

PUBLICATIONS & PRESENTATIONS

STEVE BARNARD, WOLDS ENVIRONMENTAL CONSULTING LTD



■ PAPERS AND BOOK CHAPTERS

- PALIALEXIS, A., **BARNARD**, S. SMITH, C.J. and PAPADOPOULOU, N. (2020 – in prep.) Getting better odds: a risk-based approach for the monitoring and assessment of MSFD Descriptor 1, Biological Diversity. Submitted to *Ecological Indicators*.
- BURDON, D., **BARNARD**, S., BOYES, S.J. and ELLIOTT, M. (2018) Oil and gas infrastructure decommissioning in marine protected areas: system complexity, analysis and challenges. *Marine Pollution Bulletin*, **135**, 739-758. DOI: 10.1016/j.marpolbul.2018.07.077.
- ELLIOTT, M., BOYES, S., **BARNARD**, S. and BORJA, A. (2018) Using best expert judgement to harmonise marine environmental status assessment and marine spatial planning. *Marine Pollution Bulletin*, **133**, 367-377. DOI: 10.1016/j.marpolbul.2018.05.029.
- SNOEIJIS-LEIJONMALM, P., **BARNARD**, S., ELLIOTT, M., ANDRUSAITIS, A., KONONEN, K., and SIROLA, M. (2017) Towards better integration of environmental science in society: lessons from BONUS, the joint Baltic Sea environmental research and development programme. *Environmental Science and Policy*, **78**, 193-209. DOI: 10.1016/j.envsci.2017.10.004.
- ELLIOTT, M., SNOEIJIS-LEIJONMALM, P. and **BARNARD**, S. (2017) 'The dissemination diamond' and paradoxes of science-to-science and science-to-policy communication: Lessons from large marine research programmes. *Marine Pollution Bulletin*, **125(1-2)**, 1-3. DOI: 10.1016/j.marpolbul.2017.08.022.
- BOYES, S.J., **BARNARD**, S. and ELLIOTT, M. (2016) *The East Riding Coastline: Past, Present and Future*. Prepared for East Riding of Yorkshire Council (ERYC) by the Institute of Estuarine and Coastal Studies (IECS), University of Hull. Available at: www2.hull.ac.uk/science/pdf/3450_IECS_ERYC_28_01_16.pdf
- SMITH, C.J., PAPADOPOULOU, K-N, **BARNARD**, S., MAZIK, K., ELLIOTT, M., PATRÍCIO, J., SOLAUN, O., LITTLE, S., BHATIA, N. and BORJA, A. (2016) Managing the marine environment, conceptual models and assessment considerations for the European Marine Strategy Framework Directive, *Frontiers in Marine Science*, **3:144**. DOI: 10.3389/fmars.2016.00144.
- BARNARD**, S. and ELLIOTT, M. (2015) The 10-tenets of adaptive management and sustainability: An holistic framework for understanding and managing the socio-ecological system. *Environmental Science & Policy*, **51**, 181-191. DOI: 10.1016/j.envsci.2015.04.008.
- LONSDALE, J.A., WESTON, K., **BARNARD**, S., BOYES, S. and ELLIOTT, M. (2015) Integrating management tools and concepts to develop an estuarine planning support system: A case study of the Humber Estuary, Eastern England. *Marine Pollution Bulletin*, **100(1)**, 393-405. DOI: 10.1016/j.marpolbul.2015.08.017.
- JICKELLS, T., ANDREWS, J., **BARNARD**, S., TETT, P. and VAN LEEUWEN, S. (2015) Natural sciences modelling in coastal and shelf seas. In: R.K. Turner and M. Schaafsma (eds.) *Coastal zones ecosystem services: From science to values and decision making*. Springer International Publishing, Switzerland. 240pp.
- BARNARD**, S. and ELLIOTT, M. (2013) *Sustainability in environmental management*. In: The Humber's Future Economic and Sustainable Development (D.B. Grant, ed.), Humber Local Economic Partnership (LEP) Research White Paper, University of Hull. 88pp
- BARNARD**, S., GREGORY, J., ARBUTHNOT, S., CRUNDWELL, C. and EVANS, R. (2005) Editors, *Institute of Fisheries Management Annual Conference: Sustainable Fisheries, Cardiff 2004. Conference proceedings*. 224 pp.
- APRAHAMIAN, M.W., **BARNARD**, S. and FAROOQI, M.A. (2004) Survival of stocked Atlantic salmon and coarse fish and an evaluation of costs, *Fisheries Management & Ecology*, **11**, 153–163.

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- BARNARD, S.** (1993) Trophic dynamics in a gravel pit lake ecosystem. In: V.Christensen and D.Pauly (eds.) 'Trophic models of aquatic ecosystems'. ICLARM Conference Proceedings, **26**, 390pp.
- BARNARD, S.** (1991) Modelling the Canada goose populations at Great Linford, *Game Conservancy Annual Review*, **22**.
- BARNARD, S.** (1990) Modelling species interactions in a gravel pit lake, *Game Conservancy Annual Review*, **21**, 113-114.
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■ CONSULTANCY REPORTS

- PALIALEXIS, A., BARNARD, S. SMITH, C. and PAPADOPOULOU, N. (2020) *Risk-based approach for the MSFD monitoring and assessment of Descriptor 1: Biological Diversity*. Report for the European Commission Joint Research Centre, delivered under EC grant CT-EX2019D363425-101.
- ELLIOTT, M., **BARNARD, S.**, BOYES, S.J., BURDON, D., CUTTS, N.D., FRANCO, A. and SMYTH, K. (2020) *The framework and options for compensation for Marine Annex 1 habitats for offshore wind farms*. Unpublished Report YBB875-F-2020, for Ørsted Wind Power NS, Strategic Environment Team (Contract No. 0456). University of Hull and International Estuarine & Coastal Specialists (IECS) Ltd., pp 115.
- BURDON, D., POTTS, T. & **BARNARD, S.**, 2020. Suffolk Marine Pioneer Natural Capital Logic Chains and Tool Development Workshop Report. Daryl Burdon Ltd., Willerby, UK. February 2020. (Report No. DB LTD 007/2019b
- FRANCO, A., SMYTH, K., **BARNARD, S.**, BURDON, D., ELLIOTT, M. and MAZIK, K. (2020) *Marine ecosystem health: A streamlined approach for assessments through integration, harmonisation and forecasting*. Report for JNCC produced under Contract Ref: C19-0384-1374.
- FRANCO, A., **BARNARD, S.** and SMYTH, K. (2020) *An assessment of the viability of fish monitoring techniques for use in a pilot approach in SW England*. NECR report 270, produced by Institute of Estuarine and Coastal Studies (IECS), University of Hull, Hull, UK, HU6 7RX. ISBN 978-1-78354-595-7.
- BOYES, S.J., BURDON, D., THOMSON, S.M., **BARNARD, S.** and ELLIOTT, M. (2019) *Non licensable Activity Impacts on Marine Protected Areas; Stakeholder Engagement and Strategy Report*. Report for the Marine Management Organisation (MMO) Project No: MMO1136 by the Institute of Estuarine and Coastal Studies (IECS, University of Hull).
- FRANCO, A., MAZIK, K., **BARNARD, S.**, THOMSON, S., ELLIOTT, M., JOHNSON, M. and HULL, S. (2018) *Sublittoral rock indicator: spatial correlation between environmental conditions and biological data*. Report for JNCC by Institute of Estuarine and Coastal Studies (IECS), University of Hull.
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- FORSTER, R., STRONG, J.A., BURDON, D., **BARNARD, S.**, BOYES, S.J. and ELLIOTT, M., (2016) *Evidence supporting the use of environmental remediation to improve water quality in the South Marine Plan areas*. Report produced for the Marine Management Organisation by Institute of Estuarine and Coastal Studies (IECS), University of Hull, Hull, UK, HU6 7RX. MMO Project No: 1105. ISBN: 978-1-909452-44-2. pp 158.
- BARNARD, S.**, KRYVENKO, O., CHURILOVA, T., SUSLIN, V., PAPADOPOULOU, N., MONCHEVA, S., OLENIN, S., SMITH, C., MAZIK, K., LITTLE, S. and ELLIOTT, M. (2015) *Report on sea-specific matrices of pressure-impact links*. DEVOTES Project, Deliverable 1.2. 130pp.
- BARNARD, S.**, TILLIN, H., PIRODDI, C. and THOMSON, S. (2015) *Prioritising pressures for benthic habitats in UK marine regions*. Internal JNCC Report. Report for JNCC by Institute of Estuarine and Coastal Studies (IECS), University of Hull.
- MAZIK, K., STRONG, J., LITTLE, S., BHATIA, N., MANDER, L., **BARNARD, S.** and ELLIOTT, M. (2015). *A review of the recovery potential and influencing factors of relevance to the management of habitats and species within Marine Protected Areas around Scotland*. Scottish Natural Heritage Commissioned Report No. 771.
- BARNARD, S.** and STRONG, J. (2014) *Reviewing, refining and identifying optimum aggregation methods for undertaking marine biodiversity status assessments*. Report for JNCC by Institute of Estuarine and Coastal Studies (IECS), University of Hull.
- BARNARD, S.**, BURDON, D., STRONG, J. and ATKINS, J. (2014) *The ecological coherence and economic & social benefits of the Northern Ireland MPA network*. Report to the Northern Ireland Marine Task Force (YBB238-F-2014). Institute of Estuarine and Coastal Studies (IECS), University of Hull, Hull, UK, HU6 7RX.
- SMITH, C., PAPADOPOULOU, N., **BARNARD, S.**, MAZIK, K., PATRÍCIO, J., ELLIOTT, M., SOLAUN, O. LITTLE, S., BORJA, A., BHATIA, N., MONCHEVA, S., ROBELE, S., BIZSEL, K.C. and ERONAT, A.H. (2014) *Conceptual models for the effects of Marine Pressures on biodiversity*. DEVOTES Project, Deliverable 1.1. 82pp.
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- FRANCO, A., ALVAREZ, M., **BARNARD, S.**, THOMSON, S., NUNN, A.D., COWX, I.G. and ELLIOTT, M. (2013) *Review of fish population data in the Humber Estuary*. Project number 1B1S. IECS report for the Environment Agency.
- FRANCO, A., THOMSON, S., BHATIA, N. and **BARNARD, S.** (2013) *Spatial models of Essential Fish Habitat (South Coast Inshore and Offshore Marine Plan Areas)*. MMO Project No 1044. IECS report for the Marine Management Organization (MMO).
- BARNARD, S.** and BOYES, S.J. (2013) *Review of Case Studies and Recommendations for the Inclusion of Expert Judgement in Marine Biodiversity Status Assessments*, JNCC Report No.490. Report for JNCC by Institute of Estuarine and Coastal Studies (IECS), University of Hull.
- BARNARD, S.** and REDHEAD, J. (2012) *MCZ IA Knowledge Transfer Workshop: Internal Defra/SNCB workshop report*. 93pp.
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- ENVIRONMENT AGENCY (2008) *Better sea trout and salmon fisheries; our strategy for 2008-2021*. Environment Agency, Bristol, UK. [**Member of Environment Agency drafting and editorial team**]
- BARNARD, S.** (2003) *Review of Welsh fisheries byelaws - an initial consultation (consultation paper circulated to 250 fisheries stakeholders/customers across Wales detailing proposals for revised fishing regulations)*.
- BARNARD, S.**, ANDREWS, K. and ELLIS, J.C. (2002) *Optimum stocking strategies for hatchery-reared riverine coarse fish*. Report to Environment Agency N^o. **W2-i651/TR**; WRc.
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- BARNARD, S.** (1999) *HABSCORE for Windows version 1.1; software installation and operation - Environment Agency Fisheries Technical Manual 6*; WRc.
- BARNARD, S.** (1999) *Thames Water's Abingdon Reservoir proposal (TWARP): a review of Environment Agency fisheries studies*. Report to Environment Agency; WRc.
- BARNARD, S., CONRAD, A. and SIMS, I.** (1999) *Biological monitoring of the Kennet and Avon canal, Hungerford, Spring 1999*. R&D Technical Report for Environment Agency, Thames Region.
- BARNARD, S. and WYATT, R.J.** (1999) *Fisheries assessment software within the Environment Agency*. Report to Environment Agency N°. **W176**; WRc.
- BARNARD, S.** (1998) *HABSCORE for Windows version 1.1; software installation and operation*. Report to Environment Agency N°. **W174**; WRc.
- BARNARD, S.** (1998) *The survival of stocked coarse fish - a record of reaction to operational problems and an assessment of the consequences for the validity of the agreed experimental design*. Report to Environment Agency; WRc.
- BARNARD, S., MUNRO, D. and CODLING, I.** (1998) *Assessment of the implications of the proposed development of Heron Quays in relation to fishery status and flood defence*. Report to Canary Wharfe Contractors Ltd.; WRc.
- BARNARD, S., PARR, W. and MAINSTONE, C.P.** (1998) *Fertilisation of gravel pit lakes as a fishery management tool*. Report to Environment Agency; WRc.
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- BARNARD, S.** (1997) *A review of consented trout stockings into riverine environments*. Report to Environment Agency N°. **W74**; WRc.
- BARNARD, S., WYATT, R.J. and MAINSTONE, C.P.** (1997) *The effects of stocked brown trout on the survival of wild fish populations*. Report to Environment Agency N°. **W5**; WRc.
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- WYATT, R.J. and **BARNARD, S.** (1997) *Spawning escapement targets for Atlantic salmon*. Report to Environment Agency N°. **W64**; WRc.
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- BARNARD, S. and WYATT, R.J.** (1995) *A guide to HABSCORE field survey methods and the completion of standard forms*. Report to NRA N°. **401**; WRc.
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- WYATT, R.J., **BARNARD, S. and LACEY, R.F.** (1995) *Use of HABSCORE V software and application to impact assessment*. Report to NRA N°. **400**; WRc.

- MAINSTONE, C.P., **BARNARD**, S. and WYATT, R.J. (1994) *Development of a fisheries classification scheme*. Report to NRA N^o. **244/7/Y**; WRc.
- MAINSTONE, C.P., **BARNARD**, S. and WYATT, R.J. (1994) *The NRA National fisheries classification scheme: a guide for users*. Report to NRA N^o. **206**; WRc.
- BARNARD**, S. (1993) *The alleged decline of brown trout populations in Scotland and Northern Ireland*. Report to SNIFFER N^o. **SR 3404/1**. WRc.
- GILES, N., PHILLIPS, V.E. and **BARNARD**, S. (1991) *The Current Crisis. Ecological Effects of Low Flows on Chalk Streams*. Royal Society for Nature Conservation. The Wildlife Trusts Partnership, Lincoln.
- BARNARD**, S. (1987) *The effect of aquatic macrophytes on the hydraulic roughness of a lowland chalk river*. Wessex Water Authority, Regional Biology Unit internal report.

▪ NET GAIN REPORTING (MARCH 2010 – AUGUST 2011)

As Stakeholder Manager for Net Gain[†] (the North Sea Regional Marine Conservation Zones Project) Steve was the lead report author and/or coordinator for project meetings and reports, including:

- *Net Gain Final Recommendations Submission to Natural England & JNCC*, 31 August 2011, Net Gain, August 2011 [available from online archive at:
http://webarchive.nationalarchives.gov.uk/20120502152724/http://www.netgainmcz.org/docs/Net_Gain_Final_Rec_v1_1.pdf
- *Net Gain 'Large Group Meeting' 19 & 20 July 2011*. Full report of two-day workshop held at the KC Stadium, Hull. Available from online archive at:
<http://webarchive.nationalarchives.gov.uk/20120502153515/http://www.netgainmcz.org/docs/LGM2Report.pdf>
- *Net Gain Draft Final Recommendations Submission to the Science Advisory Panel - Version 2 (June 2011)* 414pp [available from online archive at:
<http://webarchive.nationalarchives.gov.uk/20110909185445/http://www.netgainmcz.org/docs/110607%20OSB%20MV%20draft%20final%20report.pdf>
- *Net Gain Progress Reports*. Three separate progress reports submitted to the Science Advisory Panel (June 2010; October 2010; and February 2011); all reports available from online archive at:
<http://webarchive.nationalarchives.gov.uk/20120502153507/http://www.netgainmcz.org/sapanel.php>
- *Net Gain Stakeholder Advisory Panel reports*. Eight separate reports detailing eight meetings of the Stakeholder Advisory Panel held at Royal Hotel York over the period 20 April 2010 to 4 July 2011; all reports available at:
<http://webarchive.nationalarchives.gov.uk/20120502153507/http://www.netgainmcz.org/sapanel.php>
- *Net Gain Regional Hub Workshop reports*. 25 separate reports detailing a series of meetings of the four Net Gain Regional Hub groups at various venues across the Net Gain over the period 16 March 2010 to 12 May 2011; all reports available at:
<http://webarchive.nationalarchives.gov.uk/20120502153516/http://www.netgainmcz.org/hubs.php>

[†] see <http://webarchive.nationalarchives.gov.uk/20120502152857/http://www.netgainmcz.org/index.php>

■ PRESENTATIONS/POSTERS

- BARNARD, S., BURDON, D. and ELLIOTT, M. (2018)** *SPIDA: an innovative database tool to assess the impacts of oil & gas infrastructure decommissioning*. Poster prepared for JNCC: Beyond the Coast; University of Hull, UK; 26-27 June, 2017.
- BARNARD, S. and BOYES, S.J. (2018)** *The legislative background to oil & gas infrastructure decommissioning in the UK and the development of SPIDA, an innovative database tool to assess the potential impacts of decommissioning activities*. Oral presentation to SUT/MASTS Decommissioning & Wreck Removal Workshop, 1 November 2018. Glasgow, UK.
- BARNARD, S., BURDON, D. and ELLIOTT, M. (2018)** *SPIDA: an innovative database tool to assess the impacts of oil & gas infrastructure decommissioning*. Oral presentation to ECSA 57: Changing estuaries, coasts and shelf systems - Diverse threats and opportunities, 3-6 September 2018. Perth, WA, Australia.
- BARNARD, S. and PAPADOPOULOU, K.N. (2018)** *Assessing generic pressures in the marine environment using expert judgement: A scalable approach to help inform sustainable natural resource exploitation, with applications for scenario testing and for data-poor environments*. Oral presentation to ECSA 57: Changing estuaries, coasts and shelf systems - Diverse threats and opportunities, 3-6 September 2018. Perth, WA, Australia.
- ELLIOTT, M., BOYES, S.J., BARNARD, S. and BORJA, A. (2018)** *Using best expert judgement to harmonise marine environmental status assessment and marine spatial planning*. Oral presentation (by M.Elliott) to ECSA 57: Changing estuaries, coasts and shelf systems - Diverse threats and opportunities, 3-6 September 2018. Perth, WA, Australia.
- BARNARD, S (2014)** *The Northern Ireland MPA network - ecological coherence & socio-economic benefits*. Oral presentation to 2nd Marine and Coastal Policy Forum; Plymouth, UK.
- BARNARD, S. (2013)** *The use of expert judgement in marine biodiversity assessment*. Oral presentation to the Communications and Management for Sustainability (CMS) meeting on Coastal & Marine Management & Development, examining Evidence: Trends, Issues and Solutions; Brunei Gallery, School of Oriental and African Studies, University of London, UK.
- NET GAIN (2010 –2011)** Lead presenter and/or coordinator for meetings and reports by Net Gain, the North Sea Regional Marine Conservation Zones Project, including:
- *Net Gain Regional Hub Workshops*. A series of 25 meetings of the four Net Gain Regional Hub groups at various venues across the Net Gain, over the period 16 March 2010 to 12 May 2011.
 - *Net Gain 'Large Group Meeting – the Return' 19 & 20 July 2011*.
- BARNARD, S. (2007)** *Management controls for salmon & sea trout*. Oral presentation to Environment Agency Wales (North Area) Local Fishery Group. Bangor, UK.
- APRAHAMIAN, M.W., BARNARD, S. and FAROOQI, M.A. (2002)** *Does stocking contribute to enhancing stocks?* Oral presentation to the XXII session of the European Inland Fisheries Advisory Committee; Windermere, UK.
- BARNARD, S. and PEIRSON, G. (2001)** *Persistence of hatchery-reared salmonids and cyprinids in rivers in England and Wales*. Poster prepared for 'Effects of releasing hatchery-reared fish in the wild'; Visby, Gotland, Sweden; 28-30 August 2001.