



# REPORT BY THE HYDROGRAPHIC AND GEODETIC SERVICE OF THE REPUBLIC OF CUBA



## 18<sup>th</sup> MESO AMERICAN AND CARIBBEAN SEA HYDROGRAPHIC COMMISSION MEETING



*Varadero - Cuba*

27 de Noviembre - 2 de Diciembre 2017





# 1. STRUCTURE OF THE HYDROGRAPHIC AND GEODETIC SERVICE OF THE REPUBLIC OF CUBA (HGSC)



**ONHG**



**HYDROGRAPHIC AND GEODETIC NATIONAL OFFICE**  
Fulfills the functions of representing the Cuban State and executing the State policies

**GEOCUBA BUSINESS GROUP**  
Conducts productive activities and marketing





## 2. HYDROGRAPHIC SURVEYS

### NEW HYDROGRAPHIC SURVEYS WITH CARTOGRAPHIC PURPOSES

EQUIPMENT	ORDER OF PRECISION (S44)	REGION OR PLACE	NEW BATYMETRIC DATA FOR NAUTICAL CHARTS
Single beam echosounders	I y II	Tract of coastal sailing from Punta Maisí to Cabo Cruz	11534, 11536, 11537
Swath Echo Sounders (EM-2040C)	Special and I	Bahía del Mariel Bahía de Nuevitas Bahía de Puerto Padre Puerto de Casasa	11824, 11825 11858, 11859, 11860 11866 11855







## 2. HYDROGRAPHIC SURVEYS

### CURRENT CHALLENGES

- WE DON'T HAVE THE APPROPRIATE TECHNOLOGY FOR THE HYDROGRAPHIC SURVEYS IN SHALLOW AND DANGEROUS WATERS.





### 3. ELECTRONIC NAVIGATIONAL CHART

#### Current Status of the ENC Production

USAGE BAND	TITLES	STATUS			
		IC ENC		IN PRODUCTION	
		DISTRIBUTION	VALIDATION	2017	2018
2	4	0	0	4	0
3	26	22	0	2	2
4	15	3	2	6	4
5	14	9	2	2	1
6	1	0	0	1	0
<b>TOTAL</b>	<b>60</b>	<b>34</b>	<b>4</b>	<b>15</b>	<b>7</b>





### 3. NATIONAL PAPER CHARTS

#### New Charts

No.	Range of Scale 1:	Paper Chart Quantity	BSB Quantity
1	Smaller than 300 000	-	-
2	200 000 - 100 000	-	-
3	75 000 - 30 000	-	-
4	Larger than 25 000	4	4
<b>Total</b>		<b>4</b>	<b>4</b>







### 3. NATIONAL PAPER CHARTS

#### New Editions

No.	Range of Scale 1:	Paper Chart Quantity	BSB Quantity
1	Smaller than 300 000	-	-
2	200 000 - 100 000	-	-
3	75 000 - 30 000	17	17
4	Larger than 25 000	8	8
<b>Total</b>		<b>25</b>	<b>25</b>





### 3. NATIONAL PAPER CHARTS

#### Currents Cartographic Coverage

No.	Range of Scale 1:	Paper Chart Quantity	Quantity BSB
1	Smaller than 300 000	8	8
2	200 000 - 100 000	51	40
3	75 000 - 30 000	45	30
4	Larger than 25 000	75	66
<b>Total</b>		<b>179</b>	<b>144</b>

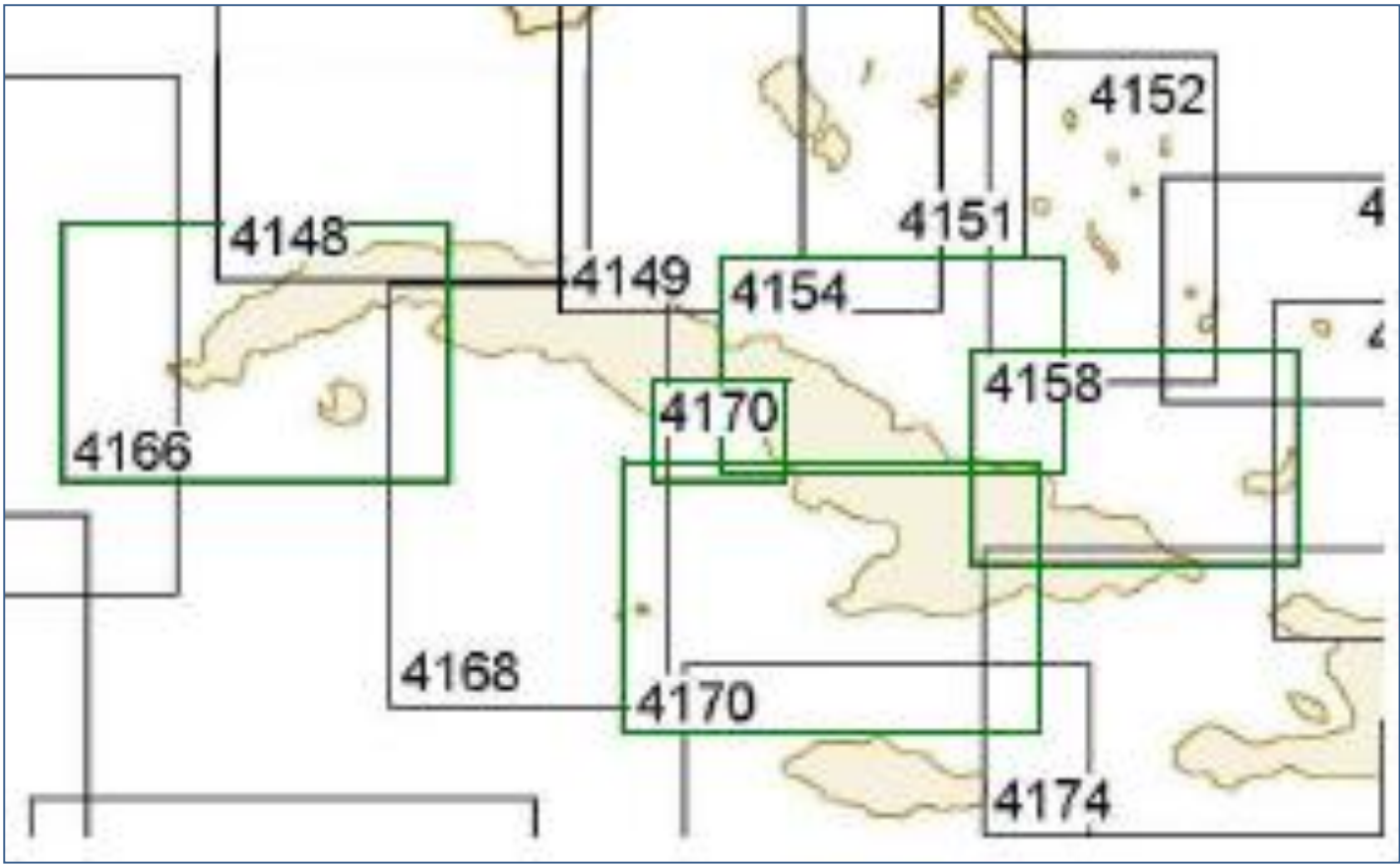






### 3. INT CHARTS

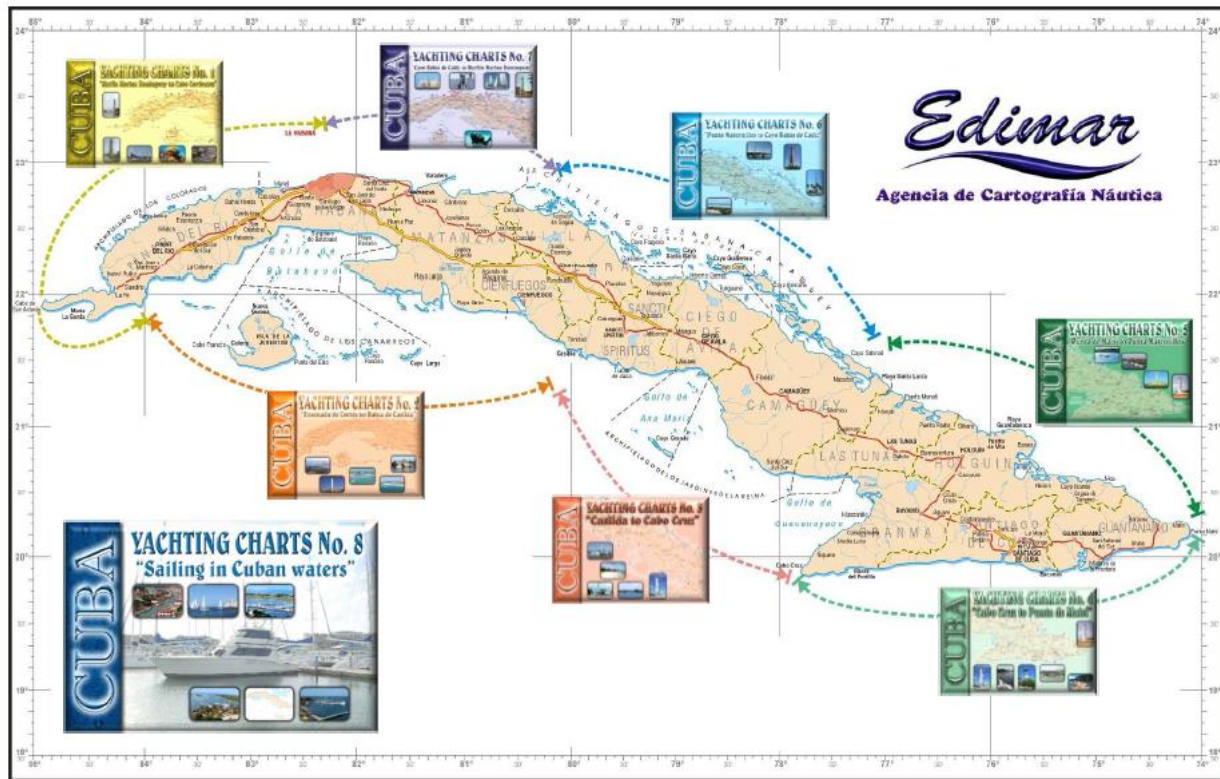
#### INT Charts (4)





### 3. OTHER CHARTS

## STATUS OF THE YACHTING CHARTS: 8 Albums







### 3. NAUTICAL CHARTS AND PUBLICATIONS



#### CURRENT CHALLENGES

**WE DON'T HAVE:**

- ✓ **SOFTWARE FOR ENC VALIDATION.**
- ✓ **UPDATED CARIS LICENSES.**
- ✓ **ACCESS TO HIGH RESOLUTION SATELLITE IMAGES.**







## 4. NAUTICAL PUBLICATIONS STATUS

- NOTICE TO MARINERS (Monthly).
- ANNUAL SUMMARY NOTICE TO MARINERS.
- LIGHTS LIST OF CUBA.
- SAILING DIRECTION (9 fascicles).
- TIDE TABLES OF CUBA.
- NAUTICAL ALMANAC.
- SYMBOLS, ABBREVIATIONS AND TERMS USED ON CHARTS (INT1).
- CHARTS AND NAUTICAL PUBLICATIONS CATALOGUE.





## 5. MARITIME SAFETY INFORMATION (MSI)

### CURRENT STATUS

- ✓ NOTICE TO MARINERS (MONTHLY) AND ANNUAL SUMMARY IS AVAILABLE ON THE WEBSITE [www.iderc.cu](http://www.iderc.cu)



### CURRENT CHALLENGES

- WE DON'T HAVE INFRASTRUCTURE FOR:
- ✓ NAVIGATIONAL INFORMATION BROADCAST (S-53).
  - ✓ GMDSS IMPLEMENTATION (IMO Publication 970 - GMDSS Handbook).





## 6. C-55

### BASIC DATA

No.	Description	Data	Updating
1	Nation / Maritime Zone.	Cuba	<b>Cuba</b>
2	Code ISO of the Nation / Maritime Zone.	CU	<b>CU</b>
3	ID. Region	NC	<b>NC</b>
4	Nation or Maritime Zone	N	<b>N</b>
5	EEZ (km <sup>2</sup> x 1000)	362.9	<b>362.9</b>
6	Length of Coastline	2500 km	<b>2500 km</b>
8	Last Updating	December 2016	<b>December 2017</b>
9	IHO Membership	S	<b>S</b>







## 7. CAPACITY BUILDING TRAINING RECEIVED

- ✓ Phase 3 of Category “B” Marine Geospatial Information Programme, sponsored by the Republic of Korea, (KHOA), Busan, ROK, 05 June – 30 July 2017.





## 7. CAPACITY BUILDING TRAINING NEEDED

- ✓ HYDROGRAPHY
- ✓ NAUTICAL CARTOGRAPHY
- ✓ ENC VALIDATION
- ✓ MARITIME BOUNDARIES
- ✓ MARINE SPATIAL DATA INFRASTRUCTURE





## 8. OCEANOGRAPHIC ACTIVITIES

### MAIN INSTITUTIONS

- ✓ ONHG AND GEOCUBA (HGSC).
- ✓ INSTITUTE OF OCEANOLOGY (MINISTRY OF SCIENCE AND TECHNOLOGY).
- ✓ MARINE RESEARCH CENTER OF THE HAVANA UNIVERSITY.

### MAIN ACTIVITIES

- ✓ OCEANOGRAPHIC DATA COLLECTION AND MEASUREMENTS IN SPECIFIC AREAS.
- ✓ GENERATION OF NUMERICAL MODELS (SMS, SISCOM, ROMS).
- ✓ MODELING OF TRAJECTORY FORECAST.







## 9. CONCLUSIONS

1. The Republic of Cuba has an area of hydrographic responsibility of 362 900 km<sup>2</sup>, the 92,5% are surveyed and the 49,5% requires re-surveys to modern standards of IHO.
2. The series of nautical charts produced and printed by the Republic of Cuba cover the jurisdictional waters of its responsibility and comply with the IHO international standards for Paper Charts, Raster (BSB), Vectorial Chart (S-57) and INT Charts.







**THANK YOU**

