

NATO UNCLASSIFIED
NOTIFICATION OF PROPOSED RESEARCH CRUISE

ANNEX A TO
CMRE(2026)0169

PART A: GENERAL

1. NAME OF RESEARCH SHIP: NATO Research Vessel (NRV) Alliance

2. DATES OF CRUISE from 25 June 2026 to 13 July 2026

3. OPERATING AUTHORITY: NATO STO-CMRE / ITAN CINCNAV

TELEPHONE:

CO : +39 331 6196659
Vo.I.P. telephone (Bridge) +39 0187784306
GSM #1 (Connected to ship tel. exchange.) +39 337267289 int. 201
GSM#2 (Connected to ship tel. exchange.) +39 3365753370 int. 201
Iridium Satellite (Bridge): +881641401947

4. OWNER (if different from no. 3) NATO

5. PARTICULARS OF SHIP:

Name:	NRV ALLIANCE
Nationality:	Italian Navy
Overall length: (in metres)	93 m
Maximum draught: (in metres)	7 m
Net tonnage:	3212 t
Propulsion e.g. diesel/steam:	Diesel
Call sign:	IALL
Registration port and number	La Spezia (Italy)

6. CREW

Name of master: CDR Stefano FEBBRARO

Number of crew: 44 (ITAN)

7. SCIENTIFIC PERSONNEL

Name and address of scientist in charge:

Robert BEEN (NDL)
NATO STO-CMRE Employee
Viale San Bartolomeo 400
19126 La Spezia (SP)
Cell: +39 338 645 0304

Tel/telex/fax no.: Land: +39 0187 527 466

No. of scientists: 25 (CMRE Science Team).

8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to latitude and longitude)

OpArea A (North-East of Iceland)

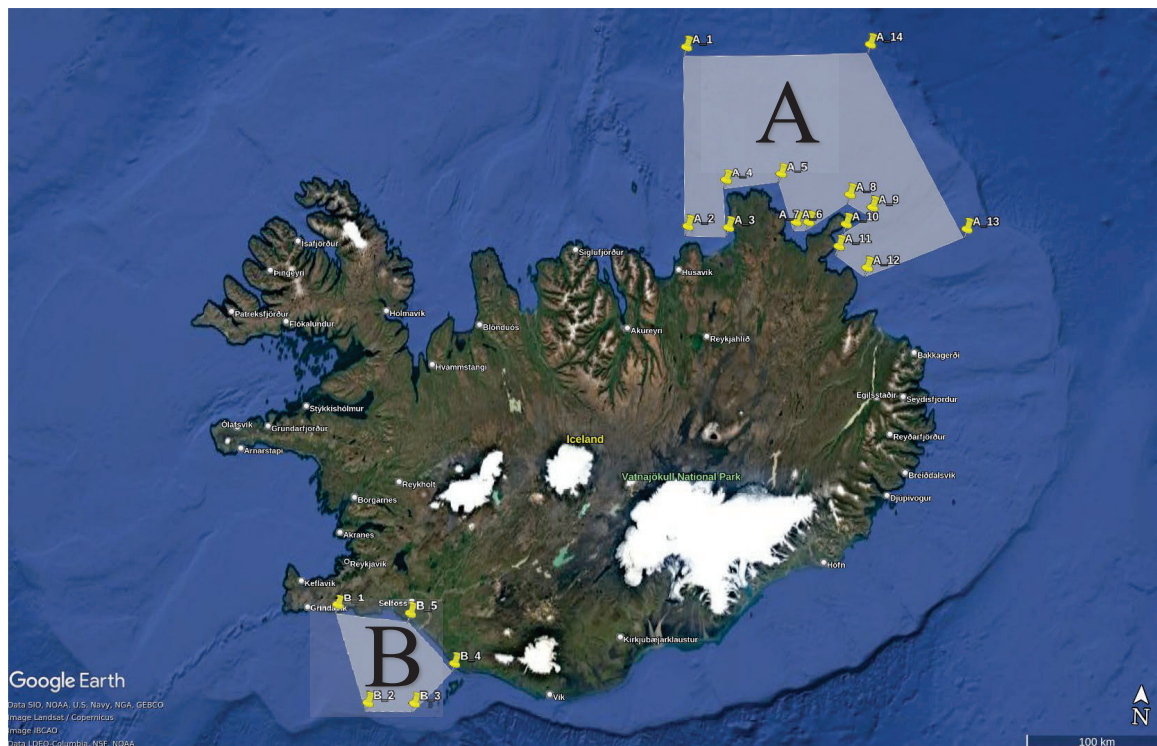
A_1	67° 21.869'N	17° 15.997'W
A_2	66° 15.521'N	17° 12.254'W
A_3	66° 15.222'N	16° 35.061'W
A_4	66° 32.805'N	16° 37.489'W
A_5	66° 35.229'N	15° 46.511'W
A_6	66° 17.312'N	15° 33.050'W
A_7	66° 17.252'N	15° 21.460'W
A_8	66° 27.246'N	14° 42.696'W
A_9	66° 22.334'N	14° 22.037'W
A_10	66° 16.297'N	14° 46.938'W
A_11	66° 8.183'N	14° 54.094'W
A_12	66° 0.078'N	14° 28.783'W
A_13	66° 13.053'N	12° 55.206'W
A_14	67° 22.922'N	14° 18.492'W

OpArea B (South-West of Iceland)

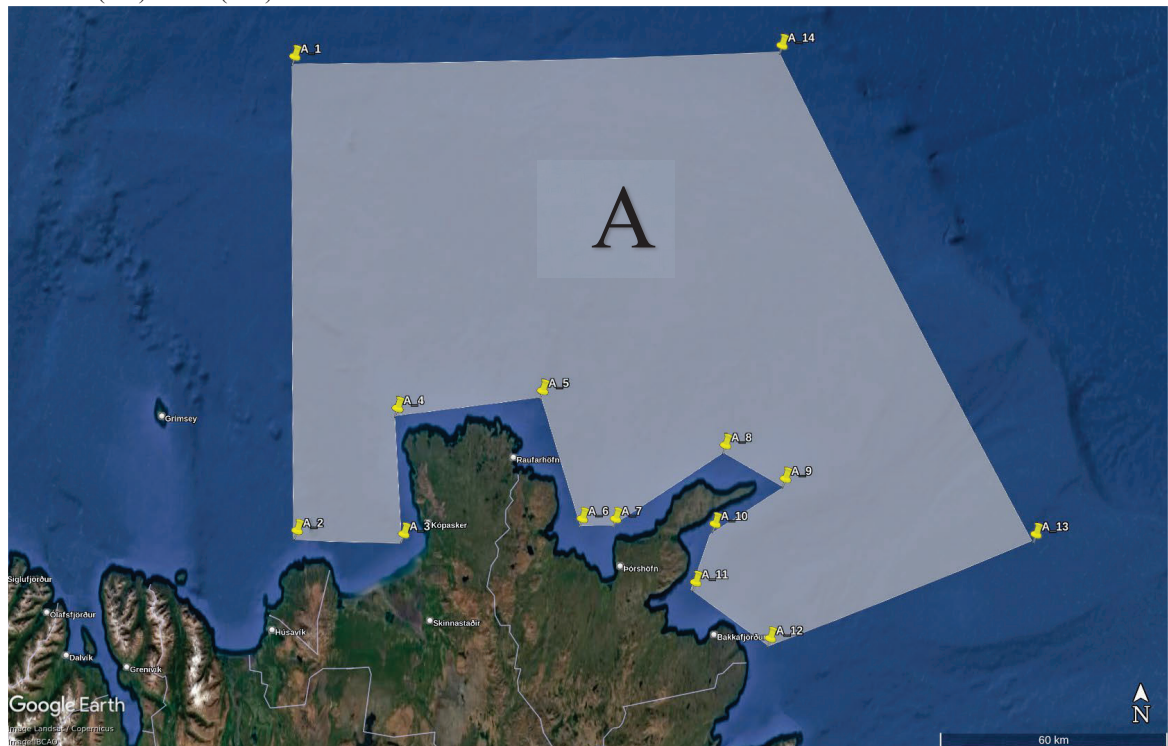
B_1	63° 48.603'N	21° 59.594'W
B_2	63° 13.488'N	21° 28.565'W
B_3	63° 14.794'N	20° 50.854'W
B_4	63° 31.024'N	20° 18.912'W
B_5	63° 47.832'N	20° 59.185'W

Also, see the images below. Area B will serve as a back-up area in case there is a very strong Northerly wind at the very start of the cruise.

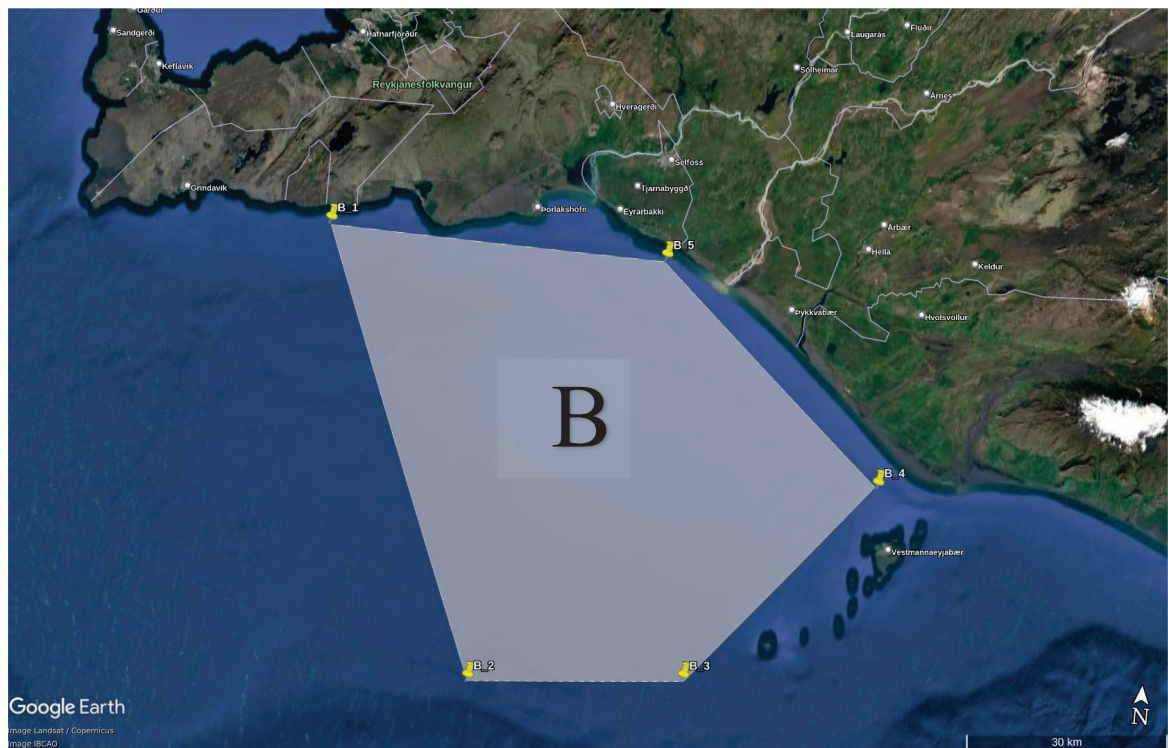
Area A is large in order to allow for seeking shelter in case of strong Westerly or Easterly winds during the experiment period; it will allow the team to continue doing meaningful science in the presence of adverse weather conditions.



Areas A (NE) and B (SW)



Area A



Area B

9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE

The TFX Arctic engineering test activities that will take place in the surrounding waters of Iceland, and partly on land, through the:

- deployment and recovery of unmanned air vehicles (serving as radio-frequency communication nodes), and
- the deployment of a maritime operations centre (MOC) information node,

aim at testing maritime unmanned system (MUS) concepts and capabilities in the context of anti-submarine warfare (ASW) and intelligence, surveillance and reconnaissance (ISR) at high latitudes, in preparation of the main TFX Arctic exercise in 2027.

The sea-going activities include the deployment of autonomous sea-bottom sensing nodes and autonomous underwater vehicles (AUVs) with both acoustic and environmental sensing capabilities. Sensing nodes (mounted on both sea-bottom nodes and AUVs) will employ passive sonar only. Therefore, the experiments will not affect marine life acoustically.

10. DATES AND NAMES OF INTENDED PORTS OF CALL

The list of intended ports of call comprises:

- Reykjavik: 22 June (- 48hrs), 25 June 2026

11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL

Requirements at ports of call: As per separate LOGREQ military signal

NOTIFICATION OF PROPOSED RESEARCH CRUISE**PART B: DETAILS**1. a) PURPOSE OF RESEARCH

The TFX Arctic engineering test activities that will take place in the surrounding waters of Iceland, and partly on land, through the:

- deployment and recovery of unmanned air vehicles (serving as radio-frequency communication nodes), and
- the deployment of a maritime operations centre (MOC) information node,

aim at testing maritime unmanned system (MUS) concepts and capabilities in the context of anti-submarine warfare (ASW) and intelligence, surveillance and reconnaissance (ISR) at high latitudes, in preparation of the main TFX Arctic exercise in 2027.

The sea-going activities include the deployment of autonomous sea-bottom sensing nodes and autonomous underwater vehicles (AUVs) with both acoustic and environmental sensing capabilities. Sensing nodes (mounted on both sea-bottom nodes and AUVs) will employ passive sonar only. Therefore, the experiments will not affect marine life acoustically.

b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)

During the sea-going experiments, MUS will be deployed from and recovered by NRV Alliance. All deployed materiel will be retrieved.

While the deployed MUS all deploy passive sonar, NRV Alliance will tow an acoustic, low-frequency sound source. Since this sound source transmits at low levels, i.e. well below 185 dB re. 1 μ Pa @1m, this is not to be considered an acoustic threat to marine life.

For environmental research purposes, NRV Alliance will deploy and tow a sub-bottom profiler; also, the sound source of this piece of equipment does not affect marine life.

NRV Alliance will also take two conductivity temperature depth (CTD) casts on a daily basis, which serve as input for determining the sound velocity profile (SVP) in our area of interest. The scientists will use these SVPs to derive how the sound propagates in the water column (and the sea bottom).

2. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished

We will use area A (and area B as a back-up in case of bad weather at the start of the experiment period), to deploy/recover our sensing systems.

NRV Alliance will sail pre-defined tracks over the sensor systems, and a moored gateway buoy may be deployed. Precise positions and tracks are not known at this point in time, since they still need some preparation / investigation.

a) TYPES OF SAMPLES REQUIRED (e.g., geological/water/plankton/fish/radionuclide)

Type of samples required, including but not limited to:

- acoustic data (hydrophones mounted on the MUS);
- Sound velocity profiles (SVPs), using the CTD;
- Bottom grabs and/or cores (to determine the bottom type (geologically));

3. METHODS OF OBTAINING SAMPLES (e.g., dredging/coring/drilling/fishing, etc. When using fishing gear, indicate fish stocks being worked, quantity of each species required, and quantity of fish to be retained on board).

Acoustic data

The autonomous sensing systems will be deployed and recovered: the Ocean Bottom Seismometers will be sitting on the sea bottom, while the (buoyancy) glider will cover an underwater area in the surroundings of the bottomed systems.

Environmental data

- The CTD will be lowered from NRX Alliance and recovered after completing its measurement cycle (typically half an hour);
- The buoyancy glider will (in addition to obtaining acoustic samples) also record SVPs; the glider will stay deployed for most of the experiment period (and recovered towards the end);
- Geology: physical bottom samples will be obtained via grabs and/or cores; the samples will be stored on board NRV Alliance for further investigation.

4. DETAILS OF MOORED EQUIPMENT

We will likely deploy a gateway (GW) buoy. This buoy is capable of receiving underwater acoustic messages, and transfer them to radio-frequency ones, and vice versa.

Both the GW buoy's deployment position and times will need to be determined in situ, as this will very much depend on the weather forecasts.

5. ANY HAZARDOUS MATERIALS (chemicals/explosives/gases/radioactives, etc.)
(Use separate sheet if necessary)

- a) Type and trade name: N/A
- b) Chemical content (and formula): N/A
- c) IMO IMDG code (reference and UN no.) N/A
- d) Quantity and method of storage on board: N/A
- e) If explosives give dates of detonation N/A

6. DETAIL AND REFERENCE OF

a Any relevant previous/future cruises

TFX Arctic 2027, area unknown for now.

b Any previously published research data relating to the proposed cruise

N/A

7. NAMES AND ADDRESSES OF SCIENTISTS OF THE COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE

We have been in contact with:

- Kolbeinn Guðmundsson kolbeinn.gudmundsson@utn.is, and
- Viggó M. Sigurðsson - LHG Viggo@LHG.IS.

8. STATE

a Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable (Yes/No)

Yes

b Participation of an observer from the coastal state for any part of the cruise together with the dates and the ports for embarkation and disembarkation

The presence of an observer on board may be permitted if space and logistics allow for this

- c When research data from the intended cruise are likely to be made available to the coastal state and by what means

The environmental data could be made available within 6/8 months

PART C. SCIENTIFIC EQUIPMENT

Complete the following table
using a separate page for
each coastal state

Coastal state: Iceland

Port of call: Reykjavik (TBC)

Dates: 25 June -13 July

Indicate "YES" or "NO"

				DISTANCE FROM COAST		
<u>List scientific work by function</u> e.g.	Water column including sediment sampling of the seabed	Fisheries research within fishing limits	Research concerning the natural resources of the continental shelf or its physical characteristics	Within 4 nm	Between 4-12 nm	Between 12-200 nm
Magnetometry	No	No	Physical characteristics of the ocean bottom yes (in a limited fashion)	Yes	Yes	Yes
Gravity	No					
Diving	No					
Seismics	Yes					
Seabed sampling	Yes					
Bathymetry	Yes					
Trawling	No					
Echo sounding	Yes					
Water sampling	No					
U/W TV	No					
Moored instr.	Yes					
Towed instr.	Yes					

Robert
Been



Digitally signed by
Robert Been
Date: 2026.05.13
14:26:04 +02'00'

(On behalf of the Principal Scientist)

Dated _____

NB IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED, THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY