NOTIFICATION OF PROPOSED RESEARCH CRUISE

Part A: GENERAL

1. Name of research ship: RV Pelagia **Cruise number:** 64PE437

2. Cruise dates: 10-22 May 2018

3a. Operating authority: NIOZ Royal Netherlands Institute for Sea Research
Telephone: (+31) (0)222-369300
Telefax: (+31) (0)222-319674

3b. Operating agent: NIOZ Royal Netherlands Institute for Sea Research
Telephone: (+31) (0)222-369300
Telefax: (+31) (0)222-319674

4. Owner: NIOZ Royal Netherlands Institute for Sea Research

5. Particulars of ship:

name:	Pelagia
nationality:	Dutch
overall length:	66.00 meters
maximum draught:	4.00 meters
nett tonnage:	1553 NRT
propulsion:	2 diesel electric Elliot White Gill Bow Truster
call sign:	PGRQ
IMO nr:	9001461

6. Crew:

name of master:	J.C. Ellen / P. Kuijt
number of crew:	11

7. Chief scientist: name: Dr Furu Mienis
addresses: P.O. Box 59, 1790 AB Den Burg, NL
telephone: +31222369391
e-mail address: furu.mienis@nioz.nl

8. Geographical area in which the ship will operate:
(with reference in latitude and longitude)
Whittard canyon complex 47-49°N/9.5-11.5°W

9. Brief description of purpose of cruise:
The planned cruise serves projects funded by the Dutch national Science Foundation (NWO). The cruise will focus on particle transport and distribution in the Whittard submarine canyon complex (most Eastern branch). Work will focus on in situ observations by benthic observatories, water column observations and water/bottom sampling.

10.Names and dates of intended ports of call:
Embarkation 10 May 2018 Dingle, Ireland
Disembarkation 22 May 2018 Texel, The Netherlands

11.Any special logistic requirements at ports of call:

No

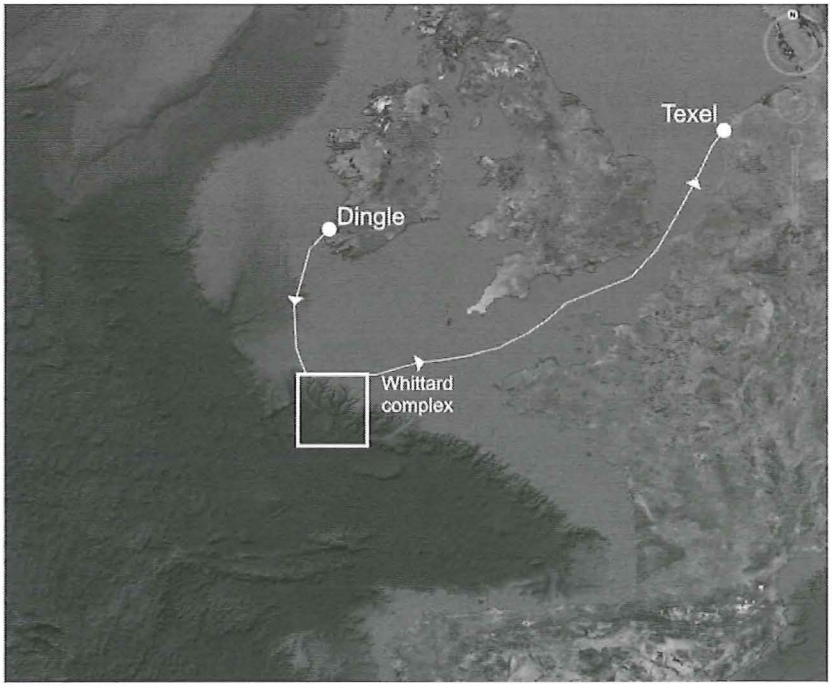
Part B: DETAIL

1. **Name of research ship:** RV Pelagia

2. **Cruise dates:** 10-22 May 2018

3. **Purpose of research and general operational methods:**
Main aim of this cruise is to establish a process based understanding of the role of submarine canyons in deep-sea carbon pathways.
We will focus on the identification of particle transport processes and quantity and type of particles that are transported, which will be achieved by collecting in-situ hydrodynamic data over appropriate time scales. In addition we will focus on fluxes and accessibility of C_{org} within a canyon, the relation to benthic and pelagic faunal distribution patterns and their role in remineralisation. During the cruise deep-sea benthic observatories equipped with novel instruments will be deployed to capture physical processes that govern particle transport. Particle fluxes and biogeochemical properties will be determined to distinguish between fresh and refractory carbon. These will be related to community respiration of biodiversity hotpots within canyons to establish remineralisation rates. Samples will be collected along the thalwegs of branches of the Whittard canyon and for comparison on the adjacent open slopes. Research during this cruise will focus on the most Eastern branch of the complex and the Explorer Canyon. Work will focus on in situ observations by benthic observatories, water column observations and water/bottom sampling. During the cruise two moorings and one lander will be recovered and redeployed at later to be defined stations. Short term lander deployments will be carried out to measure near-bed environmental conditions along the canyon thalweg as well as on the adjacent open slopes.

4. **Attach chart showing (on an appropriate scale) the geographical area of the intended work, positions of intended stations/hydrographic sections:**



5a. Type of samples required:
Water, sediment, fauna

5b. Methods by which samples will be obtained (including dredge/core/drill techniques):

Suspended particulate matter	CTD
Nutrients	CTD
(e)DNA	CTD
Sediment	Mono corer
Sediment/fauna	Box corer
Sediment	Piston corer
Near-bed data/samples	Landers/Moorings
Mapping	Multibeam

6. Details of moored equipment:

Recovery moored equipment Whittard Canyon			
Mooring1	48.387°N/-9.845°W	May 2017	Summer 2018
Mooring2	48.467°N/-9.940°W	May 2017	Summer 2018
Lander	48.377°N/-10.030°W	May 2017	Summer 2018

All equipment is fully submerged.

7. Explosives:
-

8. Detail and reference of:
a. Any relevant previous/future cruises:
A cruise with the RV Pelagia was carried out in May 2017 in the same research area.

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

9. Names and addresses of scientists of the coastal state in whose waters the proposed cruise takes place with whom previous contact has been made:
We have been in contact with colleagues from NOCS (research group of Dr Veerle Huvenne). They will actively participate in the planned cruise.

10. State:

a. Whether visits to the ship in port by scientist of the coastal state concerned will be acceptable: yes. We will have a port call in Dingle, Ireland.

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. A colleague of the NOCS will participate in the upcoming cruise.

c. When research data from intended cruise is likely to be made available to the coastal state and if so, by what means: Cruise data will be submitted to the National Oceanographic Data Center end of 2018. Results of the cruises will be published in peer reviewed scientific journals (preferentially open access) and published data will be stored in databases (e.g. Pangea).

Cruise Reports are available on request and will be distributed among appropriate foreign agencies.

COASTAL STATE: United Kingdom

SCIENTIFIC EQUIPMENT

11. Complete the following table - include a separate copy for each coastal state (indicate "Yes" or "No" if applicable)

Marine scientific equipment used	**water depth (m)**	**fisheries research**	**distance of research to coast in nautical miles**			
				3-12	12-50	50-200
Moorings	1700-2000	no	> 12	No	No	Yes
Landers	500-3000	no	> 12	No	No	Yes
Box cores	200-3500	no	> 12	No	No	Yes
CTD	200-3500	no	> 12	No	No	Yes
Tethered video	200-3500	no	> 12	no	no	yes

List of intended sampling stations during Pelagia cruise

Exact sampling locations will be defined when at sea. Main focus during the cruise will be on the most eastern branch of the Whittard Canyon Complex, the Explorer Canyon and the adjacent open slopes. Two moorings and 1 lander will be recovered at locations described above.