NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART A: GENERAL

1. Name of research ship **RV BELGICA** Cruise N° **2020/3**

2. Dates of cruise From **03 February** To **07 February 2020**

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 en 23ste Linieregimentsplein, B-8400 Ostend
✆+ 32(0)59 70 01 31 • 🖷: + 32(0)59 70 49 35 • ✉ mso@naturalsciences.be
https://odnature.naturalsciences.be/belgica/

4. Owner **Belgian state represented by Minister for Science Policy**

5. Particulars of ship

Name	**Belgica**
Nationality	Belgian
Overall length	51 meters
Maximum draught	4,5 meters
Nett tonnage	232NRT
Propulsion	Diesel
Call Sign	ORGQ
Phone numbers	Voice GSM +32 475 44 27 37
	Voice VSAT: +31 108 08 00 68
	Voice Fleet 77: +870 76 463 27 41
Fax numbers	Fax harbor: +32 50 54 59 79
	Fax Fleet 77 (at sea): +870 76 463 27 43
Email	rvbelgica@naturalsciences.be

6. Crew

Name of master	**Commander (BeN) Ludwig Damman**
N° of Crew	**15**

7. Scientific Personnel

Name and address of scientist in charge :

Dhr. Mattias Van Opstal
Institute for Agricultural and Fisheries Research 'ILVO'
Animal Sciences, Fisheries and Aquatic Productions
Ankerstraat 1, 8400 Ostend, Belgium
☎ +32-59-56 98 14 • ✉ Mattias.VanOpstal@ilvo.vlaanderen.be
www.ilvo.vlaanderen.be

Dr. Jochen Depestele
Institute for Agricultural and Fisheries Research 'ILVO'
Animal Sciences, Fisheries and Aquatic Productions
Ankerstraat 1, 8400 Ostend, Belgium
☎ +32-59-56 98 38 • ✉ jochen.depestele@ilvo.vlaanderen.be
www.ilvo.vlaanderen.be

N° of scientists : **10**

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

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

Belgian, UK, French waters
Between N50°00', W 2°00'; N54°00, E 4°50'

9. Brief description of purpose of cruise

Experimental testing of technical innovations in fishing gears, hereby focusing on a more sustainable Sea Fishery Sector

10. Port of Call. Dates. Reasons

Zeebrugge 03/02/2020 Departure homeport. Start of research cruise RV Belgica 2020/3

Zeebrugge 07/02/2020 Arrival homeport. End of research cruise RV Belgica 2020/3

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° **2020/3**

2. Dates of cruise From **03 February** To **07 February 2020**

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.

   On July 14, 2011 the European Commission (COM) published the proposal for a new CFP to replace the current Regulation (EC) No 2371/2002. The main change is the introduction of a discard ban in the form of a gradual introduction of an obligation, starting from 2016. In the end, this should lead to a landing obligation for almost all species. Research on improving the selectivity of towed gears to both length and species composition is therefore necessary. In the coming years, the available shiptime on the research vessels will be used mainly for that purpose (mainly through COMBITUIG, a project funded by EFMZV and the fisheries sector).

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.
   Attach chart with list of positions (+ geographical references)

   See Annex 1 (Chart)
   See Annex 2

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

   fish

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

   8 m twin beam trawl

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

Dates Laying	Recovery	Description	Latitude	Longitude

7. Explosives **N.A.**

   (a) Type and Trade Name
   (b) Chemical content
   (c) Dept of trade class and stowage
   (d) Size
   (e) Depth of detonation
   (f) Frequency of detonation
   (g) Dates of detonation

8. Details and reference of

(a) Any relevant previous/future cruises

Belgica cruises 2001/08, 2001/16, 2001/28, 2001/33a, 2002/22 2003/01, 2003/28 and 2003/31, 2004/2a-b, 2004/27, 2004/30, 2005/06, 2005/09, 2006/03, 2006/25, 2007/02, 2007/26, 2007/27, 2008/03, 2008/29, 2009/03, 2009/10, 2009/32a-b, 2010/02a-b; 2010/31a-b, 2011/04, 2011/10, 2011/31a-b, 2012/05, 2012/11, 2012/5, 2012/11, 2012/28, 2012/32, 2013/10, 2013/25, 2013/32, 2014/05, 2014/23, 2014/30, 2015/4, 2014/24, 2015/04, 2015/11, 2016/02, 2016/04, 2017/32, 2017/36, 2018/36, 2018/3ab, 2018/28ab, 2019/04, 2019/10, 2019/31ab, 2020/11, 2020/24, 2020/31

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

- **Bayse, S.M., Herrmann, B., Lenoir, H., Depestele, J., Polet, H., Vanderperren, E., Verschueren, B., 2016. Could a T90 mesh codend improve selectivity in the Belgian beam trawl fishery? Fish Res. 174, 201-209.**
- **Depestele, J., Vandemaele, S., Vanhee, W., Polet, H., Torreele, E., Leirs, H. and Vincx, M., 2011. Quantifying causes of discard variability: an indispensable assistance to discard estimation and a paramount need for policy measures. ICES Journal of Marine Science, special issue on fisheries dependent information.**
- **Depestele, J., Polet H., 2013. Maakt de boomkor een kans als het teruggooiverbod wordt ingevoerd? Kan een scheidingspaneel hierbij helpen? Rederscentrale, Februari, 16-17.**
- **Depestele, J., Buyvoets, E., Calebout, P., Desender, M., Goossens, J., Lagast, E., Vuylsteke, D., Vanden Berghe, C., 2014a. Calibration tests for identifying reflex action mortality preditor reflexes for sole (Solea solea) and plaice (Pleuronectes platessa): preliminary results. 158: -30.**
- **Depestele, J., Desender, M., Benoît, H.P., Polet, H., Vincx, M., 2014b. Short-term survival of discarded target fish and non-target invertebrate species in the "eurocutter" beam trawl fishery of the southern North Sea. Fish Res. 154, 82-92.**
- **Depestele, J., Rochet, M.J., Dorémus, G., Laffargue, P., Stienen, E.W.M., 2016. Favorites and leftovers on the menu of scavenging seabirds: modelling spatiotemporal variation in discard consumption. Can. J. Fish. Aquat. Sci. 1-14.**
- **Desender, M., Chiers, K., Polet, H., Verschueren, B., Saunders, J., Ampe, B., Mortensen, A., Puvanendran, V. and Decostere, A. 2016. Short-term effect of pulsed direct current on various species of adult fish and its implication in pulse trawling for brown shrimp in the North Sea. Fisheries Research 179: 90-97.**
- **Fonteyne, R. and Polet, H., 2002. Reducing the benthos by-catch in flatfish beam trawling by means of technical modifications. Fisheries Research, 55 (1-3), 2002, pp. 219-230**
- **Fonteyne, R., Polet, H. & Depestele, J. (2005). Mitigation of the environmental impact of beam trawls. in: Proceedings of the Seventh International Workshop on Methods for the Development and Evaluation of Maritime Technologies. Busan, Korea, 23-26 November 2005.**
- **Maleš, J., Vincx M., Depestele J., 2011. THE POTENTIAL OF GEAR MODIFICATIONS TO IMPROVE SPECIES SELECTIVITY OF BEAM TRAWLS. Master thesis submitted for the partial fulfillment of the title of Master of Science in Marine Biodiversity and Conservation, Within the ERASMUS MUNDUS Master Programme EMBC.**
- **Polet, H, Vanderperren E., 2013. "ADVIS II - EEN OVERZICHT VAN EXPERIMENTEN MET DE ALTERNATIEVE BOOMKOR", onderdeel ADVIS II rapport (VIS/09/A/04/Div, 0157TECH/2013/03b)**
- **Rapportering TECHVIS - selectiviteit (scheidingspaneel) in preparation**
- **Rapportering TECHVIS - selectiviteit (ePRB) in preparation**

- **Soetaert, M., Lenoir, H., Verschueren, B., 2016. Reducing bycatch in beam trawls and electrotrawls with (electrified) benthos release panels. ICES Journal of Marine Science: Journal du Conseil.**
- **Sotillo, A., Depestele, J., Courtens, W., Vincx, M., Stienen, E.W.M., 2014. Discards consumption by Herring gulls Larus argentatus and Lesser Black-backed gulls Larus fuscus off the Belgian coast in the breeding season. Ardea 102, 195-205.Stouten, H.; Heene, A.; Gellynck, X., and Polet, H., 2011. Policy instruments to meet fisheries management objectives in Belgian fisheries. Fisheries Research 111 (2011) 8- 23**
- **Uhlmann, S.S., Theunynck, R., Ampe, B., Desender, M., Soetaert, M., Depestele, J., 2016. Injury, reflex impairment, and survival of beam-trawled flatfish. ICES Journal of Marine Science: Journal du Conseil 73, 1244-1254.**
- **Van Craeynest, K., Polet, H., Depestele, J., Stouten, H., Verschueren, B., 2013. ADVIS II: alternatieven voor de boomkorvisserij. 134: 1-172.**
- **Verschueren, B.; Lenoir, H.; Soetaert, M.; Polet, H. 2019. Revealing the by-catch reducing potential of pulse trawls in the brown shrimp (*Crangon crangon*) fishery. *Fish. Res. 211*: 191-203.**

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.

United Kingdom

- Thomas Catchpole
  Centre for Environment, Fisheries & Aquaculture Science (CEFAS)
  Pakefield Road, Lowestoft, Suffolk, NR33 0HT
  Tel: +44 (0)1502 527793; fax: +44 (0) 1502 513865; Alg Tel: 01502 562244
  Thomas.catchpole@cefas.co.uk

- Peter Randall
  Centre for Environment, Fisheries & Aquaculture Science (CEFAS)
  Applied Fisheries Science & Technology
  Pakefield Road, Lowestoft, Suffolk, NR33 0HT
  Tel: +44 (0)1502 524527, Mob: +44 (0)7770 745148
  Peter.randall@cefas.co.uk

FRANCE

- Pascal Larnaud
  Ifremer
  Laboratoire de Technologie et de Biologie Halieutique (PDG-RBE-STH-LTBH)
  Station de Lorient - 8, rue François Toullec - 56100 Lorient
  Tel: +33 (0)2 97 87 38 41
  Fax : +33 (0)2 97 87 38 38
  pascal.larnaud@ifremer.fr

- Benoit Vincent
  Ifremer
  Laboratoire de Technologie et de Biologie Halieutique (PDG-RBE-STH-LTBH)
  Station de Lorient - 8, rue François Toullec - 56100 Lorient
  Tel: +33 (0)2 97 87 38 04
  Fax : +33 (0)2 97 87 38 38
  benoit.vincent@ifremer.fr

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 1 month by request to the chief scientist

Part C: SCIENTIFIC EQUIPMENT

COASTAL STATE : **UNITED KINGDOM**

(Indicate "YES" or "NO")

LIST SCIENTIFIC WORK BY FUNCTION 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	DISTANCE FROM COAST		
				WITHIN 12 NMS	BETWEEN 12-200 NMS	CONTINENTAL SHELF WORK ONLY BEYOND 200 NM BUT WITHIN THE CONTINENTAL MARGIN
8 m beam trawl	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**

Part C: SCIENTIFIC EQUIPMENT

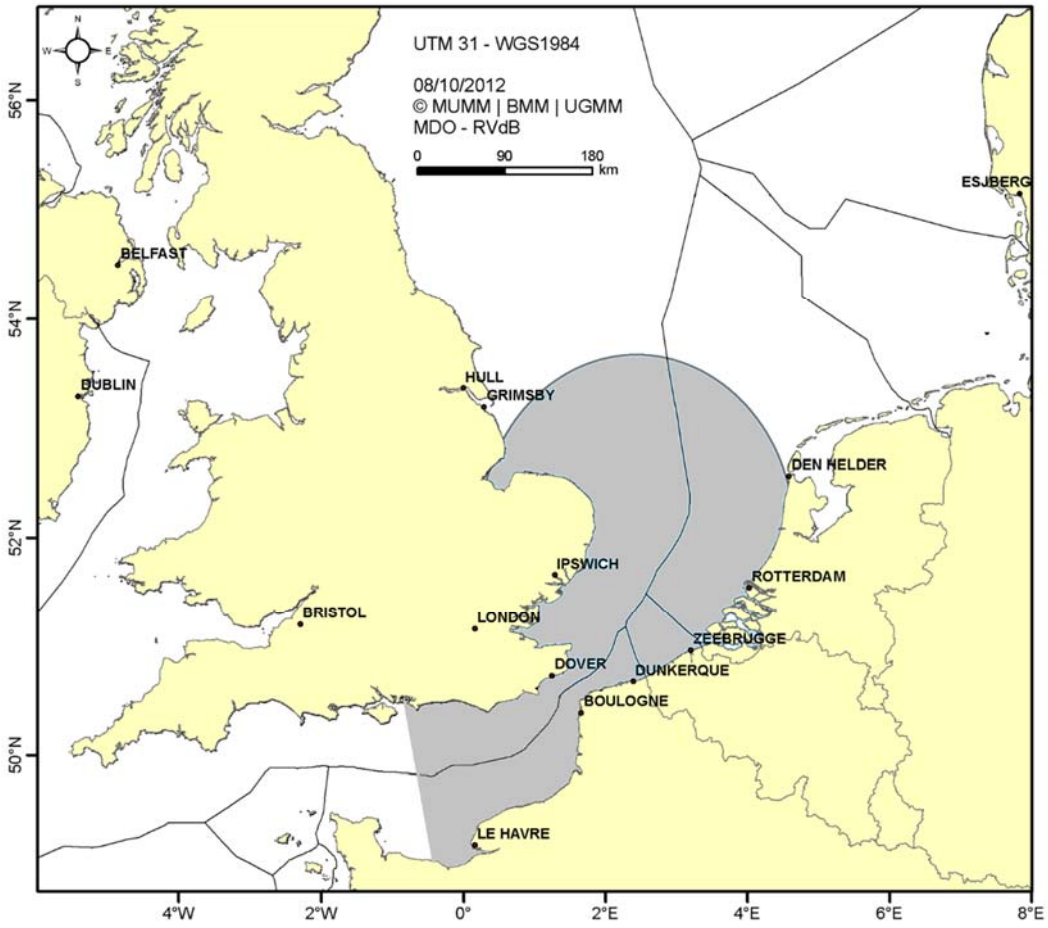
COASTAL STATE : **FRANCE**

(Indicate "YES" or "NO")

LIST SCIENTIFIC WORK BY FUNCTION 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	DISTANCE FROM COAST		
				WITHIN 12 NMS	BETWEEN 12-200 NMS	CONTINENTAL SHELF WORK ONLY BEYOND 200 NM BUT WITHIN THE CONTINENTAL MARGIN
8 m beam trawl	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**

Annex 1:

Belgica campaigns 2020/3: chart



ANNEX 2

RV Belgica research cruise 2020/3: coordinates of cruise

The fishing grounds are located in Belgian, UK and French waters, mainly in the southern North Sea and (to a lesser extent) in the eastern English Channel. The exact location of the fishing grounds can't be determined in advance due to the migration of the different target species and the unpredictability of future weather conditions. However, the week before embarking communication is planned to all parties involved concerning the most probable fishing grounds for the research cruise.