



**INTERSHIP  
NAVIGATION**

SETTING THE RIGHT COURSE

# **WORLD ECDIS DAY SEPTEMBER 2023**

## **SAFETY OF NAVIGATION BEYOND ECDIS**

### **NAVCLLOUD SERVICE BY CAPTAIN PIOTR RUSINEK**

**DPA, TECH3 FLEET TECHNICAL & MARINE SUPERINTENDENT INTERSHIP NAVIGATION**



**Technical Ship Management**

- DONNELLY TANKER MANAGEMENT**  
SETTING THE RIGHT COURSE
- HARTMANN DRY CARGO**  
SETTING THE RIGHT COURSE
- HARTMANN GAS CARRIERS**  
SETTING THE RIGHT COURSE
- INTERSHIP NAVIGATION**  
SETTING THE RIGHT COURSE

**Commercial Management**

- GasChem Services**
- HSA** HARTMANN SHIPPING ASIA
- UBC** UNITED BULK CARRIERS
- UFS**  
United Fuel Services

**Crewing & Training**

- HARTMANN CREW CONSULTANTS**
- HARTMANN CREW GERMANY**
- HARTMANN CREW PHILIPPINES**
- ISNTC**
- NAUTITEC**





- Established in 1988
- Based in Limassol, Cyprus
- Technical and Commercial Management of 40 Owned and Managed vessels
  - ▶ Handy Size Bulk Carriers
  - ▶ Multi-Purpose Vessels
  - ▶ Cement Carriers
  - ▶ PCTC
- 39 Crew Management Vessels



## SAFETY OF NAVIGATION BEYOND ECDIS



- Established in 1995
- Based in Limassol, Cyprus
- Full Management of 24 product Tankers
  - ▶ 18 Handies, MRs, LR1s & Aframax
  - ▶ 6 LPG / Pressurized and Semi-Ref Gas Carrier
  - ▶ 5 Crew management vessels

# INTERSHIP NAVIGATION ECDIS JOURNEY

## ISN-Fleet Expansion 2009-2016

### 2016 DEVELOPMENT A COMPREHENSIVE INSTALLTION PLAN AND SELECTION OF THE EQUIPMENT

- Establishment of Marine Department and Training for Marine Superintendents
- Training Centers Equipped with ECDIS Began to Operate

### 2017 IMPLEMENTATION OF NAVIGATIONAL PROCEDURES

- Bridge Manual
- Navigational Audits
- ECDIS Training for Fleet Marine Superintendents

### 2017 ECDIS INSTALLTIONS

- 25 New Installations
- 14 System Retrofits

### 2018 ECDIS RELATED ACCIDENT

### 2018-2023 NAVIGATIONAL AUDITS ON BOARD, MASTER NAV AUDITS,

### 2019 FIRST NAVCLOUD SERVICE

### 2021-2022 18 EGLOBE NAVCLOUD G2 CONNECT INSTALLTIONS

### 2023 19 VESSELS EQUIPPED WITH EGLOBE G2 CONNECT

## SAFETY OF NAVIGATION - BEYOND ECDIS

### NAVIGATIONAL AUDITS

- Implementation October 2016
- Accomplished 70 Navigational Audits
- Gaps in internal procedures
- Amendments to internal procedures and navigational checklist
- Standardization of navigation procedures
- Introduction of modern navigational systems
- Navigation standards
- Deficiencies and nonconformities
- Navigation accidents
- Bridge teamwork / cooperation between officers
- BT awareness
- Practical trainings on board and in the office.

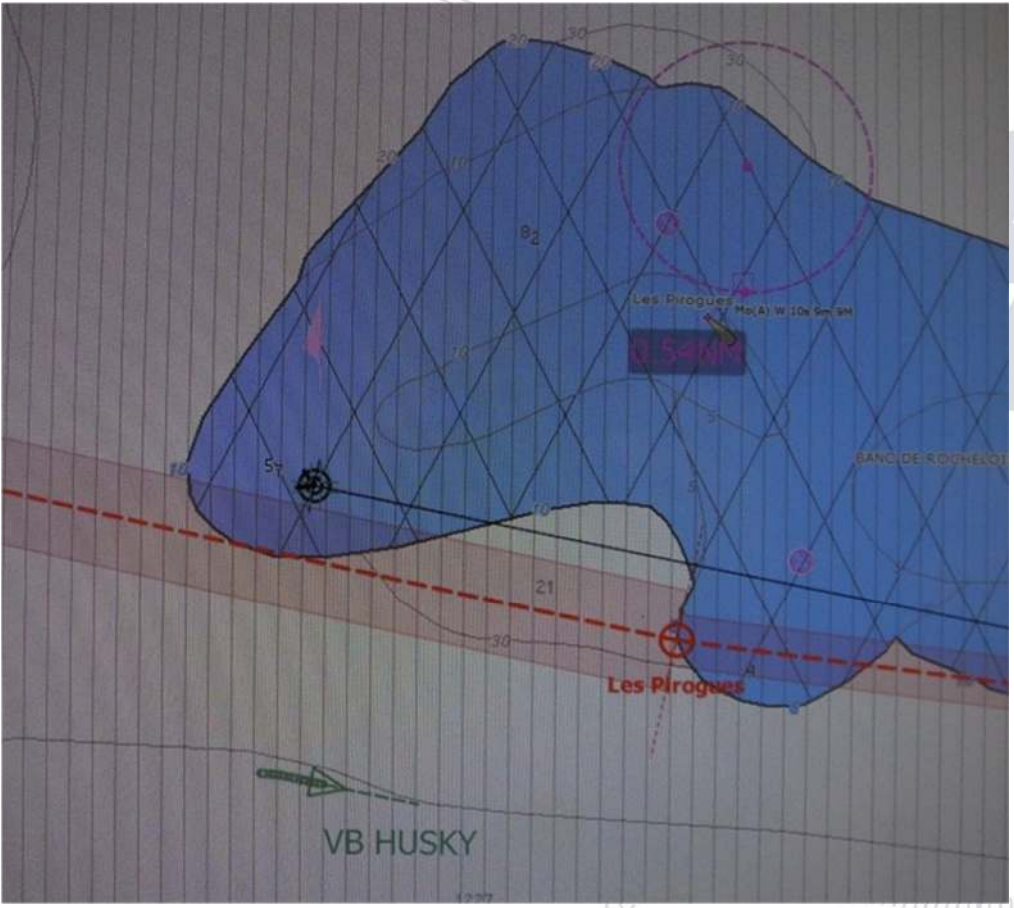


# ECDIS RELATED ACCIDENT

## GROUNDING EN ROUTE FROM KINGSTON TO FONS MOMBIN



22° 00' N  
18° 00' N  
16° 00' N  
14° 00' N  
12° 00' N  
10° 00' N  
08° 00' N  
06° 00' N  
04° 00' N  
02° 00' N  
00° 00' N  
02° 00' S  
04° 00' S  
06° 00' S  
08° 00' S  
10° 00' S  
12° 00' S  
14° 00' S  
16° 00' S  
18° 00' S  
20° 00' S  
22° 00' S



180

# ECDIS RELATED ACCIDENT

## GROUNDING EN ROUTE FROM KINGSTON TO FONS MOMBIN

System Settings AIS data for own ship AIS and ARPA Target association criteria

**Display**

Handedness  Left-handed  Right-handed

**Input**

Use touchscreen settings (to view on screen aids)

**Brilliance Control**

This brilliance will be restored when a new alert occurs.

dark  bright

**Time settings**

UTC offset 05:00 W

**Wheel Over Line**

F-Distance 200 m

**System Compliance**

IHO: S-63 edition 1.2, S-52 edition 6.1.1 (Preslib 4.0.1), S-57 edition 3.1  
 SOLAS Regulation V/19.2.1.4  
 IMO Resolutions: MSC.232(82) (2009), MSC.191(79) (2006), A.694(17) (1991)  
 IEC Standards: 61174 (2008/2009), 60945 (2002), 61162-1 (2010), -2 (1998), 61165-450 (2011), 62288 (2014)

**Software version**

Current version: 1.1.1.10  
 SevenCs EC2007 ECDIS Kernel Version 5.22

**Toolbar Management**

**Info Labels**

Sailing Mode

Time  
 Position  
 COG  
 SOG  
 Heading  
 Rate of Turn  
 SPD  
 STW  
 Depth  
 Cross Track Distance  
 Next Waypoint  
 River Monitor

**License Information**

System ID 250035  
 Seednumber E3FGm48hKP2t  
 S63 User Permit 25F74F15B7D0CB1045B8E6204436  
 ARCS User Permit BF8D98EE19163743

VECTOR: 12min T GND position by  
 AIS: not filtered --- ○  
 ACTIVE: --- ○

Exit Navigation Mode

Block Screen Go to Ship

Depth/Height in metres  
**WGS84**

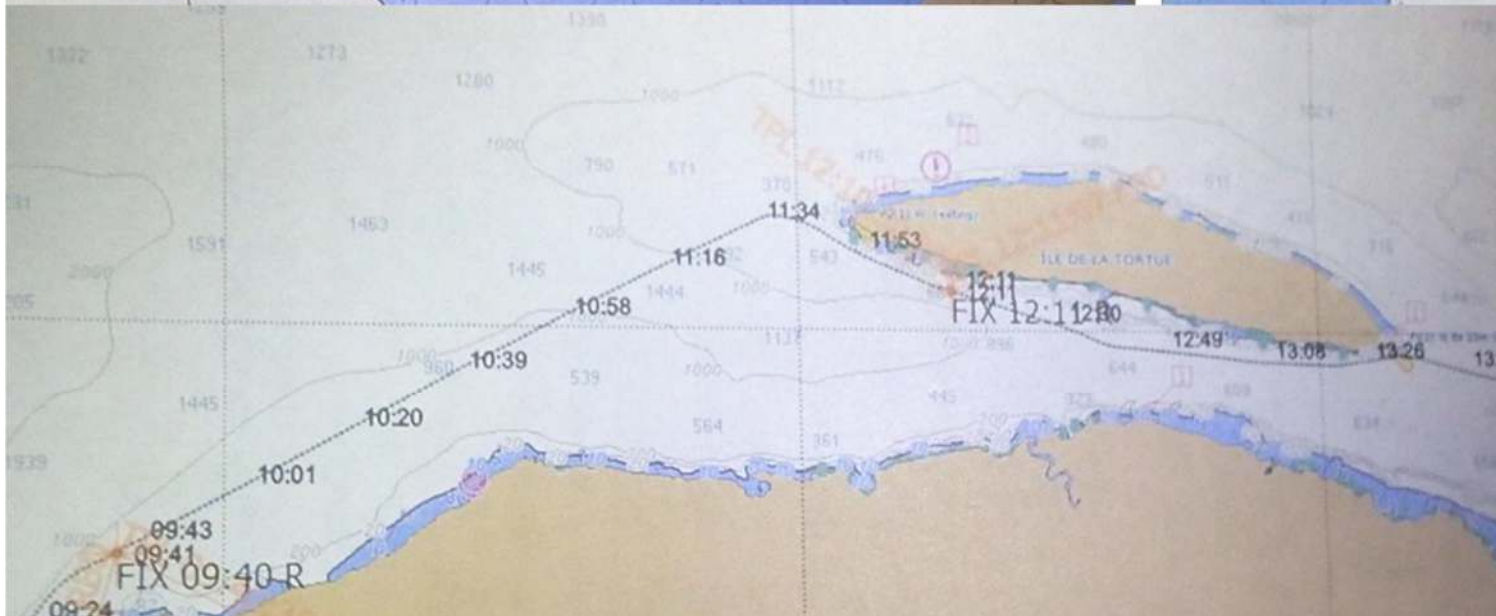
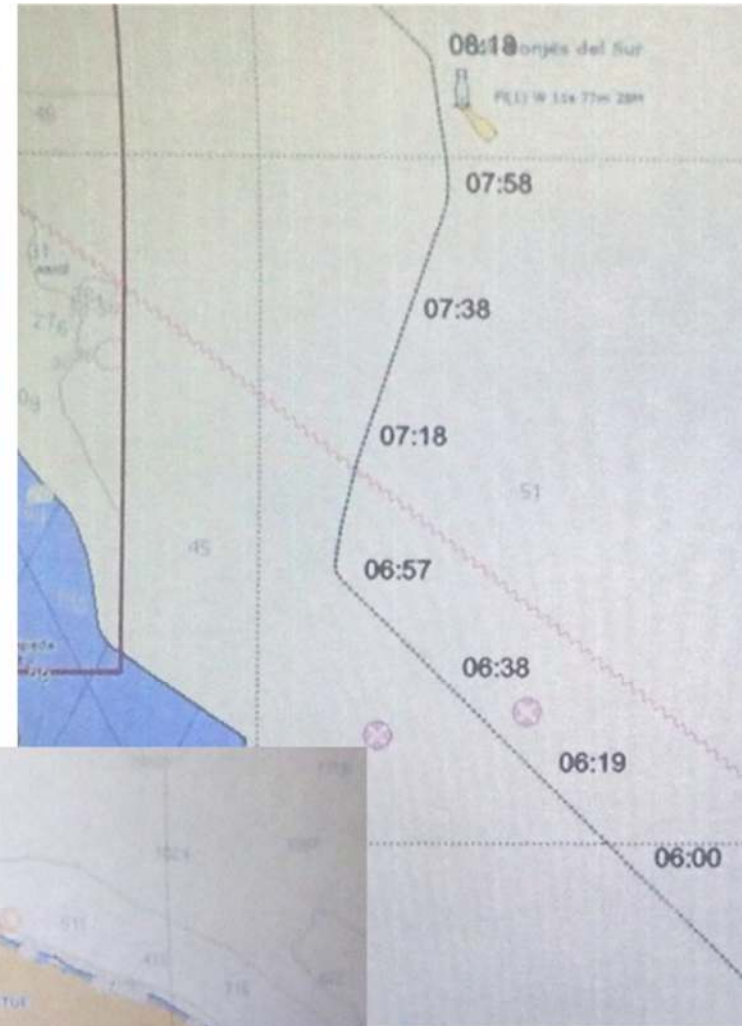


# ECDIS RELATED ACCIDENT

## FRIVOLOUS NAVIGATION



## SAFETY OF NAVIGATION BEYOND ECDIS



► 08/09/2023





# NAVICLOUD



- INTRODUCTION
  - INSTALLATIONS
  - PRACTICAL TRAINING ON BOARD
  - PRACTICAL TRAINING ON SHORE
  - REMOTE ASSESTMENT AND ROUTE MONITORING
  - REGULATORY COMPLIANCE
  - ALERTS AND NOTIFICATIONS MANAGEMENT
  - MASTERS BRIEFINGS
  - OFFICERS SEMINARS
  - PRE- AUDITS AND PREPARATIONS FOR EXTERNAL INSPECTIONS
  - NAVIGATIONAL PROCEDURES
  - PASSAGE PLANNING VS VOYAGE EFFICIENCY
  - COOPERATION WITH SERVICE PROVIDERS
- SAFETY OF THE NAVIGATION  
BRIDGE TEAM PERFORMANCE**



Live ECDIS monitoring  
Live Alerts

SAFETY OF NAVIGATION BEYOND ECDIS

# NaviCloud

### MyFleet E-Mail Notification

Vessel Underway Without Voyage Plan

**Vessel:** MV NOTOS VENTURE

**Alert:** Vessel Underway Without Voyage plan

**Status:** Active since 28 Aug 2023 06:32:04 (UTC)

You are receiving this email because a MyFleet Operator set you up as intended recipient. If you don't want to receive further notifications you can unsubscribe from this service using the link below.

[Unsubscribe](#)

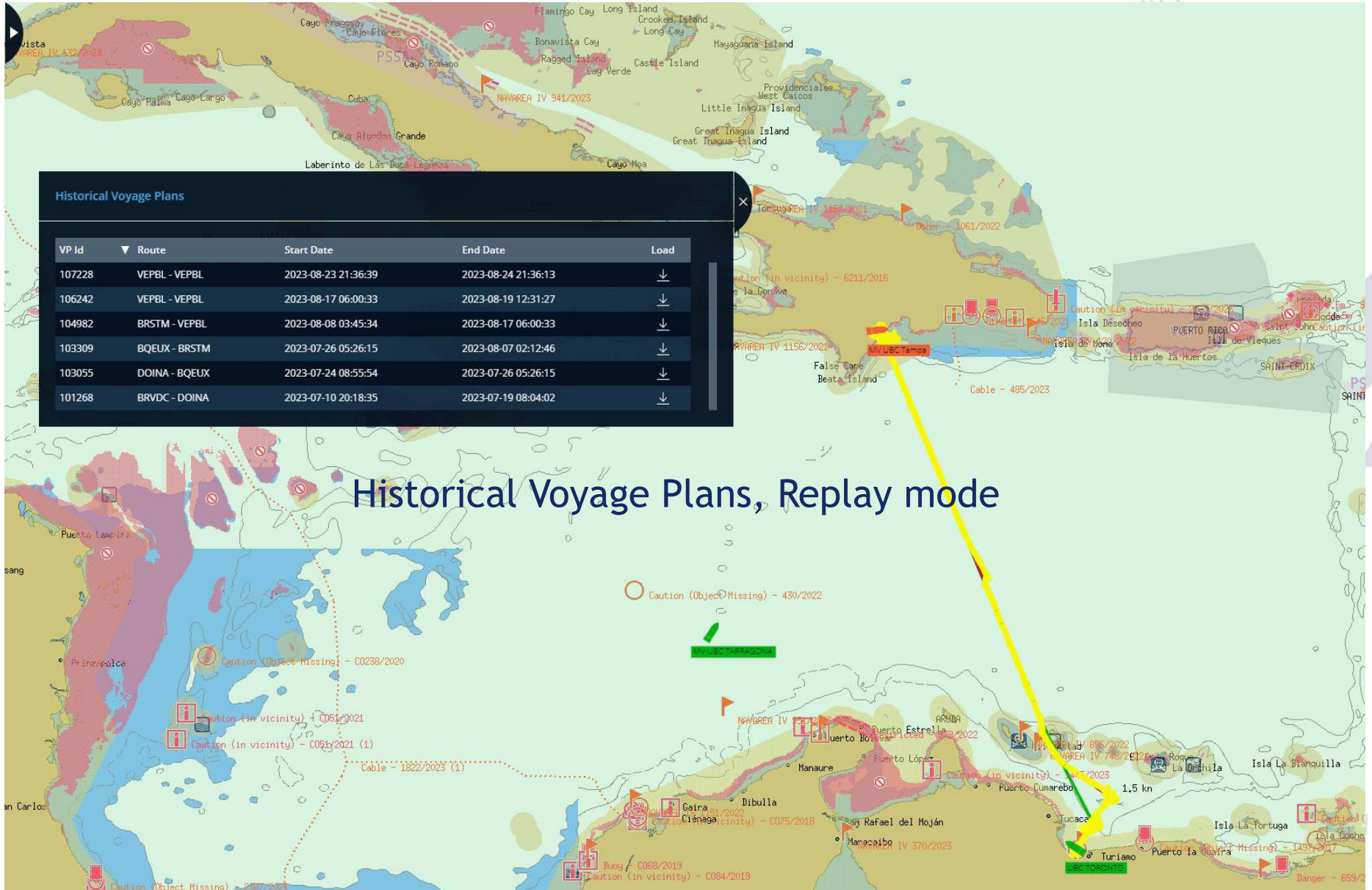
Kind regards,  
Your ChartWorld Team

[M/V NORD HIMALAYA]  
Vessel Is Located In Environmental Zone  
06:45:28  
OK, close X

Type	Setting ▲	E-Mail	Push	External E-Mails	Edit
Voyage Notification	2.5 nautical miles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	marine@intership-navigation.com	
Data Notification	24:00 hours	<input type="checkbox"/>	<input checked="" type="checkbox"/>	marine@intership-navigation.com	
Safety Notification	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	marine@intership-navigation.com	
Area Notification	Active	<input type="checkbox"/>	<input type="checkbox"/>	marine@intership-navigation.com	
Safety Notification	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	marine@intership-navigation.com	
Area Notification	Active	<input type="checkbox"/>	<input type="checkbox"/>		
Notification For Out Of Schedule Arrival	Voyage Notification	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Notification Time For Outdated Position Reports	Voyage Notification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	marine@intership-navigation.com	
Vessel Inside NAVAREA	Area Notification	<input type="checkbox"/>	<input type="checkbox"/>		
Vessel Inside Custom Area	Area Notification	<input type="checkbox"/>	<input type="checkbox"/>		



# NaviCloud



Historical Voyage Plans, Replay mode

# Case study

## The Amazon River Estuary, challenging waters, inaccuracy of ENC's, risk of grounding

\*\*\* PLS FIND BELOW DETAILS FOR THE PRESENT CONDITION OF BUOYAGE AND SAFE NAVIGATION ROUTE A/P INFO OBTAINED FROM BRAZILIAN NAV REGARDING THE AMAZON BASIN.

FYG - BUOYS PSTN SUBJ TO CHANGES UNDER CIRCUNSTANCES BEYOND OUR CONTROL.

Please note below the Amazon River buoyage info, as per Brazilian Navy.  
Light-Float(racon) lat 01-34.12n/long 049-01.37w, white light, missing.

### Aguas Seguras buoys:

No. 1 - 01-25.40n/ 049-22.20w, white light

No. 2 - 01-17.55n/ 049-27.72w, white light

No. 3 - 01-09.64n/ 049-33.33w, white light

### Curua Channel Buoys:

No. 1 - 01-05.30n/ 049-38.00w, red light

No. 2 - 01-03.70n/ 049-38.10w, green light

No. 3 - 01-01.90n/ 049-41.80w, red light

No. 4 - 00-59 82n/ 049-42.28w, green light

No. 6 - 00-54 40n/ 049-47.52w, green light

No. 8 - 00-52 80n/ 049-50.46w, green light

Carolina buoy 00-26 67n/ 050-27.77w, red light

Cacao Grande 00-11.00n/ 050-42.00w, green light

Fugitivo buoy 00-07.08n/ 050-56.50w, green light

Chagas buoy 00-00 64s/ 051-01.72w, green light

Cascalheira buoy 00-02 80s/ 051-03.50w, green light

Banco Salvador 00-11.39s/ 051-15.31w, green light

### Following signal lights:

Guara lat 01-11.26n long 049-53.96w - radar responder beacon(racon) inoperative.

Bailique 00-59.41n 049-56.79w

Ponta do Ceu 00-45.64n 050-07.01w

Canivete "radio light" 00-30.53n 050-24.84w - station dgps inoperative.

Santarem 00-38.81n 050-05.71w

Taia 00-39.23n 050-17.57w

Espirito Santo 00-15.66n 050-31.30w

Pau Cavado 00-11.51n 050-47.22w

Fugitivo 00-10.20n 050-55.12w

Cascalheira 00-01.35s 051-03.69w

santana leste 00-04.11s 051-07.84w

ilha do para light 00-52.80n 049-59.40w



# Case study...continued

IMPORTANT: IN ORDER TO AVOID HEAVY FINES TO VSL/MASTER, PLS NT TT IS IMPERATIVE TO PLOT THE PSTNS IN YR CHARTS, THIS WILL BE CHECKED BY H.MASTER ON YR ARVL FAZENDINHA PLT STN.

ABT 04 HS B4 YR ARVL CONTACT 'PILOT STATION' ON VHF CH 16 OR 11, IN ORDER TO FIX DROP PSTN.

KINDLY NOTE: (CANAL DO CURUA-CHART 201) - A/P LAST INFO, BANK EXTENDING TO THE MIDDLE OF THE CHANNEL AMONG BUOY NBR 8 LIMITED BY FLWG PSTNS.

- 1) 00 57.50N / 49 42.47W - 5,5 M
- 2) 00 56.98N / 49 42.85W - 6,6 M
- 3) 00 57.17N / 49 42.56W - 7,4 M
- 4) 00 57.28N / 49 42.38W - 5,6 M



# Case study...continued

ECDIS NAVI CHARTS **PLAN** OTHERS CLEAR RADAR CHART ONLY STD DISP VECTOR CHART IMO ALL ?
25 Jul 2023 Local UTC -3:00 15:16

HDG **291.4°** GYRO1  
 SPD **0.0kn** GPS1  
 COG **203.0°** BT  
 SOG **0.1kn** GPS1  
 POSN **03° 10.532' S**  
 GPS1 **058° 24.929' W**

Offset:  
WGS84

Ship off screen

MENU

Route Information →  
 Route :  
 Plan Speed : \*\*\* kn  
 Plan Course : \*\*\* °  
 Course to Steer : \*\*\* °  
 XTD Limit : \*\*\* m  
 XTD : \*\*\* m

To WPT : \*\*\*  
 DIST to WOP : \*\*\*\*\* NM  
 Time to Go : \*\*.\*\*\*  
 Turn RAD : \*\*\*\*\* NM  
 ROT : \*\*\* °/min  
 Next WPT : \*\*\*  
 Next Course : \*\*\* °

Overlay / NAV Tools →  
 TT/AIS  
 TT OFF < AIS FILT ON  
 Vector 10min T.GND  
 CPA/TCPA 0.5NM 1min  
 AIS CPA AUTO ACT ALL  
 Lost TGT OFF  
 Past POSN 6min T.GND

TT Source:   
 SYNC. ANT Datum: CCRP

173  
Caution Area

Route Plan

\*BRMCP to DOHAI

Waypoints	User Chart	Optimize	Alert Parameters	Check Results			
WPT	Name	Latitude	Longitude	Leg/°	Leg/NM	STR mode	RAD/NM
1	WP 1	00° 03 .000 'S	051° 06 .000 'W	141.0	0.00	Rhumbline	
2	WP 2	00° 03 .717 'S	051° 05 .424 'W	51.4	0.52	Rhumbline	0.40
3	WP 3	00° 01 .524 'S	051° 02 .693 'W	30.3	4.17	Rhumbline	0.40
4	WP 4	00° 07 .408 'N	050° 57 .507 'W	62.1	14.42	Rhumbline	0.40
5	WP 5	00° 10 .213 'N	050° 52 .245 'W	86.4	20.41	Rhumbline	0.40
6	WP 6	00° 10 .571 'N	050° 46 .666 'W	68.8	26.03	Rhumbline	0.40
7	WP 7	00° 13 .628 'N	050° 38 .848 'W	50.2	34.43	Rhumbline	0.40
8	WP 8	00° 21 .530 'N	050° 29 .419 'W	27.4	46.70	Rhumbline	0.40

Capture screenshot

XTD LIM  Symmetrical  Asymmetrical

Total WPTs : 33 Total Distance : 1810.53NM

Check Status: **Unchecked**

New Select Unselect Route Bank SAR Exchange to MONIT Save as Save



# Case study...continued

SAFETY OF NAVIGATION BEYOND ECDIS

**Plan**

00° 51.025' N TTG 8.57NM  
 049° 53.187' W 21:47  
 159.7 T 267.2NM

North Up

25 Jul 2023 Local UTC -3:00 15:09

HDG **299.1°** GYRO1  
 SPD **12.3kn** GPS1  
 0.5kn BT  
 COG **301.6°**  
 SOG **12.3kn** GPS1  
 POSN **05° 02.862' N**  
 GPS1 **051° 25.721' W**

Offset  
 WGS84

Ship off screen

MENU

Route Information

Route :  
 Plan Speed : \*\*.\* kn  
 Plan Course : \*\*\*.\*°  
 Course to Steer : \*\*\*.\*°  
 XTD Limit : \*\*\*.\* m  
 XTD : \*\*\*.\* m

To WPT : \*\*\*  
 DIST to WOP : \*\*\*\*\* NM  
 Time to Go : \*\*\*\*\*  
 Turn RAD : \*\*\*\*\* NM  
 ROT : \*\*\*.\* /min  
 Next WPT : \*\*\*  
 Next Course : \*\*\*.\*°

Overlay / NAV Tools

Echo

Display: **ON**  
 Echo Level: **7%**  
 Density: **100%**  
 Antenna: **ANT\_2**  
 Status: **OK**

Vector 20min T.GND  
 AIS FILT ON  
 TT FILT ON

539  
 AIS Message R..

08/09/2023

MEMBER OF THE HARTMANN GROUP

# Case study...continued

## SAFETY OF NAVIGATION BEYOND ECDIS

The screenshot displays an ECDIS interface with a central chart area showing a planned route (orange line) through a complex waterway. The chart includes depth contours, navigational aids, and various symbols. The interface is divided into several panels:

- Top Panel:** Shows tabs for ECDIS, NAVI, CHARTS, PLAN (active), and OTHERS. It also includes status information: 25 Jul 2023, Local UTC -3:00, 15:12, and a home button.
- Left Panel:** Contains navigation controls such as Plan-ning, Report, Guide Box, Manage Data, Chart INFO, DISP, Log, Day, 100, MOB, and a Capture screenshot button.
- Right Panel:** Displays real-time navigation data:
  - HDG: 299.5°
  - SPD: 12.3kn (with a 0.7kn change indicator)
  - COG: 302.6°
  - SOG: 12.3kn
  - POSN GPS1: 05° 03.167' N, 051° 26.199' W
  - Offset: WGS84
  - Ship off screen: MENU
  - Route Information:
    - Route: \*\*\*\* kn
    - Plan Speed: \*\*\*\* kn
    - Plan Course: \*\*\*\*°
    - Course to Steer: \*\*\*\*°
    - XTD Limit: \*\*\*\* m
    - XTD: \*\*\*\* m
    - To WPT: \*\*\*
    - DIST to WOP: \*\*\*\* NM
    - Time to Go: \*\*\*\*
    - Turn RAD: \*\*\*\* NM
    - ROT: \*\*\*\* /min
    - Next WPT: \*\*\*
    - Next Course: \*\*\*\*°
  - Overlay / NAV Tools:
    - Echo: ON
    - Echo Level: 76
    - Density: 100%
    - Antenna: ANT\_2
    - Status: OK
- Bottom Panel:** Shows a yellow warning icon, AIS Message R. (539), and a list icon.



# SAFETY OF NAVIGATION BEYOND ECDIS



The screenshot displays a marine navigation software interface. The main chart area shows a blue sea with depth contours in meters (e.g., 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200). Various navigational aids are visible, including buoys (e.g., BY 2, BY 3, BY 4, BY 6), lights (e.g., 040°T, 042°T, 031°T, 086°T, 070°T, 043°T, 057°T, 059°T), and wrecks (e.g., WR 0097, WR 0096). The interface includes a top toolbar with zoom controls and a scale of 6 NM. On the right, there are mode selection buttons: S-Mode, Sailing Mode, Planning Mode, and Chart Loader. At the bottom, there is a status bar with various icons and text: VECTOR: 24min T GND, position by AIS: filtered, EPFS1, ERBL, Edit, Check, Show Routes, Undo, Redo.

**Position:** 00° 58.2465' N 049° 43.3475' W  
**Depth Range:** 10m - 20m

**Objects:** AIO Legend

Item	Value
Caution area	
Information	Change in bathymetry - I...
Information in nati...	Alteração na batimetria - ...
Source date	01-MAY-2023
Source indication	BR,BR,NTMAR,I63(P)/23
Magnetic variation	

Change in bathymetry - lowest depth found 6.18m



HDG	<b>288.9°</b>	GYRO1
SPD	<b>0.0kn</b>	GPS1 BT
COG	<b>003.2°</b>	GPS1
SOG	<b>0.0kn</b>	
POSN	<b>03° 10.506' S</b>	
GPS1	<b>058° 24.931' W</b>	

Offset  
WGS84

Ship off screen

MENU

Route Information →

Route :  
Plan Speed : \*\*\* kn  
Plan Course : \*\*\* °  
Course to Steer : \*\*\* °  
XTD Limit : \*\*\*\* \* m  
XTD : \*\*\*\* \* m

To WPT : \*\*\*  
DIST to WOP : \*\*\*\*\* \*\* NM  
Time to Go : \*\*\*\*\* \*\*"  
Turn RAD : \*\*\*\* \* NM  
ROT : \*\*\* \* /min  
Next WPT : \*\*\*  
Next Course : \*\*\* °

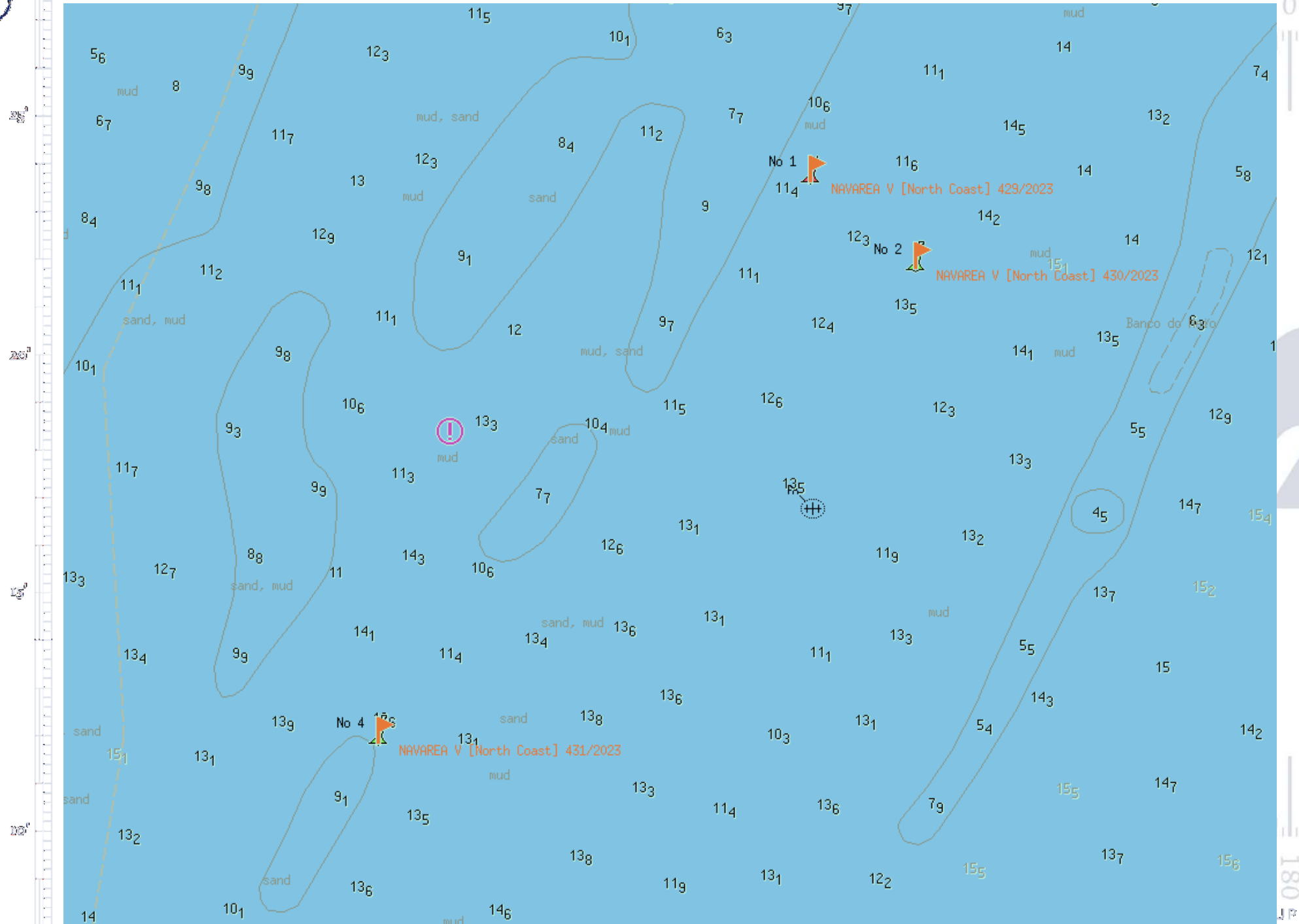
Overlay / NAV Tools →

TT/AIS		← →	
TT	<	OFF	AIIS
OFF	<	FILT ON	
Vector	10min	T.GND	
CPA/TCPA	0.5NM	2min	
AIIS CPA	AUTO	ACT ALL	
Lost TGT	OFF		
Past POSN	6min	T.GND	

TT Source:   
 SYNC. ANT Datum: CCRP

173  
Caution Area

# SAFETY OF NAVIGATION BEYOND ECDIS





**INTERSHIP  
NAVIGATION**  
SETTING THE RIGHT COURSE

**SAFETY OF NAVIGATION BEYOND ECDIS  
WORLD ECDIS DAY SEPTEMBER 2023**

**THANK YOU FOR YOUR ATTENTION**

**CAPTAIN PIOTR RUSINEK  
DPA, FLEET & MARINE SUPERINTENDENT**

MEMBER OF THE HARTMANN GROUP