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DiscardLess

Strategies for the gradual elimination of discards in European fisheries
Deliverable 7.1

Year 1 of the Landing Obligation: key issues from the Baltic and Pelagic fisheries.
DiscardLess Policy Brief No. 1.

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Year 1 of the Landing Obligation: key issues from the Baltic and Pelagic fisheries.

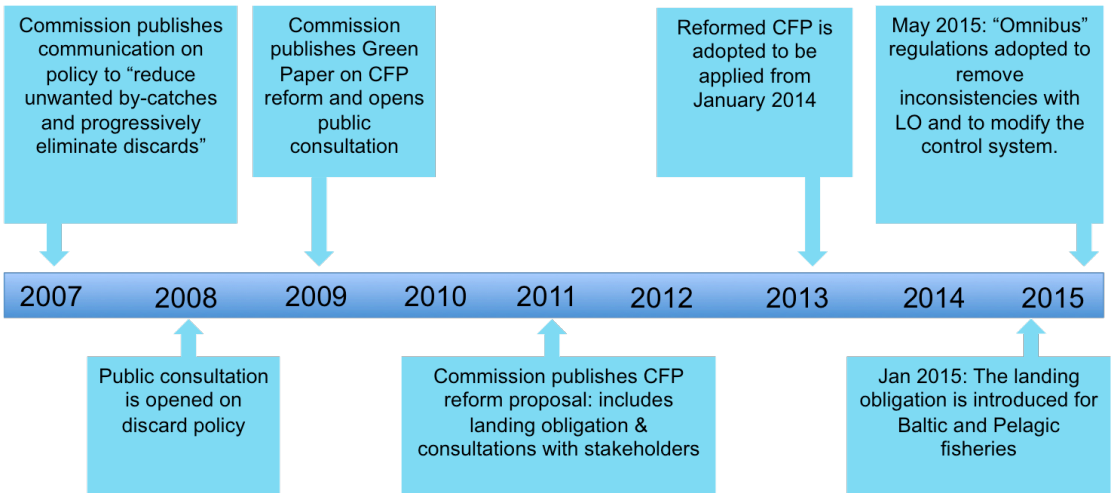
DiscardLess Policy Brief No. 1.

A Landing Obligation (LO), or a requirement to land all catches of certain fish species, was introduced as part of the EU's new Common Fisheries Policy (CFP) in 2014. This DiscardLess policy brief focuses on initial experiences with LO implementation in the Baltic and Pelagic fisheries. It summarises the discard plans in these fisheries, presents stakeholder experiences from interviews, meeting attendance and literature review and highlights emerging issues relevant to all fisheries where the LO is being implemented.

1. Background and main elements of the landing obligation

In March 2007, the Commission published a communication recognising the serious problem of discarding in European fisheries. A public consultation was held and discarding was subsequently highlighted in the Commission's Green Paper on CFP reform. While a discard ban received significant support, industry recommended instead that discard reduction should be planned, on a fisheries basis, through creating incentives to enhance selectivity. An incident involving a UK trawler in Norwegian waters in 2008[1] generated public pressure to end discarding, which increased from August 2010 in response to a UK celebrity chef's public campaign known as "Hugh's Fish Fight". In 2011 the Commission included an obligation to land catches of regulated species in its CFP reform proposal. The adopted CFP included a LO, which applied for Baltic and pelagic fisheries from January 2015.

Figure 1: Evolution of the EU's Landing Obligation 2007-2015



The main elements of the LO are as follows:

Scope: The LO applies to all catches of species which are subjected to Total Allowable Catch (TAC) limits or, in the Mediterranean, to a minimum landing size (MLS). Species that are not subject to TACs or MLS can still be discarded.

Minimum conservation reference size (MCRS): The LO requires that fish under the MCRS are landed but prohibits their use for direct human consumption. Catches of all fish, including fish below the MCRS must be recorded and counted against quotas.

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Exemptions: The LO does not apply to species and fisheries with demonstrably high survival rates for discarded fish. Also up to 5% of the total catch of species may be discarded in cases where selectivity increases are difficult to achieve or where handling of unwanted catches creates disproportionate costs (*de minimis* exemptions).

Discard plans: In the absence of multiannual plans groups of member states organised at a regional level develop discard plans in consultation with advisory councils. These plans are submitted as "joint recommendations", which detail the species to be included in the LO, at which times and also any exemptions. Following review of the joint recommendations by the Scientific, Technical and Economic Committee for Fisheries (STECF) the plans are adopted by the European Commission either in full or with amendments.

Quota flexibility

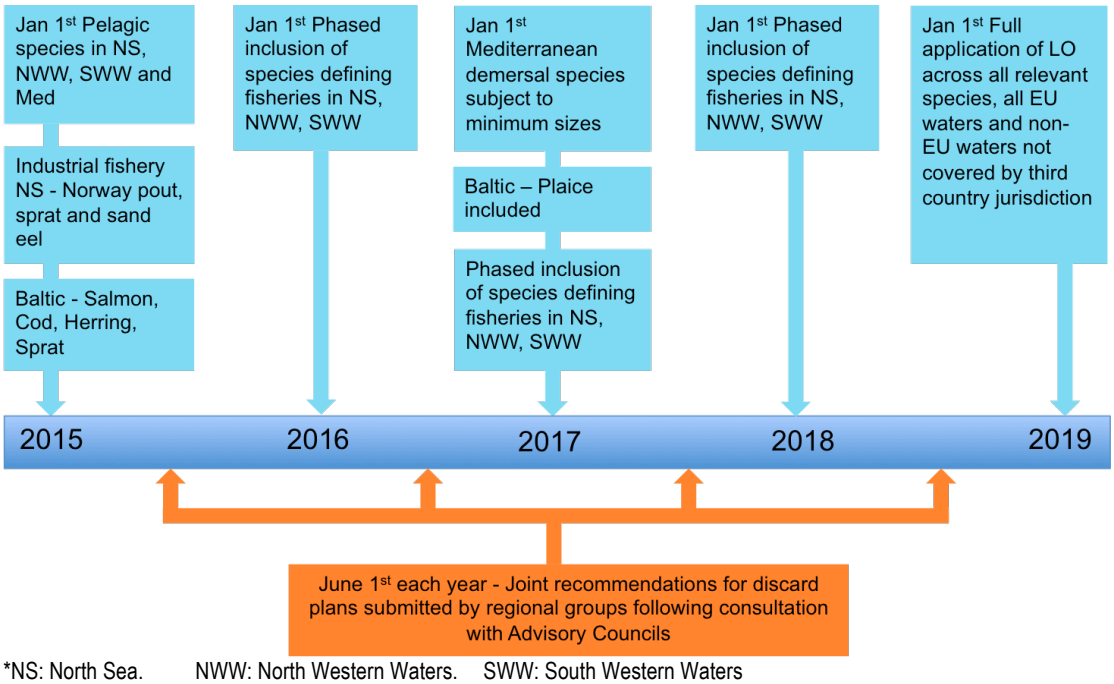
The LO requires that fishermen have access to quotas to cover their catches or they have to cease fishing (see "choke species problem" below). Accordingly, there are rules that allow for conditional transfer of quota between years and between species.

What is a choke species?

"A choke species is a species for which the available quota is exhausted (long) before the quotas are exhausted of (some of) the other species that are caught together in a (mixed) fishery" (Zimmermann et. al 2016)[2].

Timelines: The LO is being phased in between 2015 and 2019, beginning with fisheries where its application is expected to be less complicated (Figure 2).

Figure 2: Timeline for when and where the Landing Obligation applies



*NS: North Sea. NWW: North Western Waters. SWW: South Western Waters

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2. The landing obligation in pelagic fisheries

2.1 Governance context

Pelagic fisheries occur across all of Europe's regional seas and involve all of it's fishing nations, which complicates the governance of these fisheries. With participation from industry organisations and environmental NGOs, the Pelagic Advisory Council (PelAC) provides advice on all pelagic stocks in EU waters with the exception of those in the Baltic and Mediterranean. Accordingly, the PelAC has to engage separately with regional groups of member states in the North Sea, North Western Waters and South Western Waters. The LO applied to pelagic and industrial fisheries from January 1st 2015.

2.2 Pelagic Discard Plans

Table 1 below summarises the scope of the various adopted discard plans covering pelagic species.

Table 1: Adopted pelagic discard plans
(From Commission Delegated Regulations 1392 to 1395 of 2014).

	North Sea	NWW	SWW	Mediterranean
Spatial coverage	North Sea including Skagerrak & Kattegat	ICES zones Vb, V, VII	ICES zones 8, 9, 10 and CECAF zones 34.1.1, 34.1.2, 34.2.0	Mediterranean Sea
Species	Mackerel, herring, horse mackerel, blue whiting, greater silver smelt and sprat. Industrial fisheries for Norway pout, sprat and sandeel.	Mackerel, herring, horse mackerel, blue whiting, boarfish, greater silver smelt, albacore tuna and sprat.	Horse mackerel, mackerel, sprat, anchovy, albacore tuna, blue whiting and jack mackerel.	Anchovy, sardine, mackerel and horse mackerel.
	Species covered by catch limits			Species subject to minimum sizes
High Survival exemptions (under certain conditions)	Mackerel & herring caught with purse seines	Mackerel & herring caught with purse seines	Anchovy, horse mackerel, jack mackerel & mackerel caught in artisanal purse seine fisheries	None
***de minimis* exemptions** (under certain conditions)	Mackerel, horse mackerel, herring and whiting.	Blue whiting, albacore, mackerel, horse mackerel, herring, whiting & boarfish.	Blue whiting, albacore, anchovy, mackerel, & horse mackerel.	Between 3 and 7% of total annual catches of small pelagics in purse seine and mid-water trawl fisheries.
All pelagic discard plans apply from Jan 1st 2015 to 31st December 2017				
Other points: Discarding of demersal species by pelagic vessels is not permitted. Catches of pelagic species by demersal vessels can be discarded, however. Slipping or highgrading is not permitted apart from under specific exemptions detailed in the plans (see section below for explanation of terms). Catches of prohibited species must be returned to the sea. See Regulations 1392 to 1395 of 2014 for full conditions relating to exemptions.				

2.3 Pelagic discards prior to the landing obligation

Discard rates for pelagic fisheries are generally considered to be low as these fisheries target, and tend to be able to catch, single species at particular times. However, due to poor observer coverage at sea and the difficulty in estimating discards due to slipping (i.e. the releasing of fish from a net before they are taken aboard) and highgrading (discarding of fish because they are not of premium market value) pelagic discard rates are considered to be underestimates of the true figure and should be treated with caution[3] [4].

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Table 2: Discard rates for selected pelagic species in the North Sea and NWW 2010-2012. Discard rates are calculated as estimated catch discarded/total catch for each species

	North Sea	NWW (ICES VI & VII)
Herring	0	4
Mackerel	3	11
Blue Whiting	12	5
Sprat	0	0

2.4 Early impressions of LO implementation in pelagic fisheries

2.4.1 Technical Measures

Pelagic fisheries in general have lower catch diversity than most demersal fisheries and there has not been as great an emphasis on selectivity issues in the sector (PelAC, 2014). However trials of devices used to reduce demersal bycatch in pelagic nets are ongoing. Swedish vessels have had some success in reducing saithe bycatch by up to 90% while limiting Herring losses to 15% at most with the use of a flexible grid inserted in the net before the cod-end.[5] There may be some transferability of the method to other segments of the pelagic fleet experiencing similar issues such as vessels in NWW and the North Sea with a bycatch of hake.

There are industry concerns about inconsistencies in the MCRS for North Sea mackerel (the MCRS is 20 cm in one area and 30 cm in another) which is affecting the proportion of catch which cannot be used for human consumption. The PelAC has stated that catch composition rules in pelagic fisheries, e.g. the so-called "mackerel box" are no longer relevant under the LO and should therefore be abolished.

NGO representatives interviewed are concerned that exemptions such as those covering Herring and Mackerel in purse seines are difficult to monitor and could be a significant source of unaccounted mortality of Mackerel in particular.

Where *de minimis* and high survivability exemptions are allowed, industry have reported that they have enabled a relatively smooth implementation of the LO. PelAC reported this as being the case for the Spanish artisanal purse seine fleet, which can release anchovy, horse mackerel, jack mackerel & mackerel provided that the net is not fully taken on board.

2.4.2 Choke species

Both pelagic and demersal species could potentially become choke problems in pelagic fisheries. Pelagic vessels previously would have had no need for quota of bycaught demersal species such as hake caught in the NWW. Boarfish has also created some problems for German vessels with no access to quota for it. One fisherman interviewed described a scenario whereby a recovery in bluefin tuna stocks, which should be a positive development, was becoming a choke problem for some fleets as they had no quota for it. The handling of zero TAC species, such as some herring stocks and spurdog, is still an area of significant uncertainty in pelagic fisheries.

Industrial fisheries have reported that no significant LO related problems were encountered in 2015 with regards to their main issue of bycatch of species such as herring, whiting, haddock and mackerel[6]. However it was acknowledged that more significant problems may lie ahead if target stocks are less abundant and that there is a need to develop a long-term model for handling by-catch in the industrial fisheries.

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2.4.3 Handling of unwanted catches

Pelagic freezer trawlers have issues regarding the handling of fish which are subject to exemptions under the LO or would previously have been discarded[7]. These issues centre around the return to sea of prohibited species, correct handling and storage of damaged or meshed fish and storage of fish below MCRS. Previously such vessels used a discard chute to dispose of unwanted catch but under the LO such chutes must be closed, and how fish are transported from the processing area and returned to the sea is a legal concern for skippers, a safety issue for crew and may also affect survivability of the fish. Refrigerated Sea Water (RSW) vessels, which pump their catch directly into tanks for storage, are not in a position to grade out under-MCRS fish and bycatch, and consequently the proportion of such fish cannot be measured until processing onshore occurs. Some sampling of catch composition in the purse-seines is taking place, however, before pumping. One interviewee recounted an experience where in the earlier part of 2015 fishery officers were unsure of how to deal with unwanted catches in onshore factories and insisted on a costly transport solution which created significant conflict.

2.4.4 Control and information about discards

There has been a significant control emphasis and a strong engagement between PelAC, the high level groups and fisheries control agencies. The control of the LO in 2015 was complicated and delayed by the fact that regulatory conflicts were not resolved before the Omnibus regulation was adopted in late May 2015.

In August 2014 a group of control experts from the North Sea submitted a report on control methods in the pelagic LO[8]. The highest rankings were Remote Electronic Monitoring (REM) including the use of CCTV and sensors, and control observers in sufficient number to ensure continuous observation of fishing activity.

The report also notes that an industry led approach to control and reversal of the burden of proof would be ideal, but provides no detail on how this might work.

PelAC broadly welcomed the report and made a number of further recommendations, most significantly on the use of gramme size analysis as an effective and economically pragmatic control tool and as a basis for risk analysis[6]. Gramme size analysis is a method of profiling catches based on the average fish size. Gramme size analysis was not assessed in the Scheveningen control group report.

NGO participants in PelAC feel that mechanisms for control and monitoring of the LO are weak and that robust and detailed control strategies should have preceded its implementation. PelAC have also recommended that all discard plans should include control elements. One respondents view was that the CCTV option represents the only cost effective way to ensure compliance while gramme size analysis is more suited to risk assessment.

PelAC recommendations also sought a level playing field for all fleets targeting pelagic stocks in EU waters, harmonisation of LO implementation rules across EU waters and greater collaboration between PelAC and the high level groups. To illustrate the last point as of April 2016 the PelAC Executive Committee noted that it had not received replies from the Scheveningen nor the NWW regional groups on their control recommendations.

Overall the principal issues in relation to control measures revolve around a lack of transparency, certainty and harmonisation.

2.5 Implementing the LO in pelagic fisheries - overview of main issues

As expected the pelagic fisheries have not faced substantial obstacles due to LO implementation. However a number of significant uncertainties and inconsistencies

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remain unresolved and there are some differences of opinion between industry and NGO on control issues.
Overall the following points can be highlighted:

- Four separate discard plans were developed covering different regions and detailing species covered, exemptions based on high survivability and *de minimis*.
- NGOs have some concerns that exemptions for purse seiners could be a source of unaccounted for fishing mortality.
- There are still uncertainties around how freezer trawlers and RSW vessels handle and/or account for unwanted catches.
- Inconsistencies with definition of MCRS, the application of *de minimis* exemptions in different regions and differing member states interpretations of the LO are creating operational difficulties for the industry.
- How choke issues and zero-TAC stocks are dealt with is still an open question.
- NGOs have significant concerns about shortcomings in the control regime and feel that CCTV systems are needed to ensure compliance.
- PelAC faces some challenges in how it interacts with the various regional MS groups and how it fits into the evolving regionalization process.

3. The landing obligation in Baltic fisheries

3.1 Governance context

The Baltic Sea is surrounded by 8 EU member states (Denmark, Sweden, Finland, Latvia, Lithuania, Germany, Estonia and Poland) and Russia. The EU states cooperate on fisheries management though the Baltic Sea Fisheries Forum (BALTFISH). The Baltic Sea Advisory Council (BSAC) is the main forum for representation of interest groups (mainly fishing industry and environmental NGOs), and advises the European Commission and Member States on the management of Baltic fisheries. BALTFISH and BSAC are central agents in the regionalised approach of the reformed CFP.

3.2 Discards prior to the landing obligation

Cod, herring and sprat constitute about 95% of the total commercial catch in the Baltic. Plaice, flounder, salmon and other species are of local importance. Baltic fisheries, particularly pelagic ones, are generally considered to have relatively low discard rates.

Table 3: Discard situation for key Baltic stocks

Species/stocks	Main gear types	Discard situation
Cod	Trawls & gillnets	Discard rates typically estimated to be < 10% but a sharp increase in eastern Baltic cod discards was observed in 2012-2014, possibly due to prevalence of thin cod.
Herring & sprat	Pelagic trawls, typically catching both species.	Discarding of herring is regarded to be negligible, but some level of slipping has happened in the past. Discard rates for sprat are likely low as it can be used for fishmeal and feed.
Plaice & flounder	Mainly bycatch in demersal trawl fisheries	Plaice discards vary between countries but is estimated to be about 50% overall since 2010. Discarding of flounder is considered high but data are uncertain.
Salmon	Driftnet, longline & trapnets	The rate of discarding undersized salmon is estimated to be 2-5%. Seal depredation in the longline fishery has recently increased considerably.

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3.3 The Baltic discard plan

In May 2015, BALTFISH submitted a "Joint Recommendation" on a discard plan for all Baltic fisheries. The recommendation was reviewed by STECF and formed the basis of the adopted discard plan in October 2014 (CEC 2014b). The plan established that the LO applies to herring, sprat, salmon and cod from Jan 1st 2015 and from Jan 1st 2017 for plaice, which is mainly regarded as a bycatch species.
The BALTFISH recommendation included a range of suggestions for implementing the LO, such as using *de minimis* exemptions for covering seal damaged fish, which were omitted from the adopted plan as they were considered to be outside the scope of such plans. The adopted plan changed the existing minimum landing size for cod of 38cm to a MCRS of 35cm in order to increase the amount of landings that could be marketed for human consumption. The STECF supported this measure, noting that it was unlikely to compromise the sustainability of the cod stocks. A joint statement by a set of NGOs, however, was opposed to lowering MCRS for cod, arguing that it could potentially undermine reproductive capacity, and also expressed dissatisfaction with other aspects of the proposed plan[9].

3.4 Early impressions of LO implementation in Baltic fisheries

3.4.1 Technical measures

Fishermen using demersal trawl fisheries for cod are frustrated because current regulations require them to use trawls (Bacoma and T90) which are not the most selective available. Baltic stakeholders have waited for the adoption of the multiannual plan for cod, sprat and herring which will enable technical regulations to be revised regionally. However as the requirements of the LO precede regulatory adaptations the industry has begun to lose patience: "There is a widespread feeling in the sector that they are being punished for doing something they are forbidden to change. Concern is building as to how this will be reflected in relation to compliance"[10].
NGO participants in BSAC have proposed a maximum mesh size for pelagic gear in the region in order to address the issue of unaccounted for underwater mortality. Although this has provoked lengthy discussions at BSAC industry have not been supportive of the proposal as they feel it is not a significant issue and could create additional regulatory problems. BSAC agreed to ask ICES to assess the matter based on any relevant data it may have[11].

3.4.2 Choke species

Choke species problems are expected to be less pronounced in Baltic fisheries as they tend to be less mixed than fisheries in other European regions. BSAC members did not report on current choke species problems when asked to review the first years experience under the LO[10]. However choke species problems are likely to arise in 2017 when the LO will apply to plaice. This is the case as most member states may have insufficient quota for plaice (Germany, Sweden, Poland) or have no quotas (Finland, Estonia, Latvia, Lithuania). In Sweden the development of an ITQ system makes it difficult for pelagic fishermen to obtain quota to cover small bycatches of demersal fish. However a 2015 European Parliament study[2] provided details of two new gear modifications, FRESWIND and FLEX, which significantly reduce Plaice catches while retaining Cod and could go a long way towards resolving choke issues related to Plaice in the Baltic. The report also highlights some spatio-temporal changes in fishing patterns which could reduce catches of Plaice without a corresponding reduction in Cod landings.

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3.4.3 Handling of unwanted catches

The handling and use of unwanted catch are reported by BSAC members to be their main problem in the first year of the LO. It is difficult for fishermen to understand the prohibition on using undersized fish for human consumption as they see it as a waste of resources.

In Germany and Poland (and most likely other Baltic countries), the infrastructure to separately collect, store, transport and process undersized fish is underdeveloped. In Germany, relatively small quantities of unwanted catch are currently transported over large distances to relevant facilities, which involves high costs for an industry generally characterized by small profit margins[9]. This situation might be improved through the purchase and use of small-scale ensilage plants. The Danish industry reports that the handling, sorting, storing and disposal of unwanted catch is costly and involves increased workloads.

3.4.4 Control and information about discards

Control agencies have collaborated with member states and the industry about the details of controlling the LO and this has generally been regarded as constructive.

The control of the LO in 2015 was complicated and delayed by the fact that regulatory conflicts were not resolved before the Omnibus regulation was adopted in late May 2015. Fishermen were initially unable to report juvenile fish through the electronic logbooks, which had not been adapted for that purpose in time. The European Fisheries Control Agency has a joint deployment plan in the Baltic with a focus on monitoring the LO and 368 last haul analyses were conducted in the area up to the end of 2015. However, ICES 2016 advice for Eastern Baltic Cod states that "the discard rate in 2015, with the present MCRS, was estimated at approximately 15% based on observer data; however, there have been problems gaining observer access in some countries and the 15% figure is considered to be an underestimate."[12].

A surveillance report for the Marine Stewardship Council states that Baltic fishery control and enforcement personnel focused on informing fishermen about the new requirements in 2015 and indicated that there was not full compliance with the LO for cod. Concerns have been raised that the LO may bias discard estimates, which would have a negative effect on the quality of stock assessments[13].

A 2016 European Parliament workshop report on the LO in the Baltic contained a detailed discussion on changes to governance and compliance issues which could facilitate implementation of the LO. The discussion centres on a move away from top-down control regimes towards a tiered, incentivised approach to the adoption of CCTV, along with simplified legislation and a re-balancing of industry rights and responsibilities. However the report acknowledges that such changes will require further research and will take time before industry self-governance and voluntary compliance become the norm.[14]

3.5 Implementing the LO in the Baltic - overview of main issues

The first year of the LO appeared to be relatively undramatic and involved small volumes of unwanted catch. The introduction of the landing obligation in the Baltic in 2015 may to some extent have been overshadowed by more dramatic issues, including a reduction in certain TACs, competition with recreational fisheries, closure of fishing grounds, and a loss of the MSC accreditation for the German Eastern Baltic cod fishery. The late adoption of the Omnibus meant that there was a delayed start to the implementation of the LO. The following issues can be highlighted:

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- A discard plan was developed cooperatively, detailing timelines for species, exemptions based on high survivability and a lower MCRS for cod. The plan was adopted by the Commission, but NGOs disagreed with some of its elements.
- Handling unwanted catches involves an increased workload.
- Small quantities of unwanted catches have been brought ashore but industry are concerned about significant costs relative to the volumes involved.
- The industry and NGOs alike are frustrated with legislative barriers to the adoption of more selective gears.
- Inconsistencies in how member states have interpreted the LO are contributing to making the implementation of the LO more challenging in some countries .
- Significant issues concerning observer coverage and reliability of discard data and quantification of discard volumes are emerging.

4. Conclusion: Hopes and Fears after the first year of the landing obligation in Baltic and pelagic fisheries

The implementation of the Landing Obligation represents a radical and high stakes adaptation of European fisheries management. It has generated hopes that fisheries can move in a more sustainable direction as well as fears that many fishermen would be driven out of business. Based on the experiences from the first year, we reflect on the issues that appear to be significant in determining whether the LO can be a useful tool in balancing ecological and economic interests, or whether it will create a conflict ridden scenario, where the industry feels compelled to circumvent the policy.

As the implementation of the policy is still at a very early stage, questions still predominate over answers. In terms of hopes for what the Landing Obligation could achieve, including a reduction in discard and associated fishing mortality rates, it is too early to arrive at firm conclusions. Scientists, policy makers and environmental NGOs will be monitoring indicators of success such as discard rates closely over the next few years. However, experience from other countries implementing discard bans has shown that the timescales required to achieve significant discard rate reductions have been long and expectations that such results could be achieved in one year are probably unrealistic.

In terms of fear one of the most significant findings from this report is that the first year of the LO has not yet created the doomsday scenario envisaged by some in pelagic and Baltic fisheries. In the pelagic fisheries many industry respondents feel that improved and harmonised usage of *de minimis* and inter-species flexibility could significantly resolve pelagic LO issues. In the Baltic a combination of quota swaps, national redistribution of quotas, improved selectivity and spatio-temporal avoidance may be sufficient to avoid choke species issues with Plaice, in particular if the positive development for these stocks continue but this is very much dependent on the extent to which transnational swaps take place[2]. However these fisheries are significantly less complex than those which follow on the implementation timeline indicating that these cases were well chosen as a testing ground. The two year control derogation regarding "serious infringements" in the Omnibus regulation has also contributed to taking some of the conflict out of introduction of the LO.

Despite the relatively calm introduction it is very apparent that many fishers and their representatives remain fearful of the future. Industry and NGO's alike are frustrated with certain issues such as a slow, inflexible governance process, which stifles creativity

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and restricts the use of the most selective gears despite there being universal support for such changes.

NGO representatives have expressed serious concern that control and monitoring regimes are a significant weakness in the implementation of the LO. It is likely that this issue will be highlighted strongly in the next few years if discrepancies between landings of unwanted catch and estimated discard rates continue. A 2016 European Parliament workshop report on the LO in the Baltic contained a detailed discussion on changes to governance and compliance issues which could facilitate implementation of the LO. The discussion centres on a move away from top-down control regimes towards a tiered, incentivised approach to the adoption of CCTV, along with simplified legislation and a re-balancing of industry rights and responsibilities. However the report acknowledges that such changes will require further research and will take time before industry self-governance and voluntary compliance become the norm.[15]

Overall, the key feature in the route towards better discard management is the learning process and the ability for the regulatory system to respond quickly where changes to discard plans are necessary and justified. If flexibility and responsiveness is created, then this will go a long way towards incentivising creativity among industry and a gradual move towards a results based management approach. The new framework proposal for a technical regulation has revitalised hopes for this scenario.
From our study there is some evidence that such institutional evolution can occur within the context of regionalisation, but if it happens too slowly there is a risk of loss of credibility and trust in the process.

Currently in the pelagic sector amendments to the discard plans have been tabled by the PelAC through the regional MS groups while in the Baltic it is hoped that the Baltic MAP can introduce some flexibility on gears which will allow for selectivity improvements. The role of other institutions also seems to be changing with the implementation of the LO and the development of regionalisation. For example STECF's role in evaluating discard and management plans and in providing guidance where some aspects of the landing obligation have proven to be open to interpretation[16] has seen the committee become more influential.

To conclude it is apparent that if the issues which we have seen in the Baltic and pelagic fisheries are not to escalate in the more complex demersal fisheries, it is essential that all parties recognise that LO implementation is above all a learning process, that it will take time for stakeholders to adjust but that the speed of institutional response will have to improve in order for positive progress to be made.

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In addition to the published material reviewed, the most significant of which are listed above, the authors have attended a number of relevant national and Advisory Council meetings. A significant source of material used here came from interviews conducted with a broad group of relevant stakeholders concerned with discard management in the Baltic and Pelagic fisheries. Interviews conducted included:

- Employees of the European Commission,
- Employees of the Pelagic Advisory Council,
- NGO representatives active in the Baltic Advisory Council,
- NGO representatives active in the Pelagic Advisory Council,
- Fisheries representatives active in the Baltic Advisory Council,
- Fisheries representatives active in the Pelagic Advisory Council
- Pelagic fishermen
- Fisheries scientist representing ICES

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