



Knowledge Base Report

Booklet on knowledge base related to eco-innovation and circular economy of *used* fishing nets, ropes and components (FNRCs).

Professor Martin Charter, The Centre for Sustainable Design ®, University for the Creative Arts, UK

June 2018

www.circularocean.eu



Northern Periphery and
Arctic Programme
2014–2020



EUROPEAN UNION

Investing in your future
European Regional Development Fund

Circular Ocean

In pursuit of innovative and sustainable solutions for marine plastic waste, the Circular Ocean project seeks to inspire enterprises and entrepreneurs to realise the hidden opportunities of discarded fishing nets and ropes in the Northern Periphery & Arctic (NPA) region.

As increasing levels of marine litter is particularly pertinent to the NPA region, the Circular Ocean project will act as a catalyst to motivate and empower remote communities to develop sustainable and green business opportunities that will enhance income generation and retention within local regions.

Through transnational collaboration and eco-innovation, Circular Ocean will develop share and test new sustainable solutions to incentivise the collection and reprocessing of discarded fishing nets and assist the movement towards a more circular economy.

Circular Ocean is led by the Environmental Research Institute, www.eri.ac.uk (Scotland), and is funded under the European Regional Development Fund (ERDF) Interreg VB Northern Periphery and Arctic (NPA) Programme <http://www.interreg-npa.eu>. It has partners in Ireland (Macroom E www.macroom-e.com), England (The Centre for Sustainable Design www.cfsd.org.uk), Greenland (Arctic Technology Centre www.artek.byg.dtu.dk), and Norway (Norwegian University of Science and Technology www.ntnu.edu).



Disclaimer: All reasonable measures have been taken to ensure the quality, reliability, and accuracy of the information in this report. This report is intended to provide information and general guidance only. If you are seeking advice on any matters relating to information on this report, you should contact the ERI with your specific query or seek advice from a qualified professional expert.

Organisations – overview

Organisation	Country	Website
Clean Nordic Oceans	Norway/Denmark/ Sweden	www.cnogear.org
NOAA Marine Debris Program	USA	https://marinedebris.noaa.gov/types/derelict-fishing-gear
Swedish Agency for Marine and Water Management (SwAM)	Sweden	https://www.havochvatten.se/en
Marine Center, Simrishamn Municipality	Sweden	www.marelitt.eu www.smrishamn.eu
Macroom E Enterprise Centre	Ireland	www.macroom-e.com
Environmental Research Institute, North Highland College, UHI	Scotland	http://www.uhi.ac.uk
The Centre for Sustainable Design [®] , University for the Creative Arts	UK	cfsd.org.uk/projects/circular-ocean
Arctic Technology Centre ARTEK	Greenland/Denmark	www.artek.byg.dtu.dk/english
Norwegian University of Science and Technology	Norway	www.ntnu.edu
Associação Portuguesa do Lixo Marinho	Portugal	https://www.aplixomarinho.org
University of Massachusetts Dartmouth	USA	https://www.umassd.edu/smast/
Georgia State University	USA	http://artdesign.gsu.edu/profile/pamela-longobardi/
Norut Northern Research Institute	Norway	http://norut.no/en/
SYKE Marine Research Centre	Finland	www.syke.fi/en
Greenland Institute of Natural Resources	Greenland	www.natur.gl
Marine & Freshwater research Institute	Iceland	https://www.hafogvatn.is/en
The Ocean Legacy Foundation	Canada	https://oceanlegacy.ca/
The Ocean Cleanup	The Netherlands	https://theoceancleanup.com
Healthy Seas	The Netherlands	http://healthyseas.org
KIMO International	Scotland	http://www.kimointernational.org
Waste Free Oceans	Belgium	https://www.wastefreeoceans.org/
The Marine Conservation Society	UK	https://www.mcsuk.org
Bude Cleaner Seas Project	UK	http://cleanerseasproject.co.uk/
Surfers Against Sewage	UK	https://www.sas.org.uk
Tangaroa Blue Foundation	Australia	http://tangaroablue.org/
Global Ghost Gear Initiative	UK	https://www.ghostgear.org

Introduction

This report provides a compilation of governmental, public and private organisations with knowledge about issues related to collection, recycling and re-use of used and waste fishing nets ropes and components (FNRCs). Producers and private companies dealing with these issues have not been included in this report.

The research and editing of this report has taken place from February to April 2018.

I. Public Authorities and Governmental Organisations

Organisation:	Clean Nordic Oceans
Contact:	Bård Aarbakke, Nettverksleder Fiskeridirektoratet , Norway Tel: 00 47 975 69198
Country:	Norway, Sweden and Denmark
Email:	Gjermund.langedal@fiskeridir.no (CNO Project leader) bard.aarbakke@fiskeridir.no (Norway: Network Leader) charlotta.stadig@havachvetten.se (Sweden: Network Leader) rif@agua.dtu.dk (Denmark: Network Leader)
Knowledge:	A Nordic network to exchange knowledge and experience about methods and measures to reduce the effects of ghost fishing, littering of the oceans and to increase recycling from commercial and recreational fishing. Clean Nordic Oceans is a collaboration between Fiskeridirektoratet (Norway), DTU Aqua (Denmark) and Havs- och vattenmyndigheten (Sweden)
Website	www.cnogear.org

Organisation:	NOAA Marine Debris Program, Office of Response and Restoration, National Ocean Service, National Oceanic and Atmospheric Administration
Contact:	Amy V. Uhrin, Chief Scientist Marine Debris Division, Response & Restoration, East-West Highway Silver Spring MD 20910, USA
Country:	USA
Email:	amy.uhrin@noaa.gov & marinedebris.web@noaa.gov
Knowledge:	NOAA Marine Debris Program is working with fishermen to provide a place to dispose of fishing gear free of charge and support new, innovative prevention strategies through technological advancements in fishing gear. The program has collected more than 2.1 million pounds of gear from 41 locations across the USA. The NOAA Marine Debris Program and the Southeast Atlantic Marine Debris Initiative jointly developed the <i>Marine Debris Tracker</i> .
Website	https://marinedebris.noaa.gov/types/derelict-fishing-gear https://marinedebris.noaa.gov/search/node/dfg

Organisation:	Swedish Agency for Marine and Water Management (SwAM)
Contact:	Charlotta Stadig, Coordinator Gullbergs Strandgata 15, Postal Address: Box 11 930, SE-404 39 Göteborg, Sweden Tel: 00 46 (0)10 698 60 00
Country:	Sweden
Email:	havochvatten@havochvatten.se
Knowledge:	Coordinates activities, promotes and supports policy work for marine and water environmental policies. Knowledge about the collection of derelict fishing gear and prevention of losses. Commercial fishermen are obligated to report lost fishing gear to SwAM.
Website	https://www.havochvatten.se/en

Organisation:	Marine Centre, Simrishamn Municipality
Contact:	Vesa Tschernij, Project Manager - MARELITT Baltic Marine Centre, Varvsgatan 4, 272 36 Simrishamn, Sweden Tel: 00 46 0414-81 91 66
Country:	Sweden
Email:	vesa.tschernij@simrishamn.se
Knowledge:	Coordinator of the EU funded MARELITT project providing, for example, a toolkit for setting up derelict fishing gear retrieval projects.
Website	www.marelitt.eu and www.smrishamn.eu

Organisation:	Macroom E Enterprise Centre
Contact:	Michelle Green, Project Manager Macroom E Enterprise Centre, Macroom Environmental Industrial Park Ltd Bowl Road, Macroom, Cork, County Cork, Ireland Tel.: +353 26 20520
Country:	Ireland
Email:	mgreen@smileexchange.ie
Knowledge:	Macroom E runs the SMILE Resource Exchange which is a free service for businesses that encourages the exchanging of resources between its members. Their work includes used fishing nets, ropes and components (FNRCs). Macroom E is a project partner of the Circular Ocean Project.
Website	www.macroom-e.com

II. Universities

Organisation:	Environmental Research Institute (ERI), North Highland College (NHC), University for the Highlands & Islands (UHI)
Contact:	Dr Neil James, NPA Project Co-ordinator ERI, NHC, UHI, Ormlie Road, Thurso, Caithness, KW14 7EE, Scotland Tel: 00 44 (0)1847 889579
Country:	Scotland
Email:	Neil.James@uhi.ac.uk
Knowledge:	Impact of plastic contamination of aquatic environments. Project manager of the EC funded Circular Ocean Project www.circularocean.eu
Website	http://eri.ac.uk/ & http://www.uhi.ac.uk

Organisation:	The Centre for Sustainable Design[®] (CfSD), University for the Creative Arts (UCA)
Contact:	Professor Martin Charter, Director CfSD, UCA, Faulkner Road, Farnham, Surrey GU9 7DS, UK Tel: 00 44 1252 892772
Country:	UK
Email:	mcharter@uca.ac.uk
Knowledge:	Development of innovative and sustainable solutions for waste fishing nets, ropes and components (FNRCs). Circular economy, upcycling and redesign of used FNRCs. Project partner of the Circular Ocean Project.
Website	cfsd.org.uk/projects/circular-ocean

Organisation:	Arctic Technology Centre ARTEK
Contact:	Professor Lisbeth Ottosen, Vice Director, Head of Section ARTEK, Department of Civil Engineering at Danish Technical University (DTU) Technical University of Denmark, Brovej, Building 118, room 159, 2800 Kgs, Lyngby, Denmark Tel: 00 45 45 25 22 60
Country:	Greenland AND Denmark
Email:	lo@byg.dtu.dk
Knowledge:	Recycling and reuse of discarded waste fishing nets, ropes & components (FNRCs) in building materials. Project partner of the Circular Ocean Project.
Website	www.artek.byg.dtu.dk/english

Organisation:	Norwegian University of Science and Technology (NTNU)
Contact:	Dina Margrethe Aspen, Research Scientist Paritosh Deshpande, PhD Researcher Department of Ocean Operations and Civil Engineering, Norwegian University of Science and Technology (NTNU), Larsgårdveien 2, 6025 Ålesund Tel: 00 47 924 16 580
Country:	Norway

Email:	dina.aspen@ntnu.no & paritosh.deshpande@iot.ntnu.no
Knowledge:	Research into elimination, collection and reprocessing of discarded fishing nets. Project partner of the Circular Ocean Project.
Website	https://www.ntnu.edu/oceans/marine-environment-and-society

Organisation:	Associação Portuguesa do Lixo Marinho (APLM), Departamento de Ciências e Engenharia do Ambiente, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa
Contact:	Maria Paula de Oliveira Sobral, President Campus de Caparica, 2829-516 Caparica, Lisbon, Portugal
Country:	Portugal
Email:	ap.lixomarinho@gmail.com
Knowledge:	Activities and research around marine litter in Portugal. Beach clean- ups.
Website	https://www.aplixomarinho.org

Organisation:	University of Massachusetts Dartmouth, School for Marine Science & Technology
Contact:	Professor Pingguo He SMAS/Fisheries Oceanography, University of Massachusetts Dartmouth, 285 Old Westport Road, Dartmouth, MA 02747-2300, USA Tel: 001 508 910 6323
Country:	USA
Email:	phe@umassd.edu
Knowledge:	Design of environmentally friendly fishing gear.
Website	https://www.umassd.edu/smast/

Organisation:	Georgia State University
Contact:	Pamela Longobardi, Distinguished University Professor Sustainability Initiatives, Georgia State University, 75 Piedmont Avenue, Suite 750, USA Tel. 001 404 413 5246
Country:	USA
Email:	plongobardi@gsu.edu
Knowledge:	Collaboration between art, science, activism and similar groups towards resolving the issue of marine waste and cleaning beaches. Initiator of the Drifters Project: http://driftersproject.net/
Website	http://artdesign.gsu.edu/profile/pamela-longobardi/

III. Research Institutes

Organisation:	Northern Research Institute (Norut)
Contact:	Heidi Rapp Nilsen, Senior Research Scientist SIVA Innovation Centre, Sykehusvn 21, 9019 Tromsø, Norway Tel: 00 47 416 88 207
Country:	Norway
Email:	heidi.nilsen@norut.no
Knowledge:	Research into: marine waste especially in Svalbard and the Barents Sea; the status and sources of marine waste; socio-economic costs of marine waste; regulations and incentives related to waste from fishing boats.
Website	http://norut.no/en/prosjekter/marine-plastic-pollution-arctic-origin-status-costs-and-incentives-prevention-polarprog

Organisation:	Marine Research Centre, Finnish Environment Institute (SYKE)
Contact:	Pekka Kotilainen, Senior Researcher P.O. Box 140, FI-00251 Helsinki, Finland Tel: 00 358 295 252 001
Country:	Finland
Email:	E-mail: pekka.kotilainen@ymparisto.fi
Knowledge:	Knowledge about lost fishing gear in Finnish waters.
Website	www.syke.fi/en

Organisation:	Greenland Institute of Natural Resources
Contact:	Emma Kristensen, Head of Communications Kivioq 2, P.O. Box 570, 3900 Nuuk, Greenland Tel: 00 299 361 254
Country:	Greenland
Email:	info@natur.gl
Knowledge:	Greenland Institute of Natural Resources (GINR) is a research institution providing scientific advice for the Government of Greenland. GINR analyses lost fishing gear and its impact in Greenland waters.
Website	www.natur.gl

Organisation:	Marine & Freshwater Research Institute
Contact:	Haraldur Arnar Einarsson, Senior Scientist/Fishery Technology Skúlagata 4, 101 Reykjavík, Iceland Tel: 00 34 5 575 2000
Country:	Iceland
Email:	haraldur.arnar.einarsson@hafogvatn.is
Knowledge:	Fishing gear research, waste collection systems and recycling practices of waste fishing gears in Iceland.
Website	https://www.hafogvatn.is/en

IV. NGO's

Organisation:	The Ocean Legacy Foundation
Contact:	Chloé Dubois, CEO Marine Debris Solutions Centre™, The Ocean Legacy Foundation, 13537 64A Avenue, Surrey, British Columbia, V3W 9H6, Canada
Country:	Canada
Email:	chloe@oceanlegacy.ca
Knowledge:	The Ocean Legacy Foundation is an international non-profit organization which utilizes spatial mapping, education and research, clean-up expeditions and plastic to fuel technologies to develop a marine debris solutions program. Their approach combines sustainable technologies with education and skills training to give all plastic wastes and debris economic value and communities the long-term tools they need to steward their environment.
Website	https://oceanlegacy.ca/

Organisation:	The Ocean Cleanup
Contact:	Boyan Slat, Founder and CEO De Torenhoove, Martinus Nijhofflaan 2 - 18th floor, 2624 ES Delft, The Netherlands
Country:	The Netherlands
Email:	joost.dubois@theoceancleanup.com
Knowledge:	The Ocean Cleanup operates floating systems designed to capture small plastic (up 1 cm) and discarded fishing nets (tens of metres in length).
Website	https://www.theoceancleanup.com

Organisation:	Healthy Seas
Contact:	Veronika Mikos, Project Coordinator Tel: 00 31 6 30 48 07 95
Country:	The Netherlands
Email:	veronika.mikos@healthyseas.org
Knowledge:	Healthy Seas is a cross-sector initiative created by two NGOs and two businesses - that have joined forces to tackle the problem of marine litter. Healthy Seas brings together many different stakeholders: divers, fisheries, NGOs, governments, communities as well as salvage, recycling and production companies to take action against waste fishing nets.
Website	http://healthyseas.org

Organisation:	KIMO UK
Contact:	Fiona McLellan, National Coordinator KIMO UK, C/O Aberdeenshire Council, Woodhill House, Westburn Road Aberdeen AB16 5GB, Scotland Tel: 00 44 (0) 7789 790775
Country:	Scotland
Email:	faron.mclellan@aberdeenshire.gov.uk
Knowledge:	KIMO uses practical solutions to address the problems caused by litter in the oceans. Their Fishing for Litter projects are successful in encouraging fishermen to bring ashore abandoned, lost or discarded fishing gear that they find during their normal fishing activities. KIMO also works with governments, the EU, other organisations and NGOs to

	influence changes in legislation towards a resource-efficient circular economy where waste is recycled and re-used.
Website	http://www.kimointernational.org

Organisation:	Waste Free Oceans
Contact:	Letitia Florea, Project Coordinator Avenue Cortenbergh 71, 1000 Brussels, Belgium Tel: 00 32 2 739 63 79
Country:	Belgium
Email:	letitia.florea@wastefreeoceans.org
Knowledge:	Waste Free Oceans (WFO) collects and transforms Ocean Plastic by collaborating with fishermen and brands. Using a unique "Trash Catcher", which can be attached to small and middle-sized boats, they collect ocean floating on the water's surface. Partnering with business collected marine litter is upcycled to create meaningful products telling a story of reuse and innovation.
Website	https://www.wastefreeoceans.org/

Organisation:	The Marine Conservation Society
Contact:	Emma Cunningham (<i>née Snowden</i>), Senior Pollution Campaigns Officer Overross House, Ross Park, Ross-on-Wye, Herefordshire, HR9 7US, UK Tel: 00 44 1989 561590
Country:	UK
Email:	emma.cunningham@mcsuk.org
Knowledge:	The Marine Conservation Society (MCS) is the UK charity dedicated to the protection of the world's seas, shores and wildlife.
Website	https://www.mcsuk.org

Organisation:	Cleaner Seas Project
Contact:	Avril Sainsbury Tel: 00 44 07805 199090
Country:	UK
Email:	avril@cleanerseasproject.co.uk
Knowledge:	Bude Cleaner Seas Project is working together with the local community to give Bude the cleanest water quality and the cleanest beaches in Cornwall.
Website	http://www.cleanerseasproject.co.uk/

Organisation:	Surfers Against Sewage
Contact:	Jacey Russell, Fundraising Officer Unit 2, Wheal Kitty Workshops, St Agnes, Cornwall, TR5 0RD. UK Tel: 00 44 01872 553 001
Country:	United Kingdom
Email:	info@sas.org.uk
Knowledge:	Surfers Against Sewage is a national marine conservation and campaigning charity that inspires, unites and communities to take action to protect oceans, beaches, waves and wildlife
Website	https://www.sas.org.uk/plastic-free-parliament

Organisation:	Tangaroa Blue Foundation
Contact:	Heidi Taylor, Coordinator PO Box 1176, Margaret River WA 6285, Australia Tel: 00 61 410 166 684
Country:	Australia
Email:	heidi@tangaroablue.org
Knowledge:	Tangaroa Blue Foundation is an Australian-wide not-for-profit organisation dedicated to the removal and prevention of marine debris. Tangaroa Blue Foundation has created the Australian Marine Debris Initiative (AMD), an on-ground network of volunteers, communities and organisations that contribute data from rubbish collected during beach and river clean-up events to the AMDI Database, and then work on solutions to stop the flow of litter at the source.
Website	http://tangaroablue.org/

Organisation:	Global Ghost Gear Initiative (GGGI)
Contact:	Joel Baziuk, Secretariat World Animal Protection, 222 Grays Inn Road, London WC1X 8HB, UK Tel: 001 (0) 778 772 9408
Country:	UK
Email:	joelbaziuk@worldanimalprotection.org
Knowledge:	The Global Ghost Gear Initiative (GGGI) is a cross-sectoral alliance committed to driving solutions to the problem of lost and abandoned fishing gear worldwide
Website	https://www.ghostgear.org





www.circularocean.eu

Contact:

Professor Martin Charter
The Centre for Sustainable Design ®
University for the Creative Arts
Farnham, Surrey
GU9 7DS
mcharter@ucreative.ac.uk



SOCIAL MEDIA



[/CircularOcean](https://www.facebook.com/CircularOcean)



[circularocean](https://www.instagram.com/circularocean)



[@CircularOcean](https://twitter.com/CircularOcean)



[Circular Ocean](https://www.youtube.com/CircularOcean)

www.circularocean.eu



**Northern Periphery and
Arctic Programme**
2014–2020



EUROPEAN UNION

Investing in your future
European Regional Development Fund