

**APPLICATION FOR THE CONSENT TO CONDUCT MARINE SCIENTIFIC  
RESEARCH IN AREAS UNDER NATIONAL JURISDICTION OF THE UNITED  
KINGDOM**

Date: 05/04/07

**1. General information**

**1.1 Cruise name and/or number:** CV0711

**1.2 Sponsoring institution:** Marine Institute

**Name:** Marine Institute

**Address:** Rinville  
Oranmore  
Co. Galway  
Ireland

**Name of Chief Executive:** Dr. Peter Heffernan

**1.3 Scientist in charge of the project:**

**Name:** Dr. N Ó Maoiléidigh

**Address:** Marine Institute  
Newport  
Co. Mayo

**Telephone:** 00353 98 42300

**Telefax:** 00353 98 42340

**1.4 Scientist(s) from UNITED KINGDOM involved in the planning of the project**

**Name(s):** Dr. R. Shelton  
**Address:** Atlantic salmon Trust  
Suite 3/11  
King James VI Business Centre  
Friarton Road  
Perth PH2 3DG  
Scotland

**1.5 Submitting officer:**

**Name and address:** Bernadette Ni Chonghaile  
Marine Institute,  
Rinville,  
Oranmore,  
Galway

**Country:** Ireland

**Telephone:** 00 353 91 387470

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## 2. Description of project (Attach additional pages as necessary)

### 2.1 Nature of objectives of the project:

#### Experimental trawling for Atlantic salmon post-smolts to :

- To test a new pelagic trawl in open waters
- To train and familiarise technical and support staff on the operation and deployment of the trawl for further surveys in 2008 and 2009.
- To obtain samples of post-smolts for biological and genetic analyses.
- To relate run timing, timing of migration, swimming speed, growth etc to oceanographic parameters.

### 2.2 Relevant previous or future research cruises:

Post smolt trawls carried out by Fisheries Research Services (Aberdeen) in 2006 used similar techniques (see references below).

### 2.3 Previously published research data relating to the project:

- Holm, M., Holst, J. C., and Hansen, L. P. 1996. Sampling Atlantic salmon in the NE Atlantic during summer: Methods of capture and distribution of catches. ICES CM 1996/M:12, 7 pp.
- Holm, M., Holst J. C., and Hansen, L. P. 2000. Spatial and temporal distribution of post-smolts of Atlantic salmon (*Salmo salar* L.) in the Norwegian Sea and adjacent areas. *ICES Journal of Marine Science*, 57: 955-964.
- Holm, M., Hansen, L. P., Holst, J. C., and Jacobsen, J. A. 2004. Atlantic salmon, *Salmo salar* L. In *The Norwegian Sea Ecosystem*, pp 315-356. Ed. by H.R. Skjoldal. Tapiracademic Press, Trondheim. 559 pp.
- Holm, M., Holst, J. C., Hansen, L. P., Jacobsen, J. A., ÓMaoiléidigh, N., and Moore, A. 2003. Migration and distribution of Atlantic salmon post-smolts in the North Sea and North East Atlantic. pp. 7-23. In *Salmon at the edge*. Ed. by D. Mills. Blackwell Science Ltd., Oxford. 307 pp.
- Holst, J. C. and McDonald, A. 2000. FISH-LIFT: A device for sampling live fish with trawls. *Fisheries Research*, 48: 87-91.
- Holst, J. C., Hansen, L. P., and Holm, M. 1996. Observations of abundance, stock composition, body size and food of postsmolts of Atlantic salmon in the NE Atlantic during summer. ICES CM/1996M:4, 15 pp.
- Holst, J. C., Shelton, R., Holm, M., and Hansen L. P. 2000. Distribution and possible migration routes of post-smolt Atlantic salmon in the North-east Atlantic. In *The ocean life of salmon. Environmental and biological factors influencing survival*, p. 65-74. Ed. by D. Mills. Fishing News Books, Blackwell Science Ltd., Oxford. 228 pp.

Jacobsen, J. A., Lund, R., Hansen, L. P., and O'Maoileidigh, N. 2001. Seasonal differences in the origin of Atlantic salmon (*Salmo salar* L.) in the Norwegian Sea based on estimates from age structures and tag recaptures. *Fisheries Research*, 52: 169-177.

Shelton, R. G. J., Turrell, W. R., MacDonald, A., McLaren, I. S., and Nicoll, N. T. 1997. Records of post-smolt Atlantic salmon, *Salmo salar* L., in the Faroe-Shetland Channel in June 1996. *Fisheries Research*, 31: 159-162.

Shelton, R. G. J., Holst, J. C., Turrell, W. R., MacLean, J. C., and MacLaren, I. S. 2000. Young salmon at sea. In *Managing wild Atlantic salmon. New challenges - new techniques*, p.12-23. Ed. by F. G. Whoriskey and K. F. Whelan, 5th Atlantic salmon symposium. 244 pp.

### 3. Methods and means to be used

#### 3.1 Particulars of vessel

**Name:** Celtic Voyager

**Nationality:** Irish

**Owner:** Marine Institute

**Overall length:** 31.5 Metres

**Maximum draught:** 3.85m

**Net tonnage:** 340

**Propulsion:** Wartsila UD25M5 (626 kW) ZF Marine Gearbox + Berg propeller

Van der Giessen Wing Nozzle

**Cruising speed:** 10Knots

**Call sign:** EI QN

**Method and capability of communication** – hf and VHF radio, GSM telephone, Mini m Satellite phone.

**Name of master:** TBC

**Number of crew:** 7

**Number of scientists on board:** 5

**3.2 Aircraft or other craft to be used in the project:** N/A

#### 3.3 Particulars of methods and scientific instruments

Types of samples and data	Methods to be used	Instruments to be used
Post-smolts,	Length, weight determination	Measuring board
Scales (aging and growth)	Scale removal (possibly otoliths also)	
Fin clip and other body	Placed in alcohol	

tissues (genetics),		
Stomachs	Analysed on board or stored in alcohol	
Bye-catch of herring and mackerel	Samples to be counted. Notes to be taken of associated predators observed	

**3.4 Indicate whether harmful substances will be used:**

No harmful substances to be used

**3.5 Indicate whether drilling will be carried out:**

No

**3.6 Indicate whether explosives will be used**

No

**4. Installations and equipment**

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

Single trawl pelagic net

**5. Geographical areas**

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

55 to 58 N, 8 to 15 W

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.

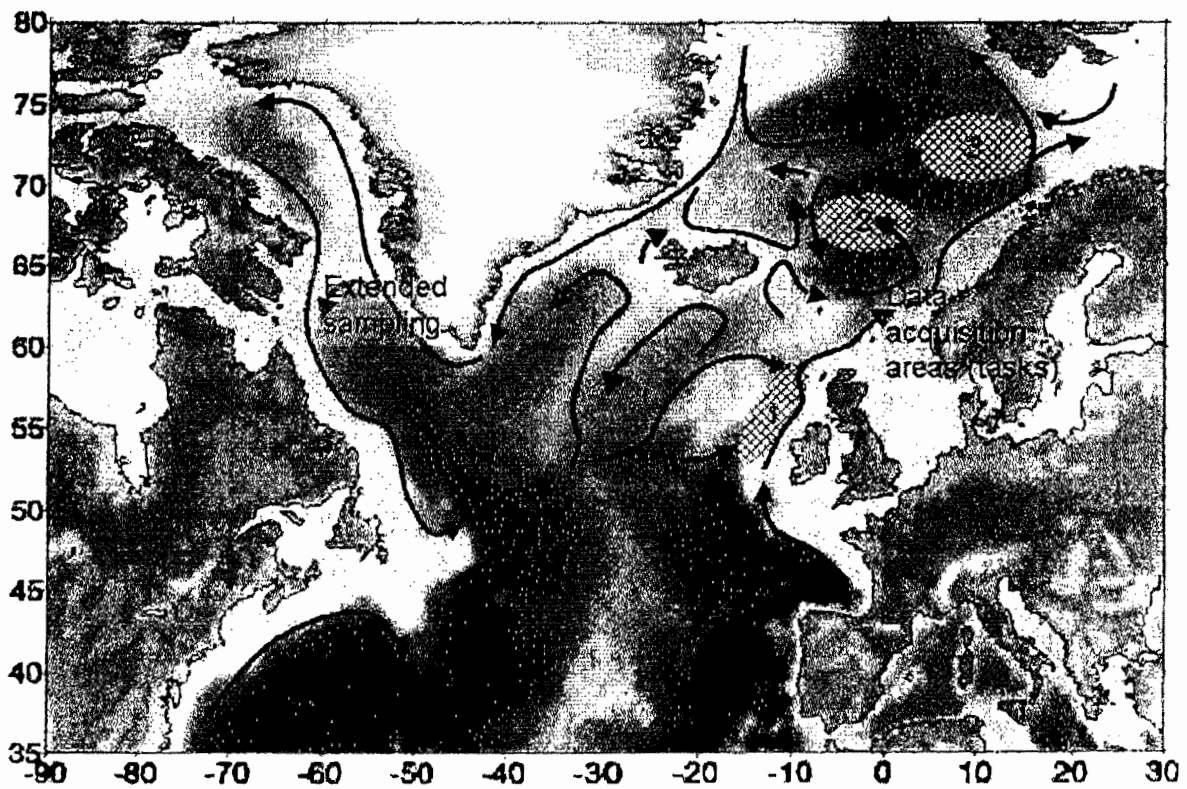


Figure 1 Location of proposed sampling (Area marked as 1) only

## 6. Dates

Expected dates of first entry into final departure from research area of the research vessel:  
7<sup>th</sup> May to 16<sup>th</sup> May

6.2 Indicate if multiple entry is expected:  
Yes

## 7. Port calls

7.1 Dates and names of intended ports of calls in UNITED KINGDOM:  
N/A

7.2 Any special logistical at ports of call:

7.3 Names/ Address / Telephone of shipping agent (if available)

## 8. Participation

8.1 Extent to which UNITED KINGDOM will be able to participate to be represented in research project:

The project is in collaboration with the Atlantic Salmon Trust, an Atlantic wide UK based organization.

8.2 Proposed dates and ports for embarkation / disembarkation:

## 9. Access to data, samples and research results

9.1 Expected dates of submission to UNITED KINGDOM preliminary reports which should include the expected dates of submission of the final results:  
Preliminary reports may 07  
Final report April 2008 07

9.2 Proposed means for access by UNITED KINGDOM to data and samples:  
UK scientist from AST will have full access to all data and samples

9.3 Proposed means to provide UNITED KINGDOM with assessment of data, samples and research results or provide assistance in their assessment or interpretation:

Results will form the basis of reports to the North Atlantic Salmon Conservation Organization (NASCO, which EU members states including UK are members of. Data will also be made available to UK scientists at the International Council for the Exploration of the Sea (ICES) Working Group on North Atlantic Salmon in April 2008.

**9.4 Proposed means of making research results internationally available:**  
AS ABOVE

### 10. Scientific Equipment

**COMPLETE THE FOLLOWING TABLE-  
SEPARATE PAGE FOR EACH COSTAL STATE:**

INDICATE YES OR NO

LIST SCIENTIFIC WORK BY FUNCTION Eg:	Water column including sediment sampling of the Seabed	Fishes research within fishing limits	Research concerning the natural resources of the continental shelf or its physical characteristics	DISTANCE FROM COAST		
				Within 12nms	Between 12-200nms	(Continental shelf work only)  Beyond 200nm but within the continental margin
TRAWLING ECHO SOUNDING WATER SAMPLING WATER SAMPLING						
WATER SAMPLING				No	Yes	No
PROFILING INSTRUMENTS				No	Yes	No
ABOVE WATER OPTICS AND PHOTOGRAPHY				No	Yes	No
Mid water Trawling				No	Yes	No

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(On behalf of the Principle Scientist)

Dated -----