Overview of DiscardLess:

Aims & Objectives

Consider project outputs *(re DAG agenda)*

Science-Policy conference for closing of H2020 Discardless project.

DiscardLess

Strategies for the gradual elimination of discards in European fisheries

- European fishermen should operate without discards, aiming to;
  - the gradual elimination of discards of commercially exploited stocks
  - encompasses a subset of the catch only, whereby many species will still be legally discarded.
- This policy will thus lead to **less** discarding rather than **discard**-free fisheries.

- **DiscardLess** will provide the **knowledge, tools,** and **methods** required for the successful reduction of discards in European fisheries.
- DiscardLess will work through collaborations between scientists, stakeholders and policy makers to support and promote practical, achievable, acceptable and cost-effective discards mitigation strategies, and to make the EU landing obligation functional, credible and legitimate.

The **collaborative approach** of DiscardLess will ensure that the developed tools, information and strategies will provide relevant, acceptable and cost effective means with a wide uptake in society which will result in the achievement of the goals of the landing obligation.

DiscardLess

Strategies for the gradual elimination of discards in European fisheries

What is DiscardLess? | Where do we work? | Contact | Scientific Results | Media | Tools

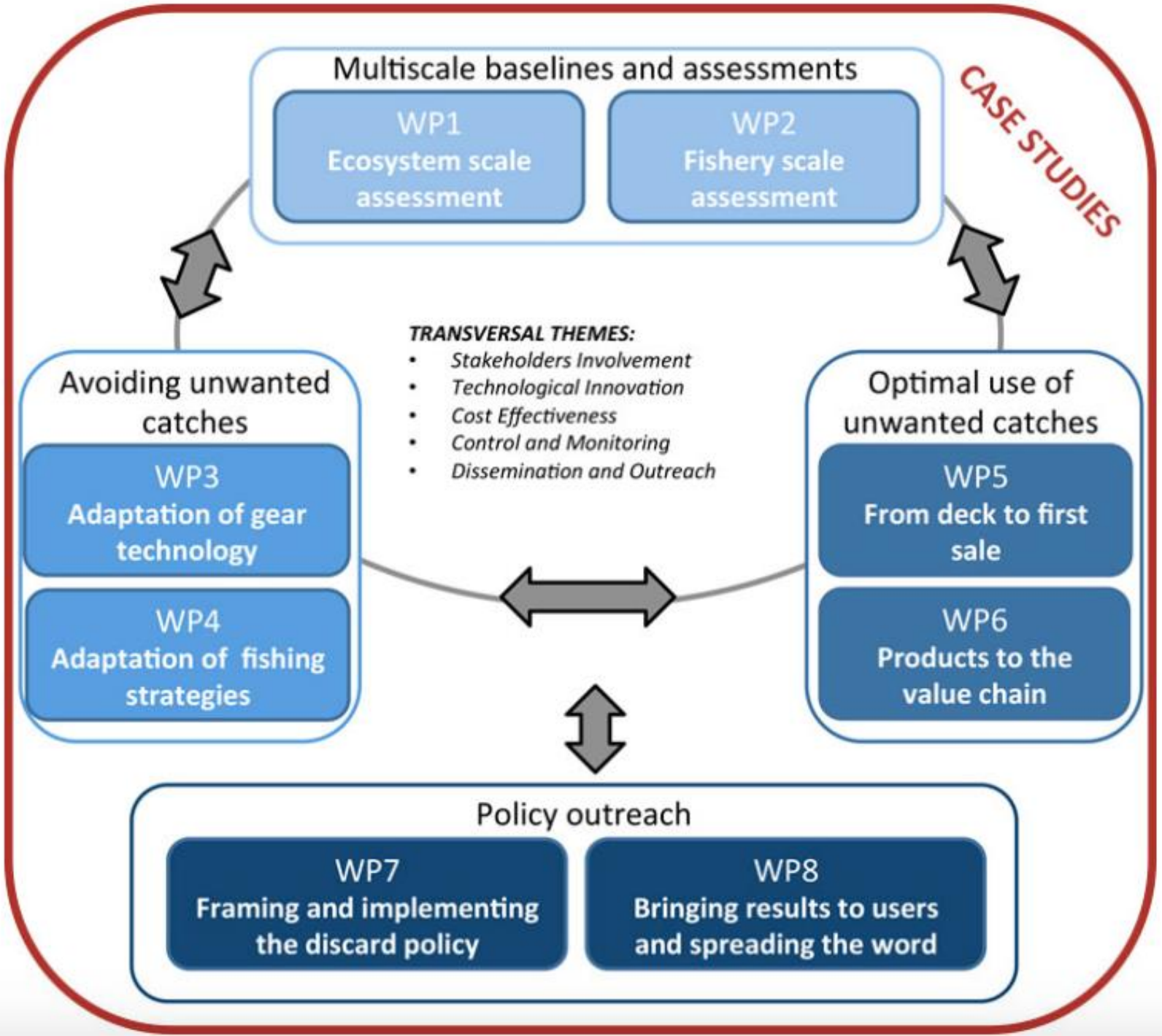
DiscardLess Overview

DiscardLess Overview

DiscardLess – Working for less discards

- **Title:** Strategies for the gradual elimination of discards in European fisheries
- **Acronym:** DiscardLess
- **Programme:** Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020)
- **Instrument**: Collaborative project
- **Total Budget:** €5,551,000.00
- **EC Contribution:** €5,000,000.00
- **Duration:** March 2015 – February 2019 (48 months)
- **Coordinator:** National Institute of Aquatic Resources, Technical University of Denmark (DTU Aqua), Denmark
- **Consortium:** 31 partners from 12 countries

http://www.discardless.eu/discardless-overview

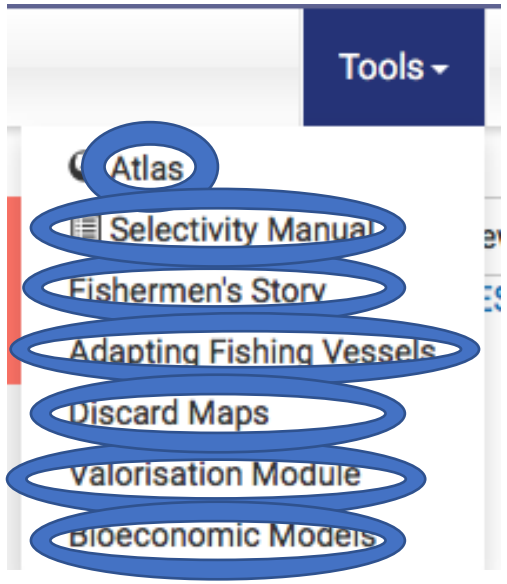


WP3: review best programmes to assess the most successful and identify best practices. Provide fishers with economic model to assess both selective and economic impact of using more selective gears.

WP4: formalize fishers' knowledge into the understanding and modelling of where and when to fish, making best use of most recent tools and models for fine-scale mapping of behavior to understand changes created by the landing obligation.

WP8: aims to be an effective vector of knowledge transfer with the DMS toolbox being an important product.

DMS Toolbox



Here you get an overview of landings or discards described by available data through indicators & knowledge of DiscardLess partners.

Will consider the Selectivity Manual in more detail later

Skippers, owner/skippers & shore based managers took part in semi-structured interviews with resultant stories provided by report and video

Based on case studies in Iceland, North Sea and Bay of Biscay;

- Report on onboard handling solutions
- Cost benefit tool to estimate investment and operational costs & likely economic returns

Through range of modelling and mapping tools, display how species are distributed in space and time. *(in some cases – outputs packaged in web-based applications)*

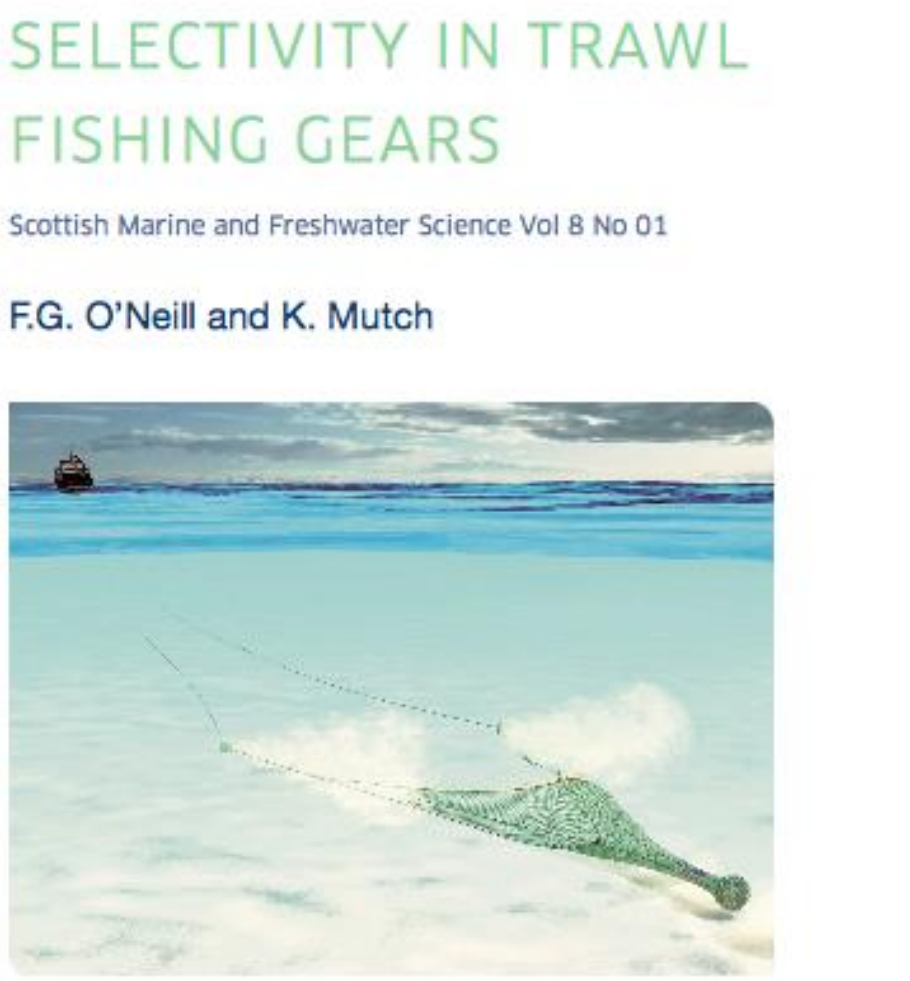
WP6: deals with how unavoidable, unwanted catches (UUC) can be utilized once they have been landed.

Bioeconomic model projections of potential economic outcomes of the LO for selected case study fisheries

Selectivity Manual (& Fact Sheets)

The intention is to make fishermen, net makers and fisheries managers more aware of possible modifications that are achievable to suit their selectivity requirements.

- Describes the different stages of capture
- Highlights how different parts of gear may influence selection
- Identify possible changes which can alter the selectivity of the gear



Series of factsheets developed to highlight potential effects of gear modification that have been trialed throughout the project area.

Area	Factsheet	Target species	Unwanted species	Gear type	Provider
Adriatic Sea	 estimating size selection of Norway lobster	Norway lobster (Nephrops norvegicus)		demersal	CROATIA
Balearic Islands	 diamond and square mesh codends	striped red mullet, hake, Norway lobster and red shrimp		demersal	IEO
Celtic Sea	 115mm and 155mm square mesh panels in the body of a trawl	Cod, haddock and other demersal species	Undersized haddock	demersal (twin rig)	Cefas
North Sea	 moving a square mesh panel (smp) closer to the codline	Haddock and whiting.		twin trawl	MSS
North Sea	 removing codend lifting bags	Haddock and whiting		single trawl	MSS
North Sea	 using a Flip Flap netting grid	Nephrops and mixed whitefish and flatfish species		twin trawl	MSS

100mm square mesh panels in the codend to improve size selection and reduce undersized haddock in ICES Area VII

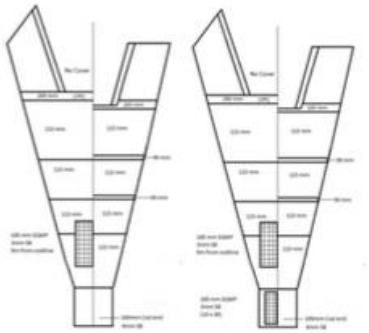
TARGET SPECIES

Cod, haddock and other demersal species

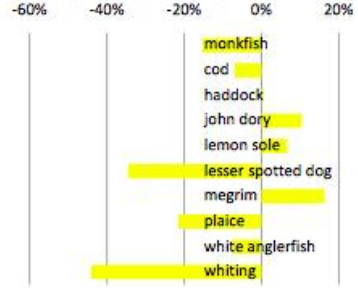
AREA, VESSEL

7 hauls were carried out in the Celtic Sea on board MFV Crystal Sea during August 2014 using the twin rig method

Standard trawl | Experimental Trawl



Percentage difference in weight of landed catches



GEAR MODIFICATION

The standard gear was a coverless trawl with a 100mm codend and a 100mm SMP @ 9 – 12m.
The modified gear had an additional 100mm SMP in the codend

RESULTS

The modified gear released almost all small fish and there were large reductions in unmarketable haddock

There were some losses of marketable whiting, monkfish and plaice but these were mainly the smaller size classes.

There were some gains of megrim, John Dory and lemon sole

FURTHER INFORMATION

Cefas.co.uk / Contact: Stephen.mangi@cefas.co.uk; Thomas.catchpole@cefas.co.uk

Centre for Environment Fisheries & Aquaculture Science

Cefas

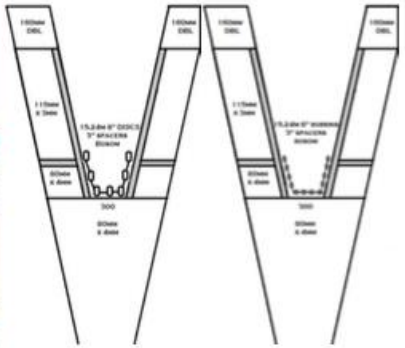
DiscardLess www.discardless.eu/selectivity_manual

anging the groundgear he capture of small flatfish in a *Nephrops* trawl

nd and flatfish

arison hauls lorth Sea on (671 HP)

ce of a low l with 200mm 15m centre is compared 00mm centre section.



bobbins	
eight (kg)	% diff
148	2.9
257	-1.4
96	-11
132	-24
50	-16
81	-54

RESULTS

Using the spherical bobbins reduced the catches of flatfish species.

This was length dependent and smaller flatfish were less likely to be retained than larger ones.

For plaice and lemon sole there were greater catches of the larger individuals.

FURTHER INFORMATION

Matt Kinghorn
mathew.kinghorn@gov.scot

The Scottish Government

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netting grid to reduce the addock and whiting in a *hrops* trawl

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on.

Species	Fish outlet hole size	Catch (kg)		% reduction in catch
		Control	Test	Test/Control
Cod	Small	2845	1839	35
	Large	2498	939	62
Haddock	Small	895	367	59
	Large	595	155	74
Whiting	Small	385	227	41
	Large	225	76	66

RESULTS

The FCAP with the smaller fish outlet holes reduced the capture of cod, haddock and whiting by 35, 59 and 41% respectively

The FCAP with the larger fish outlet holes reduced the capture of cod, haddock and whiting by 62, 74 and 66% respectively.

URTHER INFORMATION

noch, R.J. et al., 2012. Catch comparison trials with e Faithlie Cod Avoidance Panel (FCAP). ottish Marine and Freshwater Science Vol 3 No 8.

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s www.discardless.eu/selectivity_manual

an inclined netting panel parate fish from *Nephrops*

nd and flatfish

arison hauls lorth Sea on (21m, 400kW)

fitted into the ets of a twin rig

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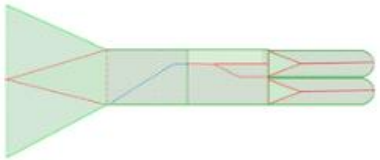

in upper cod-	
300	*400*
79	47
-	97
77	94
-	45
-	38
49	22
12	2

RESULTS

- a large proportion of the fish catch can be separated from the target species, *Nephrops*.
- Nearly all haddock and whiting went over the panel regardless of the mesh size and into the upper codend
- larger quantities of cod, anglerfish, plaice and other flats go through the inclined panel as the mesh size increases and into the lower codend
- the quality of the fish and *Nephrops* in the separated codends is better

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ardLess www.discardless.eu/selectivity_manual

Landing Obligation 2019:

What have we learned, what are the next steps?

Session I: Landing Obligation: where are we now, what has changed, and what are the main barriers? (13:00-15:10)

Session lead: Mike Fitzpatrick (Ireland) and Kåre Nolde Nielsen (Norway)

12.30	Registration
13:00	Opening and welcome *Anders Overgaard Bjarklev, President of DTU* *Clara Ulrich, DiscardLess coordinator*
13:20	FAO assessment of global fisheries discards *Amparo PerezRoda (FAO)*
13.30	Looking back: stories of EU regions between 2015 and 2018 *Mike Fitzpatrick (Ireland), Kåre Nolde Nielsen (Norway)*
13:40	Can a discard ban be good for fishers? Modelling expected economic impacts *Ayoe Hoff (Denmark)*
13.50	Legitimate or not legitimate policy? the opinion of EU fishers *Katia Frangoudes (France)*
14:00	TAC management and choke effects in Ireland *Julia Calderwood (Ireland)*
14:10	Table Discussion

Session II: Selectivity and Avoidance (15.40-18.00)

Session lead: Dave Reid (Ireland) and Barry O'Neill (Denmark)

15:40	Start of session
15:40	The Discard Mitigation Toolbox: DiscardLess results online *Jérôme Guitton (France)*
15.50	Review of déjà vu selective gears *Barry O' Neill (Denmark)*
16:00	Bright ideas – shining a light on selectivity *Dan Watson (UK)*
16:10	Overcoming economic barriers to selective gear uptake *Ana Witteveen (UK)*
16:20	Questions on selectivity talks
16:25	Try it by yourself: Challenges experiments to avoid discards *Dave Reid (Ireland)*
16:35	Maps and Apps *Toni Quetglas (Spain)*
16.45	Is it possible to avoid deep sea sharks in the Azores? *Laurence Fauconnet (Portugal)*
16:55	Next steps (Panel debate / discussion)

Session III: What to do with unavoidable unwanted catches? (9.30-11:30)

Session lead: Erling P. Larsen (Denmark) and Jónas R. Viðarsson (Iceland)

09:30	Start of session. Coffee at disposal from 09:00
09:30	How do Iceland manage to use 85% of a cod? *Jónas R. Viðarsson (Iceland)*
09:40	Where to invest best? Catalogue of uses and prioritisation *Bruno Iñarra (Spain)*
09:50	We are ready for discards… if they come *Peter Nymann (Denmark)*
10:00	Small landings in small harbours *George Triantaphyllidis (Greece)*
10:10	Transforming unwanted catches in responsible animal feed solution *Geert Bruggeman (Belgium)*
10:20	An automatic system for by-catches quantification and classification *Bruno Iñarra (Spain)*
10:30	Handling unwanted catches onboard *Birgir Sævarsson (Iceland)*
10:40	Next steps (Panel debate / discussion)

Session IV: Ecological effects of discarding (12:30-13:45)

Session lead: Marie Savina-Rolland (France) and Telmo Morato (Portugal)

12:30	Start of session
12:30	Discard data, MSY and stock assessment *Lisa Borges (Portugal)*
12:40	Measuring and improving the survival of discards *Tom Catchpole (UK)*
12:50	But who eat them? A story of hagfish and crabs *Dave Reid (Ireland)*
13:00	Can a discard ban have an effect on the food-web? *Marie Savina-Rolland (France)*
13:15	The dark side of the selectivity paradigm: Fisheries-Induced Evolution *Richard Law (UK)*
13:25	Next steps (Discussion)

Session V: Future perspectives for the Landing Obligation (13:45-15:30)

Session lead: Lisa Borges (Portugal) and Clara Ulrich (Denmark)

13:45	Start of session
13:45	CAM-pliance: Keeping an eye on discards with Electronic Monitoring *Kristian Schreiber Plet-Hansen (Denmark)*
13:55	Visit and speech by *Eva Kjer Hansen, Danish Minister for Fisheries and Equal Opportunities and Minister for Nordic Cooperation*
14:10	What DNA can do for you! Genetic methods and the Landing Obligation *Brian Klitgaard Hansen (Denmark)*
14:20	Yes Chile can! Discards reduction and monitoring in mixed-fisheries *Luis Cocas (Chile)*
14:30	Next steps for the Landing Obligation and looking towards the next CFP reform (Discussion)

Conference closing comments

Many pointed out project finishing to soon.

ICES stated;

- they were more confused based on what had been presented
- No shared views within groups
- trying to reconcile the unreconcilable
- However, so much energy & goodwill within these communities, things will move

WWF commented that the focus should be to look to avoid.

NGO's remain concerned about;

- Limited uptake of initiatives – 8% of available money has been accessed
- Lack of direction
- Use of "uplift" increasing mortality
- Look to compulsory REM

Reflection on Project aims and objectives

- ***DiscardLess*** *will provide the* ***knowledge, tools,*** *and* ***methods*** *required for the successful reduction of discards in European fisheries.*
- *DiscardLess will work through collaborations between scientists, stakeholders and policy makers to support and promote practical, achievable, acceptable and cost-effective discards mitigation strategies, and to make the EU landing obligation functional, credible and legitimate.*

The ***collaborative approach*** *of DiscardLess will ensure that the developed tools, information and strategies will provide relevant, acceptable and cost effective means with a wide uptake in society which will result in the achievement of the goals of the landing obligation.*

I would suggest that the project has provided the knowledge, tools and methods required for the successful reduction of discards.

It is now up to others to utilize the knowledge, tools and methods as a wide uptake will help achieve the goals of the landing obligation