

APPLICATION FOR CONSENT TO CONDUCT MARINE SCIENTIFIC RESEARCH
IN AREAS UNDER NATIONAL JURISDICTION OF
ENGLAND

Date : 27 octobre 2005

1 - GENERAL INFORMATION

1.1. Cruise name and/or number : MABEMONO

1.2. Sponsoring institution :

Name : UMR CNRS 8013 ELICO

Address : Station marine de Wimereux, 28 avenue Foch, 62930 Wimereux, France

Phone : +33-321-99-29-00

Fax : +33-321-99-29-01

Director : Pr Jean Claude Dauvin

1.3. Scientist in charge of the project :

Name : Dr Jean-Marie Dewarumez

Address : Station marine de Wimereux, 28 avenue Foch, 62930 Wimereux, France

Phone : +33-321-99-29-19

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Email : jean-marie.dewarumez@univ-lille1.fr

1.4. Scientist from involved in the planning of the project :

Name :

Address :

Phone :

Fax :

1.5. Submitting officer:

Name : Jean-Xavier CASTREC

Address : Centre Ifremer de Brest – Secteur Programmation

B.P. 70 - 29280 PLOUZANE

FRANCE

Phone : +33 (0)2.98.22.44.53

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Email : jean.xavier.castrec@ifremer.fr

2 - DESCRIPTION OF THE PROJECT

2.1. Nature and objectives of the project :

Sampling of about 300 stations of macrobenthos in the Eastern Channel and the North Sea in the aim to describe the status of the marine macrobenthic habitats and to compare it with those described by Cabioch and coll. in the 70th.

2.2. Relevant previous or future research cruises :

RCP Manche (1972-1976)

MABEMACE (2007)

2.3. Previously published research data relating to the project :

Souplet A. & J.-M. Dewarumez, 1980. Les peuplements benthiques de la région de Dunkerque. *Cah. Biol. Mar.*, 21 : 23-39

Souplet A., Dewarumez J.-M., Glaçon R. & F. Smigielski, 1980. Distribution des peuplements benthiques littoraux en mer du Nord, du Cap Blanc-Nez à la frontière de Belgique. *C.R. Acad. Sci. Paris, Série D*, 290 : 627-630.

Davoult D., Dewarumez J.-M., Prygiel J. & A. Richard, 1988. Carte de peuplements benthiques de la partie méridionale de la Mer du Nord. 1 carte + 1 livret Français - Anglais.

Dewarumez J.-M., Prygiel J., Davoult D., Glaçon R. & A. Richard, 1988. Macrozoobenthic communities assemblages in the southern part of the North Sea (French Coast). *COST 647 Report.* : 103-106 + 1 carte.

Prygiel J., Davoult D., Dewarumez J.-M., Glaçon R. & A. Richard, 1988. Description et richesse des peuplements benthiques du littoral français de la Mer du Nord. *C.R. Acad. Sci. Paris*, 306 : 5-10..

Dewarumez J.-M., Davoult D., Sanvicente Anorve L.E. & S. Frontier, 1992. Is the « muddy heterogeneous sediment community » an ecotone between the « pebbles community » and the « *Abra alba* community » in the Southern Bight of the North Sea. *Neth. J. Sea Res.*, 30 : 229-238.

Heip C., Basford D., Crayemeersch J.A., Dewarumez J.-M., Dörge J., De Wilde P.A.J., Duineveld G., Eleftheriou A., Herman P.M.J., Nierman U., Kingston P., Künitzer A., Rachor E., Rumohr H., Soetart K. & T. Soltwedel, 1992. Trends in biomass, density and diversity of North Sea macrofauna. *ICES, J. mar. Sci.* 44 : 13-22.

Künitzer A., Duineveld G., Crayemeersch J.A., Dewarumez J.-M., Dörge J., De Wilde P.A.J., Eleftheriou A., Heip C., Herman P.M.J., Nierman U., Kingston P., Rachor E. & H. Rumohr, 1992. The benthic infauna of the North Sea : species distribution and assemblages. *ICES J. Mar. Sci.* 49 : 127-143.

Davoult D., Dewarumez J.-M. & S. Frontier, 1993. Long term changes (1979-1990) in three benthic communities (English Channel): use of factor analysis and rank frequency diagrams for studying structural development. *Neth. J. Aquat. Ecol.*, 27 : 415-426.

Luczak C., Dewarumez J.-M. & K. Essink, 1993. First record of the american Jack Knife Clam *Ensis directus* on the French coast of the North Sea. *J. Mar. Biol. Ass. U.K.*, 73 : 233-235.

Bachelet G., Desprez M., Davoult D. & J.-M. Dewarumez, 1997. Substrats meubles intertidaux-Atlantique, Manche et Mer du Nord. In: "Les biocénoses marines et littorales françaises des côtes Atlantique, Manche et Mer du Nord". Dauvin J.-C. (éd.). *IEGB/MNHN, Paris*, 376 p : 57-64.

Carpentier P., Dewarumez J.-M. & A. Leprêtre. 1997 Long term variability of the *Abra alba* community in the Southern Bight of the North Sea. *Oceanol. Acta*, 20 : 283-290.

Castric-Fey A., Girard-Descatoire A., Gentil F., Davoult D. & J.M. Dewarumez, 1997. Macrobenthos des substrats durs intertidaux et subtidaux. In: "Les biocénoses marines et littorales françaises des côtes Atlantique, Manche et Mer du Nord". Dauvin J.-C. (éd.). *IEGB/MNHN, Paris*, 376 p : 83-86.

Dewarumez J.-M. & D. Davoult 1997. Les biocénoses subtidales macrobenthiques en Manche orientale et en Mer du Nord. In: "Les biocénoses marines et littorales françaises des côtes Atlantique, Manche et Mer du Nord". Dauvin J.-C. (éd.). *IEGB/MNHN, Paris*, 376 p : 79-82.

Fromentin J.-M., Ibanez F., Dauvin J.-C., Dewarumez J.-M. & B. Elkaïm. 1997 Long-term variability of macrobenthic communities of the North-west french coast. *J. Mar. Biol. Ass. U.K.*, 77 : 287-310.

- Luczak C., Dewarumez J.-M. & J.-C. Dauvin, 2000. Influence of spatial scale of observation on temporal changes in biodiversity and trophic structures of fine sand communities from the English Channel and the southern North Sea. *ICES J. mar. Sci.*, 57 (5) : 1481-1487.
- Dauvin J.-C. & J.-M. Dewarumez, 2002. Patrimoine naturel de la Manche orientale et du sud de la mer du Nord : invertébrés benthiques et peuplements macrobenthiques sublittoraux. Actes du colloque « Qualité des eaux : objectifs atteints ? », Wimille, décembre 2000 : 9-27.
- Davoult D. & J.-M. Dewarumez, 2002. L'utilisation de organismes benthiques pour l'évaluation de la qualité du milieu marin. Actes du colloque « Qualité des eaux : objectifs atteints ? », Wimille, décembre 2000 : 57-66.
- Desroy N., Bellan-Santini D., Deboudt P. Dewarumez J.-M., & C. Meur-Ferec, 2002. Sensibilisation et éducation à l'environnement littoral. In : Dauvin J.-C. (coord.) Gestion intégrée des zones côtières : outils et perspectives pour la préservation du patrimoine naturel. *Patrimoines Naturels*, 57 : 265-271.
- Dewarumez J.-M., Deboudt P., Desroy N. & C. Meur-Ferec, 2002. Patrimoine, particularités et richesse patrimoniale de la Côte d'Opale. In : Dauvin J.-C. (coord.) Gestion intégrée des zones côtières : outils et perspectives pour la préservation du patrimoine naturel. *Patrimoines Naturels*, 57 : 215-225.
- Desroy N., Warembourg C., Dewarumez J.-M. & J.-C. Dauvin, 2003. Macrobenthic resources of the shallow soft-bottom sediments in the Eastern English Channel and the northern North Sea. *ICES J. Sea Res.*, 60 : 120-131.
- Vallet C. & Dauvin, J.C., 2003. Cartographie et proposition de gestion des habitats marins du site NATURA 2000. NPC Rapport, 27 pp. (Collaboration)
- Rees H., Cochrane S., Crayemeersch J., De Kluiver M., Degreer S., Desroy N., Dewarumez J.-M., Duineveld G., Essink K., Hillewaert H., Kilbride R., Krönke I., Nehmer P., Rachor E., Reib H., Robertson M., Rumohr H., Van den Berghe E. Van Hoey G, 2004. The North Sea Benthos Project : planning, management and objectives. *ICES CM*.
- Carpentier A., C. Martin , S. Vaz , F. Coppin , P. Koubbi , A. Lefebvre , J. Maeden , M. Walkey , S. Harrop , Z. Kemp , N. Desroy , J.-C. Dauvin , J.-M. Dewarumez & P.P. E , 2004. Eastern Channel Habitats Atlas for marine Resources Management, Interreg IIIA project. Poster présenté au symposium scientifique de l'ICES, septembre 2004, Vigo, Espagne.

3 - METHODS AND MEANS TO BE USED

3.1. Particular of vessel

Name : **Côtes de la Manche**
Nationality : **French**
Owner : **CNRS**
Operator : **CNRS**
Overall length : **24.90 m**
Maximum draught : **3,6 m**
Net tonnage : **230** Gross tonnage :
Propulsion : **DEUTZ 1300CV at 1650 rpm**
Cruising speed : **10 Kt** Maximum speed : **12 Kt**
Call sign : **FQBE**
Method and capability of communication (including telex, frequencies) :
Tél: +33 673-87-18-83, +33-687-70-69-37
Tél satellite 871-762-28-02-54
Fax satellite 871-762-28-02-52
Name of master : **PAROT or LE BOURHIS**
Number of crew : **6 or 7**
Number of scientists on board : 6 or 7

3.2. Aircraft or other craft to be used in the project : **None**

3.3. Particulars of methods and scientific instruments :

Types of samples and data	Methods to be used	Instruments to be used
macrobenthos sampling	Dredging	Rallier du Baty dredge
		Hamon grab
		Van Veen grab
Megabenthos sampling	trawling	Beam trawl
Hydrology	Vertical profile	CTD Seabird SBE25

3.4. Indicates whether harmful substances will be used :

Formalin 3%

3.5. Indicate whether drilling will be carried out :

none

3.6. Indicate whether explosives will be used :

none

4 - INSTALLATIONS AND EQUIPMENTS

Details of installations and equipments (dates of laying, servicing, recovery, exact locations and depth)

None, only sampling

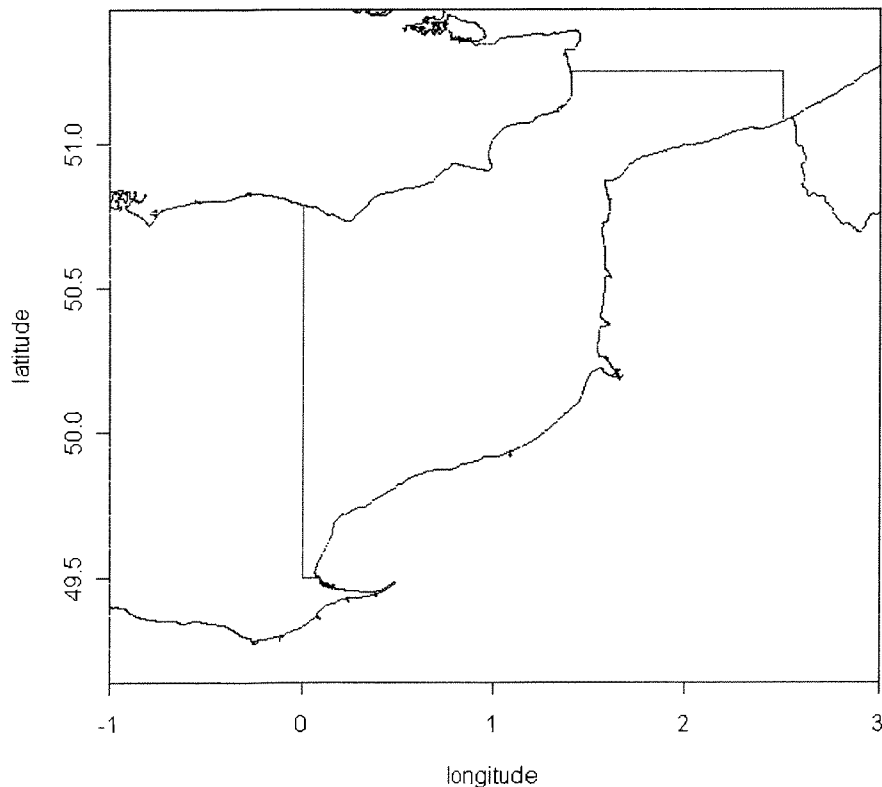
5 - GEOGRAPHICAL AERAS

5.1. Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude) :

English waters between 000° and $002^{\circ} 30'$ E and $51^{\circ} 15'$ N

5.2. Attach chart(s) at an appropriate scale showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment :

Délimitation de la zone d'étude



coordinates of the sampling stations : each crossing of 5' in latitude and longitude from $49^{\circ} 50' N - 000^{\circ} 00'$

6 - DATES

6.1 Expected dates of first entry into and final departure from the research area of the research vessel :

entry date : May 23th

departure date : July 22nd

6.2 Indicate if multiple entry is expected :

in two periods (I) May 23th to 31st and (II) July 13th to 22nd

7 - PORTS CALLS

7.1. Dates and names of intended ports of call in

(I) Dover and/or Folkestone

(II) Newhaven

7.2. Any special logistical requirements at ports of call :

only berthing

7.3. Name/Address/Telephone of shipping agent (if available)

8 - PARTICIPATION

8.1. Extent of which will be enabled to participate or to be represented in the research project :

8.2. Proposed dates and ports for embarkation/disembarkation :

unknown yet, initial embarkation and final disembarkation of both cruise (I) and (II) in Boulogne sur mer.

Change of scientific staff

For cruise (I) on May 26th in Dover or Folkestone

For cruise (II) on July 18th in Newhaven

Change of crew

For cruise (I) : none

For cruise (II) on July 16th in Newhaven

9 - ACCESS TO DATA, SAMPLES AND RESEARCH RESULTS

9.1. Expected dates of submission to CNRS of preliminary reports which should include the expected dates of submission of the final results :

end of 2007

9.2. Proposed means for access by the scientific to data and samples :

databases : Marine Station of Wimereux, North Sea Benthos Project

9.3. Proposed means of making research internationally available :

scientific publications

ANNEX

List of the scientific team

On board

Dewarumez Jean Marie CNRS, Wimereux, France
Desroy Nicolas Univ Lille, Wimereux, France
Foveau Aurélie Univ Lille, Wimereux, France
Dauvin Jean-Claude Univ Lille, Wimereux, France
Luczak Christophe IUFM Lille, Wimereux, France
Gentil Frank Univ Paris 6, Roscoff, France
Thiébaud Eric Univ Paris 6, Roscoff, France
Lecuyer Eric CNRS, Wimereux, France
Menu Dominique CNRS, Wimereux, France
Le Roy Didier IFREMER, Boulogne, France
Le Bot Sophie Univ Rouen, Rouen, France
Soune Seyne Nelly CNRS, Compiègne, France
4 Master students (Univ Caen, Lille and Paris 6)

Collaborations

Cabioch Louis CNRS, Roscoff, France
Retière Christian MNHN, Dinard, France
Carpentier André IFREMER, Boulogne, France
Koubbi Philippe, Univ Littoral, Boulogne France
Lafite Robert, Univ Rouen, Rouen, France
Rees Hubert, CEFAS, Lowestoft, England
Eastwood Paul CEFAS, Lowestoft, England