

Operational Directorate Natural Environment

NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART A: GENERAL

1. Name of research ship **RV BELGICA** Cruise N° **2014/9**
2. Dates of cruise From **07 April** to **11 April 2014**
3. Operating Authority **Belgian Navy under contract for Belgian Ministry of Science Policy
Royal Belgian Institute for Natural Sciences (RBINS)
Operational Directorate Natural Environment, Measurement Services Ostend
3de & 23ste Linierregimentsplein, 8400 Ostend
☎ +32 59 70 01 31 • 📠 +32 59 70 49 35 • ✉ bmmost@mumm.ac.be
www.mumm.ac.be**
4. Owner **Belgian state represented by Minister for Science Policy**
5. Particulars of ship

Name	RV Belgica	
Nationality	Belgian	
Overall length	51 meters	
Maximum draught	4,5 meters	
Nett tonnage	232 NRT	
Propulsion	Diesel	
Call Sign	ORGQ	
Telephone	INMARSAT	00870 76 218 73 27
Facsimile	INMARSAT	00870 32 052 18 12
Email	belgica@mumm.ac.be	
6. Crew

Name of master	Lt Cdr (BeN) Luc VAN TRICHT
N° of Crew	15
7. Scientific Personnel

Name and address of scientist in charge :	Dr. Kevin RUDDICK Royal Belgian Institute of Natural Science 'RBINS'- Operational Directorate Natural Environment Gulledelle 100 B-1200 Brussels ☎ +32 2 773 21 31 • 📠 +32 2 770 69 72 • ✉ k.ruddick@mumm.ac.be www.mumm.ac.be
N° of scientists	15

(A nominal roll of all personnel other than nationals of the applicant (flag) state is required)

**Kevin Ruddick, UK
Rodney Forster and/or Véronique Creach, UK
David Doxaran, FR**

8. Geographical area in which ship will operate (with reference in latitude and longitude).

**Belgian and adjacent Dutch part of the North Sea, including the Scheldt estuary, and the UK continental shelf
Between N 51°55.28', E 1°21.77' and N 51°25.00', E 3°34.20'**

Operational Directorate Natural Environment

9. Brief description of purpose of cruise

Purpose

Acquisition of optical data for the FP7-funded “High Spatial and Temporal Resolution Ocean Colour (HIGROC) coastal water products and services” project

10. Port of Call. Dates. Reasons.

Zeebrugge 07/04/14 Departure from home port. Start of research cruise RV Belgica 2014/9

Zeebrugge 11/04/14 Arrival in home port. End of research cruise RV Belgica 2014/9

11. Any special logistic requirements at ports of call (other than water, fuel provisions, etc.) **N.A.**

NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART B: DETAIL

1. Name of research ship **RV BELGICA** Cruise N° **2014/9**
2. Date of cruise From **07 April** To **11 April 2014**
3. Purpose of research and general methods. (If the research work is being taken on behalf of a research institution of a third state, it is the responsibility of that state to obtain prior permission; it is essential that written confirmation that this has been done is obtained and quoted in this application.

The HIGHROC project will carry out the R&D necessary for the next generation coastal water products and services from ocean colour satellite data. These services are aimed at applications such as monitoring of chlorophyll a and turbidity for the Marine Strategy Framework Directive and monitoring of suspended sediments associated with offshore activities (dredging, wind farms, etc.). HIGHROC will derive coastal water quality parameters from satellites including a) Sentinel-2 (S2) imagery at 10-20m resolution and b) SEVIRI imagery at 15 min resolution. In situ measurements will be carried out on dedicated test sites and used to validate the new S2 and SEVIRI products.

4. Attach chart(s) showing (on an appropriate scale) the geographical area of the intended work, positions of intended stations, tracks of survey lines, positions of moored / seabed equipment.

See annex

5. Types of samples required, e.g. Geological / Water / Plankton / Fish / Radioactivity / Isotope

Water

and methods by which samples will be obtained (including dredging/coring/drilling).

Niskin bottles (5 & 10l), in situ measurements (CTD, ...), LISST 100X, Secchi disk, Spectroradiometers, fluorimeter, Hydroscatt backscatter meter, AC9 absorption meter

6. Details of moored equipment : **N.A.**

Dates

Laying

Recovery

Description

Latitude

Longitude

Operational Directorate Natural Environment

7. Explosives :

N.A.

- (a) Type and Trade Name
- (c) Dept of trade class and stowage
- (e) Depth of detonation
- (g) Dates of detonation

- (b) chemical content
- (d) Size
- (f) Frequency of detonation

8. Details and reference of

- (a) Any relevant previous/future cruises

New project

- (b) Any previous published research data relating to the proposed cruise (attach separate sheet if necessary)

9. Names and addresses of scientist of the coastal state in whose waters the proposed cruise takes place with whom previous contact has been made.

UK **Dr Rodney Forster. CEFAS. Lowestoft Laboratory. UK-Lowestoft NR 33 0HT. E- mail: rodney.forster@cefas.co.uk. UNITED KINGDOM**

NL **Dr Miguel Dionisio Pires, Researcher/advisor aquatic ecology, Deltares, Unit Inland Water Systems, Department of Freshwater Ecology and Water Quality, P.O. Box 177, 1277 MH Delft - The Netherlands. E-mail: Miguel.Dionisio@deltares.nl**

10. State :

- (a) Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable.

YES

- (b) Whether it will be acceptable to carry on board an observer from the coastal state for any part of the cruise and dates and ports of embarkation / disembarkation.

Yes, cfr. part A § 10

- (c) When research data from intended cruise is likely to be made available to the coastal state and if so by what means. (If the final report is likely to be delayed beyond 12 months, interim progress reports are required.

- **Cruise report within 2 months by request to the chief scientist**

Operational Directorate Natural Environment

PART C: SCIENTIFIC EQUIPMENT

COASTAL STATE : **UNITED KINGDOM**

INDICATE "YES" OR "NO"

<u>LIST SCIENTIFIC WORK BY FUNCTION</u>				DISTANCE FROM COAST		
				WITHIN 12 NMS	BETWEEN 12-200 NMS	CONTINENTAL SHELF WORK ONLY BEYOND 200 NM BUT WITHIN THE CONTINENTAL MARGIN
EG. MAGNETOMETRY : GRAVITY DIVING : SEISMICS: BATHYMETRY SEABED SAMPLING TRAWLING ECHO SOUNDING : WATER SAMPLING U/W T.V. : MOORED INSTRUMENTS: TOWED INSTRUMENTS:	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			
Water sampling by NISKIN bottles (5 & 10l)	Yes		Yes	Yes	Yes	
in situ measurements with SCTD-system, including PAR, OBS)	Yes		Yes	Yes	Yes	
in situ optical measurements (LISST 100X, fluorimeter, AC9, ..)	Yes		Yes	Yes	Yes	
vessel's non toxic sea water intake	Yes		Yes	Yes	Yes	
Secchi disk	Yes		Yes	Yes	Yes	

Operational Directorate Natural Environment

PART C: SCIENTIFIC EQUIPMENT

COASTAL STATE :

THE NETHERLANDS

INDICATE "YES" OR "NO"

<u>LIST SCIENTIFIC WORK BY FUNCTION</u>				<u>DISTANCE FROM COAST</u>		
				within 12 nms	between 12-200 nms	continental shelf work only beyond 200 nm but within the continental margin
eg. magnetometry : gravity diving : seismics: bathymetry seabed sampling trawling echo sounding : water sampling u/w t.v. : moored instruments: towed instruments:	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			
Water sampling by NISKIN bottles (5 & 10l)	Yes		Yes	Yes	Yes	
in situ measurements with SCTD-system, including PAR, OBS)	Yes		Yes	Yes	Yes	
in situ optical measurements (LISST 100X, fluorimeter, AC9, ..)	Yes		Yes	Yes	Yes	
vessel's non toxic sea water intake	Yes		Yes	Yes	Yes	
Secchi disk	Yes		Yes	Yes	Yes	

ANNEX

RV Belgica research cruise 2014/9: chart

