



OVERVIEW OF THE 3RD NEWSLETTER:

- The circular economy for fishing gear
- First results of the fishermen survey
- Market analysis for the production of biodegradable fishing gear
- The portraits of Amanda Burton and Laetitia Miquerol
- Tests in progress for the realisation of prototypes
- The University of Plymouth research festival



WHAT IS A CIRCULAR ECONOMY FOR FISHING GEAR?

The circular economy is a production and consumption model that consists of sharing, reusing, repairing, renovating and recycling existing products and materials for as long as possible so that they retain their value. In this way, the life cycle of products is extended to reduce the use of raw materials and the generation of waste.



An example of this is being developed in the framework of the INdIGO Project:

- Improve **design**, for example by using materials with less environmental impact and by adapting the life span of materials to their use.
- Improve **collection**, by making more bins available in ports to collect the various components of used fishing gear.
- Improve local **recycling** capacity.
- To take effective **preventive** actions, it is necessary to have a better knowledge of the type of fishing and aquaculture waste found at sea and on the beaches.
- **Involve** both industrialists (manufacturers in particular), political decision-makers and professionals in the fisheries and aquaculture sector.

FEEDBACK ON THE ONLINE WORKSHOP OF 26 MAY



On 26 May, the INdIGO partnership organised an online workshop on The Circular Economy for fishing gear. The workshop was a success with 90 participants. The recording and presentations are available on request. Please email: indigo.project@univ-ubs.fr

TRASH TO TREASURE

Turning waste nets into valuable products

The most common polymers used in fishing gear are PA (e.g. nylon) gillnets and HDPE trawlnets. High quality recyclates can be produced through mechanical recycling for manufacture into many products.

In France, Fil et Fab recycle gillnets into sunglasses, and Odyssey Innovation in the UK make kayaks from trawlnets collected from harbours and beach clean groups through the Net Regeneration Scheme.



Sunglasses frames - collaboration
Fil&Fab, Armor Lux and Acuitis
Photo Credit : Armor Lux



Kayak Odyssey Innovation

Chemical recycling of nylon creates as-new fibre for use in sportswear fabrics. Many more recycled net products are coming on the market all the time.

The three Circular Economy principals are :

- 1) Design out waste.
- 2) Keep products in use as long as possible.
- 3) Regenerate natural systems.

The INdIGO project applies these principals to optimise the opportunities of retaining the value in the fishing gear inventory in the Channel area, to minimise the harmful impacts of ghost gear and to extract less raw material.

Amanda Burton, University of Plymouth

AND ALSO

THE FIRST RESULTS OF THE FISHERMEN SURVEY

As part of INdIGO, a large survey was conducted from December 2020 to March 2021 among fishermen in the Channel area (Brittany, Normandy, Haut-de-France and Southern England). The results are now being analysed by the Smel, Cefas and LabSTICC (UBS) teams. Here are some initial results:

FRANCE

106 answers

Gillnetters
from
Brittany &
Normandy

Aged 35 to
54 years

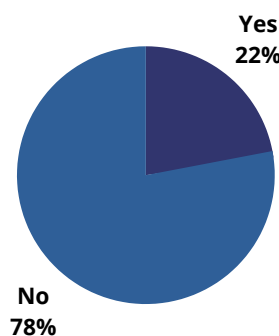
UNITED KINGDOM

41 answers

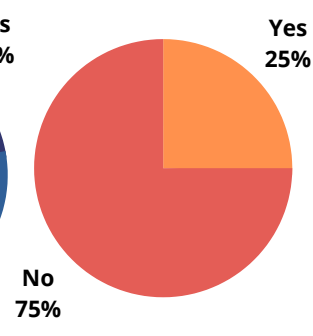
Owners &
Skippers

Fishing
experience
from 21 to 40
years

Do you know the regulations around the management of used fishing gear?

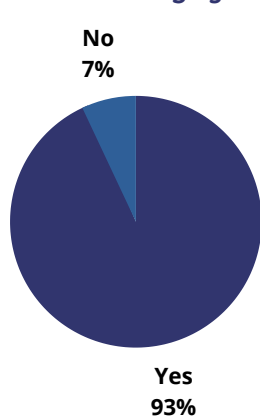


France

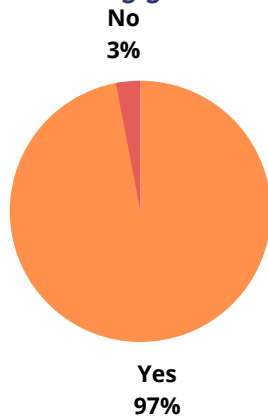


UK

Are you in favour of setting up a selective sorting system for fishing gear?

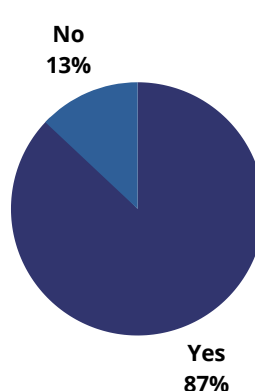


France

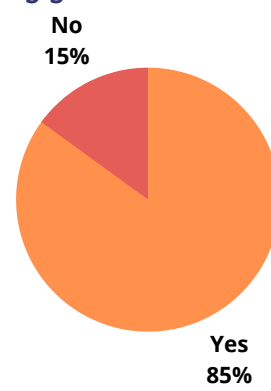


UK

Do you encounter abandoned, lost or discarded fishing gear at sea?



France



UK

Further results will be available in the near future, particularly on the acceptability aspect, in order to determine whether or not fishermen would be prepared to adopt biodegradable fishing gear.

BUT ALSO

MARKET ANALYSIS FOR BIODEGRADABLE FISHING GEAR IMPLEMENTATION IN THE CHANNEL FISHERIES



Fishing gear is known to be a significant contributor to the marine litter problem. In the absence of a 'silver bullet' solution to Abandoned, Lost Or Otherwise Discarded Fishing Gear (ALDFG) and marine litter, biodegradability is an important 'circularity aspect' in developing a circular economy for fishing gear. Ultimately, end of life recycling is crucial, but its development will take time.

Fishing gear lost at sea (for whatever reason) has a myriad of environmental and economic impacts, such as 'ghost fishing' before becoming arguably more damaging microplastic.

To demonstrate the role of biodegradability as a design feature of fishing gear, the INdIGO project undertook a comprehensive market analysis to understand the market conditions and the fleet segments most suited for the implementation of biodegradable gear in its development phase.

The report considered elements like:

- the current operating environment (including social and economic indicators),
- the management frameworks of fisheries (i.e. those operating mainly under the CFP or national regulations),
- the competition to biodegradable gear (e.g. net retrieval programmes),
- the barriers and opportunities for implementation (both technical and economic),
- the management measures (e.g. incentives) required to facilitate the uptake of biodegradable gear in sustainable small-scale static gear fisheries in the Channel area.



Ben Drakeford, Université de Portsmouth

PROFILES

LAETITIA MIQUEROL, PROJECT MANAGER FISH & CLICK (IFREMER)



After a Master's degree in Oceanography and Marine Environment, Laëtitia specialised in the study of coastal ecosystems. She is particularly interested in the impacts of human activities on marine and coastal environments and in the concrete solutions implemented to reduce these pressures.

In 2020, she joined Ifremer, partner of the INdIGO project, where she leads the Fish & Click citizen science programme. Her missions combine research and mediation: she analyses the Fish & Click data and leads awareness-raising actions on plastic pollution from fishing gear lost at sea. For Laëtitia, integrating marine stakeholders directly into scientific research is one of the strengths of the INdIGO project.

AMANDA BURTON, ENGINEERING DESIGN RESEARCH ASSOCIATE (UNIVERSITY OF PLYMOUTH)



Amanda is an Engineering Design Research Associate at the University of Plymouth. She is completing an MSc in Advanced Engineering Design, and is an Ellen MacArthur Foundation Circular Economy Pioneer.

Amanda's concern for the plastics crisis grew from a lifelong love of the ocean and the natural world. Having started her career in the oil industry, she moved into community renewable energy and then to design for the circular plastics economy in response to the global threats we face.

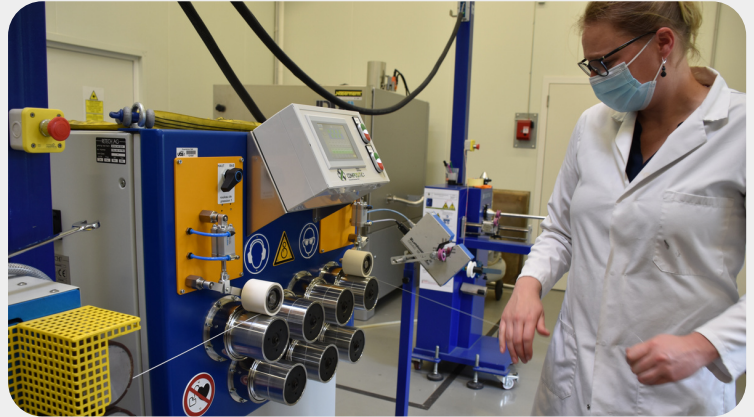
"A circular economy designs out waste, extends product lifetimes and regenerates natural systems. We can't meet our climate goals without rethinking the way we design, use and recirculate products, including fishing gear. It's great to be working together with so many committed people to shift the system."

PRODUCTION OF THE MONOFILAMENT

The first monofilament tests were carried out at CompositiC in May.

Thanks to the 7-roll stretching system acquired during the project, the team was able to test the formulations made by NaturePlast.

This new equipment should make it possible to manufacture sufficiently strong yarn to produce prototypes of biodegradable fishing nets.



Many actors still need to be involved to test the filament produced and ensure that it meets the criteria set out in the specification for the design of the nets. This includes their use by fishermen and end-of-life biodegradation tests.

RESEARCH FESTIVAL OF THE UNIVERSITY OF PLYMOUTH



The INDIGO project will be presented at the University of Plymouth's Research Festival 2021 on 29 June 2021 in an event entitled: "Engineering solutions for marine plastic pollution".

Programme and registration : <https://www.plymouth.ac.uk/research/plymouth-research-festival/2021-engineering-solutions>

Please encourage your colleagues and contacts to join the INDIGO Interest Group to be kept up to date with the project, its events and activities and research.

Sign up at the following link:



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