



# MARKET OUTLETS FOR UNWANTED CATCHES

## Executive Summary



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# EUM OFA

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# 1 Study objectives and methodological approach

## 1.1 Objectives

The overall objectives of the study are to assess the existing and potential market outlets for unwanted catches under the landing obligation (LO), the perspectives and possible evolutions resulting from the LO, and what role producer organisations (POs) play and can play in that framework.

## 1.2 Methodological approach

The starting point of the study was a desktop analysis of selected Horizon2020-projects<sup>1</sup> related to the LO. The desktop analysis also focused on a broader scouting for available data and information regarding the landings of unwanted catches and any existing and potential market outlets.

Based on the preliminary results of the desktop analysis, three case studies were selected in cooperation with DG MARE for a more in-depth analysis. The in-depth analysis of each case study is based on interviews with relevant POs and possible other operators and/or stakeholders as well as analyses of any relevant data sources that might emerge from the interviews. In relation to the three case studies, analyses were conducted on the Aggregated Catch Data Reports (ACDR) received from DG MARE referring to the period January 2018 to May 2019.

The study focused on demersal and mixed fisheries in EU countries and areas where landings are spread on multiple ports all over the coast. Pelagic fisheries in the northern EU countries were not object of the study because their catches are largely used for industrial purposes (i.e. fishmeal and fish oil) and to a limited degree affected by the LO as the catches (and bycatch) already have existing market channels. This summary reports the key findings from the desktop analysis, the analyses of the ACDR data and the three case studies without revealing details from the data sources or the interviews due to confidentiality restraints.

## 1.3 Definitions

There are multiple uses and understandings of the expressions “discards”, “bycatch” and “unwanted catches”. For this study, the following definitions apply:

- **Bycatch:** catch of species other than the targeted species;
- **Discards:** catch, either targeted species or bycatch, released back into the sea;
- **Unwanted catches:** catch of species covered by the LO, either targeted species or bycatch, under the Minimum Conservation Reference Sizes (MCRS).

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<sup>1</sup> DiscardLess (<http://www.discardless.eu/>) and MINOUW (<http://minouw-project.eu/>).

## 2 Results of the desktop analysis

### 2.1 Brief overview of the landing obligation

The LO was introduced in the reform of the Common Fishery Policy of 2013<sup>2</sup> (CFP) with the aim of reducing bycatch and gradually eliminate discards. It was highlighted that EU Member States should do their utmost to reduce bycatch, *inter alia* by improving selective fishing techniques.

In short, the LO says that “[a]ll catches of species which are subject to catch limits and, in the Mediterranean, also catches of species which are subject to minimum sizes [...], shall be brought and retained on board the fishing vessels, recorded, landed and counted against the quotas where applicable, except when used as live bait”<sup>3</sup>. Furthermore, “the use of catches of species below the minimum conservation reference size shall be restricted to purposes other than direct human consumption, including fish meal, fish oil, pet food, food additives, pharmaceuticals and cosmetics”<sup>4</sup>.

To make the LO workable, and to cater for bycatch that are unavoidable even when all measures are applied, the CFP introduces several possible exemptions from the LO. The most important ones are the “de minimis exemptions” (article 15(5)(c)) and “high survivability exemptions” (article 15(4)(b)). Catches under the exemptions shall be fully recorded but they shall not be counted against quotas.

The LO was gradually introduced on a fishery-by-fishery basis from January 2015 until its complete implementation January 2019.

For the implementation of the LO, one of the objectives of fishery producer organisations, regulated in article 7(1)(b) of the common organisation of the markets in fishery and aquaculture products (CMO)<sup>5</sup>, is “avoiding and reducing as far as possible unwanted catches of commercial stocks and, where necessary, making the best use of such catches, **without creating a market for those that are below the minimum conservation reference size**, in accordance with Article 15 of Regulation (EU) No 1380/2013”.

### 2.2 Possible utilisation of unwanted catches

There is a wide range of possible usages of unwanted catches. The DiscardLess project identified 27 different options and have created fact sheets for each of them<sup>6</sup>. The feasibility of each utilisation option is evaluated by traffic lights (green, orange, red) on six factors: process yield, technology maturity, value of product, potential market, production cost and competing companies. 25 of the 27 utilisation options are for non-human consumption, of which 17 are reductions to different biomolecules, 5 are different animal feed utilisations and 3 are other options (biogas, compost/fertiliser and leather).

9 of the 27 are applicable for all species of fish and/or shellfish, while most of them are applicable to a certain subset of species or certain parts of the fish or shellfish. Many of the utilisation options score low on technology readiness, value of product and/or production costs.

Through case studies in Denmark, the Bay of Biscay and Iceland, DiscardLess identified two utilisation options as most viable for unwanted catches, and the same options have been confirmed as the only relevant alternatives based on the interviews carried out within the present study:

- Fishmeal and fish oil
- Animal feed
  - Feed for the fur industry
  - Pet food

<sup>2</sup> EU regulation No. 1380/2013.

<sup>3</sup> Paragraph 1 of article 15 of the CFP.

<sup>4</sup> Paragraph 11 of article 15 of the CFP.

<sup>5</sup> EU regulation No. 1379/2013 on the common organisation of the markets in fishery and aquaculture products.

<sup>6</sup> The factsheets are available on DiscardLess' webpage: [http://www.discardless.eu/valorisation\\_module](http://www.discardless.eu/valorisation_module).

Fishmeal and fish oil are straight forward options for the utilisation of unwanted catches, as normally they can be obtained from any kind of fish or shellfish (if it has the required quality for such utilization). This is economically feasible when there is a production facility nearby the landing port, but the feasibility decline (or vanish) if there is the need of logistics and infrastructure for long distance transport or investments in new production facilities.

Fishmeal and fish oil producers see unwanted catches as an obvious supplement to the current resources and, depending on the species, are willing to set the price at roughly the current level of industrial fish (on average between 170,00 and 280,00 EUR/tonne in Denmark over the period 2014-2018)<sup>7</sup>.

Although the fur industry in general is under pressure and experiencing a strong downward trend<sup>8</sup>, Europe is still the world leading region when it comes to mink fur production<sup>9</sup>, and fish constitutes about 40% of the mink feed. The fur industry is thereby a large buyer of industrial fish and fish offal and a potential buyer of unwanted catches. There are some minimum standards related to quality and freshness of the fish, therefore, mink feed producers are willing to pay a slightly higher price compared to producers of fish meal and fish oil.

Producers of dry pet food use fishmeal and fish oil as marine ingredients. On the other hand, some pet food brands want to differentiate their products by having a higher focus on the usage of certain species or by guaranteeing a higher quality. For these producers, unwanted catches could be of interest given the right price and quality and that effective logistics arrangements are in place. In the DiscardLess-project, *“[e]ngagement with the different pet food producers has not resulted in a cooperation for the usage of UUC<sup>10</sup> catches. This is primarily due to the lack in amount of landed UUC, way below the threshold level for a stable supply in the specific industry”<sup>11</sup>.*

The main objective of the LO is to avoid and reduce as far as possible unwanted catches of commercial stocks but based on the findings in this study, the feasibility of the utilisation options for the **unavoidable unwanted catches**, both practically and economically, depends *inter alia* on:

- Relatively consistent landings of unwanted catches over time, both in terms of which species are landed and the volumes;
- The existence of the relevant production facilities (i.e. to produce silage, fishmeal and fish oil, etc.);
- The geographical closeness between the relevant production facilities and the landing port;
- Infrastructure and logistics (especially when the relevant production facilities and landing ports are far from each other).

## 2.3 Other related EU-projects

Over the last few years, governments, scientific institutions, industry, fishers and other stakeholders have worked to develop trials and solutions. Several projects have assessed different aspects of the LO, from reducing bycatch through improved selectivity, science and technology to survivability rates of discards and the utilisation of the unavoidable bycatch.

Several projects are co-funded or in other ways supported by the EU. A comprehensive list with links to these projects is available on the “Fisheries” section of the European Commissions webpages at the link [https://ec.europa.eu/fisheries/cfp/fishing\\_rules/landing-obligation-in-practice\\_en](https://ec.europa.eu/fisheries/cfp/fishing_rules/landing-obligation-in-practice_en).

<sup>7</sup> Publicly available data from Fiskeristyrelsen at [https://dwp.fiskeristyrelsen.dk/landingsrapport/landingsrapport\\_front\\_matter](https://dwp.fiskeristyrelsen.dk/landingsrapport/landingsrapport_front_matter) (Danish only)

<sup>8</sup> Several countries are in the process of liquidating their fur production and in the Netherlands, mink farming is banned from January 2024. Animal feed for fur production might therefore not be a market outlet for unwanted catches in the future.

<sup>9</sup> Hansen, Henning Otte (2017), *European mink industry - socio-economic impact assessment*, [<https://www.altinget.dk/misc/Fur-Invasive-19-09.pdf>]

<sup>10</sup> DiscardLess defines UUC as “unavoidable, unwanted catches” which includes both fish above and below MCRS.

<sup>11</sup> DiscardLess – D6.5. Validation of final solution for best use of unavoidable unwanted catches, chapter 3.5.3.

## 3 Summary of findings

### 3.1 Landings of unwanted catches - data availability and quality

Under the LO, all catches of species which are subject to catch limits, and in the Mediterranean, species subject to minimum sizes, shall be brought and retained on board the fishing vessels, recorded, landed and counted against the quotas where applicable, except when used as live bait. As landings of species below MCRS cannot be used for direct human consumption, such landings should be stored, handled and recorded separately.

However, large amounts of discards are still permitted thanks to the implementation of a vast number of exemptions from the LO.

Bycatch is inevitable in fisheries, especially in mixed fisheries. Due to different industry structures and the registration systems, it is difficult to determine the level of bycatch, both above and below MCRS. While official catch and landing data are based on reporting from fishing vessels, at the landing sites or sales notes from first sale, efforts on estimating bycatch and discards are based on observers on some individual fishing trips.

Bycatch of species that are not covered by the LO (i.e. species not subject to catch limits, or minimum sizes in the Mediterranean) and that have low or no market value, are normally discarded. However, based on the desktop analysis and case studies, all landings of catches above MCRS, both of targeted species and bycatch, are sold, albeit sometimes at low prices. As a result, bycatch above MCRS are not possible to identify in the data.

The available data on landings of unwanted catches is incomplete and incomparable between EU Member States. Different national sources can have deviating definitions of the landing indicator “not for human consumption”, where some countries report all catches destined for their fishmeal and fish oil industry while others only report catches below MCRS. The most comprehensive and comparable dataset is the Aggregated Catch Data Reports (ACDR)<sup>12</sup>, where the indicator “sold for non-human consumption” is defined as “landings below MCRS”. However, in the ACDR data, eight EU Member States report zero landings of unwanted catches. Even with the exemptions, and the continuous efforts in selective fishing to avoid unwanted catches, this is highly unlikely.

The reported landings of unwanted catches are low relative to the overall landings, below 0,1% in total and below 1% in each EU Member State. This is in line with statements from the interviews with POs and other stakeholders. However, there are indications of illegal discards and underreporting. The fact that only eight EU Member States report discards in the ACDR data could point towards underreporting. If no landings of unwanted catches were reported due to exemptions and legal discards, one would expect higher volumes of reported discards.

However, it is not possible to conclude whether the low reported volumes of landings of unwanted catches is due to underreporting, a high number of exemptions or a successful transition to more selective fishing. Most likely it is a combination of all factors that varies between the different fisheries and EU Member States.

### 3.2 Effects of the landing obligation on the EU market

As reported above, the LO was introduced with the aim of reducing bycatch and gradually eliminate discards and it was highlighted that Member States should do their utmost to reduce bycatch, *inter alia* by improving selective fishing techniques. According to the interviews for this study, the primary focus amongst POs have been to promote and further develop selective fisheries, i.e. fishing area management (temporary closure of fishing grounds) and development and implementation of selective fishing gear.

<sup>12</sup> “Aggregated Catch Data Reporting” as required in Article 33 of Council Regulation (EC) No 1224/2009.

Although there are several possible utilisation options of unwanted catches (ref. chapter 2.2 above), the desktop analysis and case studies identify fishmeal, fish oil and animal feed as the only economically and practically viable market outlets at present. The investment costs as well as the cost of handling the unwanted catches (sorting/cooling, etc.) in order to conserve the proper quality, both on-board the fishing vessels and on landing ports, are relatively high. In addition, in those EU Member States without a fishmeal and fish oil industry or with many small landing sites scattered along the coast, the costs of handling and transportation to the relevant market outlets, or alternatively ensure the proper destruction of the unwanted catches, are often high.

Compared to the average price of the catches destined to human consumption, the price achieved for unwanted catches is very low. The combination of low prices and high costs can reduce the fishers' incentives to land and/or report these catches.

From the POs point of view, it has not been economically feasible to market landings of unwanted catches, nor develop or facilitate new market outlets, because of their low and varying volumes. POs state that since the introduction of the LO, they have increased their focus on reporting, urging their fishers to register all catches in accordance with the regulations. In their view, extensive registration and reporting will lead to better documentation for further research activities and policy developments. According to one PO, their efforts have had a positive effect and registration and reporting amongst fishers have gradually increased over the past years. It is, however, also stated that these sorts of changes in behaviour amongst the large number of individual fishers and business owners take time.

According to one PO, a negative effect of the LO has been a reduction in quota swaps between EU Member States in fear of creating choke species<sup>13</sup>.

### 3.3 Prospects

One of the primary objectives should be to encourage EU Member States, POs and fishers to fully register their catches and to ensure a coherent registration and reporting regime across the different countries, in order to properly analyse the effects of the LO and assess and evaluate possible changes to the regulations.

One of the main objectives of the CFP is to “*gradually eliminate discards [...] by avoiding and reducing, as far as possible, unwanted catches, and by gradually ensuring that catches are landed*”<sup>14</sup>. Furthermore, the CFP shall “*where necessary, make the best use of unwanted catches, without creating market for such of those catches that are below the minimum conservation reference size*”<sup>15</sup>. In the cases that selectivity cannot be reached to eliminate all unwanted catches, fishers need an outlet for these **unavoidable unwanted catches** in order to have incentives to report and land their catches in accordance with the LO.

The price achieved for unwanted catches is often lower than the costs for the fishers. A decrease in the costs would most likely not make it profitable (hence creating market), but perhaps more tolerable. Therefore, it could facilitate the implementation of the LO.

Through this study, a gap between supply and demand has emerged. There are market operators with existing infrastructures for collecting fish offal and other raw material for fishmeal and fish oil production. This infrastructure can be extended to also include the collection of unwanted catches, but to achieve this, there must be a closer cooperation, both within the fisheries sector and between the fisheries sector and the potential buyers, to facilitate logistics to collect and store the unwanted catches in the different ports.

A closer collaboration could potentially reduce the fishers' costs of getting rid of the unwanted catches (both the costs of investments and logistics and transport), and perhaps enough, to create sufficient incentives to fully comply with the LO by registering, reporting and landing their unwanted catches.

<sup>13</sup> A choke problem arises when the quota for species “A” is low or exhausted and leads to a stop in the fishery of species “B” since bycatch of species “A” is unavoidable.

<sup>14</sup> EU regulation no. 1380/2013, Article 2(5)(a).

<sup>15</sup> EU regulation no. 1380/2013, Article 2(5)(b).



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