

22nd MEETING OF THE MESO AMERICAN – CARIBBEAN SEA HYDROGRAPHIC COMMISSION (MACHC22)

NATIONAL REPORTS FROM THE NETHERLANDS

Executive summary

- Satisfactory status for surveying and nautical charting in the MACHC area, especially with the delivery of our first S-100 series test data sets.
- Continuation of efforts to contribute to a Caribbean SDI, especially through EMODnet Bathymetry.
- Negotiations with the Dominican Republic on the maritime boundary with the Leeward Islands have been successfully concluded.

1. Hydrographic Office / Service:

a) Name of the institution: Hydrographic Service of the Royal Netherlands Navy

b) Description:

Areas of responsibility are the waters of the Kingdom of the Netherlands in the Caribbean. These are the Leeward Islands (Aruba, Curaçao, Bonaire) and the Windward Islands (Sint Maarten, Saba, Sint Eustatius).

c) Submitted by: Leendert Dorst, LL.Dorst@mindef.nl.

2. Surveys:

- The maritime part of the LIDAR survey for Sint Maarten, in cooperation with local government and the World Bank, is being processed. This LIDAR survey follows a similar French LIDAR survey for Saint Martin and Saint Barthélémy.
- HNLMS Pelikaan is a RNLN ship that goes back and forth frequently between our Windward and Leeward Islands, crossing the central Caribbean basin. Its equipment has recently been updated in NL, and it has returned to the Caribbean. We have outfitted it with a deep water echo sounder. We are in the process of getting it operational. The data that it will produce will be added to our database and that way becomes available in our web services too, and subsequently for Seabed2030.

3. New charts & updates:

a) ENC coverage, gaps and overlaps

Full ENC coverage for all appropriate usage bands. UK and FR are producer nations for the overview and general usage bands.

A rescheming of paper charts and ENCs is in progress. There will be less similarity between the paper chart scheme and the ENC scheme.

b) National paper charts

A rescheming of paper charts and ENC's is in progress. There will be less similarity between the paper chart scheme and the ENC scheme.

c) Challenges and achievements

The new paper charts for the Leeward Islands are coproduced with UKHO. The second Caribbean coproduction chart (781, Aruba) has been published and 782 and 783 (Curacao) will be published within a couple of months. For the smaller scale charts and charts of the Windward Islands, the possibility for co-productions with UKHO is still under discussion.

4. New publications & updates: no significant developments
5. MSI: The national self-assessment of MSI is submitted in Annex C.
6. C-55: Ref. Annex B.
7. Capacity Building, offered: practical traineeship on board NL survey vessels
8. Oceanographic activities: no significant developments
9. Spatial data infrastructures
 - NL has registered its Caribbean metadata for its surveys and composite grids in the EMODNet portal, as part of the EMODnet Bathymetry project for 2021-2022. The bathymetric data sets will become available too.
 - NL offers web services for its geographic names and gridded bathymetric data of the Caribbean Sea. The services have been included in the DCDB Viewer.
 - The Netherlands ENC's for the Caribbean Sea are available for online viewing in the MACHC ENC Online application. This tool is used to improve the two-way communication with local data providers.

data set	type	URL
Geographic names at sea	WMS	https://inspire.caris.nl/server/services/ows/view/map/namen-carib_IVS
	WFS	https://inspire.caris.nl/server/services/ows/download/feature/namen-carib_IDS
Bathymetry	WMS	https://inspire.caris.nl/g5/carib_noord/wms (Sint Maarten, Saba, Sint Eustatius) https://inspire.caris.nl/g5/carib_zuid/wms (Aruba, Curaçao, Bonaire)
	WCS:	https://inspire.caris.nl/g5/carib_noord/wcs (Sint Maarten, Saba, Sint Eustatius) https://inspire.caris.nl/g5/carib_zuid/wcs (Aruba, Curaçao, Bonaire)

URLs for web services in the Caribbean waters of the Kingdom of the Netherlands

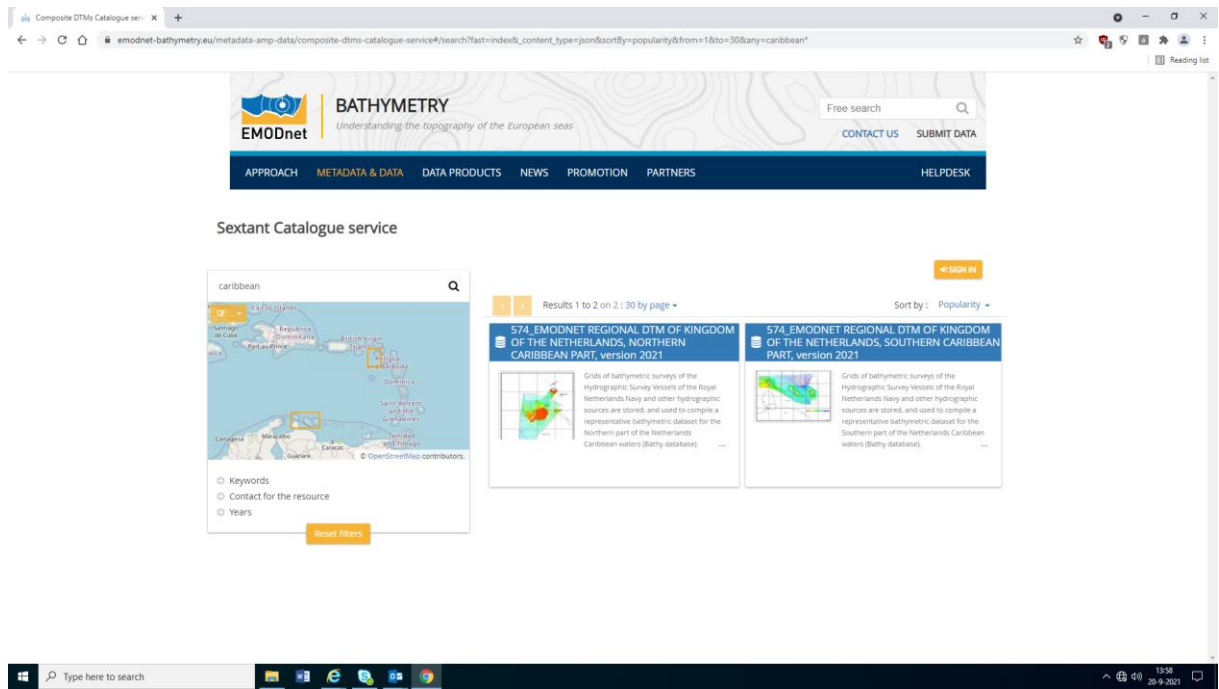


Figure: EMODNet Bathymetry metadata registration for our Windward and Leeward bathymetric grids, respectively.

10. Innovation

a) Use of new technologies

NL has developed test data sets for S-122 (Marine protected Areas), S-123 (Marine radio services) and S-128 (Catalogue of Nautical Products) for part of its Caribbean charting area. At present, the sets are in GML format (no formal exchange set yet) and can be viewed through an in-house developed Windows viewer. NL offers to share this data and the viewer. If interested please contact the NL delegation.

b) Risk assessment

The total NL responsibility area is divided in four categories. The Cat. 1 and Cat. 2 areas are surveyed using a MBES, a SSS, a SV profiler, and Fugro Marinestar ERS for horizontal and vertical positioning.

Cat. 1	0-40 m	Harbours and approaches	every 4 years
Cat. 2	0-40 m	Other coastal areas on South and West coasts	every 12 years
Cat. 3	0-200 m	Other areas up to 200 m	every 24 years
Cat. 4	> 200 m	All areas deeper than 200 m	every 50 years

Table: Categories for hydrographic surveys in the Caribbean waters of the Kingdom of the Netherlands

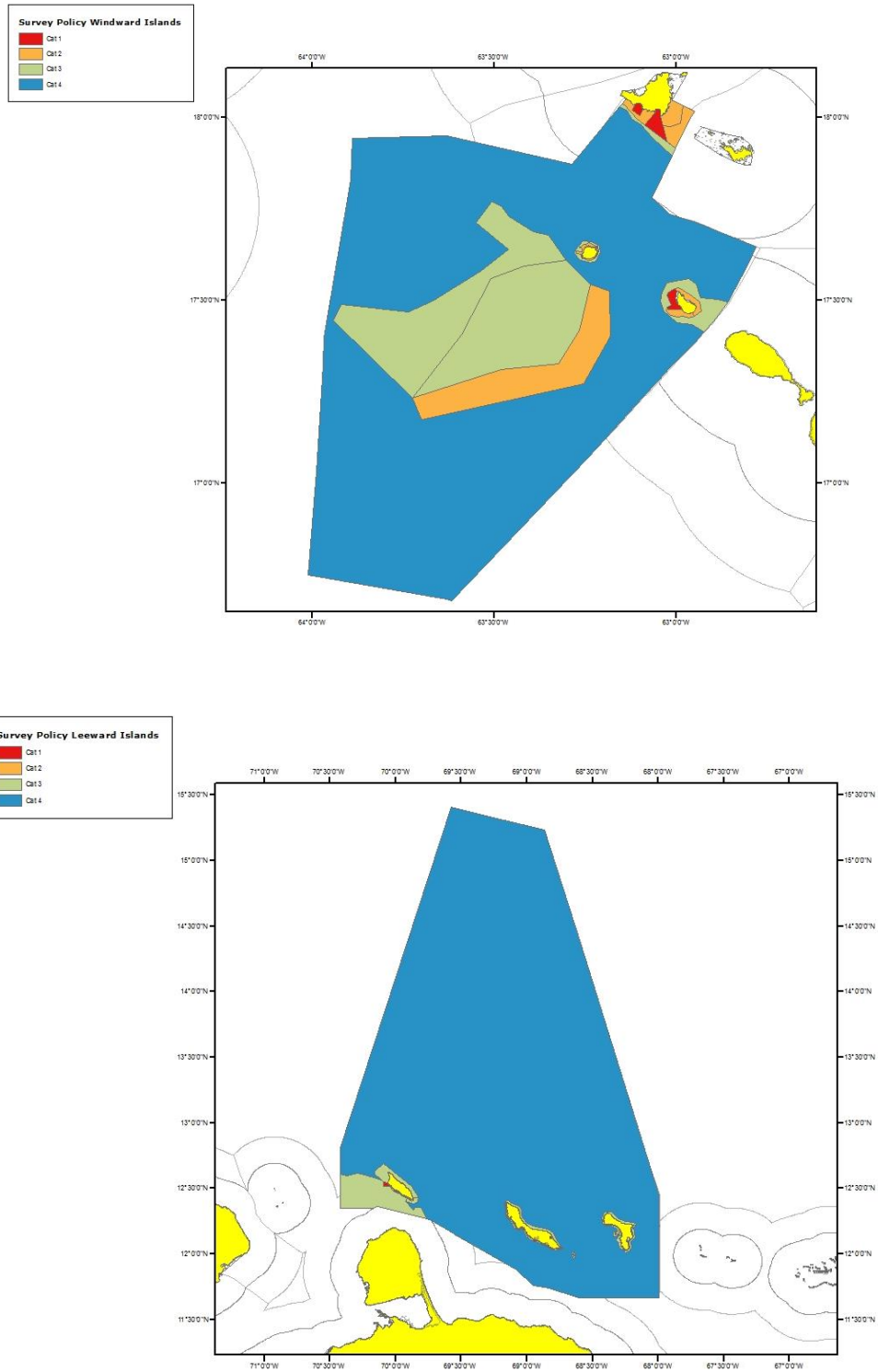


Figure: Survey Policy for the Windward Islands (upper) and Leeward Islands (lower).

c) Policy matters

- Active participation in the IHO Council.
- Active participation in the UN-GGIM Marine Geographic Information Working Group (MGIWG);

- Licences for ENC data for non-ECDIS navigation are now also available through IC-ENC, besides the existing availability through UKHO.
- Active participation in IHO EU Network Working Group, related to the List of High Value Data Sets of the European Directive on Open Data and Public Sector Information. The obligations following from the List will also be applied for the Caribbean region.

11. Other activities

a) Participation in IHO meetings

Active participation in several groups.

b) Preparation for responses to disasters: no significant developments

c) Engagement with the Maritime Administration

The Kingdom of the Netherlands is preparing itself for an IMO Member State Audit Scheme (IMSAS) audit, with a focus on its two flag states: the Netherlands and Curaçao. To this end, there is an active engagement with the Netherlands Directorate for Maritime Affairs and the Maritime Authority Curaçao (MAC).

d) International engagements:

Negotiations with the Dominican Republic on the maritime boundary with the Leeward Islands have been successfully concluded. The delimitation Agreement was signed in Santo Domingo on 5 July by ambassador Annemieke Verrijp and the Dominican Minister of Foreign Affairs, Roberto Alvarez.



Figure: signing ceremony of the maritime boundary delimitation Agreement.

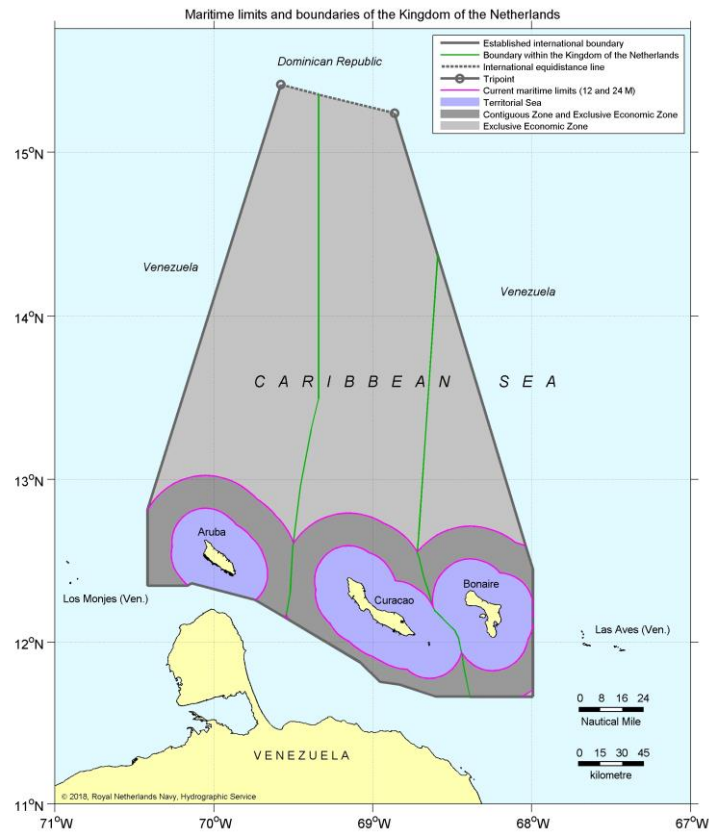


Figure: Maritime boundaries of the Leeward Islands.

12. Conclusions

- Satisfactory status for surveying and nautical charting in the MACHC area, especially with the delivery of our first S-100 series test data sets.
- Continuation of efforts to contribute to a Caribbean SDI, especially through EMODnet Bathymetry.
- Negotiations with the Dominican Republic on the maritime boundary with the Leeward Islands have been successfully concluded.

Input to the IHO Publication P-5 (*Yearbook*)

Country: the Netherlands

Organization: Hydrographic Service of the Royal Netherlands Navy

no change

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

Country: the Netherlands

	% Adequate		% Resurvey needed		% Never surveyed	
	<200m	>200m	<200m	>200m	<200m	>200m
Leeward Islands (Aruba, Bonaire, Curaçao)	89	28	11	72	0	0
Windward islands (Saba, Sint Eustatius, Sint Maarten)	100	97	0	3	0	0

National MSI Self-Assessment

Country: *Kingdom of the Netherlands*
 Organization: *Caribbean Coast Guard*

1. Maritime area

The TTW and EEZ of the Dutch Caribbean islands Aruba, Curacao, Bonaire (ABC) and Saba, St Eustatius and St Maarten (SSS) as well the SRR in the middle of the Caribbean Sea. GMDSS region classified as A2 area and under coverage of Inmarsat satellite for communication, distress and safety messages like EGC (enhanced Group Call).

2. Operational Points of Contact for the National Coordinator

INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
JRCC	0059994637700	0059994637950	rcc.curacao@mindef.nl

3. GMDSS Master Plan

All required GMDSS up to date and daily checked.
 INMARSAT-C (AOR-W + E, NAVTEX, VHF/UHF/HF radio telephony (including Emergency and shipping international channels), DSC VHF/MF, Satellite communication/iridium, telephone alarm number 913, COSPAS/SARSAT local user terminal via US MCC to JRCC Curacao, all equipment 24/7 monitored. Additionally SAROPS search and rescue planning and prediction program.

Equipment Type for Ports and Local Area	Software Version	Date of Up-date
VHF ABC and SSS islands port/ATC authorities		2015

Year Y-2		Year Y-1		Year Y	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
0	-	0	-	0	-

4. NAVTEX Coverage:

AREA H (IV) – VHF/UHF/MF – Navigational, Meteo and all desired urgency broadcasts.
 MMSI 003061000

5. Operational Issues:

Due to the change of masts we had short periods of no VHF coverage in certain areas. These were covered by Port Authorities of the different islands on request of JRCC Curaçao.

6. Contingency Planning

New VHF/UHF radiotelephony network installed on Leeward Caribbean islands.
New VHF/UHF radiotelephony network planned on Windward Caribbean islands.

7. Capacity Building

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8. Other Activities

JRCC Curaçao has now the Satellite version of Marine Traffic for satellite AIS. This is very useful when contacting and identifying AIS vessels in our SRR due to the distance from a VHF shore AIS system.

9. National Maritime Website

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10. Recommendations

Request USMCC to possibly send Distress alerts also via email. This issue has already been brought forward at USMCC. At that time, it was not possible and they could only send messages via fax. In our opinion, fax machine/system is not always reliable. Still no feedback from USMCC on this matter. We are still receiving Distress alerts via fax.

11. Summary

JRCC Curacao
INMARSAT C 422202072
DSC VHF/MF MMSI 003061000
Telnr 0059994637700
rcc.curacao@mindef.nl
24/7 monitor all GMDSS including all shipping&aircraft related COSPAS/SARSAT