



MINOUW

RECOMMENDATIONS

for discards-free fisheries

Discards are a key issue for the sustainability of fisheries worldwide.

They are identified as such by the FAO in its 2011 'Code of Conduct for Responsible Fisheries'.

On 1 January 2019, the Landing Obligation was introduced in Europe. Fish which would previously have been discarded – because they were unwanted or below the minimum legal conservation size – must now be brought ashore. The Minouw project focuses on this issue, supporting the eventual elimination of unwanted bycatch from European fisheries. Now that the project's research and analysis is complete, the resulting **recommendations for key actors are summarized below.**



Fishers' exchange programme on the selvedge technique, Viareggio, Italy, 2015.
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Policymakers

Policymakers should work to align major policy objectives (e.g. under the Common Fisheries Policy - CFP) with regional and sub-regional fisheries management. Currently, conflicting pressures within the decision-making process – national regulations and advice from MEDAC do not always match, for example – mean that discards plans adopted in practice are less ambitious than the objectives set out in Article 15 of the CFP. Conversely, successful local initiatives to conserve stocks and reduce discards are difficult to scale up, facing economic and logistical barriers to their wider adoption. The implementation of the CFP should deliver results more closely geared towards the FAO's 2003 Ecosystem Approach to Fisheries (EAF). On paper this is a priority, but there are currently no clear national or international strategies in place to bring this about.

Policymakers should:

- Ensure EU fisheries are only exploited within **biologically safe levels**: technological and institutional change at regional, national and sub-national levels are all needed for a more sustainable fisheries management regime.
- Urgently put in place **rebuilding programmes** for stocks which have already been critically over-exploited. In demographically unbalanced hake and sardine stocks in the Western Mediterranean, for example, the scarcity of large, mature fish makes it difficult to avoid catching younger undersized individuals – which brings the stocks even closer to the threat of collapse.
- **Incentivize fishers** to adopt gears and fishing strategies to eliminate discards. Certification schemes should offer compliant fishers a price premium through improved marketing of discard-free products, while reduced taxation could also reward selective practices.
- Consider reward schemes for fishers with **micro-economic policies** such as input subsidies, strongly supported by technical assistance to develop more selective fishing methods, or subsidized research and development into new fishing gears.



- **Promote certification and eco-labelling** policies for selective and sustainable fisheries. However, consumers need to be educated on the value of choosing discard-free seafood – so **public awareness campaigns** must run alongside such schemes in order for them to be effective.

Policymakers should work to align major policy objectives with fisheries management.

Fishing industry

Responsible fishers are stewards of marine resources, and have every reason to take a constructive approach to sustainability. While they tend to be resistant to innovation imposed from outside, fishers are not against innovation in general: far from being the focus of the problem, they need to be an integral part of the solution, leading efforts to embed sustainability for future generations.

Fishers should:

- **Plan fishing operations carefully** to minimize adverse impacts on the ecosystem: attaining sustainability is in the interests of the whole industry. This includes both modifying fishing gear and practices to maximize the target catch, as well as adopting recommended 'gentle care' at-vessel handling procedures to increase survival rates in legally discarded species.
- **Explore new commercial avenues:** the introduction of the Landing Obligation gives fishers new challenges in food production, which could lead to the creation of new business models. These might include creating value from less-well-known seafood products, exploring the market for non-direct human consumption, and working with vertically integrated seafood companies.
- **Provide full catch data** for scientists and fisheries management agencies to improve information on current stock status, future stock trends and sustainable harvest levels.
- **Minimize negative impacts** on sensitive or protected species – including seabirds, pelagic sharks and other megafauna – by adopting proven mitigation tools such as Turtle Exclusion Devices or Bycatch Reduction Devices.



Fishery managers

Fishery managers are well placed to explore and guide effective multi-stakeholder solutions at national and subnational level, with the aim of limiting fishing mortality within sustainable levels and rebuilding the biomass of diminished stocks. Fishery managers need to resist industry pressure to adopt measures focused on short-term profits, and be ready to work closely with other actors to develop the human and financial resources needed for monitoring and control, capacity-building and consumer awareness campaigns.

Fishery managers should:

- Implement **multi-annual management plans** (MAPs) giving detailed information on the fisheries in question, including the stakeholders involved, the gears used, main commercial species, the effect of the fishery on targeted stocks, its impact on the wider ecosystem, etc.
- Include **discard management plans** in each MAP, which clearly state full documentation procedures (traceability), handling protocols, survival rate targets, and any exceptional costs involved. These plans should be reviewed and updated annually.
- Use spatial information technology to locate and highlight areas with a high risk of unwanted bycatch, and consider establishing **fisheries restricted areas** on a temporary or permanent basis if stakeholders are broadly supportive after consultation.
- Use **economic instruments** to encourage fishers to comply with discard procedures, such as the right to fish in premium areas if they use modified gears, certification, tax exemptions, or access to European Maritime and Fisheries Fund support. There should be clear disincentives – restriction of fishing rights etc. – in cases of non-compliance.
- Facilitate the introduction of local **microplants** to legally process unwanted bycatch (brought ashore under the Landing Obligation) for uses other than direct human consumption.
- Measure progress towards compliance by employing [Minouw indicators](#), using routine fisheries data and specially collected data where required. Introduce real-time monitoring of the implementation of fisheries management measures, and adopt a flexible framework which can be quickly adapted in response to critical fisheries indicators.
- **Include fishers in policy planning** to promote compliance with and enforcement of the discards ban: co-management is likely to achieve far greater buy-in than externally imposed regulation. Local institutional settings (fisher cooperatives etc.) can provide cost-effective monitoring and surveillance, since they often already have effective self-policing mechanisms in place.



Fisheries control agencies

It's a challenge to identify fishing vessels that have discarded catches at sea, or have illegally landed unwanted catches for human consumption (so-called 'black marketing'). Direct monitoring – CCTV or on-board observers – is currently prohibitively expensive, as well as being impractical in some southern European fisheries. In practical terms, the best approach is to focus on identifying cases where infringements are most *likely*, before investigating in more detail as required.

Fisheries control agencies should:

- Carry out **risk assessments**: identify fisheries and gear types most likely to produce high levels of bycatch, then prioritize vessels in specific fisheries and using specific approaches for surveillance, or promote the adoption of limited selective gear types.
- Use **satellite tracking systems** (VMS/AIS) to identify vessels operating in high-risk areas in near real time. The MinouwGIS prototype can be a useful starting point.
- Monitor vessels' **catch profiles** at landing points – certain profiles may indicate the presence of unwanted bycatch. This may have been discarded at sea or brought to land for legal or illegal use, but in any case it must be documented.
- Monitor **gear on board**: standard, unmodified gear may suggest that a vessel is producing higher levels of unwanted bycatch.
- Cross-check different **data sources** – field evidence, log-books, VMS data – to gather evidence on the most likely real situation.
- Work at the level of the **consumer market**, monitoring what needs to happen in shops, markets, restaurants and not just at fish landing points.



Science and Technology

The role of scientists and technologists in improving the situation with discards is two-fold: on the one hand it's critical to gather and rigorously analyse as much fishery data as possible to build our knowledge and understanding of current trends; on the other, their development of innovative selective fishing gear and practices will clearly contribute to greater sustainability in future. A close and constructive relationship with fishers is essential.

Scientists and technologists should:

- Work with fishers to **develop more selective fishing gear**, investigating both well-known solutions (e.g. grids) as well as promising innovations (e.g. artificial light).
- Carry out **rigorous analysis** of the results of field trials for more selective fishing gear.
- Study the **biological and economic impacts** of deploying more selective fishing gear (while making clear independent recommendations about its use) and be realistic about its limits.
- Use statistically robust methods to **quantify bycatch and discard levels** to inform fisheries management decisions.
- Maintain and update the **EU Data Collection Framework**.
- Work with the industry to aid transition from traditional Mediterranean fresh seafood to a **broader processed product range** in which previously discarded bycatch can be used.

Rolling out the European Landing Obligation is a challenging task, but for the sake of our fisheries we have to step up our actions on all sides without delay.



Practical solutions exist, and all key actors – policymakers, fishers, fishery managers, fishery control agencies, and scientists and technologists – have important roles to play. However, these roles will only be really effective if they're approached collaboratively: fisheries managers need to get out in the field, control agencies need to work closely with industry, fishers need to talk to scientists, and so on. The Minouw project shows that the best solutions come when different stakeholders work together with a common goal. All key actors must work towards finding solutions to the problem of discards in the following order of priority: avoid (areas and seasons that generate the most discards); select (modify fishing gears and methods to increase selectivity); and use and make the most of discards.

This is the mindset that needs to be shared by everyone with an interest in a sustainable future for European fisheries.



MINOUW

Applying science, innovation and partnership to reduce discards in European fisheries.

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Cover photo: exchange on slipping methods to reduce discards, Olhao, Portugal, 2017
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Beneficiaries



Associated partners

