantamientos y proyectos relacionados, Prediccion de Mareas y publicación anual del Almanaque de Mareas; Responsable de la Cartografía Nacional; Soporte de la Fotogrametria para diferentes actividades; Garante del Catastro Nacional.</p>
<p>-Annual operating budget</p> <p>-Budget annuel</p> <p>-presupuesto anual</p>	N/D
<p>-Total number of staff employed</p> <p>-Effectifs totaux</p> <p>-Número total de personal empleado</p>	In all the country 400 IGCN employees in CNR.
<p>-Number of INT charts published</p> <p>-Nombres de cartes INT publiées</p>	N/A

-Número de cartas INT publicadas				
-Total number of paper charts published-Nombre total de cartes papier publiées-Número total de cartas de papel publicadas	7:	SAL CH 100 1989	Rio Paz – La Libertad	
		SAL CH 2 1969	La Libertad	
		SAL CH 3 1971	Acajutla	
		SAL CH 4 1975	El Triunfo	
		SAL CH 5 1985	La Unión	
		SAL CH 6 1985	La Unión	
		SAL CH 7 1987	Acajutla	
-Number of ENC cells published -Nombres de cellules ENC publiées -Número de células ENC publicadas	N/A			
-Number of Other charts -Nombre d'Autres cartes -Número de Otras cartas	2: Lago de Coatepeque y Laguna El Llano y Chanmico SAL LL-2 1982; Lago de Ilopango SAL L1-1 1981			
-Type of publications produced -Type d'ouvrages produits -Tipo de publicaciones producidas	Hydrographic sheets. Chart paper. Tidal Almanac.			
-Detail of surveying vessels/ aircraft -Détail des bâtiments hydrographiques / aéronefs -Detalle de los buques hidrográficos / aeronaves	-Name -Nom -Nombre N/A	-Displacement -Déplacement -Desplazamiento N/A	-Date Launched -Date de mise en service -Fecha de botado	-Number of crew -Nombre de l'équipage -Tripulación
-Other information of interest -Autres informations utiles -Otra información de interés				

Input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)

Country: _____

(Please provide the information in English)

C-55 Summary for:				Comments on Charts:
Country:	EL SALVADOR			
Country Iso Code:				
Country SubCode:				
INT Region:				
Country/Depend:				
Last updated:	16 th October 2019			
Provided by:	Rafael De León			
Chart coverage	Passage (%)	Coastal (%)	Port (%)	Comments on Surveys: It is necessary to update the entire Nautical Cartography of the Coasts and Ports of the Country, through medium-term planning. International support and cooperation with projects to restart the job is timely.
INT				
RNC				
ENC				
Status of Paper Charts				
Paper charts with depths in meters (%)				
Paper charts referenced to a satellite datum (%)				
Status of surveys	Adequate (%)	Resurvey (%)	No survey (%)	
0-200m			75	
> 200m			100	

MSI	Y/N	Comments on MSI:
Local warning		Information provided by the Port Maritime Authority - AMP
Coastal warning		Information provided by the Port Maritime Authority - AMP
Nav warning		Information provided by the Port Maritime Authority - AMP
Port warning		Information provided by the Port Maritime Authority - AMP
GMDSS	Y/N	Comments on GMDSS:
Master Plan		Information provided by the Port Maritime Authority - AMP
Area A1		Information provided by the Port Maritime Authority - AMP
Area A2		Information provided by the Port Maritime Authority - AMP
Area A3		

NAVTEX		
SafetyNet		

National MSI Self-Assessment

Country: *EL SALVADOR*Organization: *Instituto Geográfico y del Catastro Nacional – Centro Nacional de Registros*

(Please provide the information in English)

1. Maritime area

[Describe maritime area including details of the geographic boundaries]

2. Operational Points of Contact for the National Coordinator

INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
IGCN-CNR	+ 503 2593-5157	+503 25935087	rdeleon@cnr.gob.sv rafadele@cnr.gob.sv

3. GMDSS Master Plan

*[Report on the status of the GMDSS Master Plan: Is it up to date? When was the last update?]**[Specifics of equipment used and software version with date up-dated]*

Equipment Type for Ports and Local Area	Software Version	Date of Up-date

[Detail the number of warnings identified as immediate priority (requiring transmission within 30 minutes) and the average elapsed time for passing to NAVAREA coordinator, as reported to the last RHC meeting]:

Year Y-2		Year Y-1		Year Y	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
xx	xx.x Mins	xx	xx.x Mins	xx	xx.x Mins

4. NAVTEX Coverage:

[Diagram of NAVTEX stations and service areas within maritime area; Contact details for NAVTEX Stations; Confirm operational status has been validated.]

5. Operational Issues:

[New infrastructure in accordance with GMDSS Master Plan; Problems encountered?]

6. Contingency Planning

[Provide information regarding contingency plans that have been established and future plans where appropriate. Also report on any testing of the plan that has been conducted]

7. Capacity Building

[Demands for Capacity Building, Training requested or received, any offered, status of national, bilateral, multilateral or regional development projects with MSI component]

8. Other Activities

El Salvador is part of MACHC meeting how associate member since 2010

9. National Maritime Website

[(Address, statistics (if permitted by national legislation; how often is the information on your web site updated? Do you display the date and time of the last update on your web site?)]

10. Recommendations

[If any]

11. Summary

Tener una activa participación en las conferencias de la Comisión Hidrográfica de Mesoamérica y Mar Caribe representa un apoyo fundamental para la conformación de nuestros planes y el apoyo para ellos, así como para la ejecución de los levantamientos hidrográficos, tener personal capacitado y certificado, a fin de que estos transmitan los conocimientos adquiridos mediante la realización de proyectos hidrográficos, efectos multiplicadores y talleres. También nos acerca a la recuperación de la capacidad de hacer hidrografía y actualizar nuestras propias cartas náuticas, con el apoyo de formación y realización de proyectos en conjunto. La contribución de la OHI, MACHC, FOCAHIMECA y COCATRAM pueden hacer capaz a nuestro personal en actividades hidrográficas, lo que es indispensable para nuestro desarrollo institucional en el tema. Se necesita la actualización de toda la cartografía náutica de las Costas y Puertos del país.

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