

## Food Certification International Ltd

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Thursday 24th July 2014

## **MINSA North East Atlantic Mackerel Fishery**

### **Marine Stewardship Council Certification**

**Certification Body: Food Certification International Ltd**

## **Nominations for Assessment Team Membership**

Food Certification International (FCI) is currently undertaking the assessment of the above fishery against the Marine Stewardship Council (MSC) Principles and Criteria for Sustainable Fishing.

To assist with this assessment, FCI is also in the process of assembling an assessment team comprising of members with experience and expertise in the areas of stock assessment, ecosystem interactions and fishery management appropriate to this fishery.

The persons proposed as team members of this fishery assessment team are set out below, together with a resumé of their experience and expertise. They have been proposed on the basis of their experience in the areas of stock assessment, ecosystem interactions and fishery management.

All stakeholders are now invited to provide comments on the suitability or otherwise of any of the nominees. **Any such comments must reach us by 17:00 GMT on Sunday 3<sup>rd</sup> August 2014**

**Please note:** Any claim/s regarding the suitability or otherwise of the proposed assessment team for this fishery assessment should be accompanied by objective evidence in support of the aforementioned claim/s.

The MSC provides a set of guidelines and templates to assist in the transfer of information between stakeholders and Certification Bodies. These should be used for any comments you wish to make on this or any other stage of the assessment process and can be found here:

<http://www.msc.org/documents/get-certified/stakeholders>

Comments should be sent in the first instance to:

**FCI Fisheries Department**

[fisheries@foodcertint.com](mailto:fisheries@foodcertint.com)

**Name:** John Nichols

**Position in team:** Principle 1

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### Education

1977 MIBiol C Biol (now CBiol MSB)  
 1993 – 1996 Honorary Lecturer at University of East Anglia  
 2014 Fellow of the Society of Biology (FSB)

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### Professional Profile

Age: 74 with 42 years experience of plankton ecosystem research specialising in the taxonomy of North Atlantic & NW European plankton including phytoplankton, micro and meso-plankton, ichthyoplankton and young fish. Involvement with plankton surveys for stock assessment from 1977 and direct involvement with the assessment of pelagic and western demersal fish stocks from 1994 to 2000.

In 1992 I set up the original CEFAS programme for monitoring phytoplankton in shellfish harvesting areas to protect the public from the potential ill effects of toxic algae. I was responsible for it's compliance with the EU Directive. In that context I had to train staff in the identification of both diatoms and dinoflagellates. That programme is still running at CEFAS

Since retiring from CEFAS I have been involved as an expert in the assessment of thirty separate fisheries for Marine Stewardship accreditation and subsequent surveillance visits to accredited fisheries and the peer review process (summary details below).

At the personal level I have taken a great interest in the village of Blundeston where I have lived since 1968. For many years I was on the board of Governors of the village school and chaired that board for six years. I have a long history of involvement with the Parish Council and the Charity Trustees and was chair both bodies for many years. I was for many years a member of the Parochial Church Council and was Churchwarden from 1992 to 1999. I also chair the board of trustees which set up and established a 3.5 acre Millennium Green in the village.

I was appointed a Justice of the Peace in 1989 and retired from the bench in 2010. I was a bench chairman and deputy chairman of the North East Suffolk bench and a Suffolk County appraiser.

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### Professional Experience

#### *Fisheries management*

- » Fish stock assessment and management of North Sea pelagic species including the North Sea herring and sprat stocks and the Thames Estuary herring stock. I was involved throughout with management advice in relation to the MSC accreditation process for the Thames herring stock.
  - » Assessment and management of western mackerel and horse mackerel and western demersal stocks.
  - » Scientist in charge of numerous research vessel surveys for fish stock assessment including inshore nursery ground surveys and plankton research surveys.
  - » Plankton and young fish sampling expertise.
  - » Participation in sole egg surveys of the southern North Sea and eastern English Channel for stock assessment purposes.
  - » Participation in '0' group surveys of flatfish nursery areas of the eastern English Channel for preparation of recruitment indices.
  - » Provision of advice to senior staff, MAFF HQ staff and other national and international bodies on pelagic fisheries, shelf edge resources, distant water fisheries, deep sea resources.
  - » Established and ran the toxic algae monitoring programme for England and Wales under the requirements of an EU Directive.
  - » In 2014 I successfully completed the four module MSC on line training course, passed the exam and was certified in the role of an MSC Fishery Assessment Team Leader.
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### **MSC Certifications as Principle 1 expert**

Marine Stewardship Council assessor for the evaluation of over 25 fisheries for accreditation annual auditing and in many cases re-certification. They cover a total of twelve different species, five pelagic and seven demersal.

#### **Herring:**

- » Pelagic Freezer Associations North Sea mid-water trawl fishery
- » Hasting FO English Channel drift net fishery
- » Swedish FPO North Sea and Skagerrak purse seine and pelagic trawl fishery
- » Norway North Sea and Skagerrak purse seine and pelagic trawl fishery
- » Thames estuary drift net fishery
- » Norway Atlanto-Scandian purse seine and pelagic trawl fishery
- » German Baltic mid water trawl fishery
- » Newfoundland NAFO Division 4R purse seine fishery

#### **Mackerel:**

- » Pelagic Freezer Associations North east Atlantic mid-water trawl fishery
- » Hastings English Channel line fishery
- » South western UK handline fishery

#### **Sardine:**

- » Portuguese Bay of Biscay and Iberian waters Purse seine fishery

#### **Bass:**

- » North East Coast of England beach T net fishery

#### **Pacific Sablefish:**

- » Canadian Pacific long line and trap fishery

#### **Cod:**

- » Faroese Arctic trawl fishery
- » Russian Arctic trawl fishery

#### **Haddock:**

- » Faroese Arctic trawl fishery
- » Russian Arctic Trawl fishery

#### **Saithe:**

- » Faroese North Sea trawl fishery

#### **Sole:**

- » Ekofisk Netherlands trawl fishery
- » Hastings trawl and gill net fishery
- » Hastings trammel net fishery

#### **Plaice:**

- » Ekofisk Netherlands fishery
- » Hastings trawl and gill net fishery
- » Hastings trammel net fishery
- » I have also been a peer reviewer for numerous MSC certification reports by various Certification bodies and has also carried out four MSC pre-assessments.
- » I am an approved assessor for the UK Responsible fishing scheme.
- » I have acted in an advisory capacity to Global Certification in relation to the MSC assessment of the Bering Sea / Sea of Okhotsk Alaskan Pollock fishery.
- » Currently involved in the assessment of a Norwegian fishery on Arctic cod and haddock a Newfoundland cod fishery in region 3PS, and western Baltic spring spawning herring

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***Areas of Research Interest***

- » Taxonomy of North –West European zooplankton including ichthyoplankton and young fish.
  - » Published ICES identification sheets for eggs and larvae of Pleuronectidae and Soleidae
  - » Design, calibration and operation of plankton sampling systems.
  - » Lobster and crab larvae surveys and lobster larvae field research.
  - » Management of pelagic species including North Sea herring and western mackerel stocks.
  - » North Sea and western area groundfish surveys.
  - » Nursery area surveys of '0' group flatfish.
  - » Identification of potentially toxic algal species.
  - » Phytoplankton species succession
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**Report and scientific paper writing**

- » Author or joint author of 25 papers in refereed journals on various aspects of plankton ecosystem research and fish stock management and 19 ICES papers on plankton and stock assessment.
  - » Author of 2 ichthyoplankton identification sheets.
  - » Contributions to numerous ICES Working Group and Study Group Reports, 2 MAFF Technical Reports and articles in Fishing News.
  - » Author of an EU funded Plankton Sampler Study: Report on the Concerted Action.
  - » Co-author of numerous MSC fisheries accreditation reports.
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**Full publication list available on request**

**Name:** Dr. Massimiliano Cardinale

**Position in team:** Principle 1

**Education:** Masters Degree - Biological Science, University “La Sapienza” Rome, Italy with the maximum (110/110 with honours).

**Thesis:** 10/3-4/95 Title “Growth and diet of *Xyrichthys novacula* (Pisces: Labridae)” 70pp. The aim of the research was to investigate the growth, reproduction and feeding ecology of *Xyrichthys novacula* relating this aspects of the biology of the species with the sexual inversion process typical of this genus. Supervisor: Prof. G.D. Ardizzone (Department of Human and Animal Biology, University “La Sapienza” Rome).

**Doctoral thesis:** “Reproductive potential of Baltic cod populations (*Gadus morhua*), Department of Marine Ecology, Göteborg University, Sweden, 2001, Fishery Ecology. Supervisor Dr. Fredrik Arrhenius, Swedish National Board of Fisheries, Sweden.

### Professional Experience

**1993-94** Field and laboratory work experience and studies of population dynamics on several commercial fish species in the Central Tyrrhenian Sea (Mediterranean Sea) under Dr. Ardizzone guidance (Department of Human and Animal Biology, University “La Sapienza” Rome). Experience in aquaculture made on the *Spaurus auratus* in Ponza Island, Central Tyrrhenian Sea.

**1994** Participation as research assistant in the EEC project “Cartography of the Italian demersal resources” carried out by the Department of Human and Animal Biology, University “La Sapienza” Rome, making use of the software package Arc/Info (GIS).

**1993-94-95-96** Participation as scientist in national program supported by the Italian Ministry of Agriculture and Forestry “Demersal resources evaluation in the Italian Seas” (Fishery act 41/82).

**1994-95-96-97** Participation as scientist in the MEDITS-EEC project “Demersal resources evaluation of the Mediterranean Sea” Dr. Ardizzone (Department of Human and Animal Biology, University “La Sapienza” Rome).

**2/1996** Participation as scientist in the trawl survey supported by the Swedish National Board of Fishery “Estimation of cod discard practice in the Kattegat and Skaggeak” on board of the research vessel ARGOS.

**3/1996** Participation as scientist using a grant of the scientific Cupertino agreement between Swedish SJFR-Italian CNR in the project directed at the estimation of cod discard practice in the Baltic and Kattegat.

**5/1996** Winner of a SIBM (Italian Society of Marine Biology) fellowship for the participation at the annual congress of the society 20-25/5 Portoferraio, Elba Island (LI), Italy.

**1996/97/98/99** and 2002 Participation as scientist in the trawl survey supported by the Swedish National Board of Fishery “Recruitment cod in the Baltic Sea” on board of the research vessel ARGOS.

**5/1998** Accepted as PhD student at Gothenburg University, Department of Marine Zoology.

**9/1999** Temporary contract (to 8/2000) as scientist at IMR (Modelling of Baltic cod database) (Institute for Marine Research) of Lysekil, Sweden.

**1/2000** Advanced Course in stock assessment at ICES for stock assessment coordinators. February 2000, Copenhagen.

**1/2001** Temporary contract as statistical consultant and database analyser (to 12/2001) for the DG XIV-EU project “FABOSA” on alternative methods for fish ageing.

**1/2001** Permanent Research position in Eco-physiology of small bird’s migration and statistical analysis and modelling of large database set at INFS (National Institute for Wild Fauna of Bologna, Italy).

**3/2001** Doctoral thesis disputation “Reproductive potential of Baltic cod populations (*Gadus morhua*), Department of Marine Ecology, Göteborg University, Sweden, supervisor Dr. Fredrik Arrhenius.

**10/2001** Temporary Contract (to 12/2001) as scientist (Modelling of Kattegat-Skagerrak cod database) at IMR (Institute for Marine Research) of Lysekil, Sweden (National Board of Fisheries).

**12/2001** Permanent position as researcher (Stock Assessment, Statistical analysis and modelling of fisheries data) at IMR (Institute for Marine Research) of Lysekil, Sweden (National Board of Fisheries).

**01/2003** Participation at the EU Twinning Project in Riga, Lettland as fisheries expert on Data Collection Regulation framework within EU.

**11/2005** Participation as represent of the Swedish National Board of Fisheries eat the workshop on “Shrimp by-catch and ecosystem approach to fisheries management” organized by FAO in Maputo, Mozambique.

**11/2006** Collaboration with the Kenya Marine Fisheries Research Institute and participation in the project “Ectoparasitic polychaetes in the Indian Ocean”. Field sampling in Malindi Coral Reef Marine Park, Kenja.

**01/2007 to 12/2009** Responsible of the Component A (Stock assessment and resources management) Sustainable coastal fisheries resources management project in the Java Sea (Indonesia) under SIDA (Swedish International Development Cooperation Agency).

**08/2009** Invited participation at the workshop on “Tropical fisheries” organized by WIOMSA in Reunion Island, 24-28 August 2009.

### Courses

**2/2000** ICES Advanced Course in stock assessment at ICES for stock assessment coordinators, 1 week

**11/2008** Course in R software at IMR, Lysekil Sweden, lecturer Dr. Valerio Bartolino.

**2/2010** Course in spatial modelling analysis at the Emperial College London, Department of Life Sciences

- » Stomach content analysis
- » Zooplankton and nektobenthos sampling
- » Zooplankton and nektobenthos processing,
- » Statistical analysis
- » Large database analysis
- » Modelling, stock assessment modelling
- » Fishery management.

### Languages

*Full knowledge:* Italian, English and Swedish.

*Limited knowledge:* Spanish and Norwegian

### Scientific Journal Reviews

- » Journal of Fish Biology (11)
- » Canadian Journal of Fisheries of Aquatic Science (6)
- » Journal of Applied Ichthyology (14)
- » Proceedings of Alaska Sea Grant Symposium (1)
- » Marine Ecology Progress Series (32)
- » Archive of Fishery and Marine Research (1)
- » Fisheries Research (9)
- » Fishery Bulletin (2)

- » Journal of Ornithology (2)
- » ICES Journal of Marine Science (11)
- » Aquatic Living Resources (3)
- » Bulletin of the Sea Fisheries Institute (1)
- » CEFAS (1)
- » Annales de Limnologie (1)
- » Journal of Marine Biological Association UK (2)
- » Polar biology (1)
- » Marine Biology (2)
- » Ecography (1)
- » Annales de limnologie (1)
- » Nature (1)
- » Progress in Oceanography (2)
- » Turkish Journal of Zoology (3)
- » Hydrobiology (1)
- » Ecography (1)
- » Proceedings of Royal Society B (1)
- » Experimental biology of fishes (1)
- » Fisheries Oceanography (1)
- » Advances in Oceanography and Limnology (2)
- » Turkish Journal Fisheries of Aquatic Science (3)
- » African Journal of Marine Science (1)

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### Memberships, International Committees and Editorial Boards

From 01/2002 and onwards, Member of the **MEPS** (*Marine Ecology Progress Series*) referees board.

From 03/2002 to 12/2013, Elected Member of the **STECF** (Scientific, Technical and Economic Committee for Fisheries) at DGMARE (Directorate of Fisheries), European Community.

From 03/2002 to 12/2011, Member of the **SGRN** (Study Group on Research Needs) at DGMARE (Directorate of Fisheries), European Community.

From 01/2002 to 12/2010, Member of the **HAWG** (Herring Assessment Working Group) at ICES.

From 01/2002 to 12/2005, Member of the **WGBIFS** (Working Group on Baltic International Fisheries Surveys) and **WGNSSK** (North Sea Demersal Assessment Working Group) at ICES.

From 01/2002 to 12/2005 Member of **WGBFAS** (Baltic Sea Assessment Working Group) and **SGROMAT** (Study Group on Growth and Maturity) at ICES.

From 01/2004 to 12/2007, Member of the **ACFM** (Advisory Committee for Fisheries Managers) at ICES.

From 10/2003 to 01/2007, Member of the **Baltic Committee** at ICES.

From 1/2005 to 12/2005, Member of the **RGSSDS** (Review of the Working Group of Southern Shelf Stock Assessment) at ICES.

From 01/2006 to 12/2007 Chairman of the ACFM sub-group **RGWGEF** (Review of the Working group on Elasmobranchs Fishes at ICES).

From 01/2006 to 12/2007 Chairman of the **STECF-SGBRE** (Evaluation of Protections plan of Italian Marine resources) at DGXIV (Directorate of Fisheries), European Commission.



From 1/2007 to 12/2008 Co-Chairman of the **WKHRBP** (Working Group on herring recruitment processes in the Baltic) at ICES.

From 1/2006 to 12/2006, Member of **WGMG** (Working Group on Assessment Methods Working Group), International Council for the Exploration of the Sea.

From 1/2007 to 12/2008, Member of **WKREFBAS** (Workshop on Reference Points in the Baltic Sea, at ICES.

From 1/2007 to 12/2008, Member of **WKHER** (Workshop on Herring Management Plans), at ICES.

From 1/2005 to 12/2005, Member of **SGMAB** (Study Group on Multispecies Assessment in the Baltic), at ICES.

From 1/2005 to 12/2006, Member of **SGBFFI** (Study Group on Fish and Fisheries in the Baltic), at ICES.

From 1/2009 to 12/2009 Co-Chairman of the **WKCSMPB** (Working Group on herring recruitment processes in the Baltic) at ICES.

From 1/2008 to 12/2011 Chairman of the **STECF-SGMED** (Working group on stock assessment in the Mediterranean Sea) at DGMARE (Directorate of Fisheries), European Commission.

From 1/2009 to 12/2009 Member of the **WKFPDE** (Workshop on Fishery Management Plan Development and Evaluation) at ICES.

From 1/2009 to 12/2009 Member of the **WKROUND** (Workshop for Roundfish) at ICES.

From 1/2009 to 12/2010 Member of the **RGPAND** (Review and Advice drafting Group of the Working Group of Pandalus Assessment) at ICES.

From 1/2009 to 12/2010 Member of the **SGHIST** (Study Group on History in Fisheries) at ICES.

From 1/2009 to 12/2011 Member of the **ACOM** (Advisory Committee for Managers) at ICES.

From 1/2010 to 12/2011 Member of the **RGWIDE** (Review and Advice Drafting Group of widely distributed stocks) at ICES.

From 1/2010 and onwards Member of the Editorial Board of the *Journal Applied Ichthyology*.

From 1/2010 to 12/2010 Co-Chairman of the **WKSECRET** (Workshop on Including socio-Economic considerations into the Climate-Recruitment framework developed for clupeids in the Baltic Sea) at ICES.

From 1/2010 to 12/2010 Co-Chairman of the **WKEID** (Workshop on ecosystem indicators of discarding) at ICES.

From 1/2010 to 12/2010 Member of the **WKWATSUP** (Workshop on procedures to establish the appropriate level of the mixed herring TAC (Spring Western Baltic [WBSS] and Autumn Spawning North Sea [NSAS] stocks) in Skagerrak and Kattegat (Division IIIa)) at ICES.

From 1/2011 to 12/2011 Member of the **WKFRAME2** (Second Workshop on Implementing the ICES FMSY Framework) at ICES.

In 2/2011 Invited participant at the **STAR panel** of the Joint US-Canada Technical Review Panel for the Pacific Hake/Whiting Stock Assessment by the Center for Independent Expert (CIE).

From 1/2011 Member of **STECF** Review of scientific advice expert group at DGMARE (Directorate of Fisheries), European Community.

From 01/2011 to 12/2011 Member of the ACFM sub-group **RGWGEF** (Review of the Working group on Elasmobranchs Fishes at ICES

## Funded Projects

**9/1997 to 8/1999** EU project “Changes in spatial distribution and stock components of Baltic herring during the last decade” supported by a “Marie Curie” grant from EC at IMR (Institute for Marine Research) of Lysekil, Sweden (~50000 €).



**01/2010 to 12/2011** Project “Waking the deads” on the reconstruction of fish community and fisheries on the Swedish west coast and the Baltic Sea during the last 150 years. The project is financed by the Swedish Department of Nature (~400000 €).

**07/2010 to 08/2010** SIDA Project (Stock assessment to be implemented into management of artisanal fishery in Mozambique) under SIDA (Swedish International Development Cooperation Agency) umbrella (~15000 €).

**04/2010 to 12/2013** Chief responsible for the Ponza Island ringing station within the “Flexibility and constraints in animal movement patterns: ecology, evolution and annual cycles” coordinated by the CEES (Center for Ecological and Evolutionary Synthesis), Department of Biology, University of Oslo, Norway in collaboration with the Max Plank Institute, München, Germany and the University of Ferrara, Italy (~80000 €).

### Research Information Activity

From 2002 and onwards several (more than 10 occasions) participation as scientific divulgator for TV4, Göteborg Posten, Aftonbladet, Radio P4 and many others.

From 2002 to 2007 Contact person within Swedish National Board of Fisheries for divulgation of the status of exploited fisheries resources in the North Atlantic, including Swedish waters.

### Academic Activity

From 1/2002 to 12/2006 Lecture and co-responsible in the “Fisheries Ecology” course at the University of Gotland, Sweden (**one semester and 3 hours lectures each year; 15 hours in total; lecture organiser**).

From 1/2005 to 12/2009 Lecture in the “Fisheries Ecology and management of marine ecosystem” course at the University of Göteborg, Sweden (**one semester and 4 hours lectures each year; 20 hours in total; lecture organiser and participation in the examination**).

From 1/2005 to 12/2006 Lecture in the “Fisheries Ecology and management of marine ecosystem” course at the University of Stockholm, Sweden (**one semester and 2 hours lectures each year; 8 hours in total**).

From 7/2008 to 9/2008 Supervisor of master student (**Magdalena Linder; “Reconstructing historical trends of turbot in the Kattegat-Skaggeak”, 20 points work**) at the University of Göteborg, Sweden.

From 5/2010 to 6/2010 Stock assessment Expert of the Technical Assistance for Introduction of Stock Assessment to the Fisheries Management System of Turkey - EuropeAid/127296/D/SER/TR (“Project”). Responsible for a 5 days (**40 hours in total**) training course on DCR requirements and sampling strategy, concepts behind stock assessment, biometric and biological data collection, catch and effort statistics and otoliths readings.

### Technical reports, working report and working documents

Arrhenius, F. Håkansson, N., Cardinale, M. and Bethke, E. 1998. Intercalibration of the Sa-values between R/V Argos and Solea” Working paper for ICES Study Group on Baltic Acoustic Data.

Hjelm, J., Simonsson J. and Cardinale M. 2004. Spatial distribution of cod in the Baltic Sea in relation to abiotic factors - a question of fish-age and area. ICES CM 2004/L:16.

Hansson, M & Cardinale, M. 2005. Estimating sample precision and optimum sample size for stock assessment: a case study with Eastern Baltic cod. WD 2 at WGBFAS 2005.

Cardinale, M. 2006. Effect of mesh size, subdivision and quarter on the proportion and weight at age of herring in Illa WD 4 at WGBFAS 2006.

Cardinale, M., Storr-Paulsen, M., Ringdal, K., Jørgensen, O. 2009. Using GRASP to estimate Kattegat cod stock spatial distribution and fishable biomass from ad-hoc fishery survey. WD 2 at WKROUND 2009.

Svedäng, H., and Cardinale M. 2008. Modeling of IBTS and Ancylos survey age indices for improvement of the assessment of Kattegat cod (*Gadus morhua*). Working document to the ICES Working Group on Baltic Fisheries Assessment, Copenhagen, 8–11 April (2008).

Cardinale M. & Raetz H.-J. & Cheilari A. 2008. Scientific, Technical and Economic Committee for Fisheries (STECF) - Report of the SGMED-08-04, Working Group on the Mediterranean - Part I. (Office for Official Publications of the European Communities, Luxembourg, pp. 529. ISBN 978-92-79-10939-3

Cardinale M., Raetz H.-J. & Cheilari A. 2009. Scientific, Technical and Economic Committee for Fisheries (STECF) - Report of the SGMED-09-03, Working Group on the Mediterranean - Part II. (Office for Official Publications of the European Communities, Luxembourg, ISBN 978-92-79-14363-2, JRC55710, 850 pp.

Cardinale M., Raetz H.-J. & Cheilari A. 2010. Scientific, Technical and Economic Committee for Fisheries (STECF) - Report of the SGMED-10-02, Working Group on the Mediterranean - Part II. (Office for Official Publications of the European Communities, Luxembourg, ISBN 978-92-79-18754-4, 1077 pp.

Cardinale, M., Chacate, O. and Casini, M. Stock assessment to be implemented into management of artisanal fishery in Mozambique. SIDA internal project report, September 2010.

Cardinale M., Raetz H.-J. & Cheilari A. 2010. Scientific, Technical and Economic Committee for Fisheries (STECF) - Report of the SGMED-10-03, Working Group on the Mediterranean - Part III. (Office for Official Publications of the European Communities, Luxembourg, in press.

**11/2010** Course in FLR (Stock assessment in R) at IMR, Lysekil Sweden, lectures Erensto Jardin

### **Techniques and Skills Acquired**

- » On board data collection
- » Otoliths reading

**Full publication list available on request**

**Name:** Dr Gudrun Gaudian

**Position in team:** Principle 2

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**Education:**

2010 - Aberystwyth University - LLM Environmental Law and Management,  
*"Are fish well served by the Marine and Coastal Access Bill?"*

1989 - University of York, UK - DPhil  
*"Taxonomy and Ecology of Red Sea Corals"*

1982 -, University of Newcastle, UK,

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**Languages:** English (fluent), German (fluent), French (basic)

**Other relevant qualifications:** Certified SCUBA Divemaster

Valid UK driving licence; First Aid certificate

**Professional Memberships:** 2008 – present Member of UK Environmental Law Association

1992 - present Member of IUCN Commission of National Parks and  
 Protected Areas (CNPPA)

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**Background and experience:**

I am an experienced marine ecologist and taxonomist and my work has included coastal marine surveys, EIA's for development and tourism, and research projects in tropical and temperate seas. More recently I have become involved in fisheries certification applying the Marine Stewardship Council standard for sustainable fisheries, concentrating on Principle 2 of the Standard. I have worked on many coastal and marine management issues, such as identifying sustainable coastal development projects, as well as addressing conservation issues, including selection and planning of marine parks and reserves, sustainable utilisation of natural resources and community based management programmes. I have also conducted extensive field research on reef fisheries and tropical marine biodiversity, aiming for practical applications in coastal management.

In 2009 I completed an LLM degree in Environmental Law and Management at Aberystwyth University which has given me a deeper understanding of law and policy dealing with such issues as the Common Fisheries Policy and agricultural and land management policy, planning, water and waste management, and international environmental law including EU environmental policy.

I have given lectures on marine science to graduates and conducted environmental education courses in schools, for teachers and for research staff, as well as for the general public in the Caribbean, Maldives, and UK. I have spent over a year in Antarctica in charge of implementing a scientific programme on human impact, and have worked in both the Antarctic and Arctic on ship based tourism. I have also done extensive translation work and proof reading of scientific and technical documents from and into German. I am involved, in a voluntary capacity, in local, community, conservation and education issues

**Professional Experience Record:**

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Present (since Dec 2013) - Fisheries Technical Officer – to provide and contribute technical support, guidance and advice on work relating to the MSC Sustainable Fisheries Standard and Certification Requirements to FCI, on an ad-hoc basis.

2014 – Completed and passed MSC mandatory team leader training (6<sup>th</sup> Feb 2014)

Present – since 2010: Independent consultant on MSC fisheries certification and fisheries issues:

Fishery	Date	Position
SPSG ASH Atlanto Scandian Herring	2014	3 <sup>rd</sup> Surveillance Audit
Grupo Regal Spain hake longline fishery	2013/14	P2 PCDR update
Indian Ocean Shrimp	2013	IUU and risk assessment study
DFPO North Sea & Skagerrak haddock	2013	1 <sup>st</sup> Surveillance audit
DFPO North Sea & Skagerrak saithe	2013	2 <sup>nd</sup> Surveillance audit
DFPO North Sea sole	2013	1 <sup>st</sup> Surveillance audit
Baltic cod fishery (P2) Küstenfischer Heiligenhafen	2011/12 2012	Principle 2; full assessment P2 – surveillance audit
West of Scotland herring (P2);	2011/12 2013 2014	Principle 2; full assessment P2 – 1 <sup>st</sup> surveillance audit 2 <sup>nd</sup> Surveillance audit
Polish Eastern Baltic Cod	2011	Pre-assessment

Ongoing - Independent consultant on fisheries related issues; part time support to fisheries scientist, including editorial work, fishery projects and policies assessments.

2004 – 2009: LLMaster studies in Environmental Law and Management; University of Aberystwyth, Wales.

2001 – 2005 Translator: Technical translations of patents and environmental documents.

1992 – 2003 Turks & Caicos Islands: EIA for a cruise ship development and dock facility on Grand Turk; EIA on coral reefs as part of an island housing and marina development; Design and implementation of several underwater snorkel trails in the TCI, for environmental education of locals and visitors; Coastal EIA's for several hotel developments on Providenciales and sand mining on the Caicos Bank; TCIG Science Resource Officer conducting a series of 2 day Science Workshops to teach primary school teachers to teach science; Habitat mapping of the Caicos Bank conducted by the Fisheries Department, to identify specific habitat characteristics for lobster and conch, as part of a wider resource management programme; EIA on the effects of increased sewage on the coral reef habitats of Providenciales; research into the sustainable environmental carrying capacity of dive sites on Grand Turk and South Caicos; Preparation of an Environmental Education programme at all local schools throughout the islands; university course lecturer at SFS;

2000 FAO: Editorial input into 'Climate Change and Fisheries', published as: Climate Change and long term fluctuations of commercial catches. FAO Fisheries Technical Paper 410, Rome 2001. MRAG/LWI: Preparation of Concept Note and then Project Memorandum for NRSP: Management for the Amelioration of Agro-chemical Pollution in the Caribbean.

1998 FAO: Preparation of an FAO Technical Paper on the status of shark species, based on a document prepared by experts.

1998 MRAG/LWI: Review on the effects of sedimentation and agro-chemicals in the coastal zone, with reference to the Caribbean.

1995 ODA: Desk study on tropical Marine Biological Diversity.

1995 NRI/ EU: CARIFORUM countries, EU Caribbean Regional Environment Programme (CREP). Development of sustainable management projects of coastal and marine resources in the Caribbean region.

- 1995 UNEP: Global Biodiversity Assessment, Peer Review Workshop in Panama of the Global Biodiversity Assessment - Expert consultation.
- 1995 FCO-UK: In-country Organiser of GIS Workshop for the Caribbean Dependent Territories, based in the TCI.
- 1992-1993 ADB: Preparation of Environmental Management Strategy – Maldives, including implementation of training programs on coral reef monitoring techniques, environmental education and public awareness.
- 1993 Lecturer; On board MV 'Columbus Caravelle', lecturing on polar ecology and conservation, as part of the polar region awareness program, Antarctica and Greenland. HTS Grand Cayman - Comparative assessment of methodologies using video and stills for effective coral reef monitoring of diver pressure.
- 1992 EU: Project Leader - Tanzania; Coastal Zone Management Programme; Development of a framework for a coastal management programme for mainland Tanzania and Zanzibar, including economic appraisal, sustainable development, alternative livelihood opportunities, legislative procedure, institutional analysis and socio-economic assessment.
- 1991 MRAG: Reef Fisheries Review; Literature review of the current status and knowledge of research on reef fisheries.
- 1990-91 ODA: Project Manager; Zanzibar Coral Reef Fisheries Pilot Project; Research to directly measure both decrease in stock density and level of adult fish recruitment to coral reef areas with a high fishing mortality. Study was designed to eventually improve fisheries management on coral reefs.
- 1990 ODA: Desk study on tropical marine and coastal habitats and the evaluation of their value on a global and local scale.
- 1989/90 FINNIDA: Design and implementation of marine survey programme around Zanzibar Island, to collect baseline information on reef fish, algae and scleractinian coral. Establishment of permanent transect sites for future monitoring of environmental impact from Zanzibar town.
- 1989/90 PTES: Mafia Island (Tanzania) Marine Survey; Design and implementation of ecological surveys of coral reefs, mangroves and seagrass beds with a view to establish a Marine Protected Area/ Marine Park. Establishment of permanent transect sites on the reefs for future monitoring, training of non-expert divers to use biological survey tools.
- 1986-88, GPINT Antarctica: Establishment of scientific base, extensive research into human environmental impact, pollution monitoring and wildlife monitoring.
- 1986, RRAG: Pike and Perch project Lake Windermere, assessment, evaluation and computer cataloguing of demographic fish data collected since 1930's. Zoological Society London: design of a coral reef display for a tropical reef aquarium. EIA of diving on Peter Island – British Virgin Islands.
- 1985 Marine Conservation Society: St Abbs Coastal Marine Survey for the establishment of marine reserve.
- 1982 – 1989: Doctoral Research on the Ecology and Taxonomy of corals in the Red Sea.
- 1980 Marine Biological Association, Plymouth: Research into the nesting behaviour of the Corkwing Wrasse, *Crenilabrus melops*.

## Publications

MSC Fisheries Reports – see MSC.org

Gaudian G, *etal*/2013. Yearsley Moor Archaeological Project: over 4000 years of history. 2009-2013. North Yorkshire Moors National Park.

Also at: [www.northyorkmoors.org.uk/caring/our-work/lime-and-ice/exploring-yearsley-moor](http://www.northyorkmoors.org.uk/caring/our-work/lime-and-ice/exploring-yearsley-moor)

Carlton, C., Southall T., Gaudian G. 2012. Seas at Risk: Reform of the Common Fisheries Policy - Turning the Tide for Low Impact Fisheries. [www.seas-at-risk.org/1images/SAR2012-Turningthetidereport2012.pdf](http://www.seas-at-risk.org/1images/SAR2012-Turningthetidereport2012.pdf)

Gaudian G, 2009. LLM dissertation – University of Wales, Aberystwyth. *Are fish well served by the Marine and Coastal Access Bill?*

## 2009 – Alne Community Plan

- Gaudian G, 2002. Oil platforms and coral reefs: can they co-exist? Quarterly Risk Management Bulletin, 1.
- Gaudian G, PAH Medley, 2000. 'Turks and Caicos Islands'; chapter in: Seas at the Millennium: An Environmental Evaluation. ed. Charles Sheppard. published by Elsevier Science.
- Gaudian G, PAH Medley, 1995. Marine Biological Diversity. Report to *Overseas Development Administration* presented at the 2nd Governments Party to the CBD meeting in Jakarta. 50pp.
- Gaudian G, Medley PAH, 1995. Diver carrying capacity and reef management in the Turks & Caicos Islands. *Bahamas Journal of Science*, 3 (1): 9-14.
- Gaudian G, Koya A, Wells S, 1995. East Africa - Marine Region 12. In: A global Representative System of Marine Protected Areas. Vol. III. GBRMPA / World Bank/ IUCN: 71-105.
- Gaudian G, 1995. (Editor). Proceedings of the Caribbean British Dependent Territories GIS Workshop. Grand Turk 27-29 March, 1995. Grand Turk Turks & Caicos Islands, British West Indies.
- Gaudian G, 1995. Sustainable environmental carrying capacity of the dive sites on Grand Turk, BWI. Project Report to *People's Trust for Endangered Species*, London, UK.
- Gaudian G, Medley PAH, Ormond RFG, 1995. Estimation of the size of a coral reef fish stock. *Marine Ecological Progress Series* 122: 107-113.
- Medley PAH, Gaudian G, Wells SM, 1993. Coral Reef Fisheries Stock Assessment. *Reviews in Fish Biology and Fisheries*, 3 (3): 242-285.
- Gaudian G, *et al*, 1992. Coastal Zone Management Framework for Tanzania. Project Report for *Commission of European Communities*. (B7-5040/91/31; DGVIII).
- Medley PAH, Gaudian G, Wells SM, 1992. A review of coral reef capture fisheries stock assessment. Review published by *Overseas Development Administration*, London, UK.
- Gaudian G, Richmond MD, Ngoile MAK, 1992. The Development of a Marine Resource Conservation Plan for Mafia Island, Tanzania. Proc. 4th World Congress on National Parks & Protected Areas, Venezuela.
- Gaudian G, *et al*, 1990. Permanent transect surveys for monitoring of reef fish and coral community on reefs around Zanzibar. Report for Zanzibar Commission of Lands and the Environment.
- Gaudian G, 1990. Reef Survey, Mafia Island, Tanzania. *Reef Encounter*, 7:14-15.
- Medley PAH, Gaudian G, 1990. Marine Biological Diversity. Report published by *Overseas Development Administration*, UK.
- Gaudian G, 1984. Taxonomic notes on coral specimens collected from Sudan and Saudi Arabia, Red Sea. Report, Tropical Marine Research Unit, University of York, UK.



**Name:** Nick Pfeiffer

**Position in team:** Principle 2

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### Education

- » 1985-1987: Regional Technical College, Galway. Ireland. NCEA Diploma in Aquatic Science (Aquaculture).
  - » 1987-1989: Plymouth Polytechnic, Plymouth, Devon. Great Britain. Council for National Academic Awards B.Sc. (Hons.) Fishery Science.
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### Professional Profile

Nick Pfeiffer is an independent marine ecologist and founding partner of MERC Consultants, an Irish based aquatic consultancy firm. Nick principal area of expertise is in relation to investigating aspects of the impacts of both commercial capture fisheries and other more general marine development projects on aquatic ecosystems. He has been conducting assessments of fisheries against the Marine Stewardship Councils Principles and Criteria for Sustainable fishing since 2007 and has completed five full assessments and three pre-assessments as of 2010.

Nick has more than 20 years of experience working in a broad range of areas associated with marine biodiversity, ecosystems and the sustainable use of living aquatic resources. Between 1992 and 1998 Nick worked as a fisheries scientist with the Fisheries Research Centre in Ireland. His work focused on investigating impacts of a wide range of Irish capture fisheries on aspects of marine ecosystems. He has also worked on bycatch reduction in trawl fisheries with the Marine extension Service at the University of Georgia, USA. As well as having worked as a researcher, Nick completed many trips on commercial fishing vessels in the capacity of scientific observer. He has completed trips on a broad range of fishing vessels including demersal trawlers, pelagic trawlers, creel vessels, seine netters, static netters, dredgers and trolling vessels. Nick has several years of experience of commercial finfish aquaculture and also has extensive experience of commercial fisheries gained during observer trips and scientific studies.

Other professional undertakings focus on the evaluation of impacts of commercial activities including fishing, renewable energy and built infrastructure on aquatic ecosystems. In this regard he continues to design, implement and manage projects that are focused on collecting baseline biological data in relation to both designated aquatic nature conservation sites and undesignated marine areas. Nick is also active in conducting environmental impact assessments of a broad range of activities and in this regard Nick specialises in evaluating impacts on biodiversity and marine habitats.

Nick is also a member of the National Platform for Biodiversity Research. This is a forum for scientists, policy makers and other interested stakeholders involved in the field of biodiversity research in Ireland. The platform is run under the auspices of the National Parks and Wildlife Service and the Environmental Protection Agency and it forms part of a wider network of biodiversity platforms across Europe that link into European initiatives through the European Platform for Biodiversity Research Strategy.

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### Work History

**Current:** **MERC Consultants - Marine Environmental and Fisheries Consultancy**

Since 2004 Nick is a working partner with MERC Consultants. MERC is a leading provider of specialist aquatic environmental consultancy services in Ireland.

To date MERC has completed multiple projects and extensive environmental research work for the Marine Institute, National Parks and Wildlife Service, County Councils, Heritage Council, Northern Ireland Environment and Heritage Service, Irish Sea Fisheries Board, Irish Islands Federation, Department of Agriculture Fisheries and Food, Environmental Protection Agency, Scottish National Heritage as well as a wide range of other public and private organizations. MERC is comprised of a core team of 4 experienced environmental scientists who collectively have more than 60 years of experience on diverse aspects of environmental issues. Nick's specialisation is in relation to aquatic resource management. In this regard Nick heads up projects that explore aspects of nature conservation legislation and protected area designations, as well interactions between fisheries and the marine ecosystem.



More recently, Nick has participated as an assessment team member during the evaluation of a number of fisheries against the principles and criteria for sustainable fisheries of the *Marine Stewardship Council*. In this role, Nick has brought the benefit of 15 years of experience of fisheries and marine conservation and environmental research to bear as a Principle 2 expert during the assessments. In addition to this, since 2008 Nick has completed a number of pre-assessments of fisheries against the MSC standard. In all MSC related work Nick has been engaged by *Food Certification International*, an approved Certification Body under the MSC scheme, as a sub-contracted expert.

## Previous:

### 1. Consultant and manager, Nautilus Consultants (Ireland) Ltd

Nick joined this company, a sister company of the Edinburgh based Nautilus Consultants, in June 2001. Working to demonstrate that sustainable development and nature conservation are , Nautilus Consultants have completed work in 80 countries over the past 28 years. Nick worked on a range of projects focused on marine resource management issues between 2001 and 2005. Nick continues to work with Nautilus Consultants from time to time on projects where there is a requirement for knowledge and experience in relation to Irish fisheries.

### 2. Assistant Inspector of Fisheries, Fisheries Research Centre, Department of the Marine

Nick was employed as an Assistant Inspector of Fisheries between 1992 and 1998.

The position was focused on investigating fishing and fishing gear technologies with a view to reducing discarding levels, bycatch and cetacean mortalities as well as reducing overall impacts of trawling fisheries on the marine environment. Nick carried out bycatch investigations and fishing gear selectivity trials onboard demersal whitefish and prawn trawlers, gillnet vessels as well as pelagic herring and sprat trawlers in the Celtic Sea and on the West coast of Ireland during the period 1992-1996.

In 1996 Nick assisted with the establishment of the joint Marine Institute/ University College Galway Marine Fisheries Environment Unit initiative. The MFEU served as a key resource for conducting research into fisheries/environment interactions in Irish waters. work undertaken included development of square mesh escape panels in trawl nets; investigations into fate of lost static gears in Irish waters; assessment of the impacts shellfish trap fisheries on the seabed on the west coast of Ireland (with UK Joint Nature Conservation Committee), effects of trawling on seabed habitats of the Irish Sea (IMPACT II) and studies to monitor the movement of electronically tagged plaice *Pleuronectes platessa* and anglerfish *Lophius piscatorius* in Irish waters. Most of the research undertaken was funded through EU programmes and the results of the above investigations were all presented in project reports.

### 3. Fellowship Researcher, Marine Extension Service, University of Georgia, USA

Nick was employed on a fellowship programme with the University of Georgia for a period of 24 months from 1991 -1992 and was based in the UGA coastal research facility in Brunswick, Georgia. During this time Nick worked on projects aimed at reducing ecological impacts of marine fisheries on biological communities including fish, sea turtles and marine benthos.

## Publications and Reports

- » Clayton, P., Buchanan, C., Cummins, V., Sealy, S., O'Leary, D., O Mahony, C. and Pfeiffer, N. , 2003 , *Aquaculture and Coastal Economic and Social Sustainability - Enviroreview Report* , Contract No. Q5RS-2000-31151., European Commission., No. of Pages 109 <http://cmrc.ucc.ie/publications/reports/ENVIROREVIEW.pdf>
- » Fox, G.M., Ball, B.J., Munday, B.W., Pfeiffer, N., 1996. The IMPACT II study: preliminary observations on the effects of bottom trawling on the ecosystem of the Nephrops grounds in the N.W. Irish Sea. In *Irish Marine Science 1995*, pp. 337- 354. Ed. by B.F. Keegan and R. O'Conner. Galway University Press Ltd., Galway, 626 pp.
- » Fahy, E., Norman, M., Browne, R.; Roantree, V.; Pfeiffer, N.; Stokes, D.; Carroll, J. and Hannaffy, O., 2001. Distribution, population structure, growth and reproduction of the razor clam *Ensis arcuatus* (Jeffreys) (Solenaceae) in coastal waters of western Ireland Irish Fisheries Investigations No. 10 (2001)

- » Pfeiffer, N. (2003) DISPOSAL AND RE-UTILISATION OF FISH AND FISH PROCESSING WASTE (INCLUDING AQUACULTURE WASTES). NDP MARINE RTDI DESK STUDY SERIES DK/01/003.
- » Southall, T., Medley, P., McFadden, M. and Pfeiffer, N. 2009. Irish Pelagic Sustainability Group North East Atlantic mackerel *Scomber scombrus* trawl fishery. Marine Stewardship Council Certification. <http://www.msc.org/track-a-fishery/IPSG>
- » Southall, T., Medley, P., McFadden, M. and Pfeiffer, N. 2010. Irish Pelagic Sustainability Association North East Atlantic mackerel *Scomber scombrus* trawl fishery. Marine Stewardship Council Certification. [www.msc.org/track-a-fishery/IPSGA](http://www.msc.org/track-a-fishery/IPSGA)

**In addition to the above Nick has authored or contributed significantly to over 60 non-peer reviewed project reports.**

**Full publication list available on request**

**Name:** Andy Hough

**Position in team:** Principle 2

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### Education

1986 - B.Sc. Honours Zoology

1990 - PhD. Marine Biology Crustacean ecology.

- » Lead Auditor 2000
  - » MSC Risk-Based Framework Auditor
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### PROFESSIONAL HISTORY

2011 - present:

HOUGH ASSOCIATES LTD. Director, responsible for strategic development and project delivery of company providing fishery auditing, management of fishery impacts on aquatic ecosystems and marine ecology consultancy,

1999 – 2011:

MOODY MARINE LTD. Founding Director (full-time from 2003); Lead Auditor, fishery assessments and Chain of Custody assessments. Played a consistent role in the development of MSC programme (including the development of the risk-based assessment framework) and was part of the committee developing the UK Responsible Fishing Scheme.

1998 – 2003:

UNIVERSITY OF LIVERPOOL CENTRE FOR MARINE AND COASTAL STUDIES. Director, responsible for strategic development of a University-based centre providing specialist consultancy and analytical services in marine conservation ecology, Environmental Impact Assessment, environmental radioactivity, environmental chemistry. Project delivery in marine conservation ecology and Environmental Impact Assessment.

1991 - 1998:

SGS ENVIRONMENT. Dr Hough was responsible for the provision of coastal and marine consultancy services throughout SGS, including Environmental Impact Assessment, marine conservation ecology, marine monitoring.

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### KEY EXPERIENCE

Following three years PhD research on crustacean ecology, he has worked in the field of marine research and management for over twenty years, including marine conservation biology, fishery impacts on marine ecosystems, marine and coastal environmental impact assessment and policy development.

Andrew has been active in the development of Marine Stewardship Council certification since 1997, when involved in the pre-assessment of the Thames herring fishery. He was a founding Director of Moody Marine, led the establishment of Moody Marine fishery certification systems and has represented Moody Marine at all MSC workshops until 2011. He has also worked with MSC on several specific development projects, including those concerned with the certification of small scale/data deficient fisheries.

He has been Lead Assessor (and often also expert team member) on many fishery assessments to date. This has included Groundfish (e.g. cod, haddock, pollock, hoki, hake, flatfish), Pelagics (e.g. tuna species, herring, mackerel, sprat, krill, sardine) and shellfish (molluscs and crustacea); included evaluation of the environmental effects of all main gear types and considered many fishery administrations including the North Atlantic, South Atlantic, Pacific, Southern Ocean and in Europe, North America, Australia and New Zealand, Japan, China, Vietnam and Pacific Islands. He has recently acted solely as an expert team member of Principle 2 inputs of European inshore fisheries and Falkland Islands Toothfish.

He has carried out peer reviews for various CABs including fisheries for molluscs, crustacea and freshwater finfish. Other assessments include Chain of Custody assessments for merchants, processors, distributors and retailers.

Andrew has also been involved in the development of certification schemes for individual vessels (Responsible Fishing Scheme) and evaluation of the Marine Aquarium Council standards for trade in ornamental aquarium marine species.

Consultancy services have included policy advice to the Association of Sustainable Fisheries, particularly with regard to the implications of MSC standard development, and assistance to fisheries preparing for, or engaged in, MSC assessment.

**Full publication list available on request**

**Name:** Geir Honneland

**Position in team:** Principle 3 (Norway)

Geir Hønneland is Research Director of the Fridtjof Nansen Institute and adjunct professor at the University of Tromsø, Norway. He holds a Ph.D in political science from the University of Oslo, speaks Russian fluently and has followed the developments of Russian fishery politics and the Barents Sea fisheries management for more than two decades. Among his books are *Implementing International Environmental Agreements in Russia* (Manchester University Press, 2003) (including fisheries agreements), *Russian Fisheries Management: The Precautionary Approach in Theory and Practice* (Martinus Nijhoff, 2004), and *Making Fishery Agreements Work: Post-Agreement Bargaining in the Barents Sea* (Edward Elgar, forthcoming 2012). He has also published a number of articles about Russian fisheries management, and the Barents Sea fisheries management more widely, in peer reviewed journals.

Geir also has wide range of evaluation experience, e.g. for the FAO relating to the FAO Code of Conduct for Responsible Fisheries. Further, he has produced a country study of Russian fisheries management for the OECD and several consultancies about Russian fisheries management. He was member of the team that performed the first MSC assessment of a Russian Barents Sea fishery in 2010.

Geir is based near Oslo in Norway. A more comprehensive presentation can be found at the FNI's website: <http://www.fni.no/cv/cv-geh.html>

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### Education

2004	Full professor competence
2000	Dr.Polit. (PhD) in political science from the University of Oslo
1993	Cand.Polit. (MA) in political science from the University of Tromsø
1990	Cand.mag. (BA) from the University of Oslo in political science; East European history, culture and society; and Russian and Polish languages and literature
1987	Russian language from the Norwegian Defence College

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### Work Experience

*At the Fridtjof Nansen Institute, Lysaker, Norway:*

2006–present	Research Director
2003–06	Director of the Russian and Polar Programme
2000–02	Director of the Polar Programme
1996–99	Research Fellow

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### *Outside the Fridtjof Nansen Institute:*

2010 (June-August)	Visiting scholar at Innovative Fisheries Management, University of Aalborg, Denmark
2005–	Adjunct professor (“professor II”) at the Dept. of Political Science, University of Tromsø
2002–03	Visiting scholar and professor of international environmental policy at the Dept. of Human Ecology, Rutgers, the State University of New Jersey, USA
1994–95	Researcher at NORUT Social Science Research, Tromsø
1988–93	Russian interpreter for the Norwegian Coast Guard, the Governor of Svalbard and the Norwegian Defence Head Command

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### Languages

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- » Norwegian (mother tongue)
- » English (fluent)
- » Russian (fluent)
- » German (good)
- » French (fair)

### Teaching / course responsibility:

“Regime Creation and Region Building in the Arctic” (BA level), Dept. of Political Science, University of Tromsø (each semester from autumn 1995 to spring 1998).

“International Environmental Politics” (BA level), Dept. of Human Ecology, Rutgers University, USA (autumn 2002 and spring 2003).

“The Barents Collaboration and Norwegian Politics in the High North” (MA level), Dept. of Political Science, University of Tromsø (spring semesters in 2005, 2006 and 2007). Revised course “International Politics in the High North” (spring semesters 2008, 2009 and 2011).

“Russian Resource Management, Petroleum and Environmental Politics” (PhD level), Dept. of Political Science, University of Tromsø (spring semester 2008).

“Russian Politics” (BA level), Dept. of Political Science, University of Tromsø (autumn semesters 2008, 2009 and 2010).

### Miscellaneous:

Reviewer for the following scientific journals: *Acta Borealia*, *Arctic Review on Law and Politics*, *Cooperation & Conflict*, *Environmental Management*, *Global Environmental Politics*, *Human Ecology*, *Human Organization*, *Internasjonal Politikk*, *International Environmental Agreements: Politics, Law and Economics*, *Millennium*, *Nordisk Østforum*, *Polar Record*, *Polar Research*, *Political Geography*, *Society & Natural Resources*

Board member of the journal *Nordisk Østforum* 1996–2001

Board member of the Fridtjof Nansen Institute (staff representative) 2003-2006

### Peer Reviewed Publications

#### *Peer-reviewed books in English:*

Making Fishery Agreements Work: Post-Agreement Bargaining in the Barents Sea Fisheries, Cheltenham and Northampton, MA: Edward Elgar Publishing, forthcoming 2012 (approx.. 200 pp.)

International Environmental Agreements: An Introduction, London and New York: Routledge, forthcoming 2011 (approx. 200 pp.) (co-edited with Steinar Andresen and Elin Lerum Boasson).

Borderland Russians: Identity, Narrative and International Relations, Basingstoke & New York: Palgrave Macmillan, 2010 (184 pp.).

International Politics and Arctic Governance: Regime Effectiveness and Northern Region Building, London and New York: Routledge, 2007 (co-edited with Olav Schram Stokke) (224 pp.) (paperback edition 2010).

Law and Politics in Ocean Governance: The UN Fish Stocks Agreement and Regional Fisheries Management Regimes, Leiden and Boston: Martinus Nijhoff Publishers/Brill Academic Publishers, 2006 (with Tore Henriksen and Are Sydnæs) (226 pp.).

Tackling Space: Federal Politics and the Russian North, Lanham, MD and Oxford: University Press of America, 2006 (co-edited with Helge Blakkisrud) (222 pp.).

Health as International Politics: Combating Communicable Diseases in the Baltic Sea Region, Aldershot and Burlington, VT: Ashgate, 2004 (with Lars Rowe) (130 pp.).

Russian Fisheries Management: The Precautionary Approach in Theory and Practice, Leiden and Boston: Martinus Nijhoff Publishers/Brill Academic Publishers, 2004 (210 pp.).

Russia and the West: Environmental Co-operation and Conflict, London and New York: Routledge, 2003 (184 pp.) (paperback edition 2011).

Implementing International Environmental Agreements in Russia, Manchester and New York: Manchester University Press, 2003 (with Anne-Kristin Jørgensen) (204 pp.).

Centre–Periphery Relations in Russia: The Case of the Northwestern Regions, Aldershot and Burlington, VT: Ashgate, 2001 (co-edited with Helge Blakkisrud) (256 pp.).

Coercive and Discursive Compliance Mechanisms in the Management of Natural Resources: A Case Study from the Barents Sea Fisheries, Dordrecht and Boston: Kluwer Academic Publishers/Springer, 2000 (204 pp.).

Integration vs. Autonomy: Civil–Military Relations on the Kola Peninsula, Aldershot and Brookfield, VT: Ashgate, 1999 (with Anne-Kristin Jørgensen) (214 pp.).

*Peer-reviewed books in Norwegian (incl. translations):*

Arktiske utfordringer (Challenges in the Arctic), Kristiansand: Høyskoleforlaget, forthcoming 2011 (approx. 150 pp.).

Medvedevs Russland (Medvedev's Russia), Bergen: Fagbokforlaget, forthcoming 2011 (with Jørgen Holten Jørgensen) (approx. 160 s.).

Nordområdene – hva nå? (The High North – What Now?), Trondheim: Tapir Academic Press, 2010 (with Lars Rowe) (152 pp.).

Fra svarte skyer til helleristninger: Norsk-russisk miljøvernssamarbeid gjennom 20 år (From Dark Skies to Rock Carvings: 20 Years of Norwegian–Russian Environmental Cooperation), Trondheim: Tapir Academic Press, 2008 (with Lars Rowe) (186 pp.).

Internasjonal miljøpolitikk (International Environmental Politics), Bergen: Fagbokforlaget, 2008 (co-edited with Steinar Andresen and Elin Lerum Boasson) (210 pp.).

Småstat og energistormakt: Norges sikkerhetspolitiske rolle i nord (Nordområdepolitikk III) (Small State and Energy Great Power: Norway's Security Role in the High North), Bergen: Fagbokforlaget, 2008 (with Svein Vigeland Rottem and Leif Christian Jensen) (136 pp.).

Den nye nordområdepolitikken: Barentsbilder etter årtusenskiftet (Nordområdepolitikk II) (The New Norwegian Politics in the High North: Barents Pictures after the Turn of the Millennium), Bergen: Fagbokforlaget, 2008 (with Leif Christian Jensen) (177 pp.).

Russlandsbilder: Nye debattinnlegg om naboskap i nordområdene (Nordområdepolitikk I) (Pictures of Russia: New Contributions to the Debate about Neighbourhood in the High North), Bergen: Fagbokforlaget, 2007 (co-edited with Lars Rowe) (114 pp.).

Kvotekamp og kyststatssolidaritet: Norsk-russisk fiskeriforvaltning gjennom 30 år (Quota Battles and Solidarity between Coastal States: Norwegian–Russian Fisheries Management through 30 Years), Bergen: Fagbokforlaget, 2007 (152 pp.). Published in Russian by PINRO Press in 2007.

Moderne russisk politikk: En innføring i Russlands politiske system (Contemporary Russian Politics: An Introduction to Russia's Political System), Bergen: Fagbokforlaget, 2006 (with Jørgen Holten Jørgensen) (168 pp.). Published in revised and updated version in Danish by Forlaget Samfundslitteratur in 2007.

Barentsbrytninger: Norsk nordområdepolitikk etter den kalde krigen ("Barents Breaking": Norwegian Foreign Policy in the North after the Cold War), Kristiansand: Høyskoleforlaget/Norwegian Academic Press, 2005 (190 pp.).

Vårt bilde av russerne: 25 debattinnlegg om samarbeidet i nord (How We View the Russians: 25 Contributions to the Debate about Co-operation in the North), Kristiansand: øyskoleforlaget/Norwegian Academic Press, 2002 (with Anne-Kristin Jørgensen) (116 pp.).

**Full publication list available on request**



**Name:** Rod Cappel  
**Position in team:** Principal 3 Expert

2005 Imperial College, Post. Cert. Applied Environmental Economics  
 1995 Heriot-Watt University, MSc Marine Resource Development & Protection  
 1992 Liverpool University, BSc (Hons) Marine Biology  
 Institute of Environmental Management & Assessment (Associate Member)

### Key Qualifications

15 years of experience, including 10 years as project leader and project manager. Fisheries & aquaculture industry analysis;

- Port infrastructure and regeneration: feasibility & business planning for port infrastructure investment.
- Coastal management: development & implementation of coastal and marine spatial planning.
- Economic appraisal & environmental economics: Economic and socio-economic analysis, options appraisal & Cost Benefit Analysis.
- Fisheries policy, legislation and management: Provision of policy research, legislative review and development of fisheries management plans.
- Sector planning: industry development, strategic reviews and plans.
- Environmental Assessment: experienced practitioner and project manager for Environmental Impact Assessment, SEA, and Appropriate Assessment & MSC certification.
- Aquaculture: strategic and technical development of sustainable aquaculture.
- Fish processing & marketing: investigations into global seafood trade including price analysis, eco-labelling, certification and use of Life Cycle Assessment.
- Project & public expenditure design & evaluation: programme design and ex-ante, mid-term and ex-post monitoring and evaluation.

### Career History

**Current Position:** Director  
**Address:** Poseidon Aquatic Resources Management Ltd, Windrush, Warborne Lane, Portmore, Near Lymington, Hampshire S041 5RJ, UK  
**Dates:** 2007 - present  
**Detail:** Poseidon Aquatic Resources Management Ltd is a leading international consultancy specialising in fisheries, aquaculture and aquatic environment

2004 to 2007 Senior environmental consultant with Royal Haskoning, UK  
 1997 to 2004 Consultant with Nautilus Consultants Ltd., UK  
 1995 to 1996 EC Fisheries Observer, NAFO region, Canada & Spain  
 1993 to 1994 Research Assistant, Australian Institute of Marine Science

### Geographic Experience

**European** EU, UK, Ireland, Norway, Belgium, Denmark, Portugal, Netherlands, Cyprus, Albania  
**Asia** Bangladesh, Indonesia, Malaysia, Myanmar, Thailand & Vietnam  
**Other** Oman, Australia

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## Client Experience

<i>Europe</i>	EC, Euro Parliament, EEA; Defra, DTI, DfID (UK); DCMNR, BIM (Eire)
<i>Global</i>	FAO, World Bank, UNEP, WWF

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## Specific Experience

### *Environmental Assessment*

- Netherlands: Marine Stewardship Council Main Assessment for private client (2010) Principle 3 expert for a number of North Sea fisheries.
- UK: Marine Stewardship Council Pre-Assessment for private client (2010) Pre-assessment of two demersal fisheries in the North East Atlantic region.
- Global: Assessing the environmental gains achieved by Marine Stewardship Council certification (MSC, 2010) Exploring evidence of change in fisheries management & practices as a result of MSC certification.
- Netherlands: Marine Stewardship Council Pre-Assessment for private client (2010) Lead assessor and principle 3 expert for a North Sea fishery.
- UK: Assessment of UK Seafood sustainability (Defra, 2009-2010). Identification of current actions and LCA issues with UK produced and imported seafood products to inform recommendations for supporting actions.
- UK: Marine Stewardship Council Main Assessment for private client (2009-2010) Lead assessor and principle 3 expert for a North Sea fishery.
- Netherlands: Marine Stewardship Council Pre-Assessment for private client (2009) Undertaking pre-assessment of a North Sea fishery for Dutch client.
- Europe: Environmental and social evaluation of EC FIFG funding programme (Environmental NGO, 2009-ongoing). A shadow ex-post evaluation of FIFG investigating the support given under fleet and non-fleet measures in relation to environmental and social criteria. Assessment of EC data for top 10 recipients and case study investigations in key Member States.
- Europe: Assessment of impacts and pressures of aquaculture activities in relation to Water Framework Directive objectives (DG Environment, 2009-ongoing).
- UK: Marine Stewardship Council Pre-Assessment for private client (2008-2009) Undertaking pre-assessment of three major fisheries for UK client.
- UK: Appropriate Assessment of Barrow Port Area Action Plan (Barrow Borough Council, 2008) Project manager, in association with Royal Haskoning, to conduct an appropriate assessment of a supplementary planning document associated with two Natura 2000 sites.
- UK: Strategic Environmental Assessment of the European Fisheries Fund (Defra, 2007-2008) Assessment of potential impacts of new EC structural funding scheme for the fisheries sector including development of mitigation and monitoring.
- UK EEZ: Environmental Risk Assessment (Private client, 2007) Project manager for assessment of various decommissioning options using scenarios for oil & gas infrastructures in the North Sea.
- UK: Cumbria Wind farm EIA (Private client, 2007) PM for EIA of proposed onshore wind farm
- UK: Environmental & ecological surveys to support Helix Project lottery fund bid (British Waterways/Falkirk Council, 2006-2007) Project management of ecological, contaminated land surveys and scoping report to support successful multi-million pound Lottery Fund bid – the Falkirk Helix Project.
- UK: Waterfront Harbour Revision Order (West Lakes Renaissance, 2005-2007) Project manager of EIA for £100million+ regeneration scheme including Cumulative Effects Assessment & Appropriate Assessment.
- UK: Feasibility of Offshore Wind farm Sites (Airtricity, 2006) Review of fishing activity and resources associated with 3 potential offshore wind farm sites in Scottish waters.
- UK: Solway Firth Cockle Fishery Management Plan (Scottish Executive, 2005) Drafting of Appropriate Assessment for re-opened cockle fishery to address impacts and mitigation for SPA and SAC interest features
- UK: Sheringham Shoal Offshore Wind Farm (SCIRA Ltd, 2006) Production of commercial fisheries section for offshore wind farm EIA off the Norfolk coast.

- UK Thanet Offshore Wind Farm (Warwick Energy, 2006) Production of commercial and natural fisheries section of environmental statement for EIA of wind farm in the Greater Thames Estuary.
- UK: Fishing effort and subsea cable interactions (Seagen, 2001). Assessment of risk from and to fishing activity caused by telecoms cable in the North Sea

### **Port infrastructure and regeneration**

- UK: Investment Appraisal of boat ramp and fishing compound for Withernsea (East Riding of Yorkshire Council, 2010). Development of business case including CBA to support an EFF bid for new fishing infrastructure.
- Oman: Strategic Review of Fishery Harbours (Ministry of National Economy in association with Arup, 2009). Provided fisheries & fishery harbour expertise to a national strategic review of commercial ports and fishery harbours involving port visits and consultation throughout the country.
- UK: Waterfront Harbour Revision Order (West Lakes Renaissance, 2005-2008) PM of EIA for £100million+ regeneration scheme including Cumulative Effects Assessment & Appropriate Assessment. Drafting fisheries and socio-economic impacts chapters and Non-Technical Summary for EIA.
- UK: Solway Firth Harbours Feasibility Study (Scottish Enterprise in association with McKenzie Wilson Partnership, 2008) Investigation into current and required port infrastructure to develop marine tourism, commercial fishing, recreational angling, cargo and timber sectors along the Scottish Solway coast.
- UK: Withernsea fisheries options appraisal (East Ridings Council, 2006) feasibility of new fishing infrastructure involving industry consultation and market appraisal.
- Ireland: Port Development Scoping (Shannon Foynes Port Company, 2006) PM for investigation of issues associated with a large-scale land reclamation and port development project.
- UK: Eastbourne Fishing Quay Feasibility (Eastbourne Fishermen's Society, 2006) Assessment of needs and design of dedicated facilities to support the fishing fleet within an existing harbour.
- Cyprus: Akrotiri Port Expansion (Defence Estates, 2005-2006) Project manager of marine dive survey, fisheries survey and stakeholder consultation for military Ro-Ro terminal upgrade.
- UK Shoreham Port Market Development (Shoreham Port Authority, 2005) Economic feasibility and site appraisal for mixed-use market premises at major commercial port on the South Coast of England.
- UK: Fisheries regeneration initiative (Sunderland Port Authority, 2002) Evaluation and projected development of the areas fishing industry including review of current & potential seafood markets.
- Albania: Albanian Fisheries Development Project (World Bank, 2000-2001). Feasibility review assessing proposed infrastructure investment and financing of proposed facilities
- UK: Port Regeneration study Brixham (Torbay BC, 1999-2000) Consideration of facilities for seafood sector (catching and processing), tourism and the wider community.

### **Coastal management**

- UK: Delivering OSPAR Annex V commitments in Scotland (Scottish Government, 2008) Project manager of an interdisciplinary team of experts considering the inter-relationship between Natura 2000 sites and development of a network of Marine Protected Areas under OSPAR Annex V.
- UK: Sustainable Scotland Marine Environment Initiative (Scottish Executive 2004-2006) PM for development of new approaches to marine spatial planning and implementation of the ecosystem approach.
- UK: Options appraisal for coastal remediation (South Shields MBC, 2005-2006) Investigation of appropriate coastal management options for an eroding contaminated cliff face in a popular recreational area.
- UK: Invest in Fish South West (WWF/Defra, 2003-2004) Detailed socio-economic survey of recreational anglers and associated coastal industries using choice experiment to determine Willingness to Pay for new coastal management approaches - contributed to regional bio-economic model.

### ***Economic Appraisal & Environmental Economics***

- Europe: Socio-economic assessment of change in fisheries dependent communities across Europe (EC DG MARE, 2010) Quantitative and qualitative data gathering & analysis for 24 fisheries-dependent communities. Undertaking case studies in Scotland, England & Ireland.
- Europe: Regulatory Impact Assessment of a Plan of Action on Seabirds (EC DG MARE, 2010)
- UK: Financial appraisal of fisheries shore-side facilities (East Ridings Council, 2009 & 2010)
- UK: Regulatory Impact Assessment of extensions to Natura designated areas (Scottish Government, 2008) Assessing socio-economic impact of proposed seaward extensions of Special Protected Areas.
- Europe: Regulatory Impact Assessment of Shark Conservation Action Plan (EC DG MARE, 2008)
- UK: Withernsea cost benefit analysis (East Ridings Council, 2006) CBA of potential fishing infrastructure for EU funding application
- UK: Economic Assessment for Flood Alleviation Schemes (Moray Council, 2006-2007) Production of damage assessment for tangible and intangible elements associated with 3 flood alleviation schemes.
- UK Cairnryan port development (P&O Stena line, 2006) Economic Assessment of impacts from port developments on native oyster fisheries.
- UK: Kilkeel Harbour Extension (DARD, 2005) Economic appraisal of harbour development options for Northern Ireland's largest fishing port. Involves fleet modelling, cost/benefit analysis and socio-economics.
- UK: Socio-economic evaluation of SW England fishing industry (SWRDA, 2001). Production of baseline of fisheries socio-economic info for Objective One and Non-objective one areas in the South West.
- UK: Economic evaluation of fisheries infrastructure investment in Rye (Arup/Environment Agency, 2001). Review of fishing's socio-economic contribution to the area and the port's revenue.

### ***Sector planning***

- Oman: Review of fisheries sector development (World Bank, 2009). Desk-based review of the performance of the fisheries sector against strategic targets set within the national five year plans.
- UK: Review of CFP Reform proposals (Inquiry into Future Fisheries Management, 2009) Study of recent marine fisheries policy papers and CFP critiques, including the recent Green Paper on CFP Reform to identify thinking and potential solutions in relation to regionalisation, control, science, fishing rights and integrated management.
- UK: Fishing sector icing requirements in the South East of England (SE Food Group Partnership, 2008) Assessment of current capacity and future ice needs for the South East catching sector with proposals to improve ice provision and practice to support fleet-wide quality improvements.
- UK: South East England Fishing Industry Development Plan (SEEDA, 2006-2007) Project Leader for sector review, market opportunities, price analysis, development of GIS to inform industry development plan
- UK: New jobs for the fishing industry: seafood, tourism and education (Hastings Borough Council, 2004) Audit of fishing industry & dependent tourism for development strategy for industry and town.
- UK: Assessment of Seafood Market Development Opportunities (North Shields council, 2003). Provision of strategic guidance on seafood businesses detailing requirements for a new business park.
- UK: Fisheries Action Plan Development (Welsh Assembly, 2000). Production of a strategy for Welsh fisheries including inland and coastal commercial and recreational fisheries

### ***Aquaculture***

- UK: Impact of Aquaculture on Scottish Tourism (Scottish Aquaculture Research Forum, 2008) Socio-economic assessment of visitor perceptions of aquaculture and resulting impact on tourism revenues.
- UK: Analysis of Salmon Farming in Scotland, Norway & Chile (Scottish Government, 2007-2008). Review of price & market impacts of industry evolution & government interventions over the last 10 years.

- UK: Sustainable Seafood Consumption & Production (Defra, 2007) Project Leader of Life Cycle Assessment for UK fisheries and aquaculture production, transport & processing and consumption.
- UK Mussel bottom culture site investigation (Deepdock Ltd, 2006) Fisheries assessment & habitat survey of Scottish firth to assess feasibility of commercial shellfish harvest.
- Bangladesh: Investment Mechanisms for Responsible Shrimp Culture. (DfID, 2004) Investigation of encouraging environmentally and socially responsible production and trade practices in developing countries.
- Bangladesh & Vietnam: Environmental Capacity for Aquaculture Developments in the Tropics (TROPECA) (DfID, 2002-2004). Management of 5 case studies (2 in Bangladesh & 3 in Vietnam) using environmental capacity in developing countries to manage aquaculture development on a sustainable basis.
- Bangladesh: Shrimp farm feasibility study (Private client, 2003) Assessment of potential shrimp and fin fish farm at an undeveloped site in SW Bangladesh involving site survey, soil and water quality, etc.

### ***Fisheries Policy Legislation and Management***

- Bay of Bengal: Assessment of small pelagics fisheries within the Bay of Bengal Large Marine Ecosystem (BOBLME) (FAO/GEF, 2010). Visits to all 8 countries within the BOBLME area to assess the current management & environmental impact of small pelagics fisheries in the region, focusing on Hilsa shad (*Tenulosa ilisha*) and Indian Mackerel (*Restrelliger kanagurta*). Recommendations for management improvements, capacity building and collaboration across the region were given.
- UK: Management of Brown Crab fisheries in Northern Ireland (NIFPO, 2010) Review of current fisheries management, and extensive consultation with industry to explore structure and viability of a local management plan, including quality and marketing support.
- Europe: Assessment of Effort Management Administration in the North East Atlantic (DG MARE, 2010-ongoing). Poseidon is leading a European research consortium exploring the practical implementation of various effort management regimes throughout Europe. The work will explore experiences and problems to date in order to identify best practice and areas where simpler regulation is possible.
- Europe: Regulatory Impact Assessment of Common Fisheries Policy Reform (with MRAG for DG MARE, 2009-ongoing). Poseidon has an extensive role in the most far-reaching and influential fisheries Impact Assessment to date, which will help to determine the type and scale of CFP reform in 2012. The team is providing socio-economic analysis using various indicators and reporting on regional case studies to inform the RIA.
- UK: Review of evidence for 2012 CFP Reform (Inquiry into Future Fisheries Management, Marine Scotland, 2009). A desk-based review of key documents relating to Scottish and UK proposals for future fisheries management. The IFFM is an apolitical group established to propose the best approach to future fisheries management to inform CFP reform.
- UK: An economic approach to long-term reform of the English inshore fleet (Defra in association with Vivid Economics, 2009). Exploration of several options for management of resource access by the inshore fishing fleet in 20 years time using industry interviews and workshops to determine favoured arrangements, impacts and transition arrangements.
- UK: Production of model management plan for Inshore Fisheries Groups (Scottish Government, 2008-ongoing) Working with 6 pilot IFGs around Scotland to assist in development of local management objectives and measures to inform a model Management Plan and guidance for all IFGs.
- UK: Development of fisheries sustainability assessment tool (Private Client, 2008) Production of a decision-making tool for large UK multiple retailer to aid delivery of sustainability targets in seafood purchasing.
- Global: Review of Abandoned Lost and Discarded Fishing Gear (FAO, 2008) Co-author of technical paper reviewing global knowledge base in ALDFG with recommendations for future inter-agency activities.
- UK: Guidelines on siting and installation of sub-sea cables (DTI, 2006) Development of best practice in relation to avoidance or minimisation of fisheries interactions with sub-sea cables.
- UK: Fish Producer Organisations Review (Defra, 2006) Review of quota management, marketing and fisheries management by UK Fish Producer Organisations as part of Quota Change Management Review.



- Albania: Albanian Fisheries Development Project (World Bank, 2000-2001). Development of co-management structure for fisheries organisations and relevant authorities for future management.
- Norway & EU: Economic Aspects of Discarding (DG XIV of EC, 2000). Economic incentives for discarding in European Fisheries; case study on North Sea whitefish trawl fishery and Norwegian cod fishery
- Global: Comparative Analysis of International Fisheries Organisations (European Parliament, 2000). Review of Regional Fisheries Bodies: current and future status & issues with intervention recommendations.

### ***Fish processing and marketing***

- Ireland: Business benchmarking for Irish processing companies (Enterprise Ireland, 2008) Assessment of seafood companies using PROBE business benchmarking software.
- UK: Feasibility of establishing independent shellfish depuration facilities (Crown Estate, 2008)
- Ireland: Disposal and re-utilisation of fish and processing waste (Marine Institute, 2002) Research study investigating waste from fisheries and aquaculture, disposal methods, CBA of potential reutilisation.
- UK: Impact of regulatory change on King Scallop Markets (Seafish, 1999-2000). Market investigation of impact of tighter control on shellfish testing. CBA on various processing options for scallop products.

### ***Project and public expenditure design and evaluation***

- UK: Strategic Environmental Assessment of the European Fisheries Fund (Defra, 2007-2008) Evaluation of potential impacts resulting from new EC structural funding scheme for the fisheries sector including development of mitigation and monitoring.
- UK: Quinquennial review of Northern Ireland Fisheries Harbour Authority (DARD, 2003). Provision of expert advice on fishing industry & fisheries harbours during evaluation of NIFHA.
- EC: Impact of FIG measures on the fish processing industry (DG XIV EC, 2001-2002) Management of pan-European team investigating impact of European funding on the fish processing industry.
- Ireland: Value for Money Review of Ice Plant Programme. (BIM, 2001) Assessment of demand changes and proposing level of future funding with extensive fieldwork and consultation.

### **Details of pre-2000 work available on request**

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### **Other relevant information (e.g. Publications)**

Recent published documents/articles/reports (other than the project reporting listed above) include:

**Cappell, R., T. Huntington and G. Macfadyen (2010).** 'FIG 2000-2006 Shadow Evaluation'. Report to the Pew Environment Group. 47 pages plus appendices.

**Macfadyen, G., Huntington, T., Cappell, R.** Abandoned, lost or otherwise discarded fishing gear. UNEP Regional Seas Reports and Studies, No. 185; FAO Fisheries and Aquaculture Technical Paper, No. 523. Rome, UNEP/FAO. 2009. 115p.

**Cappell, R., S. Gubbay, T. Huntington, I. Boyd, A. Brierley, M. Burrows, D. Hughes, N. Quick and T. Mallows (2008).** „Inter-relationships for Scotland in the delivery of OSPAR Annex V commitments and the EC Birds and Habitats Directives in the marine and coastal environment, with a particular emphasis on identifying potential synergies in MPA delivery. Project number SAG/017/07. Produced by Poseidon Aquatic Resource Management Ltd in association with SMRU Ltd and the Scottish Association for Marine Sciences.

### **Full publication list available on request**

**Name:** Paul MacIntyre  
**Position in team:** Traceability Expert Advisor

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### Qualifications

ISO 9001 Lead Auditor (QMI 1991); Registered Organic Inspector (DEFRA); Diploma in Advanced Food Hygiene (Queen Margaret University Edinburgh); BRC v5 Food Manufacturing Auditor BRC (London and Manchester); GlobalGAP IFA Trainer (GlobalGAP Cologne) ; RYA Yachtmaster Offshore (RYA Southport) ; Diploma Photography (Photography Institute)

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### Profile

15 years of management experience within the aquaculture and fish processing sectors.

20 years of experience auditing ISO, HACCP, BRC, GlobalGAP, organic and conventional farming operations within the aquaculture production and fish processing sectors and including MSC Chain of Custody since 2005.

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### Career History

**Current Position:** **Operations and Certification Manager**  
**Address:** Food Certification International Ltd, Inverness, Scotland  
**Dates:** 2002 to Present  
**Detail:** Responsible for managing FCIs inspection and certification services including audit and inspection for FCI and other standard owners.

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**Position:** **Senior Management Roles**  
**Address:** Marine Harvest International, Fort William, Scotland  
**Dates:** 1975 - 1990  
**Detail:** 1975-1984 Farms Manager; 1984-1990 Factory Manager

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### Education

**Diploma:** High School only.  
**Dates:** 1968 - 1974  
**Detail:** Qualifications above all gained in later life.



**OR****Name:** Ken Bruce**Position in team:** Traceability Expert Advisor

Robert Gordon's Institute of Technology, School of Business Management Studies, King Street, Aberdeen (1969 – 1970, 1971 – 1972)

1st Year Passes achieved in:

- » Economics
- » Economic History
- » English
- » Work study
- » Statistics

Other Qualifications & Appointments

- » Diploma in Safety Management
- » Institute of Food Science & Technology - Professional Food Auditor & Mentor (6/5/08 to 6/5/13)

**Employment History**

*Current Position:* Quality Assurance Inspector

*Address:* Food Certification (International) Ltd. Dochfour Business Centre, Dochgarroch, Inverness, IV3 8GY

*Dates:* 2001 - present

*Details:*

- » Responsible to the Executive Director on all aspects of organisation, planning and control of inspection operations
- » Carry out inspections of stock, products, operational procedures, practices and premises of companies in accordance with assigned programmes of work
- » Area of operation covers Scotland including islands off the West Coast, Orkney and Shetland and in other parts of UK and abroad as required
- » To produce clear, accurate, unambiguous reports to required timescale
- » Carry out specific project work as directed by Operations Manager – Fishery
- » Auditing Experience against following standards as below:

**Production Standards**

- » Label Rouge Farmed Salmon Scheme
- » GlobalG.A.P Aquaculture ISO 9001
- » Freedom Food Aquaculture
- » Code of Good Practice for Scottish Finfish

**Primary Processing Standards**

- » Label Rouge Farmed Salmon Scheme
- » BRC Global Food (Version 5)
- » GlobalGap Chain of Custody

### **Value Added Processing Standards**

- » Scottish Smoked Farmed Salmon Scheme (Cold, Hot Smoked and marinade salmon for retail market)
- » TQM Farmed Salmon Processing Scheme (Fresh, semi-cooked, cooked, en-croute and coated salmon dishes for retail market)

### **Other Standards**

- » MSC Chain of Custody
- » LR Standard – Compound Feed Mills
- » PGI for Scottish Salmon
- » SALSA

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**Position:** **Production Process Manager**

**Address:** Esk Frozen Foods Ltd., Croft Road, Montrose

**Dates:** 1999 – 2000 (16 months)

**Detail:**

- » Responsible to the Operations Director on all aspects of organisation and control of processing and freezing of all fruit and vegetable lines, including oven cook and fry chip line.
- » Monitored and controlled all aspects of Department performance, namely labour efficiencies, product yields and ensuring Quality Standards being achieved.
- » Heavy involvement in start up and running with World Class Manufacturing team.
- » Took over as Health and Safety Officer and led Safety committee meetings and dealt with all safety matters in the factory.

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**Position:** **Departmental Manager**

**Address:** Macfish Ltd, Watermill Road, Fraserburgh

**Dates:** 1998 – 1999 (6 months)

**Detail:**

- » Responsible to the Production Director on all aspects of organisation and control of Chill Fish department including High Risk Hot Smoke Mackerel Final Packing operation.
- » Monitored and controlled all aspects of Department performance, namely labour efficiencies, product yields and ensuring Quality Standards being achieved.

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**Position:** **Production Manager**

**Address:** J Johnston & Sons, Sir William Smith Road, Abroath

**Dates:** 1996 – July 1998 (30 months)

**Detail:**

- » Responsible to production director on all aspects of factory operation.
  - » Responsibilities included fish purchasing, production, and maintaining packaging stock levels.
  - » Responsible for all personnel matters
  - » Quality assurance and food safety
  - » Health and Safety management
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**Position:** **Production Project Manager (36 months)**

**Factory Manager (36 months)**

**Address:** Rahbek – Food Ltd., Oxleasow Road, Redditch, Worcs.

**Dates:** 1990 - 1996

**Detail:**

- » Responsible to production director on all aspects of factory operation.
- » Responsibilities included all fish purchasing, production and maintaining packaging stock levels.
- » All matters relating to personnel including staffing levels and discipline.
- » Quality assurance and food safety.
- » Health and Safety management.

**Position:** **Production Manager (48 months)**

**Factory Manager (24 months)**

**Purchasing Manager (24 months)**

**Address:** Rahbek – Food Ltd., Oxleasow Road, Redditch, Worcs.

**Dates:** Octo1982 - 1990

**Detail:**

- » Responsible to General Manager
- » This new plant launched a total of 28 new products over a 30 month period utilising a wide variety of fish, sauce mixes, fresh fruit and vegetables all freshly prepared on site.
- » Responsible for all aspects of production including staffing levels, production planning, raw material purchasing, new product trials through to launch of chilled, delicatessen and recipe dishes for Marks and Spencer.
- » Directly involved with project work to extend factory to include plate freezing, additional automated in line filling lines, enrobing and frying line, and cold storage facility.
- » Reporting on full range of issues including labour utilisation, yield control, staff turnover, production forecasting and all health and safety and staff training issues.
- » Dealt directly with Danish suppliers of majority of raw materials, packaging and ingredients.
- » Developed price grids to monitor and compare budget v actual price position.
- » Develop new suppliers to achieve best prices.
- » Up to 40 Product varieties
- » Over 200 staff employed.

**Position:** **Production Supervisor (12 months)**

**Fisheries Project Manager (16 months)**

**Address:** Clipper Seafoods Ltd., North Esplanade East, Aberdeen

**Dates:** May 1980 – 1982

**Detail:**

- » Report to Plant Manager including Brine/Smoke, Weigh/Bag, and Multivac/Freeze operations for pelagic and white fish species.
- » Ensure required flow of raw materials, fresh and frozen for all production lines.
- » Improve staff utilisation; maintain yield controls and calculation of labour costs.
- » 60 staff employed.

**Position:** **Work Study Observer (18 months)**

**Production Supervisor (36 months)**

**Training and Safety Officer (18 months)**

**Address:** Macfisheries Ltd., Denmark Street, Aberdeen

**Dates:** 1978 - 1980

**Detail:**

- » Responsible to the factory manager on yield control, production throughput levels, staffing and disciplinary matters, health and safety and plant hygiene.

**Position:** **Fisheries Project Manager**

**Address:** Global Trust Certification Ltd, Dundalk, Co Louth, Eire

**Dates:** 1972 - 1978

**Detail:**

- » Carried out work-study timings supplying information to planning and bonus departments on new and existing product lines.
- » Reported to shift manager on all matters of day-to-day production problems within department.
- » Reported to Personnel Manager on Induction, Operator/Instructor and Safety Training.
- » Co-ordinated all health and safety matters throughout the operation liaising with all levels of management.

## Training Courses

February 2008

- » BRC Third Party Auditor update – Global Food (Issue 5)

August 2005

- » Emergency First Aid – 1 Day course

June 2005

- » BRC Third Party Auditor course – Global Food (Issue 4), Certificate No BRC/ATP012/TPA/114

March 2005

- » Fish Welfare Officer Training course – 2 day

June 2004

- » National Powerboat Cert – Level 2 Coastal , Planing & Displacement Craft Cert No – 010365

May 2004

- » Advanced Food Hygiene Diploma – REHIS Diploma No 04044

Sept 2002

- » ISO 9001:2000 Auditor/Lead Auditor – Cert No 191/02

April 2002

- » Understanding & Implementing ISO 9001:2000

March 2002

- » Auditing HACCP and Food Safety – Leatherhead Training

March/April 2001

- » FCS Induction Training Programme Inspector – Fishery Products

September 1999

- » Total Productive Management (World Class Manufacturing)

July 1999

- » Introduction to Refrigeration (Engineering)

September 1998

- » Albert Fisher Managing Performance  
July 1998
- » Time Management – Angus College  
December 1977
- » BSC Total Loss Control  
November 1977
- » BSC Health & Work Environment  
October 1977
- » BSC Communications  
June 1977
- » BSC Advanced Safety  
May 1977
- » General Safety Course – British Safety Council (BRC), TWI Operator / Instructor  
Trainers Course  
March 1974
- » Fish Handling & Processing, Torry Research Station, Aberdeen  
April 1973
- » Unilever - Basic Supervision Course, Port Sunlight, Liverpool  
December 1972
- » Job Safety Course
- » Job Instruction & Communication