

Nicky (Nicoletta) Cariglia

Nationality: Italian / British

Academic Record

Institution: University of Newcastle
Date: 2007 - 2008
Degree: MSc Tropical Coastal Management

Institution: University of Wales, Swansea
Date: 2002 - 2005
Degree: BSc Marine Biology

Profile:

15 years' experience in marine environmental management across various disciplines with the last nine spent in pollution emergency response. On site attendance at over 30 oil spill incidents providing advice on response operations, environmental impact assessment as well as fisheries/aquaculture mitigation and management measures. Specific expertise includes; incident management, SCAT, oil spill contingency planning, shoreline response oversight and waste management. Wider experience with environmental risk and impact assessments, coral reef ecology; marine reserve design and monitoring; and fisheries management. Primarily worked in tropical, remote and logistically constrained regions. Previous experience in coral reef management and small-scale fisheries management from Indian Ocean, Pacific Ocean and Mediterranean regions.

Professional qualifications/ training: IMO level 1, 2 and 3 oil spill clearance course – ICS 100,200 – Helicopter underwater escape training (HUET) – Basic offshore survival (BOSIET) – PADI Rescue Diver– International certificate of competence boat licence (ICC) – Arctic survival course – GRI Sustainability Standards course.

Employment Record

2019 - Present

Marittima Ltd.

Director / Independent consultant

Environmental consultancy and pollution emergency response services for the maritime sector:

- Emergency environmental and spill response
- Environmental advice to salvage operations and wreck removals
- Environmental risk and impact assessment
- Oil spill contingency planning: review, writing and capability building workshops
- Technical and ESG policy review and due diligence for shipping, port related infrastructure and waste management processes.

2019

Athelia Sustainable Ocean Fund Marine

Technical Director.

Provision of technical and scientific expertise on potential investments relating to coastal infrastructure, maritime transport, conservation, and fisheries and



aquaculture. Tasks include pre-investment advice and technical due diligence as well as environmental and social due impact monitoring throughout the projects. Development of internal ESG standards matrix.

2017 - 2019

ITOPF Ltd.

Senior Technical Adviser

As part of the Europe, Middle East and Africa team, responsible for training and mentoring junior technical staff in their roles. Provided a high level of support to the technical management team, and actively contributed to the delivery of ITOPF's strategic objectives.

2012 - 2017

ITOPF Ltd.

Technical Adviser

- Provision of technical advice during oil spills;
- Involved in liaison and communication between all stakeholders;
- Monitoring overall response and issuing daily SITREPs;
- Provision of inputs on the design, implementation and analysis of post spill environmental monitoring and remediation;
- Fisheries and aquaculture related oil spill contingency planning and assessment. Provision of advice on fisheries and aquaculture impacts within the framework of the IMO international liability and compensation regimes. Principal author for IOPC guidelines "Managing fisheries during an oil spill";
- Development and delivery of training courses and workshops for governmental, inter-governmental and non-governmental organisations on various aspects of maritime pollution;
- Conducted risk assessments on vessel groundings and salvage operations.

2011 - 2012

MRAG Ltd

Fisheries Consultant

Provision of advice on development of marine environmental monitoring programmes including data analysis, report production and GIS mapping. Managed all elements of various fisheries observer programmes and sat on a number of technical committees.

Authored tenders, scientific reports, Environmental Statements and non-technical summaries

2009 - 2010

Government of Maldives/World Bank

Consultant (Maldives Environmental Monitoring Programme)

Responsible for the coordination, strengthening and implementation of national coral reef monitoring programme including development of community-based indicators and protocols. Training of junior employees in underwater survey techniques and coral reef species identification. Authoring of coral reef status reports.

2006 - 2009

Coral Cay and Frontier

Science Officer

Periodic expedition deployments for NGOs training volunteers in underwater survey techniques for coral reef monitoring and MPA effectiveness in Philippines and Fiji.



Selected project and spill experience (further examples available upon request):

Country / Region	Date	Project
Sri Lanka	2021	Waste management adviser for salvors on a debris retrieval project following a containership fire and wreck. Developing, implementation and oversight of waste management operations from debris retrieval operations associated with container debris around the wreck. Large focus on dissemination of accurate and realistic information, undertaking risk assessment of likely nature of waste to inform development of appropriate and proportionate waste management strategy. Challenges in determining likelihood of retrieval of DG given fire and subsequent submersion and building political consensus of actual risks.
Desk-based	2021	Environmental and social risk and impact evaluation for wreck removal options for a sunken jack-up rig in Malaysia. Initial assessment to systematically quantify risks, impacts and opportunities for various removal options.
Desk-based	2021	Lead author on technical RFP from Mauritian government for a comprehensive and detailed claims analysis and environmental and socio-economic impact assessment in the aftermath of WAKASHIO. The technical proposal was the highest scoring bid amongst several consortia of established, large organisations. The financial proposal was also the most competitive. At the time of writing, final award is still outstanding.
Scotland, UK	2020	Environmental adviser to salvors on grounded vessel KAAMI. Complicated cargo of SRF pellets. (cargo with value, transported as waste under Basel Convention). Development of dynamic and bespoke counter pollution plans due to erratic behaviour of soaked pellets. Development and implementation of bespoke waste storage plan once offloaded due to self-heating properties. Consideration of final processing a key concern due to soaking in seawater and changes in calorific value.
Italy	2020	Socio-economic damage assessment to several mussel farms following the refloating attempt of a grounded ferry in Sardinia.
Italy	2019-2020	CDRY BLUE –appointed by salvors to act as environmental adviser, government liaison and develop appropriate anti-pollution contingency measures during debunkering operations.
USA	2019	SCAT Coordinator and temporary Environment Unit lead for GMS on GOLDEN RAY response. Coordinated field teams as well as provide input and writeup best management practices (BMPs), shoreline treatment recommendations (STRs), waste management plan and sampling plan.
Bahamas	2019-2020	SCAT team lead for response to South Riding Point post-Dorian oil spill. Unique nature of contamination (widespread throughout Caribbean pine forest and elevation due to transportation of oil by hurricane). Implemented a modified version of SCAT to suit local conditions.

Country / Region	Date	Project
Bahamas	2019	Technical due diligence and feasibility assessment for port reception facility to process MARPOL Annex I and Annex IV waste within Port of Freeport. Undertaken on behalf of potential investors.
Solomon Islands	2019	HFO spill on remote island in the Solomon Islands. Considerable logistical constraints due to remoteness. Local tribal sensitivities key factor in response organisation and incident management. Considerable need for improvisation for shoreline clean-up operations on account of scarcity of resources.
Netherlands	2018	HFO spill from a products tanker. Spill occurred within the third Botlek of Rotterdam port. Significant risk to industrial operations and subsequent risk of closing down activities reliant on water intake. Considerable component relating to oiled wildlife and wildlife rehabilitation.
Togo	2018	HFO spill – first recorded incidence of spilled oil stranding ashore in the country. Provided training to workforce and training on manual recovery techniques. Monitored beach seining operations to determine degree of impact to normal fishing operations.
Greece	2017	Spill of IFO 180 from a grounded passenger ferry on an island during the peak tourism season. Challenges associated with return of ferry to Piraeus for repairs due to coinciding with a large spill in the Piraeus area. Initially, attempts to attribute spill to passenger ferry was a challenge.
Taiwan, Province of China	2017	Environmental risk assessment of proposed salvage options for a sunken wreck. Liaising with divers, salvage experts and visual analysis of underwater video footage to develop a semi-quantitative risk matrix including a variety of socio-environmental indicators.
Turkey	2016-2017	On site attendance for a spill of HFO from a grounded tuna carrier vessel in a highly touristic location. Close liaison with the Turkish authorities. Issues included; mitigation options for the numerous sea bass and bream farms and bluefin tuna ranches. Outlined response options during severe weather (gales and snow) and conducted environmental monitoring.
Brazil	2016	Environmental characterisation of the Santos estuary. Following several very small spills of fuel from bunkering ships undertook an environmental assessment to identify sources of chronic pollution within the estuary, determine general condition of mangroves throughout the estuary and map the coastline type and sensitivities.
Chile	2016	Spill of very high density but low viscosity slurry oil. Issues with submerged oil response and selecting appropriate vacuums/pumps. Issues with fragmentation and underwater containment.
Mexico	2015	Development of oil spill contingency measures following the grounding of a bulk carrier vessel. Oversight of collection of environmental samples to establish baseline conditions.

Country / Region	Date	Project
Spain	2015	Provision of technical advice in relation to a spill of asphalt within the port of Huelva. Neutrally buoyant/negatively buoyant product posed challenges in terms of recovery and contamination assessment.
Japan	2014	A continuous release of HFO within the Bay of Tokyo from a sunken vessel which lasted 12 weeks. Numerous fisheries and mariculture issues on both the east and western side of the Bay. Considerable logistical issues in managing the response due to distances involved. Assessment of large quantities of oiled and unoled fishing gear as well assessment of complex fisheries claims associated with the highly varied fisheries activities undertaken within the Bay of Tokyo. .
Brazil	2014	Response to an IFO spill following an explosion on an LNG vessel caused by an overflow of firefighting water. Provision of oversight of shoreline clean-up operations. Development of terms of reference for a large-scale fisheries economic impact and characterisation study for Santos Bay as well as coordination and oversight of the project.
Philippines	2013	HFO spill resulting from a ferry which sunk following a collision resulting in considerable loss of life. Subsequently, significant economic - fisheries issues due to oil stranding within a lagoon where local communities were reliant on subsistence fishing. Organised and oversaw entire response; sourced and improvised equipment, trained personnel and reported to authorities. Implemented a post-spill monitoring project using local academics to monitor impacts of the spill on mangroves and local fisheries.
UK	2011	IOTC and ICCAT Regional Observer Programme to monitor at sea transhipments Client: IOTC and ICCAT Management and implementation of the operational aspects of the IOTC and ICCAT Regional Observer Programme to monitor transhipments at sea. Responsible for reviewing and analysing observer reports and databases and providing regular status reports.
Maldives	2009-2010	EIA for unlicensed sea cucumber (<i>Holothuria scabra</i>) farm in Noonu atoll, Maldives. Retrospective attempt to quantify environmental and social impacts of a long established, sea cucumber farm; Assessment of impacts to gain information on developing a framework for the licensing of similar private ventures within the Maldives

Selected Meetings, Working Groups, Conferences and Workshops delivered:

- JNCC UK dispersants workshop – Edinburgh, 2018
- Global Initiative for West and Central Africa (GI-WACAF) and Global Initiative for Southeast Asia (GI-SEA). The GI-WACAF and GI-SEA programmes are a cooperation between the International Maritime Organisation (IMO) and the industry association, IPIECA. As part of her role as technical adviser, Nicky has designed and delivered several courses related to the activities of these programmes:
 - o • Ivory Coast GI-WACAF regional workshop on OPRC implementation, 2017.
 - o Namibia sub-regional workshop on implementing an incident management system (IMS), 2016.



- o Cape Verde national workshop on contingency planning, 2016.
- o Ghana sub-regional workshop on waste management, 2014.
- o Philippines national workshop on contingency planning, 2014.

Selected Conferences Attended:

- International Oil Spill Conference (IOSC) 2021, Virtual, speaker.
- International Oil Spill Conference (IOSC) 2017, Long Beach, USA, speaker.
- Gulf of Mexico Research Initiative (GoMRI) Conference 2017, New Orleans, USA.
- PREMIAM-Post-spill monitoring conference 2016 and 2018, London, UK, speaker.
- Society for Risk Analysis Annual Meeting 2015, Arlington VA, USA, invited plenary speaker.
- Natural Resources Symposium 2015, Washington DC, USA, speaker.
- Interspill 2015, Amsterdam, The Netherlands, speaker.
- Environmental Liability Directive Stakeholder Conference 2013, Brussels, Belgium.
- ARCOPOL Plus Conference 2013, Cardiff, Wales
- Reef Conservation UK (RCUK) 2012, London, UK
- Indian Ocean Cetacean Symposium (IOCS) 2009, Malé, Maldives

Selected Publications (more available upon request):

Cariglia N, 2021. Salvors as OSROs: benefits and constraints. 2021 International Oil Spill Conference Proceedings (to be published).

Cariglia N, 2017. Implementation of oil spill impact mitigation measures in fisheries and mariculture. International Oil Spill Conference Proceedings.

Cariglia N, Challenger, G, Beer, N. 2017. The use and misuse of SCAT. International Oil Spill Conference Proceedings.

Cariglia N and Laruelle, F. 2017. Response considerations when oil spills affect tidal agriculture. 2017 International Oil Spill Conference Proceedings.

Cariglia N. 2015. Environmental damage assessment: case studies from around the world. Presentation at Natural Resource Damage Symposium, Georgetown University, Washington DC, USA. **Cariglia, N**. 2015.

International regime for liability for ship source spills. Presentation at Natural Resource Damage Symposium, Georgetown University, Washington DC, USA

Cariglia N; Wilson, S; Graham, N.A.J.; Fisher, R; Robinson, J.; Ameeruddy, R.; Quatre, R.; Polunin, N.V.C, 2013. Sea Cucumbers in the Seychelles: Effects of Marine Protected Areas on High Value Species. Aquatic Conservation: Marine and Freshwater Ecosystems, Vol. 23, No. 3, 2013, p. 418-428. IOPC Funds. 2016. Guidance for Member States: management of fisheries closures and restrictions following an oil spill. London, UK; 15 pp.

MRAG Ltd. 2012. A Review of Bycatch in the Indian Ocean Gillnet Tuna Fleet Focussing on India and Sri Lanka. ISSF Technical Report 2012-05. International Seafood Sustainability Foundation, Washington, D.C, USA.

Patel M, **Cariglia N**, Marchand, P, Brandt J, and Soares, D. 2018. A whitepaper submission: Environmental damage: changing perceptions and future outlook. Interspill 2018, London

Zahir H., Quinn N, **Cariglia N**. 2010. Assessment of Maldivian coral reefs in 2009 after natural disasters. Marine Research Centre; Malé; Republic of Maldives.