NOTIFICATION OF PROPOSED RESEARCH CRUISE

Part A: GENERAL

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

2. **Cruise dates:** 2-31 July 2007.

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

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

4. **Owner:** Royal Netherlands Institute for Sea Research (NIOZ)

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

6. **Crew:**

name of master:	J. Ellen/
number of crew:	10

7. **Chief scientist:**

name:	Dr. C. Brussaard
addresses:	Royal Netherlands Institute for Sea Research P.O. Box 59 1790 AB Den Burg
telephone:	(+31) (0)222-369300/
telefax:	(+31) (0)222-319674
e-mail address:	corina.brussaard@nioz.nl

8. **Geographical area in which the ship will operate: North Sea, 4°W-9°E and 61°N-49°N.**
(with reference in latitude and longitude)

9. **Brief description of purpose of cruise:**

This cruise with the R/V *Pelagia* is for work in the North Sea in July 2007. This cruise track (starting at station number 1 and going to number 24, with the crossed stations indicating process stations) coast will allow us to study and compare the extent to which viruses control the abundance and contribution of *M. pusilla* to the total phytoplankton community, as well as to the pelagic food web. For France and the Skagerrak we known that relative high abundances of *M. pusilla* are reported during June-July. No detailed information is available on the importance of *M. pusilla* and its specific viruses for the English side of the North Sea, nor for the Danish and Dutch waters. A central North Sea station will be taken along for comparison. The cruise plan is involves both sampling of the water column and the upper sediment. The latter because it has been recently shown that the upper sediment can act as a reservoir for pelagic algal viruses. We like to be the first testing this for our model species, as well that this has to our knowledge not been done before in the North Sea.

The project is funded through the Netherlands Organisation for Scientific Research (NWO) and the NIOZ

10. **Names and dates of intended ports of call: -**

1 - 2 July 2007 Brest, France
31 July Texel, Netherlands

11. **Any special logistic requirements at ports of call:**

None

Part B: DETAIL

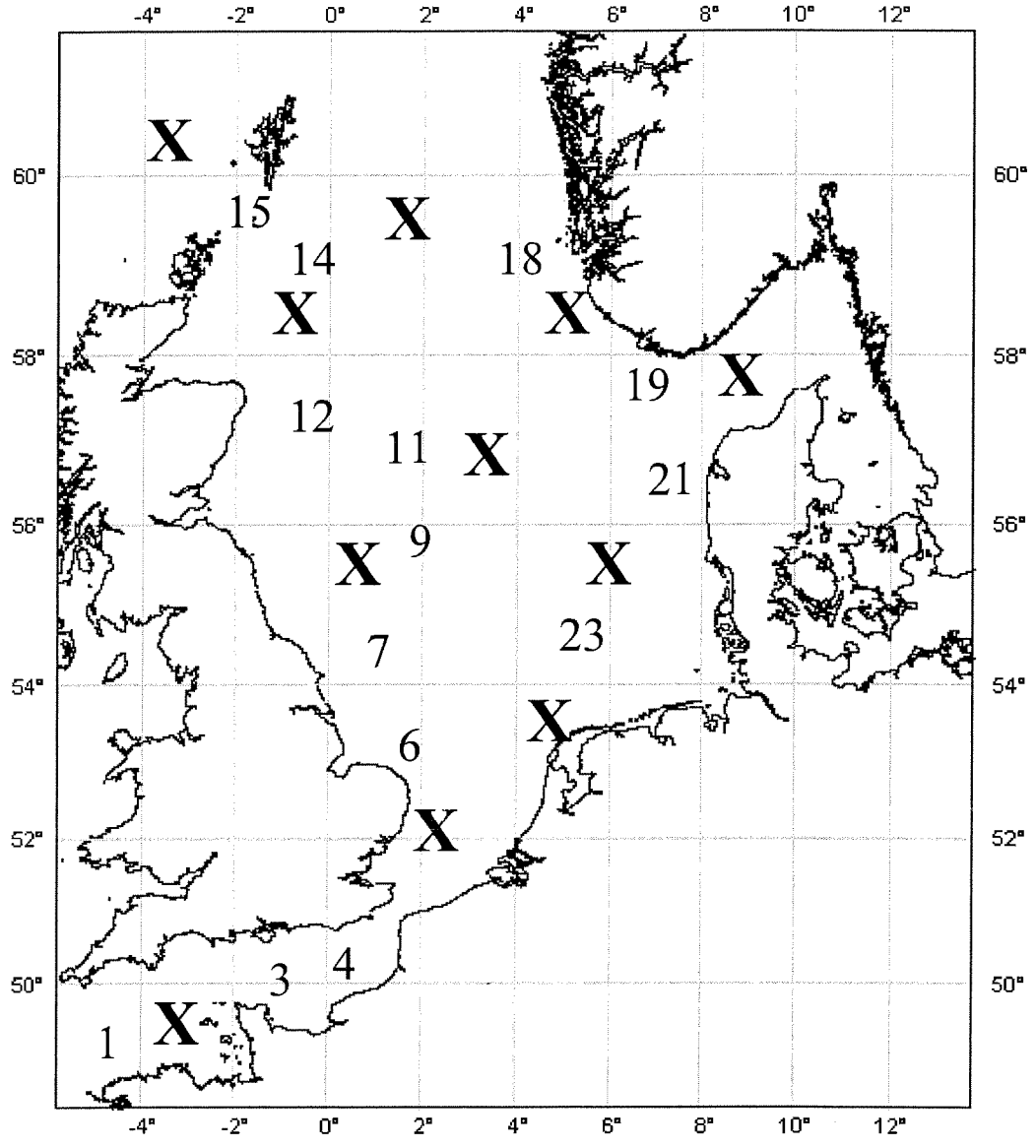
1. **Name of research ship:** RV Pelagia

2. **Cruise dates:** 2-31 July 2007

3. **Purpose of research and general operational methods:**

Study viral control of the generally abundant but never blooming picophytoplankter *Micromonas pusilla* to the total phytoplankton community, as well as to the pelagic food web, and compare this with more traditional loss factor such as grazing. For France and the Skagerrak we known that relative high abundances of *M. pusilla* are reported during June-July. No detailed information is available on the importance of *M. pusilla* and its specific viruses for the English side of the North Sea, nor for the Danish and Dutch waters. A central North Sea station will be taken along for comparison. The cruise plan is involves both sampling of the water column and the upper sediment. The latter because it has been recently shown that the upper sediment can act as a reservoir for pelagic algal viruses. We like to be the first testing this for our model species, as well that this has to our knowledge not been done before in the North Sea. Growth (production) and mortality (grazing and viral lysis) will be performed on the process stations together with the more basic variables; the other stations will only be samples for abundance of algae, grazers and microbes; diversity of the algal, bacterial and viral community and level one variables such as nutrients, salinity and temperature. Sampling gear will involve mainly CTD and box core. Operational methods upon sampling: (ultra)filtration to concentrate samples for diversity analysis, direct counting, fixation of samples for analysis at home lab, primary and secondary production and mortality assays, autoanalysis for nutrient concentrations.

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 samples and upper sediment samples

5b. Methods by which samples will be obtained (including dredge/core/drill techniques): CTD rosette sampling, aquaflow pump system of the ship, vertical nets for zooplankton, and box coring

6. **Details of moored equipment: -**

N/a

7. **Explosives:**

No explosives.

8. **Detail and reference of:**
   a. **Any relevant previous/future cruises:** MOMAP-2 cruise in July 2003 with R/V Pelagia, and MEC-SEFAS cruises through UK collaboration in 2007 and 2008

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

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:**
Project partner: Dr. N. Simon, Station Biologique , BP 74, 29680 Roscoff cedex, France
UK cruise: Dr. S. Painting, SEFAS, Pakeroad, Lowestoft, UK

Have had contact with Prof. G. Bratbak, Univ. Bergen, Bergen, Norway

10. **State:**

   a. **Whether visits to the ship in port by scientist 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.

   c. **When research data from intended cruise is likely to be made available to the coastal state and if so, by what means:**

The data will be made available through a scientific publication.

COASTAL STATE: France

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	**3-12**	**12-50**	**50-200**
CTD rosette	All	No	No	Yes	Yes	Yes
Aquapump	5 m	No	No	Yes	Yes	Yes
Multinets	all	No	No	Yes	Yes	Yes
Box core	bottom	No	No	Yes	Yes	Yes

List of intended sampling stations during Pelagia cruise

4 (stations 1-4 on map)

References

COASTAL STATE: UK

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	3-12	12-50	50-200
CTD rosette	All	No	No	Yes	Yes	Yes
Aquapump	5 m	No	No	Yes	Yes	Yes
Multinets	all	No	No	Yes	Yes	Yes
Box core	bottom	No	No	Yes	Yes	Yes

List of intended sampling stations during Pelagia cruise

12 (stations 5-16 on map)

References

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	3-12	12-50	50-200
CTD rosette	All	No	No	Yes	Yes	Yes
Aquapump	5 m	No	No	Yes	Yes	Yes
Multinets	all	No	No	Yes	Yes	Yes
Box core	bottom	No	No	Yes	Yes	Yes

List of intended sampling stations during Pelagia cruise

1 (stations 21 on map)

References