

Application for Consent to conduct
Marine Scientific Research

Date: _12/02/2016

1. General Information

1.1 Cruise name and/or number: EVHOE 2016

1.2 Sponsoring Institution(s):IFREMER	
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer
Address:	155, rue Jean-Jacques Rousseau 92138 ISSY LES MOULINEAUX FRANCE
Name of Director:	François JACQ

1.3 Scientist in charge of the Project:	
Name:	Michèle SALAUN
Country:	FRANCE
Affiliation:	IFREMER
Address:	8, rue François TOULLEC 56100 Lorient FRANCE
phone:	+33 2 97 87 38 14
Fax:	+33 2 97 87 38 01

Email:	Michele.Salaun@ifremer.fr
Website (for CV and photo):	

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	Dr Brian Harley
Affiliation:	CEFAS Fisheries Laboratory
Address:	Lowestoff Suffolk NR33 OHT United Kingdom
Telephone:	direct) +44 (0) 1502 524254 +44 (0) 1502 513865
Fax:	
Email:	brian.harley@cefas.co.uk
Website (for CV and photo):	

2. Description of Project

2.1 Nature and objectives of the project:
<p>French Bottom Trawl Surveys in Bay of Biscay and Celtic Sea (survey code : EVHOE)</p> <p><i>a) Purpose of survey</i></p> <p>The main objectives of the survey are :</p> <ul style="list-style-type: none"> - to obtain abundance indices per age group and annual recruitment estimates for the sampled species ; - to build a reliable time series of those indices ; - to follow the evolution of the demographic structures of the main exploited

fish populations ;

- to map the spatio-temporal distribution of the fisheries resources per age group.

b) Area surveyed

This French survey began in 1987. The area was limited to 48°30' N in the north and to the northern margin of Gouf de Cap Breton in the south (ICES divisions VIIIh, VIIIa,b,c and d). In 1990, the survey area was extended towards the north (51°15' N) to cover the grounds of the Celtic Sea deeper than 100 meters (ICES divisions VIle,f,g,h and j).

c) Methodology

The GOV 36/47 bottom trawl is used with a 20 mm mesh codend liner. The trawl is deployed with plane oval trawl boards of 1300 kg and with 10-20 cm rubber discs on the footrope.

The haul duration is 30 minutes and the towing speed 4 knots. Trawling is carried out during day time only.

In the Bay of Biscay (ICES divisions VIIIa,b,c and d) and in the Celtic Sea (ICES divisions VIle,f,g,h and j), a stratified sampling scheme is used. The area is divided according to latitude into 5 blocks and the hauls were distributed in seven depth zones (15-30, 31-80, 81-120, 121-160, 161-200, 201-400, 401-600 m). 160 stations will be occupied at locations given in fig. 2.

Catch weight and catch numbers are recorded for all species, only selected finfish and shellfish are measured.

d) Extension of the study area in 1999 and 2000

Following the European contract DG XIV 98/057 " International Program of Standardised Bottom Trawl Surveys off Northwestern Europe", a comparative study of the different fish species catchabilities to the French/Irish and Irish/Scottish fishing boats/gears has been conducted in the Irish and U.K. waters (fig. 2). Following the SESITS program (1997-1998) involving the French, Spanish and Portuguese surveys, the whole study has led to the integration of the different data collected during surveys covering the area from Northern Scotland to the Strait of Gibraltar into a common international data base.

e) Improvement of knowledge on meso and bathy pelagic species

In 2001, 2002, 2003, 2007- 2011, 2013 several hauls using a pelagic trawl have been carried out in the northern part of Bay of Biscay and in 2014 in the south of Celtic sea at immersions above 1500 m, in order to collect

information on species which show a vertical migration during the night and can potentially be preys of marine mammals.

f) *Observations of fishing grounds*
 f) *Observations of fishing grounds*

The available datasets of habitat mapping in the Celtic Sea are very scarce. The Pagure sled could be used to add missing information. This tool is to be used to get qualitative information (photo and video) of the nature of the seafloor for the different strata visited during the survey. A module using a laser beam and video is used to acquire supplementary information on granulometry and seafloor structure.

2.2 If designated as part of a larger scale project, then provide the name of the project and the Organisation responsible for coordinating the project:

2.3 Relevant previous or future research projects:

The survey was conducted in the fourth quarter (October-November) of each year from 1987 to 1990, in 1992 and 1994, 1995, 1997-2014 and also in the second quarter (May-June) of 1988 and 1991. The survey is intended to be carried in the future at least in 2016 and 2017 as the objective is the construction and the maintaining a long time series.

2.4 Previous publications relating to the project:

		Nombre
1	Publications d'articles originaux dans des revues avec comité de lecture référencées dans JCR (<i>Journal Citation Reports</i>) (ajouter des lignes si nécessaire)	
	Année n+1 :	
	Année n+2 :	
	Année n+3 :	

	Année n+4 :	
	Année n+5 :	
	Année n+6 :	
	Année n+7 :	
	Total	76
2	Publications dans d'autres revues ou ouvrages scientifiques faisant référence dans le domaine	36
3	Publications électroniques sur le réseau Internet	
4	Publications sous forme de rapports techniques	30
5	Articles dans des revues ou journaux « grand public »	1
6	Communications dans des colloques internationaux	61
7	Communications dans des colloques nationaux	8
8	Nouvelles espèces (animales, végétales, microorganismes) décrites	1
9	Rapports de contrats (Union européenne, FAO, Convention, Collectivités ...)	13
10	Applications (essais thérapeutiques ou cliniques, AMM ...)	
11	Brevets	
12	Publications d'atlas (cartes, photos)	1
13	Documents vidéo-films	
14	DEA ou MASTER 2 ayant utilisé les données de la campagne	14
15	Thèses ayant utilisé les données de la campagne	14
16	Traitement des échantillons et des données Si en cours, préciser et donner les échéances	en cours
17	Transmission au SISMER des données acquises avec les moyens communs du navire (NB : cette transmission est systématique dans le cadre des navires gérés par Genavir) Transmission au SISMER de données autres que celles acquises avec les moyens communs du navire	Oui Oui
18	Transmission à d'autres banques de données	Oui
19	Transmission à d'autres équipes de données ou d'échantillons	Oui
200	Considérez-vous la publication des résultats terminée ? Si en cours, préciser et donner les échéances	en cours

Références bibliographiques

- R1 - De Cardenas E., O. Cendrero, J.C. Quero & M.H. Du Buit, 1988. Record of *Cyttopsis roseus* (Pisces, Zeiformes, Zeidae) North of 49 degree N, a new species for the Celtic Sea and a new record of *Chaunax pictus* (Pisces, Lophiiformes, Chaunacidae). *Cybium* 12 (2): 168-169.
- R1 - Du Buit M.H. & J.C. Quero, 1989. Extension of the known geographical area for three teleost species from the North-East Atlantic ocean. *Cybium* 13 (4): 388.
- R1 - Du Buit M.H., C. Ozouf Costaz & J.C. Quero, 1989. Records of *Cryptosaras couesi* and *Ceratias* sp. (Pisces, Lophiiformes, Ceratiidae), new species for the French slope of the Atlantic Ocean. Distribution in the north-eastern Atlantic. *Cybium* 13 (2): 192.
- R1 - Burgeot T., G. Bocquené, P. Truquet, L. Le Déan, J.C. Poulard, D. Dorel, A. Souplet & F. Galgani, 1993. The dragonet (*Callionymus lyra*) a target species used for evaluation of the biological effects of chemical contaminants on French coasts. *Mar. Ecol. Prog. Ser.* 97: 309-316.
- R1 - Bez N., J. Rivoirard & J.C. Poulard, 1995. Approche transitive et densité de poissons. *Cah. géostatistiques. Ecole des Mines, Paris* 5: 161-177.

- R1 - Quéro J.C. & O. Cendrero, 1996. Incidence de la pêche sur la biodiversité ichthyologique marine : le bassin d'Arcachon et le plateau continental. *Cybiurn* 20 (4): 323-356.
- R1 - Amara R., J.C. Poulard, F. Lagardère & Y. Désaunay, 1998. Comparison between the life cycles of two Soleidae, the common sole, *Solea solea*, and the thickback sole, *Microchirus variegatus*, in the Bay of Biscay (France). *Environmental Biology of Fishes* 53: 193-209.
- R1 - Pelletier D., 1998. Intercalibration of research survey vessels in fisheries: A review and an application. *Can. J. Fish. Aquat. Sci.* 55 (12): 2672-2690.
- R1 - Petitgas P., 1998. Biomass-dependent dynamics of fish spatial distributions characterized by geostatistical aggregation curves. *ICES J. Mar. Sci.* 55: 443-453.
- R1 - Quéro J.C., M.H. Du Buit & J.J. Wayne, 1998. Les observations de poissons tropicaux et le réchauffement des eaux dans l'Atlantique européen. *Oceanol. Acta* 21 (2): 345-351.
- R1 - Rochet M.J., 1998. Short-term effects of fishing on life history traits of fishes. *ICES Journal of Marine Science* 55: 371-391.
- R1 - Comillon P.A. & M.J. Rochet, 1999. Mixture models and comparative analysis of life history traits of teleost fishes. *C. R. Acad. Sci. Ser. 3 Sci. Vie* 322 (1): 71-74.
- R1 - Lundy C.J., Moran P., Rico C., Millner R., Hewitt G (1999) Macrogeographic population differentiation in oceanic environments: a case study of European hake (*Merluccius merluccius*), a commercially important fish. *Molecular Ecology*, 8, 1889-1898
- R1 - Moran P., Lundy C., Rico C (1999) Isolation and characterisation of microsatellite loci in European hake *Merluccius merluccius* (Merlucidae, Teleostei). *Molecular Ecology*, 8, 1352-1362
- R1 - Lundy C.J., Rico C., Hewitt G.M. (2000) Temporal and spatial genetic variation in spawning grounds of European hake (*merluccius merluccius*) in the Bay of Biscay. *Molecular Ecology*, 9, 2067-2079.
- R1 - Galgani F., J.P. Léauté, P. Moguedet, A. Souplet, Y. Vérin, A. Carpentier, H. Goraguer, D. Latrouite, D. Andral, Y. Cadiou, J.C. Mahé, J.C. Poulard & P. Nérison, 2000. Litter on the sea floor along European coasts. *Mar. Pollut. Bull.* 40 (6): 516-527.
- R1 - Blanchard F. & J. Boucher, 2001. Temporal variability of total biomass in harvested communities of demersal fishes. *Fish. Res.* 49: 283-293.
- R1 - Blanchard F., 2001. Fishing effects on the diversity dynamics of demersal fish communities. Comparative analysis of the role of the interactions between species in the Bay of Biscay and in the Gulf of Lion (France). *CYBIUM* 25 (3) : 293-294
- R1 - Blanchard F., 2001. The effect of fishing on demersal fish community dynamics : an hypothesis. *ICES J. Mar. Sci.* 58(3): 711-718.
- R1 - Blanchard, F., 2001. Dynamics of harvested demersal fish communities: analysis of the species diversity in the Bay of Biscay (Atlantic Ocean) and in the Gulf of Lions (Mediterranean Sea). *Aquat. Living Resour./Ressour. Vivantes Aquat.* Vol. 14, no. 1, pp. 29-40.
- R1 - Petitgas, P., 2001. Geostatistics in fisheries survey design and stock assessment: models, variances and applications. *Fish and Fisheries* 2, 231-249.
- R1 - Souissi, S., Ibanez, F., Ben Hamadou, R., Boucher, J., Cathelineau, A.C., Blanchard, F., Poulard, J.-C., 2001. A new multivariate mapping method for studying species assemblages and their habitats: example using bottom trawl surveys in the Bay of Biscay (France). *Sarsia* 86, 527-542.
- R1 - Poulard, J.-C., Léauté, J.-P., 2002. Interaction between marine populations and fishing activities: temporal patterns of landings of La Rochelle trawlers in the Bay of Biscay. *Aquat. Living Resour.* 15, 197-210.
- R1 - Rochet, M.-J., Péronnet, I., and Trenkel, V. M. 2002. An analysis of discards from the French trawler fleet in the Celtic Sea. *ICES Journal of marine Science*, 59: 538-552.
- R1 - Pelletier D, M. Verdoit M., R. Bellail, 2003. Are Commercial Logbook and Scientific CPUE Data Useful for Characterizing the Spatial and Seasonal Distribution of Exploited Populations? The Case of the Celtic Sea Whiting. (Sous presse: Aquatic Living Resources)
- R1 - Petitgas, P., Poulard, J.-C., Biseau, A., 2003. Comparing commercial and research survey catch per unit of effort: megrim in the Celtic Sea. *ICES J. Mar. Sci.* 60, 66-76.
- R1 - Poulard, J.-C., Blanchard, F., Boucher, J., Souissi, S., 2003. Variability in the demersal fish assemblages of the Bay of Biscay during the 1990s. *ICES Marine Science Symposia* 219, 411-414.
- R1 - Rochet, M.-J. and Trenkel, V. 2003. Which community indicators can measure the impact of fishing? A review and proposals. *Can. J. Fish. Aquat. Sci.*, 60: 86-99.
- R1 - Rochet, M. J., and Trenkel, V. M. 2005. Factors for the variability of discards: assumptions and field evidence. *Canadian Journal of Fisheries and Aquatic Sciences*, 62: 224-235.
- R1 - Trenkel, V., Rochet, M.-J., 2003. Performance of indicators derived from abundance estimates for detecting the impact of fishing on a fish community. *Can. J. Fish. Aquat. Sci.* 60, 67-85.

- R1 - Kacher, M. & Amara, R., 2004. Distribution and growth of 0-group European hake in the Bay of Biscay and Celtic Sea : a spatial and inter-annual analyses. *Fisheries Research*, Volume 71, Issue3, March 2005, Pages 373-378.
- R1 - Puillat, I., Lazure, P., Jégou, A.-M., Lampert, L. and Miller, P. I. 2004. Hydrographical variability on the French continental shelf in the Bay of Biscay, during the 1990s. *Continental Shelf Research*, 24: 1143-1163.
- R1 - Trenkel, V. M., Pinnegar, J., Rochet, M. J., and Rackham, B. 2004. Different surveys provide similar pictures of trends in a marine fish community but not of individual fish populations. *ICES Journal of marine Science*, 61: 351-362.
- R1 - Blanchard, F; Vandermeirsch, F, 2005. Warming and exponential abundance increase of the subtropical fish *Capros aper* in the Bay of Biscay (1973-2002). *Comptes rendus Biologies [C. R. Biol.]*. Vol. 328, no. 5, pp. 505-509.
- R1 - Désaunay, Y., Guérault, D., Le Pape, O. and Poulard, J.-C. 2005. Changes in occurrence and abundance of northern / southern flatfishes over a 20-year period in a coastal nursery area (Bay of Vilaine) and on the eastern continental shelf of the Bay of Biscay. *Scientia Marina*, In press.
- R1 - Poulard, J.-C. and Blanchard, F. 2005. The Impact of climate change on the fish community structure of the eastern continental shelf of the Bay of Biscay. *ICES Journal of Marine Science*, 62: 1436-1443.
- R1 - Rochet, M.-J., Trenkel, V., Bellail, R., Coppin, F., Le Pape, O., Mahé, J.-C., Morin, J., Poulard, J. C., Schlaich, I., Souplet, A., Vérin, Y., and Bertrand, J. A. 2005. Combining indicator trends to assess ongoing changes in exploited fish communities: diagnostic of communities off the coasts of France. *ICES Journal of Marine Science*, 62: 1647-1664.
- R1 - Charrier G., Chenel T., Durand J.-D., Girard M., Quiniou L., Laroche J. 2006. Discrepancies in phylogeographical patterns of two European anglerfishes (*Lophius budegassa* and *Lophius piscatorius*). *Molecular Phylogenetics and Evolution*. 38(3) : 742-754
- R1 - Chen, C. S., Pierce, G. J., Wang, J., Robin, J. P., Poulard, J. C., Pereira, J., Zuur, A. F., Boyle, P. R., Bailey, N., Beare, D. J., Jereb, P., Ragonese, S., Mannini, A. and Orsi Relini, L. 2006. The apparent disappearance of *Loligo forbesi* from the south of its range in the 1990s: Trends in *Loligo* spp. abundance in the northeast Atlantic and possible environmental influences. *Fish. Res.* 78(1): 44 - 54
- R1 - Lahaye V., Bustamante P., Spitz J., Das K., Meynier L., Magnin V. Dabin W. & Caurant F., 2005. Long-term preferences of common dolphins (*Delphinus delphis*) in the bay of Biscay using cadmium (Cd) as a metallic tracer. *Marine Ecology Progress Series*, 305: 275-285.
- R1 - Trenkel, V.M. et Skaug, H. 2005. Disentangling the effects of trawl efficiency and population abundance on catch data using random effects models. *ICES Journal of Marine Science*, 62: 1543-1555.
- R1 - Lahaye V., Bustamante P., Dabin W., Van Canneyt O., Dhermain F., Cesarini C., Pierce G.J., & Caurant F., 2006. New insights from age determination on toxic element accumulation in striped and bottlenose dolphins from Atlantic and Mediterranean waters. *Marine Pollution Bulletin*, 52, 1219-1230.
- R1 - Teletchea, F. V. Laudet and C. Hänni. 2006. Phylogeny of the Gadidae (sensu Svetovidov, 1948) based on their morphology and two mitochondrial genes. *Molecular Phylogenetics and Evolution*, Volume 38, Issue 1, January 2006, Pages 189-199.
- Woillez M, Poulard Jean-Charles, Rivoirard Jacques, Petitgas Pierre, Bez Nicolas (2007). **Indices for capturing spatial patterns and their evolution in time, with application to European hake (*Merluccius merluccius*) in the Bay of Biscay**. *ICES Journal of Marine Science*, 64(3), 537-550. Publisher's official version : <http://dx.doi.org/10.1093/icesjms/fsm025>
- R1 - Charrier G., Coombs S., Laroche J. 2007. Genetic structure of whiting (*Merlangius merlangus*) in the North East Atlantic and adjacent waters. *Marine Ecology Progress Series* 330: 201 - 211.
- R1 - Poulard J.-C. and Trenkel V., 2007, Do survey design and wind conditions influence survey indices ? *Can. J. Fish. Aquat. Sci.* 64, 1551-1562.
- R1 - Spitz J., Quéro J.C. & Vayne J.J., 2007. Contributions à l'étude du genre *Pseudoscopelus* (Pisces : Chiasmodontidae) avec une espèce nouvelle, *P. pierbartus* n. sp., deux synonymies junior et une clé d'identification des espèces valides. *Cybiu*, 31(2): 333-339.
- R1 - Trenkel, V. M., Rochet, M.-J., and Mesnil, B. 2007. From model-based prescriptive advice to indicator-based interactive advice. *ICES Journal of marine Science*, 64: 768-774.
- R1 - Woillez, M., Poulard, J.-C., Rivoirard, J., Petitgas, P., and Bez, N. 2007. Indices for capturing spatial patterns and their evolution in time, with application to European hake (*Merluccius merluccius*) in the Bay of Biscay. *ICES Journal of Marine Science* 64: 537-550.

- R1 - Cherel, Y., Ridoux, V., Spitz, J., & Richard, P. (2009). Stable isotopes document the trophic structure of a deep-sea cephalopod assemblage including giant octopod and giant squid. *Biology Letters*, 5(3), 364-367. doi:10.1098/rsbl.2009.0024
- R1 - Trenkel, V.M., & Cotter, J. (2009). Choosing survey time series for populations as part of an ecosystem approach to fishery management. *Aquatic Living resources/Ressources Vivantes Aquatiques*, 22(2), 121-126. doi:http://dx.doi.org/10.1051/alr/2008057
- R1 - Persohn C., Lorange P., Trenkel V.M., (2009). Habitat preferences of selected demersal fish species in the Bay of Biscay and Celtic Sea, North-East Atlantic. *Fisheries Oceanography*, 18(4), 268-285. <http://dx.doi.org/10.1111/j.1365-2419.2009.00515.x>
- R1 - Drouineau H., Mahevas S., Bertignac M., Duplisea D., (2010). A length-structured spatially explicit model for estimating hake growth and migration rates. *ICES Journal Of Marine Science*, 67(8), 1697-1709. Publisher's official version: <http://dx.doi.org/10.1093/icesjms/fsq042>, Open Access version: <http://archimer.ifremer.fr/doc/00016/12714/>
- R1 - Mahe K., Elleboode R., Persohn C., Dufour J.-L., (2010). Age and Growth of the lemon sole (*Microstomus kitt*) in the Celtic Sea and the North Sea. *Journal of Oceanography, Research and Data*, 3, 12-18. Open Access version : <http://archimer.ifremer.fr/doc/00019/13024/>
- R1 - Rochet, M. J., Trenkel, V. M., Carpentier, A., Coppin, F., Gil de Sola, L., Léauté, J.-P., Mahé, J.-C., Maiorano, P., Mannini, A., Murenu, M., Piet, G. J., Politou, C.-Y., Reale, B., Spedicato, M. T., Tserpes, G. & Bertrand, J. A. (2010) Do changes in environmental pressures impact marine communities? An empirical assessment. *Journal of Applied Ecology*, 47.
- R1 - Spedicato M.T., Poulard J.-C., Politou C.-Y., Radtke K., Lembo G., Petitgas P. (2010). Using the ALADYM simulation model for exploring the effects of management scenarios on fish population metrics. *Aquatic Living Resources*, 23(2), 153-165. Publisher's official version : <http://dx.doi.org/10.1051/alr/2010015> , Open Access version : <http://archimer.ifremer.fr/doc/00011/12226/>
- R1- Drouineau Hilaire, Mahevas Stephanie, Bertignac Michel, Duplisea Daniel (2010). **A length-structured spatially explicit model for estimating hake growth and migration rates.** *Ices Journal Of Marine Science*, 67(8), 1697-1709. Publisher's official version : <http://dx.doi.org/10.1093/icesjms/fsq042> , Open Access version : <http://archimer.ifremer.fr/doc/00016/12714/>
- R1- Lehuta Sigrid, Mahevas Stephanie, Petitgas Pierre, Pelletier Dominique (2010). **Combining sensitivity and uncertainty analysis to evaluate the impact of management measures with ISIS-Fish: marine protected areas for the Bay of Biscay anchovy (*Engraulis encrasicolus*) fishery.** *Ices Journal Of Marine Science*, 67(5), 1063-1075. Publisher's official version : <http://dx.doi.org/10.1093/icesjms/fsq002> , Open Access version : <http://archimer.ifremer.fr/doc/00011/12234/>
- R1- Spitz Jerome, Mourocq Emeline, Leaute Jean-Pierre, Quero Jean-Claude, Ridoux Vincent (2010). **Prey selection by the common dolphin: Fulfilling high energy requirements with high quality food.** *Journal Of Experimental Marine Biology And Ecology*, 390(2), 73-77. Publisher's official version : <http://dx.doi.org/10.1016/j.jembe.2010.05.010> , Open Access version : <http://archimer.ifremer.fr/doc/00011/12221/>
- R1 - Spitz, J., Mourocq, E., Schoen, V., and Ridoux, V. 2010. Proximate composition and energy content of forage species from the Bay of Biscay: high- or low-quality food? – *ICES Journal of Marine Science*, 67: 000–000.
- R1 - Spitz J., Mourocq E., Leaute J.-P., Quero J.-C., Ridoux V. (2010). Prey selection by the common dolphin: Fulfilling high energy requirements with high quality food. *Journal of Experimental Marine Biology And Ecology*, 390(2), 73-77. DOI: /10.1016/j.jembe.2010.05.010, <http://archimer.ifremer.fr/doc/00011/12221/>
- R1-Chouvelon Tiphaine, Spitz Jerome, Cherel Y., Caurant Florence, Sirmel R., Mendez-Fernandez P., Bustamante Paco (2011). **Inter-specific and ontogenic differences in delta C-13 and delta N-15 values and Hg and Cd concentrations in cephalopods.** *Marine Ecology Progress Series*, 433, 107-120. Publisher's official version : <http://dx.doi.org/10.3354/meps09159> , Open Access version : <http://archimer.ifremer.fr/doc/00166/27761/>
- R1 - Czamanski M., Nugraha A., Pondaven P., Lasbleiz M., Masson A., Caroff N., Bellail R., Treguer P. (2011). Carbon, nitrogen and phosphorus elemental stoichiometry in aquacultured and wild-caught

fish and consequences for pelagic nutrient dynamics. *Marine Biology*, 158(12), 2847-2862. DOI: 10.1007/s00227-011-1783-7

R1 - Lassalle G., Lobry J., Le Loc'h F., Bustamante P., Certain G., Delmas D., Dupuy C., Hily C., Labry C., Le Pape O., Marquis E., Petitgas P., Pusineri C., Ridoux V., Spitz J., Niquil N. (2011). Lower trophic levels and detrital biomass control the Bay of Biscay continental shelf food web: Implications for ecosystem management. *Progress In Oceanography*, 91(4), 561-575. DOI: 10.1016/j.pocean.2011.09.002, Open Access version: <http://archimer.ifremer.fr/doc/00057/16851/>

R1- Schnitzler Joseph G., Klaren Peter H. M., Bouquegneau Jean-Marie, Das Krishna (2012). **Environmental factors affecting thyroid function of wild sea bass (*Dicentrarchus labrax*) from European coasts.** *Chemosphere*, 87(9), 1009-1017. <http://dx.doi.org/10.1016/j.chemosphere.2011.11.039>

R1 - Chauvelon T., Spitz J., Caurant F., Mendez-Fernandez P., Autier J., Lassus-Debat A., Chappuis A., Bustamante P. (2012). Enhanced bioaccumulation of mercury in deep-sea fauna from the Bay of Biscay (north-east Atlantic) in relation to trophic positions identified by analysis of carbon and nitrogen stable isotopes. *Deep-sea Research Part I-oceanographic Research Papers*, 65, 113-124. <http://dx.doi.org/10.1016/j.dsr.2012.02.010>

R1 - Lassalle G., Gascuel D., Le Loch F., Lobry J., Pierce G.J., Ridoux V., Santos M.B., Spitz J., Niquil N. (2012). An ecosystem approach for the assessment of fisheries impacts on marine top predators: the Bay of Biscay case study. *ICES Journal of Marine Science*, 69(6), 925-938. <http://dx.doi.org/10.1093/icesjms/fss049>

R1 - Rochet M.J., Daures F., Trenkel V.M. (2012). Capacity management, not stock status or economics, drives fleet dynamics in the Bay of Biscay ecosystem on a decadal time scale. *Canadian Journal Of Fisheries And Aquatic Sciences*, 69(4), 695-710. Publisher's official version : <http://dx.doi.org/10.1139/F2012-002>, Open Access version : <http://archimer.ifremer.fr/doc/00076/18730/>

R1- Spitz Jerome, Chauvelon Tiphaine, Cardinaud M., Kostecki, Lorange Pascal (2013). **Prey preferences of adult sea bass *Dicentrarchus labrax* in the northeastern Atlantic: implications for bycatch of common dolphin *Delphinus delphis*.** *Ices Journal Of Marine Science*, 70(2), 452-461. Publisher's official version : <http://dx.doi.org/10.1093/icesjms/fss200>, Open Access version : <http://archimer.ifremer.fr/doc/00125/23625/>

R1-Brind'Amour Anik, Laffargue Pascal, Morin Jocelyne, Vaz Sandrine, Foveau Aurelie, Le Bris Herve (2014). **Morphospecies and taxonomic sufficiency of benthic megafauna in scientific bottom trawl surveys.** *Continental Shelf Research*, 72, 1-9. Publisher's official version : <http://dx.doi.org/10.1016/j.csr.2013.10.015>, Open Access version : <http://archimer.ifremer.fr/doc/00162/27309/>

R1- Rocklin Delphine, Levrel Harold, Drogou Mickael, Herfaut Johanna, Veron Gerard (2014). **Combining Telephone Surveys and Fishing Catches Self-Report: The French Sea Bass Recreational Fishery Assessment.** *Plos One*, 9(1), -. Publisher's official version : <http://dx.doi.org/10.1371/journal.pone.0087271>, Open Access version : <http://archimer.ifremer.fr/doc/00177/28812/>

R1-Chauvelon Tiphaine, Caurant Florence, Cherel Y., Simon-Bouhet B., Spitz Jerome, Bustamante Paco (2014). **Species- and size-related patterns in stable isotopes and mercury concentrations in fish help refine marine ecosystem indicators and provide evidence for distinct management units for hake in the Northeast Atlantic.** *Ices Journal Of Marine Science*, 71(5), 1073-1087. <http://dx.doi.org/10.1093/icesjms/fst199>

R1- Lassalle Geraldine, Pasqual Jean-Sebastien Nelva, Boet Philippe, Rochet Marie-Joelle, Trenkel Verena, Niquil Nathalie (2014). **Combining quantitative and qualitative models to identify functional groups for monitoring changes in the Bay of Biscay continental shelf exploited foodweb.** *Ices Journal Of Marine Science*, 71(1), 105-117. Publisher's official version : <http://dx.doi.org/10.1093/icesjms/fst107>, Open Access version : <http://archimer.ifremer.fr/doc/00173/28427/>

R1- Ravard David, Brind'Amour Anik, Trenkel Verena (2014). **Evaluating the potential impact of fishing on demersal species in the Bay of Biscay using simulations and survey data.** *Fisheries Research*, 157, 86-95. Publisher's official version : <http://dx.doi.org/10.1016/j.fishres.2014.03.007> , Open Access version : <http://archimer.ifremer.fr/doc/00188/29968/>

R1-Vanhaelen Alex, Massin Claude, Martin Jocelyne, Laffargue Pascal (2014). **Kaloplocamus ramosus (Cantraine, 1835) (Gastropoda: Polyceridae): new records in the Bay of Biscay, with notes on distribution and food.** *Iberus*, 32(1), 53-64.

R1-Chouvelon Tiphaine, Violamer L., Dessier Aurelie, Bustamante Paco, Mornet Françoise, Pignon-Mussaïd Cecilia, Dupuy Christine (2015). **Small pelagic fish feeding patterns in relation to food resource variability: an isotopic investigation for *Sardina pilchardus* and *Engraulis encrasicolus* from the Bay of Biscay (north-east Atlantic).** *Marine Biology*, 162(1), 15-37. <http://dx.doi.org/10.1007/s00227-014-2577-5>

R1-Feist S. W., Stentiford G. D., Kent Maxxie, Ribeiro Santos Ana, Lorange Pascal (2015). **Histopathological assessment of liver and gonad pathology in continental slope fish from the northeast Atlantic Ocean.** *Marine Environmental Research*, 106, 42-50. Publisher's official version : <http://dx.doi.org/10.1016/j.marenvres.2015.02.004> , Open Access version : <http://archimer.ifremer.fr/doc/00252/36370/>

R1- Chaalali Aurelie, Saint-Beat Blanche, Lassalle Geraldine, Le Loc'h Francois, Tecchio Samuele, Safi Georges, Savenkoff Claude, Lobry Jeremy, Niquil Nathalie (2015). **A new modeling approach to define marine ecosystems food-web status with uncertainty assessment.** *Progress In Oceanography*, 135, 37-47. <http://dx.doi.org/10.1016/j.pocean.2015.03.012>

R2 - Quéro J.C., M.H. Du Buit, J. Fonteneau & J.J. Vayne, 1988. Observations ichtyologiques effectuées en 1987. *Ann. Soc. Sci. nat. Charente Marit.* 7 (6): 721-725.

R2 - Quéro J.C., M.H. Du Buit, G. Delmas, J. Fonteneau & J.J. Vayne, 1989. Observations ichtyologiques effectuées en 1988. *Ann. Soc. Sci. nat. Charente Marit.* 7 (7): 849-852.

R2 - Quéro J.C., M.H. Du Buit, J. Fonteneau, F. Morandeau & J.J. Vayne, 1990. Observations ichtyologiques effectuées en 1989. *Ann. Soc. Sci. nat. Charente Marit.* 8 (2): 961-967.

R2 - Quéro J.C., M.H. Du Buit, B. Kergoat, J.L. Laborde & F. Morandeau, 1991. Observations ichtyologiques effectuées en 1990. *Ann. Soc. Sci. nat. Charente-Marit.* 7 (9): 1065-1071.

R2 - Gauthiez F., 1994. Characterizing small-scale patterns in fish populations via Taylor's power law: an extended quasi-likelihood model. In *Journées Internationales Ecologie et Méthodes Statistiques*: 97-99.

R2 - Bez N., J. Rivoirard & J.C. Poulard, 1995. Le covariogramme : un outil structural. In *Deuxième forum halieumétrique*. J. Ferraris, D. Pelletier & M.J. Rochet, eds. ORSTOM Editions, Nantes. 79-86 p.

R2 - Gauthiez F., J.C. Poulard & C. Koutsikopoulos, 1995. Analyse de la distribution spatiale à petite échelle des poissons benthiques et démersaux en mer Celtique. In *Deuxième forum halieumétrique*. J. Ferraris, D. Pelletier & M.J. Rochet, eds. ORSTOM Editions, Nantes. 99-110 p.

R2 - Quéro J.C., M.H. Du Buit, J.L. Laborde & J.J. Vayne, 1996. Observations ichtyologiques effectuées en 1995. *Ann. Soc. Sci. nat. Charente-Marit.* 8 (5): 577-584.

R2 - Quéro J.C., M.H. Du Buit & J.J. Vayne, 1997. Les captures de poissons à affinités tropicales le long des côtes atlantiques européennes. *Ann. Soc. Sci. nat. Charente-Marit.* 8 (6): 651-673.

R2 - Quéro J.C., M.H. Du Buit, N. Caill, M.N. Casamajor, N. Cazeils, A. Dewez, G. Morandeau & J.J. Vayne, 1999. Observations ichtyologiques effectuées en 1998. *Ann. Soc. Sci. nat. Charente-Marit.* 8 (8): 925-934.

R2 - Quéro J.C., 2000. Impact des pêcheries sur la biodiversité ichtyologique marine : comparaisons de 2 chalutages effectués en 1910 puis en 1990. *Ozeanografika* 3: 293-299.

R2 - Quéro J.C., P. Lorance & E. Tardy, 2000. Observations ichtyologiques effectuées en 1999 à bord du navire de recherche "Thalassa". *Ann. Soc. Sci. nat. Charente-Marit.* 8 (9): 1047-1058.

R2 - Quéro J.C., Spitz J. & Vayne J.J., 2002. Observations ichtyologiques effectuées en 2001. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(2): 179-186.

R2 - Quéro J.C., Spitz J. & Vayne J.J., 2003. Observations ichtyologiques effectuées en 2002. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(3): 275-280.

R2 - Quéro J.C., Bellail R., Spitz J., Tardy J. & Vayne J.J., 2004. Observations ichtyologiques effectuées en 2003. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(4): 367-370.

R2 - Spitz J. & Quéro J.C., 2004. Observations ichtyologiques de la faune mésopélagique du talus continental du golfe de Gascogne en 2003. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(4): 371-376.

R2 - Quéro J.C., Bellail R., De Casamajor, M.N., Leaute J.P., Morandeau G., Morinière P., Spitz J. & Vayne J.J., 2005. Observations ichtyologiques effectuées en 2004. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(5): 483-490.

R2 - Quéro J.C., Spitz J. & Vayne J.J., 2006. Observations ichtyologiques effectuées en 2005. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(6).

R2 - Leynaud D., 2007. Evolution sédimentologique de la Grande Vasière (GV). *IUEM Lemar n°05 20731 042*, p22.

R2 - Quéro J.C., Spitz J. & Vayne J.J., 2007. Faune française de l'Atlantique, poissons carangidés. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(7): 709-722.

R2 - Quéro J.C., Spitz J., Vayne J.J., Abernot-Le Gac C., De Casamajor, M.N., Duhamel E., Morandeau G., Gautier G & Van Canneyt, O., 2007. Observations ichtyologiques effectuées en 2006. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(7): 699-708.

R2 - Quéro J.C., Spitz J., Vayne J.J., Auby I., De Casamajor, M.N., Chanut B., Léaute J.P., Morinière P. & Tardy J., 2008. Observations ichtyologiques effectuées en 2007. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(8): xxx-xxx.

R2 - Quéro J.C., Spitz J. & Vayne J.J., 2008. Faune française de l'Atlantique, poissons tétraodontiformes. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(8): xxx-xxx.

R2 - Quéro J.C., Spitz J., Vayne J.J., Auby I., De Casamajor, Léauté J.P., Franck, M., Quinquis J., (2009). Observations ichtyologiques effectuées en 2008. *Annales de la Société des Sciences Naturelles de la Charente-Maritime*, 9(9), 932-940. Open Access version : <http://archimer.ifremer.fr/doc/00000/6602/>

R2 - Spitz J. & Quéro J.C., 2008. Observations ichtyologiques de la faune bathypélagique du canyon du Cap Ferret. *Ann. Soc. Sci. nat. Charente-Marit.*, 9(8):.

R2 Chaalali Aurelie, Saint-Beat Blanche, Lassalle Geraldine, Le Loc'h Francois, Tecchio Samuele, Safi Georges, Savenkoff Claude, Lobry Jeremy, Niquil Nathalie (2015). **A new modeling approach to define marine ecosystems food-web status with uncertainty assessment.** *Progress In Oceanography*, 135, 37-47. <http://dx.doi.org/10.1016/j.pocean.2015.03.012>

R2 -Chouvelon Tiphaine, Spitz Jerome, Caurant Florence, Mendez-Fernandez P., Chappuis A., Laugier Flora, Le Goff E., Bustamante Paco (2012). **Revisiting the use of delta N-15 in meso-scale studies of marine food webs by considering spatio-temporal variations in stable isotopic signatures - The case of an open ecosystem: The Bay of Biscay (North-East Atlantic).** *Progress In Oceanography*, 101(1), 92-105. <http://dx.doi.org/10.1016/j.pocean.2012.01.004>

R2- Huse Geir, Mackenzie Brian R., Trenkel Verena, Doray Mathieu, Nottestad Leif, Oskarsson Guomundur J. (2014). **Spatially explicit estimates of stocks sizes, structure and biomass of herring and blue whiting, and catch data of bluefin tuna.** *Earth System Science Data Discussions*, 7(2), 457-493. Publisher's official version : <http://dx.doi.org/10.5194/essdd-7-457-2014> , Open Access version : <http://archimer.ifremer.fr/doc/00252/36345/>

R2-Lassalle G., Chouvelon Tiphaine, Bustamante Paco, Niquil N. (2014). **An assessment of the trophic structure of the Bay of Biscay continental shelf food web: Comparing estimates derived from an ecosystem model and isotopic data.** *Progress In Oceanography*, 120, 205-215.

<http://dx.doi.org/10.1016/j.pocean.2013.09.002>

R2- Mahe Kelig, Villanueva Ching-Maria, Vaz Sandrine, Coppin Franck, Koubbi Philippe, Carpentier Andre (2014). **Morphological variability of the shape of striped red mullet *Mullus surmuletus* in relation to stock discrimination between the Bay of Biscay and the eastern English Channel.** *Journal Of Fish Biology*, 84(4), 1063-1073. Publisher's official version : <http://dx.doi.org/10.1111/jfb.12345> , Open Access version : <http://archimer.ifremer.fr/doc/00185/29587/>

R2- Pinnegar J. K., Goni N., Trenkel Verena, Arrizabalaga H., Melle W., Keating J., Oskarsson G. (2015). **A new compilation of stomach content data for commercially-important pelagic fish species in the Northeast Atlantic.** *Earth System Science Data*, 7(1), 19-28. Publisher's official version : <http://dx.doi.org/10.5194/essd-7-19-2015> , Open Access version : <http://archimer.ifremer.fr/doc/00195/30641/>

R2- Quero Jean-Claude, Spitz Jerome, Leaute Jean-Pierre (2013). **Faune française de l'Atlantique. Requins .2. C- archarhiniformes (Craniata : Elasmobranchii).** *Annales de la Société des Sciences Naturelles de la Charente-Maritime*, 10(4), 413-431. Open Access version : <http://archimer.ifremer.fr/doc/00250/36083/>

R2- Quero Jean-Claude, Spitz Jerome, Leaute Jean-Pierre (2011). **Faune française de l'Atlantique. Requins .1. Hexanchiformes & Lamniformes (Craniata : Elasmobranchii).** *Annales de la Société des Sciences Naturelles de la Charente-Maritime*, 10(2), 207-223. Open Access version : <http://archimer.ifremer.fr/doc/00250/36082/>

R2- Quero Jean-Claude, Spitz Jerome, Leaute Jean-Pierre (2010). **Faune française de l'Atlantique. Chimères (Craniata : Chondrichthyes : Holocephali).** *Annales de la Société des Sciences Naturelles de la Charente-Maritime*, 10(1), 59-67. Open Access version : <http://archimer.ifremer.fr/doc/00250/36081/>

R2- Reece Yves, Rochet Marie-Joelle, Trenkel Verena, Jennings S., Pinnegar J. K. (2013). **Use of morphological characteristics to define functional groups of predatory fishes in the Celtic Sea.** *Journal Of Fish Biology*, 83(2), 355-377. Publisher's official version : <http://dx.doi.org/10.1111/jfb.12177> , Open Access version : <http://archimer.ifremer.fr/doc/00152/26294/>

R2- Rochet Marie-Joelle, Collie Jeremy S., Trenkel Verena (2013). **How Do Fishing and Environmental Effects Propagate Among and Within Functional Groups?** *Bulletin Of Marine Science*, 89(1), 285-315. Publisher's official version : <http://dx.doi.org/10.5343/bms.2011.1138> , Open Access version : <http://archimer.ifremer.fr/doc/00154/26492/>

R4 - Anon, 1993. Identification biogéographique des principaux stocks exploités en Manche, relations avec ceux des régions voisines. IFREMER. Rapport Interne DRV. n°93-028. 262 p.

R4 - Sanchez F., F. De La Gandara & Poulard. J.C., 1993. Campana de calibracion Cornide-Baka/Thalassa-GOV. 52 p.

R4 - Sanchez F., J.C. Poulard & F. de la Gandara, 1994. Experiencias de calibración entre los artes de arrastre BAKA 44/60 y GOV 36/47 utilizados por los B/O Cornide de Saavedra y Thalassa. Inf. Téc. Inst. Esp. Oceanogr. 48 p.

R4 - Rochet M.J., E. Benoît, F. Blanchard, J. Boucher, J.-C. Poulard, A. Souplet & Y. Vérin, 1999. La pente de la structure en taille multispécifique : un indicateur de l'effet de la pêche sur les peuplements de poissons exploités. Rapport final. Programme interdisciplinaire de recherche "Environnement, vie et sociétés". Méthodologies et pertinence d'indicateurs d'interactions populations humaines-milieux. 23 p.

R4 - Spitz J., Quérou J.C. & Ridoux V., 2002. Compte rendu des chalutages pélagiques effectués dans le sud du golfe de Gascogne durant la campagne EVHOE 2001. Rapport CRMM: 25p.

R4 - Bertrand, J.A., (éditeur) 2004. L'état des communautés exploitées au large des côtes de France. Application d'indicateurs à l'évaluation de l'impact de la pêche. Ifremer/DRV/RH/RS/04-001, 170 pp

R4 - Bertrand Jacques, Marie-Laure Cochard, Coppin Franck, Olivier Le Pape, Jean-Claude Mahé, Jocelyne Morin, Jean-Charles Poulard, Marie-Joëlle Rochet, Ivan Schlaich, Verena Trenkel, Arnauld Souplet et Yves Vérin, 2005. Poissons et invertébrés au large des côtes de France. Indicateurs issus des pêches scientifiques. Bilan 2002. Ifremer, Nantes, EMH: 05-001, 60 pp.

R4 - SIH-C, 2007. Poissons et invertébrés au large des côtes de France. Indicateurs issus des pêches scientifiques. Bilan 2004. Ifremer, Nantes, EMH : 07-001, 84p.

R4 - Bertrand J., Brind'Amour A., Cochard M.-L., Coppin F., Leaute J.-P., Lorange P., Mahe J.-C., Morin J., Poulard J.-C., Rochet M.-J., Schlaich I., Souplet A., Trenkel V., Verin Y., (2009). Grands invertébrés et poissons observés par les campagnes scientifiques. Bilan 2007. <http://archimer.ifremer.fr/doc/00000/6160/>

R4 - Mahe K., Bellail R., Dufour J.-L., et al. (2009). Synthèse française des procédures d'estimation d'âge / French summary of age estimation procedures. <http://archimer.ifremer.fr/doc/00000/7294/>

R4 - Morin J., Bertrand J., Cochard M.-L., Coppin F., Leaute J.-P., Lobry J., Mahe J.-C., Poulard J.-C., Rochet M.-J., Schlaich I., Souplet A., Trenkel V., Vaz S., Verin Y. (2009). L'état des communautés exploitées au large des côtes de France. Application d'indicateurs à l'évaluation de l'impact de la pêche. Bilan 2004; Edition 2009, 795 pp. <http://archimer.ifremer.fr/doc/00000/7293/>

R4 - Bertrand J. (2011). Les populations ichtyologiques démersales du plateau de la sous-région marine Golfe de Gascogne DCSMM/EI/GDG. Ministère de l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/GDG/2.2.7.a/2011, 7p.

R4 - Dorémus, G., Mercier F., Caupenne M., Dian O., Gonzalez L. 2011. Bilans des observations des mammifères et oiseaux marins-Campagnes EVHOE 2009/2010. Rapport pour l'Agence des aires marines protégées. 20p.

R4 - Galeron J., Guillaumont B., Fabri M.-C., Van Den Beld I., Davies J., Bayle C. (2011). Biocénoses des fonds meubles du bathyal et de l'abyssal de la sous-région marine Golfe de Gascogne DCSMM/EI/GDG. Ministère de l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/GDG/2.2.6.a/2011, 12p.

R4 - Guillaumont B., Davies J., Van Den Beld I., Bayle C. (2011). Habitats particuliers des biocénoses du bathyal et de l'abyssal de la sous-région marine des Mers Celtiques DCSMM/EI/MC. Ministère de l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/MC/2.2.6.c/2011, 6p.

R4 - Guillaumont B., Davies J., Van Den Beld I., Bayle C. (2011). Habitats particuliers des biocénoses du bathyal et de l'abyssal de la sous-région marine Golfe de Gascogne DCSMM/EI/GDG. Ministère de l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/GDG/2.2.6.c/2011, 9p.

R4 - Guillaumont B., Davies J., Van Den Beld I., Bayle C. (2011). Biocénoses des fonds durs du bathyal et de l'abyssal de la sous-région marine des Mers Celtiques DCSMM/EI/MC. Ministère de l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/MC/2.2.6.b/2011, 6p.

R4 - Guillaumont B., Davies J., Van Den Beld I., Bayle C. (2011). Biocénoses des fonds meubles du bathyal et de l'abyssal de la sous-région marine des Mers Celtiques DCSMM/EI/MC. Ministère de l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/MC/2.2.6.a/2011, 5p.

R4 - Guillaumont B., Davies J., Van Den Beld I., Bayle C. (2011). Biocénoses des fonds durs du bathyal et de l'abyssal de la sous-région marine Golfe de Gascogne DCSMM/EI/GDG. Ministère de

- l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/GDG/2.2.6.b/2011, 10p.
- R4 - Iglésias S.P., 2011. - Actinopterygians from the North-eastern Atlantic and the Mediterranean (A natural classification based on collection specimens, with DNA barcodes and standardized photographs), Volume I (plates), Provisional version 07, 01 April 2011. 197p. <http://www.mnhn.fr/iccanam>.
- R4 - Iglésias S.P., 2011. - Chondrichthyans from the North-eastern Atlantic and the Mediterranean (A natural classification based on collection specimens, with DNA barcodes and standardized photographs), (plates & text), Provisional version 05, 01 April 2011. 76p. <http://www.mnhn.fr/iccanam>
- R4 - Laffargue P., Baudiniere E. (2011). Biocénoses des fonds meubles du circalittoral de la sous-région marine Golfe de Gascogne DCSMM/EI/GDG. Ministère de l'Ecologie, du Développement durable, des Transports et du Logement (MEDDTL), Ref. DCSMM/EI/EE/GDG/2.2.5.a/2011, 20p.
- R4 - Lorange P. (2011). Les populations ichtyologiques démersales du plateau de la sous-région marine des Mers Celtiques, contribution thématiques DCSMM, évaluation de l'état initial, caractéristiques biologiques - biocoenoses DCSMM/EI/MC. Ministère de l'Ecologie du Développement Durable des Transports et du Logement, Ref. DCSMM/EI/EE/MC/2.2.7.a/2011, 6p.<http://archimer.ifremer.fr/doc/00054/16505/>
- R4 - Lorange P. (2011). Les populations ichtyologiques démersales profondes de la sous-région marine mers Celtiques, contribution thématiques DCSMM, évaluation de l'état initial, caractéristiques biologiques - biocoenoses DCSMM/EI/MC. Ministère de l'Ecologie du Développement Durable des Transports et du Logement, Ref. DCSMM/EI/EE/MC/2.2.7.b/2011, 8p.<http://archimer.ifremer.fr/doc/00054/16503/>
- R4 - Lorange P. (2011). Les populations ichtyologiques démersales profondes de la sous-région marine Golfe de Gascogne, contribution thématiques DCSMM, évaluation de l'état initial, caractéristiques biologiques - biocoenoses DCSMM/EI/GDG. Ministère de l'Ecologie du Développement Durable des Transports et du Logement, Ref. DCSMM/EI/EE/GDG/2.2.7.b/2011, 9p.<http://archimer.ifremer.fr/doc/00054/16502/>
- R4 - Morizur Y., Valery L., Claro F., Van Canneyt Ol. (2011). Captures accidentelles. Contribution thématique état initial DCSMM, SRM GDG. 6pp. <http://www.ifremer.fr/dcsmm/Medias-lfremer/Medias-Dcsmm/Espace-de-travail/Evaluation-initiale/PI-V2/Captures-accidentelles-SRM-GDG>.
- R4 - Gautier E., Kerjean M., Satra Le Bris C., Bourillet J.-F. (2010). ACTION RECOPLA - Inventaire et bancarisation des données de Géosciences Marines pour les façades Atlantique, Manche et Méditerranée. Juin 2010 – DCB/GM/LES/R.INT.2010.06. 146 pp.
- R4 - Rolet C., Desroy N. (2011). Biocénoses des fonds meubles du circalittoral de la sous-région marine des Mers Celtiques DCSMM/EI/MC. Ministère de l'Écologie, du Développement Durable, des Transports et du Logement, Ref. DCSMM/EI/EE/MC/2.2.5.a/2011, 11p.
- R4 - Delaunay Damien (2015). Correspondance de l'échantillonnage entre le programme d'observation à la mer (ObsMer 2003-2015) et la campagne EVHOE (1997-2014) dans le golfe de Gascogne et la mer Celtique. <http://dx.doi.org/10.13155/39856>
- Depestele Jochen, Rochet Marie-Joelle (2014). **Quantifying food subsidies to the benthos due to discards. Task 4.4 Report on the quantification of discard flow to the seabed, relative to natural food sources.** <http://archimer.ifremer.fr/doc/00310/42146/>
- R5 - Quéro J.C., 1989. Les poissons du golfe de Gascogne. Ifremer / Mus. nat. Hist. nat., Brest. 229 p.
- R6 - Abbes R., H. Beucher, R. Chevalier & J. Guéguen, 1988. Preliminary results of a groundfish survey in the Bay of Biscay (october 1987). ICES, C.M. 1988/G:17.
- R6 - Guéguen J. & A. Picollier, 1988. Infestation of mackerel (*Scomber scombrus*) by anisakidae. French observations in 1987 and 1988. ICES CM 1988/H:18.
- R6 - Petitgas P. & J.C. Poulard, 1989. Applying stationary geostatistics to fisheries : a study on hake in the Bay of Biscay. ICES CM 1989/G/62 Sess. U. 21 p
- R6 - Poulard J.C., I. Peronnet & J.J. Rivoalen, 1993. Depth and spatial distributions of *Lepidorhombus whiffiagonis* (Walbaum, 1972) by age group in Celtic Sea and Bay of Biscay. Poster. ICES CM 1993/G:43.
- R6 - Anon, 1994. Report of the Study Group on the Coordination of Bottom Trawl Surveys in sub-reas VI, VII and VIII and division IXa. ICES, C.M. 1994/G:6.
- R6 - Borges M.F., A. Silva, C. Porteiro, P. Abaunza, A. Eltink, M. Walsh, J.C. Poulard & S. Iversen, 1995. Distribution and migration of horse mackerel. Poster. ICES CM 1995/H:18.
- R6 - Désaunay Y., D. Guérault, P. Grellier & G. Williamson, 1996. *Anguilla anguilla* (L.) larvae caught by French R.V. Thalassa at the Bay of Biscay continental slope in November 1995 : otolith marking

- experiment and daily ring validation (preliminary information). EIFAC-ICES Working Party on Eel, Ijmuiden (NL).
- R6 - Pereiro F.J., F. Gonzales, A. Eltink, J.C. Poulard, F. Cardador & M. Walsh, 1996. Distribution of hake in european waters. Poster. ICES C.M. 1996/S:17.
- R6 - Poulard J.C., 1996. Spatialisation et structure trophique des assemblages d'espèces pêchées en mer Celtique et dans le golfe de Gascogne. Colloque Résultats/Prospective du Réseau Diversité Marine. Biodiversité en Milieu Dispersif. MNHN, Paris 18-20 novembre 1996. In Résultats/Prospective du Réseau Diversité Marine. Biodiversité en Milieu Dispersif, MNHN, Paris 18-20 novembre 1996.
- R6 - Poulard J.C., 1997. Depth and Spatial Distributions of Hake by Age Group in the Bay of Biscay and Celtic Sea. Document de travail présenté à la réunion du "ICES Working Group on Ecosystem Effects of Fishing". ICES, Copenhague. 12 p.
- R6 - Poulard J.C. & J. Boucher, 1997. Spatial distribution of species assemblages in the Celtic Sea and the Bay of Biscay. Working document, ICES Working Group on Ecosystem Effects of fishing, Copenhague. 17 p.
- R6 - Quéro J.C., 1997. Changes in the Euro-Atlantic fish species composition as resulting from fishing and ocean warming. Ninth International Congress of European Ichthyologists. (CEI 9). Fish Biodiversity.
- R6 - Rochet M.J., J.C. Poulard & J. Boucher, 1997. Analysis of the spatial and temporal variability of the size spectrum of the fish community in the Bay of Biscay, 1987-1995. Document de travail présenté à la réunion du "ICES Working Group on Ecosystem Effects of Fishing". ICES, Copenhague. 16 p.
- R6 - Désaunay Y., D. Guérault & P. Grellier, 1998. Validation of daily increments in the otoliths of *Anguilla anguilla* (L.). 2ème Symposium International "Fish Otolith Research and Application", Bergen (Norvège). poster.
- R6 - Rochet M.J., 1998. A Modelling Approach to the Effect of Fishing on Multispecies Size Spectra. In Alcalá 1st International Conference on Mathematical Ecology, Alcalá (Spain).
- R6 - Blanchard F., 1999. Hypothesis on fishing effect on the demersal fish community dynamics. ICES young scientists conference on marine ecosystem perspectives. 20-24 November 1999.
- R6 - Petitgas P., J.C. Poulard & A. Biseau, 1999. Comparaison of commercial and scientific cpue data to analyse catchability: melgrim in the Celtic Sea. ICES 1999/R:08. 19 p.
- R6 - Blanchard F. & T. Do Chi, 2000. Caractéristiques comparées de la dynamique de peuplements de poissons démersaux soumis à différents niveaux d'exploitation par pêche. Colloque UOF, zones littorales et anthropisation : gestion et nuisances, La Rochelle, 4-6 juillet 2000. Colloque UOF, zones littorales et anthropisation : gestion et nuisances, La Rochelle, 4-6 juillet 2000.
- R6 - Blanchard,-F., Do-Chi,-Thang 2000 (Comparative approach of the dynamics of the demersal fish communities exploited for fishing.), Approche comparative de la dynamique des peuplements de poissons demersaux exploités par la pêche. Littoral-zones-and-anthropization:-management-and-nuisance,-La-Rochelle,-4-5-6-July-2000-Zones-littorales-et-anthropisation:-Gestion-et-nuisances,-La-Rochelle,-4-5-6-juillet-2000. Miramand,-P.-(ed.); Guyot,-T.-(ed.); Alligner,-N.-(ed.) 2001 vol. 26, no. 3, pp. 95-97
- R6 - Duplisea D. & F. Blanchard, 2000. Variability in the North Sea fish community at different level of species aggregation in an ecological hierarchy. American Society of Limnology and Oceanography 2000 Aquatic Sciences Meeting : Research Across Boundaries, Copenhague (Danemark), 5-9 juin 2000.
- R6 - Reid D., D.J. Beare, J.C. Mahé, P. Connolly, C.G. Davis & A.W. Newton, 2000. Quantifying Variability in Gear Performance on IBTS Surveys: Swept area and volume with depth. ICES CM 2000/K:28. 20 p.
- R6 - Rochet M.J., V. Trenkel, J.-C. Poulard & I. Péronnet, 2000. Using discards estimates for assessing the impact of fishing on biodiversity. ICES CM 2000/ Mini:06. 13 p.
- R6 - Verdoit M. & D. Pelletier, 2000b. Characterizing the spatial and seasonal dynamics of the whiting population in the Celtic Sea from the analysis of commercial catch and effort data and scientific survey data. ICES CM 2000/ K : 36. 15 p.
- R6 - Blanchard,-F.; Boucher,-J.,2001. (Dynamics of the demersal fish community in the bay of biscay investigated by analysing). Dynamique des peuplements de poissons demersaux et impact de la pêche dans le golfe de Gascogne: voies d'analyse. Proceedings-of-the-7th-international-symposium-on-oceanography-of-the-bay-of-Biscay,-Biarritz,-4-6-April-2000-Actes-du-7eme-colloque-international-d'-oceanographie-du-golfe-de-Gascogne,-Biarritz,-4-6-avril-2000. Elbee,-J.-d'-(ed.); Prouzet,-P.-(ed.) Plouzane-France Ifremer 2001 no. 31, pp. 181-186

- R6 - Mahé J.C., 2001a. Estimation of abundance indices at age in research surveys. - A comparison of sampling strategies. ICES. CM 2001/P:10. 13 p.
- R6 - Poulard, J.-C., Blanchard, F., Boucher, J., Souissi, S., 2001. Variability in the demersal fish assemblages of Bay of Biscay during the 1990s. ICES Symposium. Hydrobiological Variability in the ICES Area, 1990-1999. Edinburgh, Scotland 8-10 August 2001 POSTER
- R6 - Rochet, M. J., and Trenkel, V. M. 2001. An attempt to measure the impact of fishing on the Celtic Sea groundfish community, The Reykjavik Conference on Responsible Fisheries in the marine ecosystem, Reykjavik, Island, FAO.
- R6 – Blanchard F, Boucher J and Poulard J.C., 2002. General trends in the fish community of the Bay of Biscay from 1973 to nowadays: Ecosystem effects of fishing or climate? . Communication au 8ème colloque International d'Océanographie du golfe de Gascogne. Gijon (Espagne) avril 2002
- R6 - Désaunay Yves, Daniel Guérault, Olivier Le Pape & Jean-Charles Poulard, 2002. Changes in occurrence and abundance of northern / southern flatfishes over a 20-year period in a coastal nursery area (Bay of Vilaine) and on the eastern continental shelf of the Bay of Biscay. Communication au 8ème colloque International d'Océanographie du golfe de Gascogne. Gijon (Espagne) avril 2002. Papier à paraître dans Oceanologica Acta
- R6 - Trenkel, V. M., and Rochet, M. J. 2002. Towards a theory for discarding behaviour. ICES CM 2002/ V:03, 10.
- R6 - Bellail, R., Bertrand, J., Le Pape, O., Mahé, J.-C., Morin, J., Poulard, J.-C., Rochet, M.-J., Schlaich, I., Souplet, A., Trenkel, V., 2003. A multispecies dynamic indicator-based approach to the assessment of the impact of fishing on fish communities. ICES CM 2003/V:02 12.
- R6 - Pusineri C., Meynier L., Spitz J., Ridoux V., 2003. Differential digestion rates of dolphin prey: observational and experimental bases for an improved dietary analysis procedure. 17th Annual Conference of the European Cetacean Society, Las Palmas de Gran Canaria, Espagne, March 2003.
- R6 - Spitz, J., Poulard, J.-C., Richard, E., Meynier, L., Pusineri, C., Ridoux, V., 2003. May changes in the diet of striped dolphins (*Stenella coeruleoalba*) from the Bay of Biscay reflect trends from groundfish surveys ? Seventeenth Annual Conference of the European Cetacean Society, Las Palmas de Gran Canaria, Spain. 9-13 March 2003.
- R6 - Blanchard F, J Boucher and JC Poulard, 2004. Comparative analysis of fishing and climate effects on the fish community structure of the Bay of Biscay. ICES Symposium on "The Influence of Climate Change on North Atlantic Fish Stocks". 11-14 May 2004 Bergen, Norway.
- R6 - Chen C.-S., G.J. Pierce, J. Wang, J.-P. Robin, J.C. Poulard, J. Pereira, A.F. Zuur, P.R. Boyle, N. Bailey, D.J. Beare, I. Sobrino and L. Orsi Relini, 2004. The apparent disappearance of *Loligo forbesi* from the south of its range in the 1990s: trends in *Loligo* spp. abundance in the Northeast Atlantic. ICES CM 2004/CC 346
- R6 - F Blanchard, J Boucher and JC Poulard, 2004. The effects of fishing and climate warming on the fish community in the Bay of Biscay during the last 3 decades : The answer of some indicators. Poster présenté au symposium Quantitative ecosystem indicators for fisheries management (SCOR-Unesco, Paris, 31 mars - 3 avril
- R6 - F Blanchard, J Boucher, JC Poulard, C. Hily and F. Lelec'h, 2004. Effects of climate and fishing: the necessity to take regime shifts into account in fisheries management objectives. Fourth World Fisheries Congress. Vancouver, BC, Canada. May 2 - 6, 2004
- R6 - Lahaye V., Bustamante P., Das K., Spitz J., Meynier L., Magnin V., Caurant F., 2004. The use of cadmium (Cd) and mercury (Hg) to discriminate dietary preferences of common dolphins (*Delphinus delphis*) and striped dolphins (*Stenella coeruleoalba*) in the Bay of Biscay (France). 18th Annual Conference of the European Cetacean Society, Kolmarden, Sweden, April 2004.
- R6 - Poulard JC and F Blanchard, 2004. Impact of climate change on the fish community structure of the eastern continental shelf of the Bay of Biscay. ICES Symposium on "The Influence of Climate Change on North Atlantic Fish Stocks". 11-14 May 2004 Bergen, Norway.
- R6 - Poulard JC and F Blanchard, 2004. Spatio-temporal distribution of hake in the Bay of Biscay. BECAUSE Meeting, Athens, 1 - 4 November 2004
- R6 - Poulard, J.-C., Mahé, J., 2004. Structure and spatial distribution of fish assemblages in the Celtic sea. Working Paper to 2004 ICES Working Group IBTS 14 pp.
- R6 - Rochet, M.-J., Trenkel, V., Bertrand, J., Bellail, R., Coppin, F., Le Pape, O., Mahé, J., Morin, J., Poulard, J.-C., Schlaich, I., Souplet, a., Véryn, Y., 2004. Is the impact of fishing on the fish communities around France increasing? Poster présenté au symposium "Quantitative ecosystem indicators for fisheries management" (SCOR-Unesco, Paris, 31 mars - 3 avril 2004)
- R6 - Trenkel, V., Rochet, M.-J., and Sari, T. 2004. A new class of predator prey models with interactions described by thresholds. ICES CM 2004/FF:04, 5.

- R6 - Trenkel, V.M., Pinnegar, J.K. Blanchard, J.L., Tidd, A.N. 2004. Can multispecies models be expected to provide better assessments for Celtic sea groundfish stocks? ICES Annual Science Conference, Vigo, ICES CM 2004/FF:05, 26 pp.
- R6 - Lahaye V., Bustamante P., Dabin W., Van Canneyt O., Dhermain F., Cesarini C., Pierce G.J. & Caurant F., 2005. New insights from age determination on toxic element accumulation in striped and bottlenose dolphins from Atlantic and Mediterranean waters. 16th Biennial Conference on the Biology of Marine Mammals, San Diego, California, 12-16 December 2005.
- R6 - Lahaye V., Bustamante P., Dabin W., Spitz J., Van Canneyt O., Das K., Holsbeek L., Learmonth J.A., Santos B., Pierce G., Rogan E., Guerra A., Gonzales A.L. & Caurant F., 2005. New insights from metallic tracers on the feeding ecology of common dolphins in European waters. 19th Annual Conference of the European Cetacean Society, La Rochelle, France, April 2005.
- R6 - Mahé J.C. and J.C. Poulard, 2005. Spatial distribution and abundance trends of main elasmobranch species in the Bay of Biscay and Celtic Sea from bottom trawl surveys. ICES CM 2005/N:04
- R6 - Poulard Jean-Charles and Verena Trenkel, 2005. General year effect on survey catchability. Fisboat meeting Fontainebleau 31 janvier - 04 février 2005.
- R6 - Poulard, J.-P., Trenkel, V.M. 2005. Relationship between survey abundance and weight indices, survey design and wind conditions: the French groundfish survey in Bay of Biscay. ICES Annual Science Conference, Aberdeen, ICES CM 2005/Z: 02, 17 pp.
- R6 - Trenkel, V. et Rochet, M.-J. 2005. Comment détecter des changements dans la dynamique des indicateurs? Conférence de l'AFH, Nantes, juin 2005.
- R6 - Woillez, M., Petitgas, P., Rivoirard, J., Poulard, J.-C. and Bez, N. 2005. Indices for capturing spatial pattern and change across years of fish population: an application on European hake (*Merluccius merluccius*) in the Bay of Biscay. ICES CM 2005/L:16, 15pp.
- R6 - Lahaye V., Bustamante P., Dabin W., Das K., Holsbeek L., Laws R.J., Santos B., Pierce G., Rogan E., Pierce G. J. & Caurant F., 2006. Coastal populations of small cetaceans are less exposed to toxic metals than oceanic ones in European waters. 20th ECS Conference, Gdynia, Pologne, 2-7 April 2006.
- R6 - Hermant M., Y. Désaunay, J. Lobry, J.C. Poulard, O. Le Pape, 2007. Influence de la variabilité climatique et du réchauffement global sur les populations ichthyologiques dans le Golfe de Gascogne. Communication au 8ème forum halieumétrique. La Rochelle 19-21 juin 2007.
- R6 - Le Floc'h, P., Poulard, J.-C., Thébaud, O., Blanchard, F., Bihel, J., and Steinmetz, F. 2007. Analyzing the potential economic impacts of long-term changes in marine fish communities: the case of French fisheries in the Bay of Biscay. Communication au 8ème forum halieumétrique. La Rochelle 19-21 juin 2007.
- R6 - Mourocq E., Spitz J., Castin M. & Ridoux V., 2007. Fish quality and prey selection by dolphins off the Bay of Biscay. 21th ECS Conference, San Sebastian, Espagne, 23-25 April 2007.
- R6 - Mouyen L., Spitz J., Linot S., Saint-Jean C. & Ridoux V., 2007. Considering digestibility biases in dietary analyses of marine mammals: In vitro and modelling experiments. 21th ECS Conference, San Sebastian, Espagne, 23-25 April 2007.
- R6 - Leblond E., Daures F., Berthou P., Dintheer C. (2008). The Fisheries Information System of Ifremer: a multidisciplinary monitoring network and an integrated approach for the assessment of French fisheries, including small-scale fisheries. ICES 2008 Annual Science Conference, 22-26 september 2008, Halifax, Canada. ICES CM 2008/K:11, 8pp.
<http://archimer.ifremer.fr/doc/00059/17002/>
- R6 - Rochet M.-J., Daures F., Van Iseghem S., Trenkel V.M. (2009). The joint dynamics of fish stocks and fishing fleets: testing hypotheses in the Bay of Biscay. ICES Annual Science Conference. ICES CM 2009/O: 08, 17 pp.
- R6- Chouvelon Tiphaine, Cresson Pierre, Brach-Papa Christophe, Knoery Joel, Thomas Bastien, Marco-Miralles Françoise, Andral Bruno, Bouchoucha Marc, Fabri Marie-Claire, Bustamante Paco (2015). **Hg bioaccumulation in deep-sea fauna: investigation of the influence of the trophic functioning at the base of food webs.** 12th International Conference on Mercury as a Global Pollutant - ICMGP, 14th-19th June 2015, Jeju, Korea.
- R6- Dimeet Joel, Pawlowski Lionel, Robert Marianne, Biseau Alain, Dube Benoit, Gaudou Olivier, Rochet Marie-Joelle (2013). **Preliminary attempt to evaluate the effect of a technical measure inducing a change of selectivity using combined data from a scientific survey and from the French observer at sea program.** CCR Eaux Occidentale et Septentrionale, 18 avril 2013, BILBAO,

Espagne.

R6_ Sanchez Florence, Zarauz Lucia, Morandeau Gilles, Santurtun Marina (2014). **Improving and sharing knowledge to optimize management of a cross border canyon: Case of Capbreton canyon (France, Spain)**. INCISE 2014 - 2nd International Symposium on Submarine Canyons, 29 sept. - 01 oct. 2014, Edinburgh, Scotland, UK.

R7 - Blanchard F. & J. Boucher, 2000. Dynamique des peuplements de poissons démersaux et impact de l'exploitation par pêche dans le golfe de Gascogne : voies d'analyse. VIIe colloque international d'Océanographie du golfe de Gascogne, Biarritz, 4-6 avril 2000.

R7 - Blanchard F, Boucher J and Poulard J.C., 2002. General trends in the fish community of the Bay of Biscay from 1973 to nowadays: Ecosystem effects of fishing or climate? . Communication au 8ème colloque International d'Océanographie du golfe de Gascogne. Gijon (Espagne) avril 2002

R7 - Blanchard, F., Boucher, Poulard, J.-C. 2003. Changement au sein du peuplement de poissons : interactions pêche et climat ? Tchatches 2003, 2-3 décembre 2003, Port en Bessin.

R7 - Spitz J., 2004. Le régime alimentaire des petits cétacés et sa variabilité temporelle : Un indicateur de changements environnementaux ? 13ème Conférence Internationale sur les Cétacés & 6ème Séminaire du Réseau National d'Échouages, Nice, France, 13-14 Novembre 2004.

R7 - Bertignac M., Fablet R., Guyader O., Mahévas S., De Pontual H. & Poulard J.C, 2005. Le merlu dans le golfe de Gascogne : bilan et prospective. Colloque défi golfe de Gascogne, Brest, 22-24 mars 2005.

R7 - Bertrand J., Bellail R., Coppin F., Le Pape O., Mahé J.C., Morin J., Poulard J.C., Rochet M.J., Schlaich I., Souplet A., Trenkel V. et Vérin Y, 2005. Tendances récentes de l'état des communautés démersales exploitées le long des côtes de France. Colloque défi golfe de Gascogne, Brest, 22-24 mars 2005.

R7 - Blanchard F., Poulard J.C. et Boucher J, 2005. Effets interactifs du changement climatique et de l'exploitation par la pêche sur le peuplement de poissons du Golfe de Gascogne. Colloque défi golfe de Gascogne, Brest, 22-24 mars 2005.

R7 - Fritsch M., Morizur Y., Poulard J.C. et Carpentier A, 2005. Le bar commun en Atlantique Nord : Quelles évolutions ? Colloque défi golfe de Gascogne, Brest, 22-24 mars 2005

R8 - Spitz J., Quéro J.C. & Vayne J.J., 2007. Contributions à l'étude du genre *Pseudoscopelus* (Pisces : Chiasmodontidae) avec une espèce nouvelle, *P. pierbartus* n. sp., deux synonymies junior et une clé d'identification des espèces valides. *Cybium*, 31(2): 333-339.

R9 - Guéguen J. & al., 1988. Evaluation des ressources halieutiques de l'Ouest de l'Europe par campagnes de chalutages programmés, EVHOE 871. IFREMER DRV NANTES. Rapport final du contrat CEE n°2610. CEE.

R9 - Poulard J.C. & al., 1989. Distribution saisonnière et évaluation des ressources halieutiques du golfe de Gascogne. IFREMER, DRV, Lorient. Rapport final du contrat CEE n°3941. 246 p.

R9 - Quéro J.C. & O. Cendrero, 1995. Incidence des activités de pêche sur les poissons dans les eaux marines d'Arcachon du 18ème siècle à nos jours. Rapport final du contrat Commission des Communautés Européennes. n° PEM/93/009. 126 p.

R9 - Reid D. ed 1997. Shelf Edge Fisheries and Oceanography Study (SEFOS). Final report of the AIR 2931105 programme.

R9 - Sanchez F. ed 1999. Evaluation of demersal resources of southwestern Europe from standardised groundfish surveys (SESITS). Study EC-DGXIV N° 96-029. IEO - Ifremer - Ipimar: 195 p.

R9 - Borges L., F. Cardador, A. Fernandez, J. Gil, P. Moguedet, P. Panterne, J.C. Poulard, R.

Sanchez & I. Sobrino, 1999. Evaluation of demersal resources of southwestern Europe from standardised groundfish survey. IPIMAR - IEO - Ifremer, Lisbon, Portugal - Santander, Cadiz, Spain - La Rochelle, Nantes, France. Final report. DG X IV Study contract 96-029. 195 p.

R9 - Mahé J.C. ed 2001. International program of standardised trawl surveys (IPROSTS). Study EC-DGXIV N° 98-057. Ifremer - Marine Institut4 - Marine laboratory: 122 p.

- R9 - Beare D, J Castro, J Cotter, O van Keeken, L Kell, A Laurec, J-C Mahé O Moura, S Munch-Petersen, J R Nielsen, G Piet, J Simmonds, D Skagen, P J Sparre, 2003. Evaluation of Research Surveys in Relation to Management Advice (EVARES - FISH/2001/02 - Lot 1) Final Report to European Commission Director-General Fisheries : 324 p.
- R9 - Pierce G.J., Santos M. B., Learmonth J.A., Smeenk C., Addink M., Garcia-Hartmann M., Boon Y.P., Zegers B.N., Mets A., Ridoux V., Caurant F., Bustamante P., Lahaye V., Guerra A., Gonzales A., Lopez A., Alonso J.M., Rogan E., Murphy S., Van Canneyt O., Dabin W., Spitz J., Dorémus G. & Meynier L. 2004. Bioaccumulation of persistent organic pollutants in small cetaceans in European waters: transport pathways and impact on reproduction. Rapport final contrat européen BIO CET, Projet n°EVK3-2000-00027, 36p.
- R9 - Lahaye V., Bustamante P., Law R., Aubail A., Spitz J., Rogan E. and Caurant F., 2004. Bioaccumulation of trace elements in small cetaceans from the NE Atlantic and transfer through the diet. Rapport contrat européen BIO CET, Workpackage 8 Deliverable. Projet n°EVK3-2000-00027, 36p.
- R9 - Minereau A., 2006. Etude des sédiments superficiels constituants de la Grande Vasière - Golfe de Gascogne. contrat Ifremer 2 06 82228, Astérie, Brest.
- R9 - Poulard, J.C. 2007. Hake (*Merluccius merluccius*) in the Bay of Biscay. Contribution au cas d'étude golfe de Gascogne du projet européen FISBOAT.
- R9 - Poulard, J.C. 2007. Contributions au cas d'étude golfe de Gascogne du projet européen BECAUSE.
- R12 - Trenkel V.M., Berthélé O., Lorance P., Bertrand J.A., Brind'Amour A., Cochard M.-L., Coppin F., Léauté J.-P., Mahé J.-C., Morin J., Rochet M.-J., Salaun M., Souplet A., Vérin Y. (2009). Grands invertébrés et poissons observés par les campagnes scientifiques. Atlas de distribution. Bilan 2008. <http://archimer.ifremer.fr/doc/00000/6976>.
- R15 - Schaan O., 1989. Description des associations d'espèces dans le golfe de Gascogne, d'après des résultats de chalutage, par des méthodes d'ordination et de classification. Université de Bretagne Occidentale. Mémoire de DEA. 32 p.
- R15 - Housse C., 1993. Etude de la population du merlan (*Merlangius merlangus* L.) du golfe de Gascogne. Université, Aix Marseille II. Mémoire de stage de DEA. 45 p.
- R15 - Lauroz K., 1993. Description et cartographie des associations d'espèces vagiles (poissons et invertébrés) dans le golfe de Gascogne et sur le plateau Celtique. Université Aix Marseille II. Mémoire de DEA. 28 p
- .
- R15 - Mariotti E., 1994. Etude préliminaire du protocole d'échantillonnage d'une campagne d'intercalibration de deux navires de recherche. Mémoire de DEA de Modélisation Statistique et Stochastique. 110 p
- .
- R15 - Zendera N., 1990. Typologie du golfe de Gascogne à partir de l'analyse des associations faunistiques. Université Pierre et Marie Curie (Paris VI). Mémoire de DEA. 42 p.
- R15 - Chantrelle P., 2003. Traits et stratégies biologiques des poissons démerso-benthiques du golfe de Gascogne et de la mer Celtique : assemblages, structuration et tendances. Université Claude Bernard - Lyon 1. Mémoire de stage de DEA (analyse et modélisation des systèmes biologiques) 31 p.
- R15 - Meynier L., 2004. Food and feeding ecology of the common dolphin, *Delphinus delphis*, in the Bay of Biscay: intraspecific dietary variation and food transfer modelling. MSc Thesis, University of Aberdeen, Aberdeen
- .
- R15 - Spitz J., 2004. Le régime alimentaire des petits cétacés et sa variabilité temporelle : un indicateur des changements environnementaux ? Diplôme de l'Ecole Pratique des Hautes Etudes, EPHE, Paris
- .
- R15 - Linot S., 2006. Analyse de la digestibilité de proies de *Delphinus delphis* par expérience in vitro. Master 1 Environnement et Espaces Littoraux, Université de La Rochelle.

R15 - Mourcq E., 2006. Analyse de la composition corporelle des proies du dauphin commun ; Approche qualitative de cette composition en terme de valeur énergétique. DUT Analyses Biologiques, IUT de La Rochelle.

R15 - Hermant M., 2007. Impact du réchauffement global sur les populations de poissons plats dans le golfe de Gascogne. Mémoire de stage, Master 2, Université Pierre et Marie Curie, Paris

R15 - Mariotti L., 2007. Le régime alimentaire du phoque veau-marin et son impact sur les ressources en baie des Veys, Normandie. DUT génie Biologiques, IUT de La Rochelle.

R15 - Schoen V., 2007. Ecologie alimentaire des prédateurs supérieurs du golfe de Gascogne: analyse calorimétrique des proies. DUT génie Biologiques, IUT de La Rochelle.

R15 – Ramonet M., 2008. Le suivi des populations des élasmobranches par les missions Evhoe de 1997 à 2007. Mémoire de stage, Master 2 Exploitation des Ressources vivantes Côtières, Université de Caen. 60 p.

R15 – Despois Emilie (2014). Analyse et comparaison de la distribution démographique de l’anchois et de la sardine du golfe de Gascogne basées sur des campagnes océanographiques automnales et printanières.

R16 - Petitgas P., 1991. Contributions géostatistiques à la biologie des pêches maritimes. Thesis: Ecole Nationale des Mines, PARIS. 211 p.

R16 - Taverny C., 1991. Contribution à la connaissance de la dynamique des populations d'Aloses (*Alosa alosa* et *Alosa fallax*) dans le système fluvio-estuarien de la Gironde : pêche, biologie et écologie. Etude particulière de la dévalaison et de l'impact des activités humaines. Thesis: Université de Bordeaux I, Bordeaux. 451 p.

R16 - Ould el Kettab M., 1993. La pêche des gadidés de Mer Celtique : description, analyse de l'exploitation et évaluation des stocks. Tentative de gestion par un modèle bio-économique. Thesis: Bretagne Occidentale. 207 p.

R16 - Gauthiez F., 1997. Structuration spatiale des populations de poissons marins démersaux. Thesis: Claude Bernard - Lyon I. 251 p.

R16 - Blanchard F., 2000. Effets de l'exploitation par pêche sur la dynamique de diversité des peuplements de poissons démersaux. Analyse comparée du rôle des interactions entre espèces dans le golfe de Gascogne et dans le golfe du Lion. Thesis: Bretagne occidentale, Brest. 225 p.

R16 - Kacher, M., 2004. Le merlu du golfe de Gascogne et de la mer Celtique : croissance, répartition spatiale, écologie alimentaire et assemblages. Thèse de Docteur d'Université. Université du Littoral Côte d'Opale 62930 Wimereux.

R16 - Charrier G., 2005. Structure génétique des populations de poissons dans l'Atlantique Nord-Est. Thèse de Doctorat, Université de Bretagne Occidentale, Brest, 187p.

R16 - Lahaye V., 2006. Utilisation des éléments toxiques comme traceurs de populations chez les petits cétacés : identification des populations ou segments de populations les plus vulnérables. Thèse de Doctorat, Université de La Rochelle

R16 - Mouyen L., 2006. Quantification des régimes alimentaires de prédateurs supérieurs marins : prise en compte des différences de digestibilité des proies par expérience in vitro et simulation. Thèse de Doctorat Vétérinaire, Ecole Nationale Vétérinaire de Nantes.

R16 - Persohn, C. 2009. Sensibilité des populations de poissons aux changements globaux en fonction de leurs traits d'histoire de vie étudiée par une approche empirique. Thèse, Université de Brest, 200 p

R16 - Pusineri C., 2005. Niches alimentaires et partage des ressources : les petits cétacés du golfe de Gascogne. Thèse de Doctorat, Université de La Rochelle.

R16 - Certain G., 2007. Distribution spatiale des prédateurs du golfe de Gascogne en relation avec les paramètres environnementaux. Thèse de Doctorat, Université de La Rochelle/CEBC-CNRS.

R16- Fauconnet Laurence (2014). **Caractérisation empirique et détaillée des captures : Contribution à l'approche écosystémique des pêches.** PhD Thesis, Université Européenne de Bretagne. <http://archimer.ifremer.fr/doc/00256/36717/>

3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in

Latitude and longitude in decimal degrees, including coordinates of cruise/track/way points/sampling stations). Please provide coordinates in a separate excel spreadsheet.

Operations	Latitude	Longitude	Profondeur <i>Water depth</i>
bottom trawl	43°20' N to 52°30' N	1°20' W to 12°00' W	600 m
Pelagic trawl	43°20' N to 52°30' N	1°20' W to 12°00' W	2000 m
Pagure	43°20' N to 52°30' N	1°20' W to 12°00' W	<400 m

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical

Areas of the intended work and, as far as practicable, the location and depth of sampling

Stations, the tracks of survey lines, and the locations of installations and equipment.

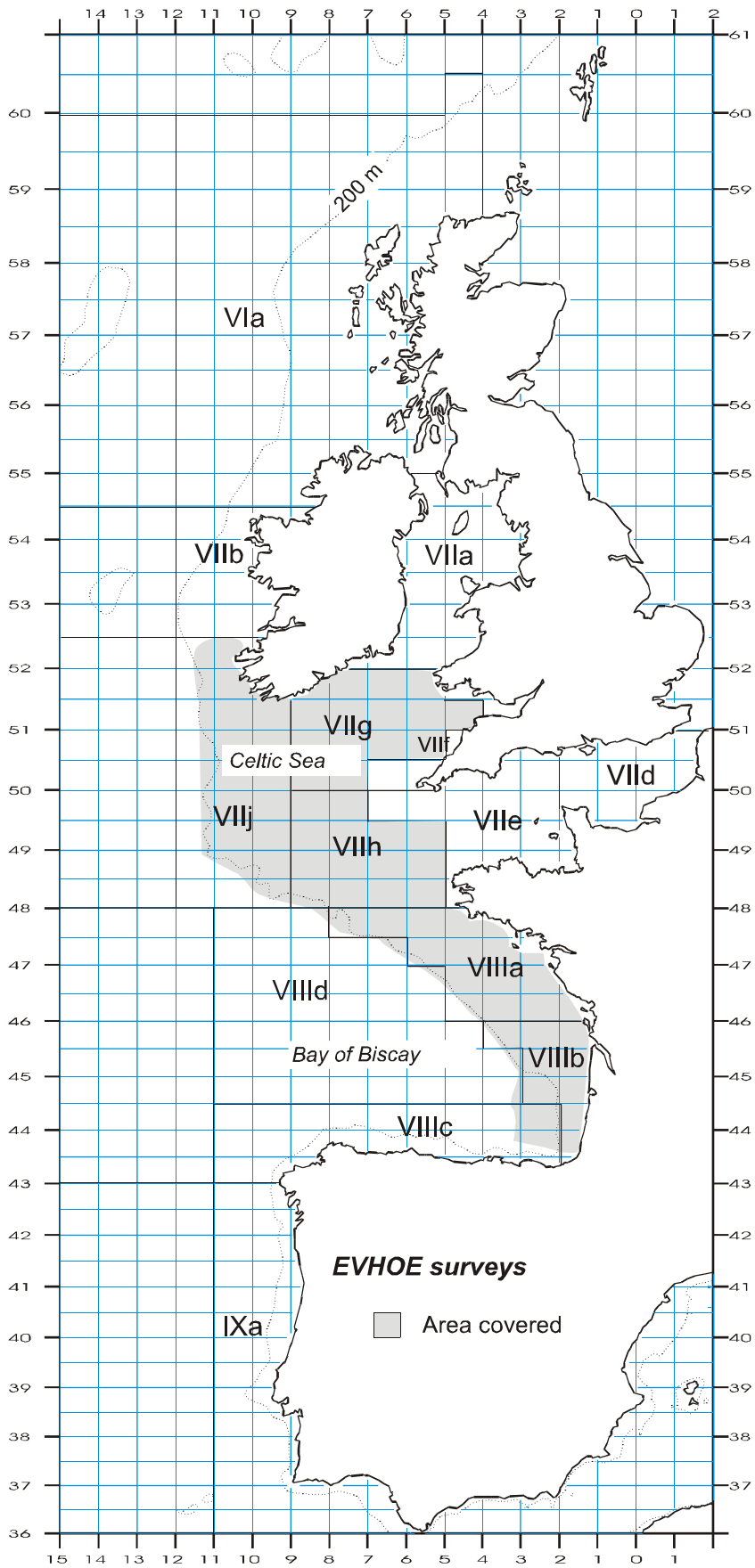
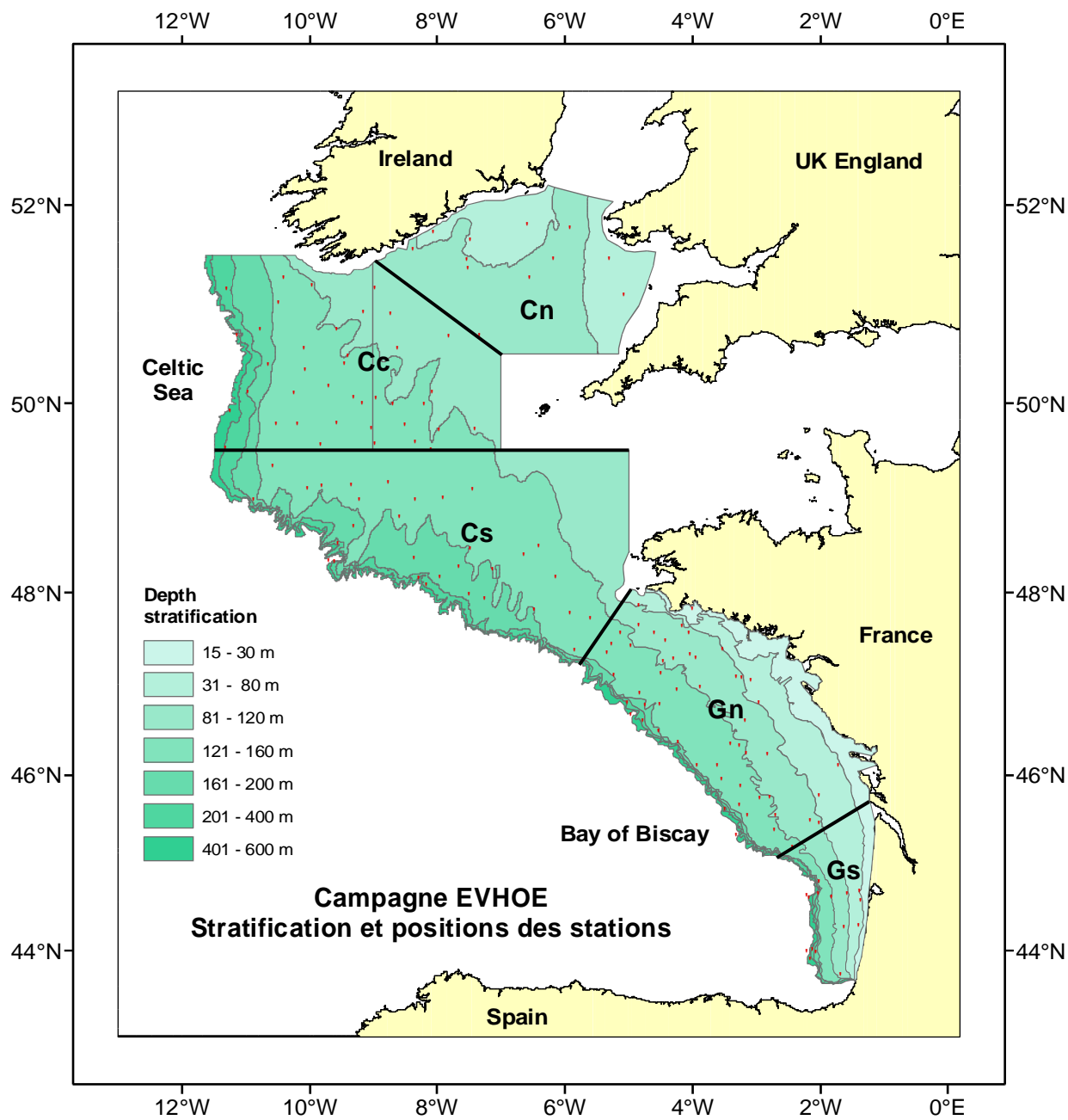


Fig. 1. - North-Eastern Atlantic ICES Statistical Areas and area covered during the EVHOE surveys.



located stations not definitive

4. Methods and means to be used

4.1 Particulars of vessel:

Name:	THALASSA
Type/Class:	Research vessel
Flag	French
Identification Number (IMO/Lloyds No.):	IMO=9070307
Owner:	IFREMER
Operator:	GENAVIR
Overall length (meters):	74,5 m
Maximum draught:	6,10 m
Displacement/Gross Tonnage:	2 803 UMS
Propulsion:	Diesel Electric
Cruising & maximum speed:	11 knots
Call sign:	FNFP
INMARSAT number and method and capability of communication (including emergency frequencies):	<p>Method and capability of communication (including telex, frequencies):</p> <ul style="list-style-type: none"> - GSM : 33.6.07.32.44.87 (bridge) - 33.6.16.87.10.69 (captain) Fax : 33.6.20.18.50.20 Inmarsat : Tel : 00.870.7.731.600.16 (bridge) - Fax : 00.870.7.831.600.57 - Vsat : Tel : 33.2.98.22.48.05 (bridge) - Fax : 33.2.98.22.48.06 - Telex Inmarsat C1 : 058x.4.227.297.10 - Telex Inmarsat

	<p><i>C2 : 058x.4.227.297.11</i> <i>(Codes: East Atlantic: 0581 - West Atlantic: 0584 - Pacific : 0582 - Indian Ocean: 0581)</i> <i>email :</i> TL.Commandant@thalassa.ifremer.fr <i>Email Telex C1 :</i> ThalassaC1@skyfile-c.com <i>Email Telex C2 :</i> ThalassaC2@skyfile-c.com</p>
Name of Master:	Loïc PROVOST
Number of Crew:	25
Number of Scientists on board:	25

4.2 Particulars of Aircraft:	
Name:	
Make/Model:	
Nationality (flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall Length (meters):	
Propulsion:	
Cruising & Maximum speed:	
Registration No.:	
Call Sign:	

Method and capability of communication (including emergency frequencies):	
Name of Pilot:	
Number of crew:	
Number of scientists on board:	
Details of sensor packages:	
Other relevant information:	

4.3 Particulars of Autonomous Underwater Vehicle (AUV):	
Name:	
Manufacturer and make/model:	
Nationality (Flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall length (meters):	
Displacement/Gross tonnage:	
Cruising & Maximum speed:	
Range/Endurance:	
Method and capability of communication (including emergency frequencies):	
Details of sensor packages:	

Other relevant information:	
-----------------------------	--

4.4 other craft in the project, including its use:

4.5 Particulars of methods and full description of scientific instruments to be used(for fishing gear specify type and dimension)			
Types of samples and Measurements:		Methods to be used:	Instruments to be used:
	biological observations on fish	trawling	bottom trawl GOV 36/47 Echo sounders
	hydrographic observations	Temperature and salinity	Sonde NKE 300m and 600 m
	Video observations	Submarine camera	PAGURE

4.6 Indicate nature and quantity of substances to be released into the marine environment:

4.7 Indicate whether drilling will be carried out. If yes, please specify:
NIL

4.8 Indicate whether explosives will be used. If yes, please specify type and trade name,

Chemical content, depth of trade class and stowage, size, depth of detonation, frequency of Detonation, and position in latitude and longitude:

NIL

5. Installations and Equipment

Details of installations and equipment (including dates of laying, servicing, method and Anticipated timeframe for recover, as far as possible exact locations and depth, and Measurements):

NIL

6. Dates

6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms:

October 17 ,2016

December 1, 2016

6.2 Indicate if multiple entries are expected:

YES

7. Port Calls

7.1 Dates and Names of intended ports of call:

--

7.2 Any special logistical requirements at ports of call:

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

8. Participation of the representative of the coastal State

8.1 Modalities of the participation of the representative of the coastal State in the research Project:

8.2 Proposed dates and ports for embarkation/disembarkation:

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include

The expected dates of submission of the data and research results:

Cruise report within two months of the cruise ending

.

Proposed means for access by national scientists to data and samples

Research data will be available on ASCII files two months after the cruise ending.

9.2 Anticipated dates of submission to the coastal State of the final report:

Research data will be available on ASCII files two months after the cruise ending.

9.3 Proposed means for access by coastal State to data (including format) and samples:

All information will be available through the ICES International Bottom Trawl Surveys Working Group.

9.4 Proposed means to provide coastal State with assessment of data, samples and

Research results:

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples

And research results:

9.6 Proposed means of making results internationally available:

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or

Pending):

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:

A handwritten signature in black ink, appearing to read 'MS', written over a horizontal line.

Signature:

Contact information of the focal point:

Name: Michele SALAUN

Country: France

Affiliation: IFREMER

Adress: 8, rue François TOULLEC 56100 Lorient FRANCE

Telephone: +33 2 97 87 38 14

Fax: +33 2 97 87 38 01

Email: Michele.Salaun@ifremer.fr