

Seminar Highlights



FARNET TRANSNATIONAL SEMINAR FOR FLAGS SAINT-JEAN-DE-LUZ, FRANCE 20 – 22 NOVEMBER 2018 Closing the Loop: the circular economy in fisheries and aquaculture areas

Organisers: FARNET, at the initiative of the European Commission

Hosts: Region of Nouvelle-Aquitaine with the help of the Côte Basque – Sud Landes FLAG

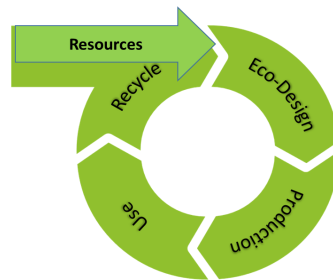
Participants: Over 100 Managing Authorities, National Networks, experts and FLAGS representatives from all 20 Member States implementing fisheries CLLD

Current production systems and consumption habits are unsustainable. We are using up our natural resources quicker that they can be regenerated, while studies show that between 80-99% of products are no longer in use after six months. The move towards a circular economy is an effort to replace the linear “take-make-dispose” model with “the 3 Rs – reduce, reuse, recycle”. In the context of the [EU Circular Economy Plan](#), the EMFF can also support environmentally-sustainable and creative ways to implement the circular economy in fisheries and aquaculture areas. FLAGS can play an important role in identifying and investing in innovators and educating operators to rethink design, production, usage and recycling in a way that protects the environment, whilst increasing economic opportunities in the form of new jobs and businesses.

KEY MESSAGES



- ✓ 95% said **FLAGS can play a role**
- ✓ **67% have allocated funds** for circular economy actions



2018 FARNET Survey on circular economy
100/368 FLAGS responding



“We have to do something in order to clean our seas. I think there is a lot of potential to reuse this waste and create benefit for the local communities. The fishermen will then have access to a cleaner environment.”

Andreea Strachinescu,
Head of Unit, DG MARE

PARTICIPATION

Which materials could the fisheries and aquaculture sectors recycle?



What would you like to see designed better to reduce its environmental impact?



PROJECT AND KNOWLEDGE HUB

Moving towards renewables

Eastern Asturias FLAG, Spain

Moving away from the use of fossil fuels is part of implementing the circular economy. The fishing organization ('*cofradia*') of Bustio now runs all their buildings (including the fish auction) on renewable energy from solar and wind power, thanks to help from this FLAG. They have also installed storage batteries that allow them to better manage their energy production versus needs. [See the full presentation](#)



Recycling polystyrene fish boxes

Thy-Mors FLAG, Denmark

This [FLAG-supported project](#) takes the polystyrene waste from packing and transporting fish and transforms it into plastic pellets that can be sold to manufacturers for a range of new products. It is the first recycling plant of its kind in Denmark. [See the full presentation](#)

Smart ecosystems for seaweed and oysters

Dorset & East Devon FLAG, UK

This FLAG is integrating the culture of complementary species and building in uses for by-products with the integrated multi-trophic aquaculture (IMTA) of oysters and longline algae production. They are supporting local companies to put this in place, while exploring outlets for unwanted seaweed by-products in cosmetics, food additives or organic fertilizer. [See the full presentation](#)



Collaborating on recycling plastic waste

Vidourle Camargue FLAG, France

Marina officials, associations and local fishermen are among the network of stakeholders working together to set up a collection and recycling chain for plastic waste caught at sea. The next step for the pilot project will be scaling it up to create an economically-viable operation. [See the full presentation](#)

Utilizing warm water from the leisure sector

Costa da Morte FLAG, Spain

An outdoor pool for children is heated using excess solar-panel heated water from a nearby sports complex. The pool is part of a redevelopment of the area where the Anllóns cockle pickers work and highlights their activities. The regeneration project involves school trips to see the cockle pickers at work and tasting sessions. [See the full presentation](#)



Managing waste in fishing harbours

Costa Granada FLAG, Spain

Local fishermen are collecting engine oil and other waste from fishing in the harbour through an initiative set up by the FLAG with the support of Axis 4. They have learned more about the sorting, management and recycling of this waste through awareness-raising activities. [See the full presentation](#)



From fish skin to fashion leather

Arcachon FLAG, France

A young French entrepreneur turns discarded fish skins into "marine leather" and works with fashion designers to create bags, bracelets and other items for sale. The technique was learned through a FLAG-funded cooperation project in Finland. Her innovative fish skin tanning process uses 100% natural products. [See the full presentation](#)



Setting up value chains for oyster shells

Vannes FLAG, France

A range of partners in this FLAG's area have been working together to use oyster shells in different ways, including for fertilizer, cosmetics and paint. The FLAG-supported initiative helps the actors to collaborate and maintain close contact with a local factory that produces the goods. FLAGs discussed the challenges of setting up such supply chains. [See the full presentation](#)



From dump to supermarket

Smicval, France

A look at the innovative concept of the "inverted supermarket", offering a model for collecting and selling second hand items. Thinking about how to apply this to fisheries and aquaculture. [See the full presentation](#)



"It's always interesting to meet people from different countries and different FLAGs. There are not many circular economy projects going on right now in our area, so I definitely heard some great thoughts here on what to do. During the Working Group, we generated really good ideas about how to use all of the catch." *Kersti Oja, Peipsi Fishery Area FLAG*



ECO-DESIGN

Vincent Collet, Think+ Agency

If things continue at the current pace, by 2050 there will be more plastic than fish in the oceans. Eco-design is ultimately about making equivalent or better-quality products that have a low environmental impact in their manufacturing and in their use. Innovation is a very large part of this and there are many good examples in fisheries and aquaculture areas. [See the full presentation](#)

Marennes Oléron FLAG (FR) presented a project that is developing a new bio-based, biodegradable and industrially-compostable bioplastic compound partly made from oyster shells. This material would be used to make oyster spat collectors which are currently made of non-recycled plastic and contribute to marine litter and waste. [See the full presentation](#)

In the project presented by South FLAG (IE), the plastic mesh in the rope used for breeding mussels has been replaced with biodegradable cotton. This solution was copied from New Zealand's "Hairy Rope System" and, as well as being environmentally-friendly, is more efficient for seeding longlines and harvesting mussels. [See the full presentation](#)



USAGE

Tom Snow, designContext

The circular economy aims to reduce that amount of virgin resources that are used, by keeping as many resources that have already been processed in use for as long as possible. Sharing, repairing and reusing are three steps to decrease the overall number of goods being produced. Re-thinking usage models and ownership can help pool resources and incentivize greater producer responsibility for the environmental footprint of their goods. [See the full presentation](#)

FLAGS discussed the sorts of things that could be shared. Ideas ranged from storage space, to ice machines and even boats for tourism purposes. They looked at ways of ensuring that equipment lasts longer, such as maintenance, repair and leasing models. Such services can be pooled to make them more viable. Re-use and re-distribution were also explored for fishing overalls, equipment and unsold fish.

WHAT ARE THE CIRCULAR ECONOMY CHALLENGES FOR FLAGS?

- ✓ Finding and gathering information on potential circular economy initiatives; identifying similar projects to provide a model; and researching and testing are all time-consuming factors which can delay profitability.
- ✓ The conditions might not be in place to turn the plan into a viable business. For example, there has to be the necessary capacity and skills to deal with the collected waste in order for an enterprise to be sustainable.
- ✓ Creating the right incentive for those producing waste to collaborate with those who want to use it for a different purpose.
- ✓ Recycling can have a high cost. It may be expensive and time consuming to collect, sort and process waste.
- ✓ There could be legal constraints to implementing certain projects. Different Member States have their own legislation when it comes to fishing waste and marine litter.
- ✓ Licensing for new innovations can be complicated and legal expertise might be necessary.
- ✓ Finding the necessary funding/investment from either the public or private sector.



BY-PRODUCTS

Thomas Binet, Vertigo Lab

By-products from along the fisheries and aquaculture supply chain can become a valuable resource for new products and businesses. The key to effectively using by-products in the circular economy is looking for synergies with other local sectors. Feasibility questions are important to find out if using the by-product presents a viable business opportunity that meets a demand and has possible customers. In terms of guaranteeing supply, there could be possibilities to collaborate with other FLAGS to ensure the critical mass needed. [See the full presentation](#)

FLAGS pointed to a series of opportunities to use by-products from local production. For example, organic fish waste from the auction or processing can be made into pet food, fishmeal for aquaculture or new products for human consumption (fish fingers, stock cubes, etc.); shells can be ground to make fertilizer, paving stones or paint; and nets can be recycled (e.g. into plastic beads or filament for 3D printing) or repurposed to make handbags, decorations and other items.



EU PLASTIC STRATEGY

Andreea Strachinescu, Head of Unit, DG Mare

The European Union's Plastics Strategy is a part of the transition towards a more circular economy. Its aim is to protect the environment from plastic pollution whilst fostering growth and innovation. Abandoned, lost and discarded fishing gear represents around 27% of plastic marine litter. Fishing gear has high recycling potential, but the current recycling market is small and localized. [See the full presentation](#)

Fishy Filaments is a Cornish brand that specializes in recycling marine plastics into 3D printer filament. The Cornwall & Isles of Scilly FLAG provided animation support through sourcing non-EU funds and connecting with land owners, harbours and other relevant bodies. The FLAG also helped to secure EMFF support for a large-scale infrastructure project to develop a new site within the harbour for innovation businesses that carry out diversification projects linked to the industry (seaweed processing, marine engineering, fishy filaments). [See the full presentation](#)

TIPS FROM THE SEMINAR

- ✓ Changing the way waste is perceived is fundamental: it must be seen and treated as a resource that can be reused and create value.
- ✓ Investing the time to see circular economy projects through to completion can bring multiple benefits: both economic and environmental.
- ✓ Work with those who produce waste to find the right incentives and rewards for forming partnerships with circular economy projects.
- ✓ Awareness-raising and coordination between the different actors and stakeholders is essential: fishermen, aquaculture producers, harbours and public authorities all have a role to play – as does the private sector.
- ✓ Finding an organization that can drive and coordinate circular economy initiatives is important. In countries where local fishing cooperatives don't exist, alternative leaders must be found.
- ✓ FLAGS can play a role both in funding circular economy projects, but also in seeking complementary financing from other sources.

FIELD TRIP TO THE CÔTE BASQUE-SUD LANDES FLAG AREA

“A new life for old fishing nets”

During a trip to a newly set-up workshop, seminar attendees saw a project in which old fishing nets are taken apart so that they can be recycled and reused. Nets are collected from fishermen taking part in the scheme. Two employees oversee four job seekers who are part of this initiative as a way of being supported into work. There was a demonstration of the special “detection gun” that is used to identify the types of plastics in the different parts of the nets. The project is modeled on a similar one already taking place in the [Marennes Oléron FLAG](#) area. The FLAG also supports a start-up company associated with this project, that is researching and testing recycling methods for used and dismantled net slicks with the aim of manufacturing new marketable plastic products. [Read more about the project](#)



“The possible uses for organic fish waste”

Associate Professor at The Institute of Analytical and Physical-Chemical Sciences (the University of Pau and the Pays de l'Adour), Susana Fernandes, described research into creating value from fishery by-products on a molecular level. The FLAG-supported project takes organic fish waste and species with low commercial and nutritional value and breaks them down into marine biopolymers (such as collagen and hyaluronic acid) which can be used in a range of products including cosmetics, pharmaceuticals and water treatment.

A further study looks at how to valorise the polymers and molecules of shells from crustacean by-catch. [Read more about the research](#)

“Models for upcycling and secondhand distribution”

API-UP primarily up-cycles discarded wood into a variety of furniture, with a focus on eco-design and industrial symbiosis. A description of their journey and operations showed how lessons from their model can be applied to upcycling in fisheries and aquaculture areas. This includes building local networks and fostering relationships by getting to know the local stakeholders and relying on local actors, such as associations, businesses and institutions. [Read more about the model](#)

Soli'bat is a platform for collecting unused building material (tiles, window frames, paint, etc.) from a range of different actors and making it available for sale at largely reduced prices to those with limited resources. This mechanism of setting up a new economic model and supply chain for reusing waste in a sustainable way is one that could also work in the context of fisheries and aquaculture areas. This project highlighted the importance of mobilising local authorities and relevant partners from the private sector for effective and sustainable recycling and redistribution. [Read more about the model](#)

“CIRCULAR ECONOMY SHOWCASE”

The Blue Loop Expo offered a space for FLAGs and local entrepreneurs to showcase products made from fisheries, aquaculture and marine by-products and “waste”. Items on display included skateboards, bags and 3D printing filament incorporating old fishing nets; exfoliant and string made from mussel barb; filtrating paving stones made from scallop shells; cups made from fish scales; and tiles and jewellery from mussel shells. [See more exhibits](#)



Skateboard made of fishing nets that is sold by Bureo.



100% biodegradable water bottle made from sugar cane waste



Balenup makes and sells sustainable art from recycled and upcycled materials



Notox use eco-design to make squid-shaped surfboards from 75% recyclable materials