

# *DiscardLess*

- Strategies for the gradual elimination of discards in European fisheries



# From technical research to applications in the world of fisheries

*DiscardLess* will help provide the knowledge, tools and technologies as well as the involvement of the stakeholders to achieve the gradual elimination of discarding. These will be integrated into Discard Mitigation Strategies (DMS) proposing cost-effective solutions at all stages of the seafood supply chain. The first focus is on preventing the unwanted catches from ever being caught. This will promote changes in gear using existing and innovative selectivity technology, and changes in fishing tactics based on fishers' and scientists' knowledge. The second focus is on making best use of the unavoidable unwanted catch. Technical and marketing innovations will be detailed from the deck, through the supply chain to the final market, including monitoring, traceability and valorization components.

*DiscardLess* will evaluate the impacts of discarding on the marine environment, on the economy, and across the wider society. The project will also monitor the actual developments before, during and after the implementation of the landing obligation (LO), allowing comparison between intentions and outcomes.

Eliminating discards is as much a societal challenge as a fishery management one, so *DiscardLess* will also evaluate stakeholders' perception of discards.

*DiscardLess* will describe the changes in management and the associated governance structures needed to cement the process. Approaches to manage discards will be proposed in a range of case study fisheries across Europe, encompassing differences in specific discarding issues. All these innovations will be combined in integrated Internet based interactive programs (DMS toolbox) that will help fishers evaluate the present and future situation and make a more qualified decision of how to adjust to the new regime. The outcomes of the project will be disseminated and knowledge transfer across Europe will be maximized through an educational environment, teaching the next generation, as well as through more conventional routes.

# Balancing existing knowledge with innovation

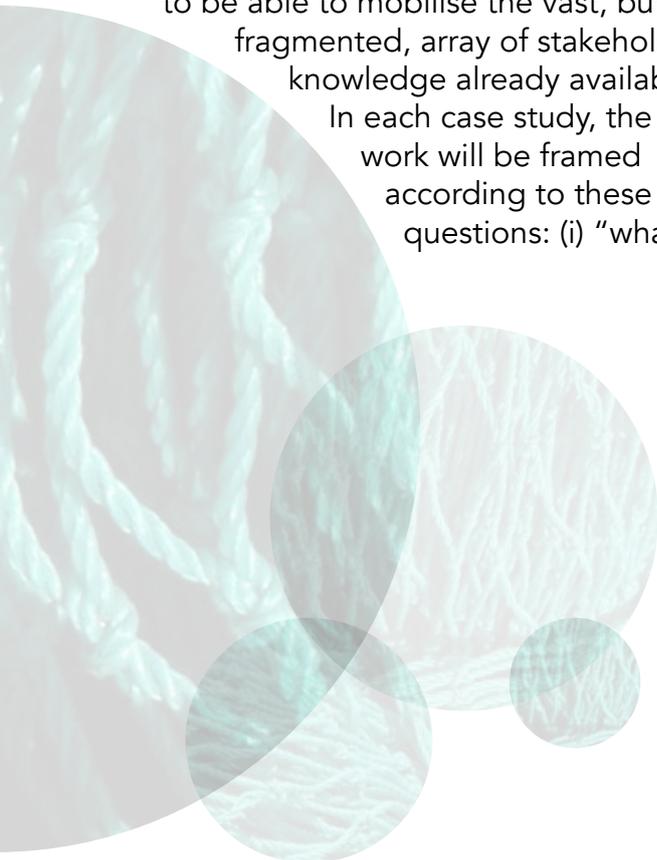
The *DiscardLess* partners have extensive experience and knowledge about discards issues, and recognise the overall complexity of the problem. However, the members consider that a range of relatively simple actions used in conjunction can help mitigate discarding, and can help motivate stakeholders towards reducing discards without jeopardising the ecological, social and economic sustainability of the fisheries.

The basic design will be to systematically combine technical and scientific knowledge with users' knowledge using participatory approaches at all scales. The ambition is to be able to mobilise the vast, but fragmented, array of stakeholders' knowledge already available.

In each case study, the work will be framed according to these key questions: (i) "what do

we scientists and fishers know about the links between fishing and discarding?" (ii) "what do we not know?" and (iii) "what do we want to attempt together?"

We seek simple but comprehensive answers to these complex questions.



# The *DiscardLess* research project

*DiscardLess* is designed to take on the simultaneous challenges and opportunities of studying and implementing a radical new management approach. Placing *DiscardLess* in its policy context will bring it to the forefront for documenting the history of a fundamental paradigm shift in European fisheries management. Significant progress beyond the state-of-the-art will be achieved in all WPs, while it is recognized that the science base on discarding will continue to expand rapidly.

**WP1** will advance our understanding of the impact of the landing obligation on key fish stocks and marine ecosystems. The existing knowledge on current discarding practices and available data will be enhanced, and the potential outcomes and trade-offs of alternative discarding scenarios will be evaluated using state-of-the-art ecosystem models.

**WP2** will play a central role in filling knowledge gaps and monitoring actual changes in the economic profitability and in the attitudes and perceptions of stakeholders. Since individual incentives to discard may often not coincide with the overarching management objectives, impact assessments will be conducted both at the socio-economic and business economic levels.

**WP3** will mobilise knowledge of fishers, netmakers and scientists to increase awareness of both existing and emerging technical solutions to reduce discards. The generic properties of a range of selective devices will be detailed and disseminated, and their cost-effectiveness will be evaluated. Two types of innovative gear technologies will be further developed and promoted, including real-time video imaging of fish entering the gear and underwater LED lighting enhancing escapement of fish.

**WP4** will formalise fishers' knowledge into the understanding of where and when to fish, and will make best use of the most recent tools and models for the fine-scale mapping of individual fishing choices to fully understand the changes in fishing patterns created by the landing obligation.

**WP5** will identify the most relevant options for on-board handling and storing, taking into account different vessel types and sizes, gears, species, geographical areas. Cost-effective solutions for on-board handling including sorting, bleeding, cleaning, chilling, preprocessing, storing will be suggested, using 3D drawings of vessel decks and storage rooms. The technology for the monitoring, control and traceability of catches will also be enhanced with new genetic tools operational from the vessel deck to the supply chain.

**WP6** will investigate the logistics and processing requirements for unloading, classifying, treating, storing and using unwanted catches at port. An important innovative tool in *DiscardLess* will be the development of an automatic system for the quantification and classification of catches landed in bulk, including bycatch.

**WP7** will provide and integrate knowledge relevant for successful discard governance in Europe. Documentary and interview based research on the background and objectives of the landing obligation will establish an improved basis for progressing towards these objectives.

**WP8** aims to be an effective vector of knowledge transfer, allowing maximal diffusion of scientific results into concrete information that can be bought in by the fishing and seafood industries. The DMS toolbox and our other media products including an educational film will provide a concrete and lively platform for gathering and visualising the knowledge to be exchanged.

**WP1  
+  
WP2**      **WP3  
+  
WP4**      **WP5  
+  
WP6**      **WP7  
+  
WP8**

Month 6  
Best knowledge  
and  
criteria to baseline  
scenarios

Month 12  
First guidance on good  
practice in discard  
policy Implementation

Month 24  
Impact of management  
scenarios and knowledge on  
LO implementation in  
the Mediterranean

Month 36  
Mitigation Strategies  
synthesised in the DMS

Month 42  
Impact assessments  
of the LO with DMS  
complete

Month 48  
Final symposium

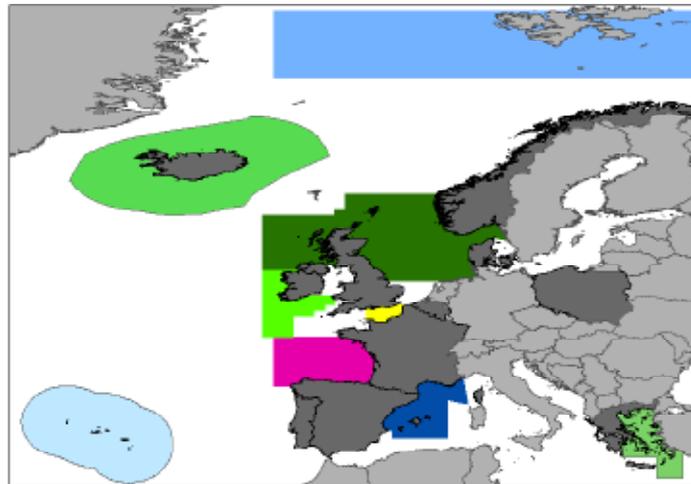
# The *DiscardLess* Consortium

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	Ifremer	IFREMER (WP1 Coordinator), FR
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	University of Bergen	University of Bergen, NO
	Strathclyde University Glasgow	Strathclyde University, UK
	IFRO-University of Copenhagen	IFRO-University of Copenhagen, (WP2 Coordinator), DK
	Université de Bretagne Occidentale	Université de Bretagne Occidentale, FR
	SEAFISH	Seafish Industry Authority, UK
	Marine Scotland Science	Marine Scotland Science, (WP3 Coordinator), UK
	Food and Agriculture Organization of the United Nations	Food and Agriculture Organization of the United Nations
	SIMRAD	Simrad Spain SLU, ES
	HAMPIÐJAN	Hampiðjan hf, IS
	SafetyNet Technologies LTD	SafetyNet Technologies LTD, UK
	Marine Institute	Marine Institute (WP4 Coordinator), IE
	NAYS	NAYS, GR
	Pôle AQUIMER	Pôle AQUIMER, FR
	IMAR-University of Azores	IMAR-University of Azores, PT
	Cefas	CEFAS, UK
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	MAREL	MAREL, IS
	ShipCon	ShipCon, PL
	TRACE Wildlife Forensics Network Ltd	TRACE Wildlife Forensics Network Ltd, UK
	AZTI-Tecnalia	AZTI-Tecnalia (WP6 Coordinator), ES
	BARNA	BARNA, ES
	Nutrition Sciences N.V.	Nutrition Sciences N.V., BE
	University of Tromsø	University of Tromsø (WP7 Coordinator), NO
	Marine Natural Resources Governance	Marine Natural Resources Governance, IE
	FishFix	FishFix, BE
	Agrocampus Ouest	Agrocampus Ouest, FR
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# Project Coordination

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Main focus areas and partners in Europe

